

Guidance

RIIO-2 Regulatory Instructions and Guidance (RIGs) for Network Asset Risk Metric (NARM) Tables – for Electricity Transmission, Gas Transmission, and Gas Distribution (Version 1.02)

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This document provides instructions and guidance to the electricity transmission¹, gas transmission², and gas distribution network³ licensees. Its purpose is to enable them to complete the Network Asset Risk Measure (NARM) Regulatory Reporting Pack (RRP), for the RIIO-2 price controls. The guidance does not apply to electricity distribution licensees whose price control cycle is on a two-year lag and is due to commence on 1 April 2023.

This document provides general and specific guidance for populating the NARM RRP. It explains the scope of the NARM RRP data templates, what to consider when completing them, and where to find more information.

¹ RIIO-ET2 – relates to the three electricity transmission owners (ETO): National Grid Electricity Transmission plc (NGET), SP Transmission plc (SPT), Scottish Hydro Electric Transmission plc (SHET)

² RIIO-GT2 – relates to the gas transmission owner (GTO): National Grid Gas Transmission (NGGT)

³ RIIO-GD2 – relates to the eight gas distribution network operators (GDN): Cadent – East of England (EoE), Cadent – London (Lon), Cadent – North West (NW), Cadent – West Midlands (WM), Northern Gas Networks (NGN), SGN - Scotland Gas Networks (Sc), SGN - Southern Gas Networks (So), Wales and West Utilities (WWU)

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1. Introduction

Chapter Summary

This chapter sets out the purpose and structure of the NARM (NARM) Regulatory Reporting Pack (RRP) which will apply to the electricity transmission, gas transmission, and gas distribution network companies for RIIO-2.

Background

- 1.1. RIIO-2 is the second iteration of price controls to be ~~conducted under~~ using the RIIO (Revenue = Incentives + Innovation + Outputs) model. This applies to electricity and gas transmission network companies and to gas distribution companies from 1 April 2021 to 31 March 2026.⁴
- 1.2. The Network Asset Risk Metric (NARM) is an evolution from RIIO-1 Network Output Measures (NOMs) and relate to the risk of asset failure (derived from the probabilities and expected consequences of asset failure). Through their asset management activities, such as replacement or refurbishment, network companies should ensure that the risk to consumers of asset failure is maintained within reasonable bounds. This is an important part of the price controls, because it contributes to a significant proportion of the network ~~companies~~ companies' totex and consumers could suffer significant detriment if the pursuit of short-term profit leads to unmanageable levels of degradation in the condition of network assets and ultimately to unacceptable levels of network asset failures.
- 1.3. NARM sets network companies clearly defined outputs that require and encourage them to take ~~more long~~ longer-term view of their network asset risk.
- 1.4. The NARM Regulatory Reporting Pack (RRP) is our method of collecting data to enable us to administer the ~~Conditions of the Licence (the relevant licence conditions, which relate to the price control) which include~~ includes monitoring the performance of ~~Licensees~~ licensees against our ~~final proposals/determinations, monitor RIIO-2 Final Determinations~~⁵, monitoring compliance with ~~price control~~ licence obligations and ~~to allow~~ enabling analysis between price controls and at the subsequent price control review.
- 1.5. ~~Our~~ The NARM RRP is part of ~~an extensive~~ a wider suite of regulatory reporting and monitoring ~~pack~~ tools, which will:

⁴ RIIO-ED2 will commence on 1 April 2023 and will run until 31 March 2028.

⁵ RIIO-2 Final Determinations for transmission and gas distribution network companies were published on 8 December 2020: <https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator>

- allow us to collect data on total expenditure (Totex) for use in the annual iteration process (AIP); and
- provide a database of network company performance for us to draw on to set [cost proposals required outputs and allowed costs](#) at subsequent review periods.

1.6. These instructions[This document, the NARM Regulatory Instructions and Guidance \(NARM RIGs\), sets out the instructions and guidance applicable to the relevant network companies for completing and submitting the NARM RRP. It provides information on:](#)

- [the systems, processes, procedures, recording and provision of the required data](#)
- [reporting units](#)
- [levels of accuracy \(including rounding\)](#)
- [the methodology for calculating or deriving required numbers](#)
- [the provision of the data to the Ofgem \(format, frequency etc.\)](#)
- [reasons for the data requirement](#)
- [a glossary of terms used in the workbooks](#)

1.7.

~~1.6.~~1.8. [The instructions and guidance contained in this document](#) do not change any definitions or obligations contained within the electricity transmission or gas transporter licences applicable to each network company, and in the event of any conflict, the licence conditions ~~will~~ [always](#) take precedence.

Use of the NARM RRP

NARM RRP

~~1.7.—The NARM RRP are the means of annual monitoring and reporting. Their structure and content is a direct evolution of the NARM Business Plan Data Template (BPDT) which was, itself, used in our RIIO-2 Final Determinations⁶ to determine the regulatory settlement for the RIIO-2 period for each network company.~~

This guidanceAnnual reporting purpose

1.9. [As with other areas of the price control, each licensee is required to report annually on the NARM. This includes both reporting data related to its delivery and providing a supporting qualitative narrative. There are several purposes to NARM annual reporting, including⁷:](#)

- [1. to collect outturn and forecast data so that Ofgem can take a view on the likely end of period outcome of the NARM Funding Adjustment and Penalty Mechanism.](#)

⁶ <https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator>

⁷ [From the NARM Handbook v3.1, published on 3 February 2022.](#)

This means that each network company's annual reporting should include its best forecasts of data that will be provided as part of its NARM Closeout Report (see below):

2. to help identify emerging issues that might need to be addressed ahead of the next price control period or at RIIO-2 closeout;
3. to collect data and information to inform future development of the NARM methodologies and NARM mechanisms in future price controls;
4. to collect data that will be needed to facilitate robust assessment of the network companies' RIIO-3 business plans.

1.10. The fourth of these purposes has been driven by lessons learned from previous price controls, where the ramping down of annual reporting requirements and ramping up again for business plans led to significant difficulties such as those discussed below. Our intention in developing the RIIO-2 NARM RRP is to ensure as smooth a transition as possible between RIIO-2 annual reporting and RIIO-3 business plans, and between RIIO-3 business plans and RIIO-3 annual reporting. Difficulties previously experienced, due to a lack of cohesion between business plans and annual reporting, include:

- difficulties for licensees in providing necessary business plan data due to insufficient time to set up reporting systems or to collect historical data. This then leads to a higher use of assumptions and to less robust data submissions than should be the case.
- significant time and resources required to develop reporting requirements for each business plan annual reporting cycle. Continuity between business plans and annual reporting should allow licensees to embed reporting (and assurance) as business as usual, and should allow Ofgem time to develop and refine the assessments that will inform the setting and implementation of future price controls.
- due to the relatively long price control periods (five years in the case of RIIO-2), it is highly likely that both licensees and Ofgem will experience staff turnover and other barriers to maintaining continuity. In the past this has contributed to loss of organisational knowledge, gaps in reporting requirements, and to differences in interpretation of requirements (between Ofgem and licensees, or between different licensees). Often these issues only come to light as part of the business plan assessment or as part of price control implementation, when it is too late effectively to address them. Ensuring continuity, between annual reporting and business plans will help ensure that such gaps do not arise.

Form of submission and submission deadlines

1.11. Licensees are required to submit their NARM regulatory data by completing the NARM RRP template.

1.12. The deadline for licensees to whom these Regulatory Instructions and Guidance (RIGs) relate to submit RRP(s) and supporting commentary is 16th October following the end of each regulatory year.

1.13. The submission must be accompanied by a letter signed by a director on behalf of the licensee confirming that the data is accurate and has been provided in accordance with the RIGs.

~~1.8.1.14.~~ This RIGs document relates to the NARM RRP versions listed below and to any subsequent version of the NARM RRP(s) unless superseded by a subsequent guidance version of the RIGs:

- RIIO2_NARM_RRP_v1.02

Commentary

1.15. Alongside the RRP, each licensee must submit a supporting commentary document. The purpose of the supporting commentary is to provide an understanding of the data contained in the RRP, as well as an explanation and/or updates on any previously identified or emerging issues related to NARM and/or the licensee's delivery of its Baseline Network Risk Outputs (BNRO). Please see Chapter 7 for further explanation of the commentary requirements.

General instructions and guidance

1.9.1.16. The key points to note in completing the RRP templates are listed below. These apply unless otherwise stated on a specific table or in the guidance below:

1. The ~~Licensee~~ licensee must take all reasonable steps to ensure the quality of its data. ~~This will~~ Quality data must in all material respects be accurate, complete, and fairly presented.
2. Where a table contains multiple years of data (historical and/or forecast) that was reported in a previous RRP template, the ~~licensees~~ licensee should report, unless otherwise stated in the specific table guidance, data for all years that is to the best of its knowledge up to date and accurate. Licensees are required to explain any material data revisions ~~in their~~ of previously-submitted data in the accompanying narrative.
3. The ~~Licensee~~ licensee must, as soon as is reasonably practicable, notify Ofgem of the likelihood of any significant revisions to improve data quality.
4. The NARM RRP tables are colour coded to reflect the action required. The colour key is as below:

Colour Key

Non-editable cell	abc
Ofgem input cell	
Company input cell	12.3
Calculation cell (sub-total)	12.3
Calculation cell (total)	12.3
Link from other sheet in workbook	12.3
Link from other workbook	12.3
Input not relevant	

Colour Key

Non-editable cell	abc
Ofgem input cell	
Company input cell	12.3
Calculation cell (sub-total)	12.3
Calculation cell (total)	12.3
Link from other sheet in workbook	12.3
Link from other workbook	12.3
Input not relevant	

5. Licensees ~~should~~ must enter or amend data only in 'Company input cells' and ~~should~~ must not insert ~~or~~, delete, merger, or otherwise amend rows ~~or~~, columns or cells unless otherwise indicated as permitted on a specific table or in the guidance below, or unless otherwise agreed with Ofgem.

6. Workload units and outputs should be reported commensurate with the purpose for which such data is intended, taking into consideration the appropriate allocations that are necessary to complete the tables. Workload and outputs should be entered in the unit of measurement set out in this guidance or in the template.
7. Unless otherwise indicated in ~~the~~this guidance or templates, financial values should be input as positive values.
8. Where a reportable value is zero or is not applicable to a licensee, then a zero character must be input rather than the cell being left blank.
9. Unless a licensee has an explicit agreement to the contrary with Ofgem, ~~then~~ risk values are to be derived in accordance with ~~its~~the licensee's most recently approved NARM Methodology. Where such an explicit agreement exists then the licensee should provide an explanation of the agreed methodology in its associated narrative document.

~~1. In order to differentiate from financial values, Monetised Risk values have the unit R£ when relating to annual risks, and LR£ when referring to longer term risks.~~

10. Monetised Risk values should be entered in millions (R£m ~~or LR£m~~) and shown to three decimal ~~places~~places.
11. Probabilities should be entered to a minimum of three decimal places/significant figures (e.g. 0.00000123 or 0.123).
12. Workload and asset population volumes should be entered to one decimal place.

~~1.10.1.1. 1.15. The purpose of this document is to provide instructions and guidance to enable the licensees to complete the NARM RRP. This document provides information on:~~

- ~~• the systems, processes, procedures, recording and provision of the required data~~
- ~~• reporting units~~
- ~~• levels of accuracy (including rounding)~~
- ~~• the methodology for calculating or deriving required numbers~~
- ~~• the provision of the data to the Ofgem (format, frequency etc.)~~
- ~~• reasons for the data requirement~~
- ~~• a glossary of terms used in the workbooks.~~

~~1.11.1.17.~~ Data reported through the NARM RRP must be aligned with and be demonstrably reconcilable with the data reported through the Cost and Volumes RRP for the equivalent reporting year.

~~1.12.1.18.~~ While every effort has been made to be ensure that this guidance is as comprehensive as possible ~~in developing this guidance, when network companies begin to populate the data template, areas requiring further clarification or interpretation will inevitably arise. Where, where~~ a network company is unsure ~~of~~ how to interpret ~~the guidance in specific circumstances then~~aspects of it, it should seek clarification from Ofgem.

Provision of Monetised Risk data

~~1.13.1.19.~~ All Monetised Risk values and consequences of failure should be reported in 2018/19 prices.

~~1.14.1.20.~~ Forecast views Forecasts of Monetised Risk ~~shall and asset and intervention volumes should~~ represent the ~~licensees~~ licensee's best ~~view following~~ views. The licensee should use its best endeavours to take account of all relevant internal and external factors ~~when forming these views~~.

~~1.15.~~ Unless a licensee has an explicit agreement to the contrary with Ofgem, then risk values are to be derived in accordance ~~its most recently approved NOMs Methodology~~. Where such an explicit agreement exists then the licensee should provide an explanation in its associated narrative document.

~~1.16.1.21.~~ Unless it is stated that lifetime or longer term risk values to be reported, then all risks to be reported are ~~annual~~ single year snapshot values and ~~shall~~ should be derived in accordance with the licensee's NARM Methodology. Long term risks should be reported in accordance with the licensee's NARM Methodology or, if the NARM Methodology does not yet cover long term risk, then in accordance with the methodology agreed with Ofgem for RIIO-2 Business ~~Plan~~ Plans. The ~~licensees~~ licensee's accompanying narrative document should state the basis on which long term monetised risk values have been derived.

Form of submission

~~1.17.~~ Licensees should submit their NARM RRP in accordance with instructions given from Ofgem on the overall RIGS and RRP.

Structure of this document

~~1.17.~~ This document is divided into sections reflecting the different component parts of the BPDs workbooks. These are as follows:

- ~~• Chapter 2 provides instructions for the completion of the 'N1 Output Delivery' Worksheets.~~
- ~~• Chapter 3 provides instructions for the completion of the 'N2 Network Risk' worksheets.~~
- ~~• Chapter 4 provides instructions for the completion of the 'N3 Asset Category Risk' worksheets.~~

Publication

~~1.18.1.22.~~ Ofgem is bound by the requirements of section 105 of the Utilities Act 2000 relating to the disclosure of information.

~~1.19.1.23.~~ Ofgem recognises the value of improving transparency of information in regulating natural monopolies and we intend to continue to review to what extent to publish further disaggregated data and analysis alongside the RRP.

2. ~~N0 Cover~~Administrative Worksheets

Purpose or reporting requirements

2.1. These worksheets contain general administrative information including details of the licensee making the submission, the template and submission version, and details of the relationship of the NARM RRP to other RRP submitted by the licensee~~etc.~~

~~Overview of worksheets~~

~~2.2. The worksheets included within this chapter are:~~

Electricity Transmission	Gas Transmission	Gas Distribution
<ul style="list-style-type: none">• N0 Cover• N0.1 Contents• N0.2 Submission Version History• N0.3 Template Version History• N0.4 Related Workbooks• N0.5 Data Constants• N0.6 Lookup References	Same for all sectors	Same for all sectors

~~N0 Cover~~

N0.1 Submission Details

Purpose and use by Ofgem	This worksheet helps facilitate version control and efficient analysis of data.
General guidance on completing this worksheet	<p>Licensee must select company <u>the following from the dropdown menus:</u></p> <ul style="list-style-type: none"><u>Company</u> (licensee) name from dropdown list in cell B12 and<u>Reporting period</u> <p><u>Licensees must enter submission</u>the following information in the relevant cells:</p> <ul style="list-style-type: none"><u>Submission</u> version number and submission<u>Submission</u> date in cells B15 and B16 respectively.

	<p>Licensees are required to assign a unique submission version number for each submission and re-submission.</p> <p>Submitted files must be given the filename indicated in the 'File Name' cell B17 and be saved as a Excel Binary Workbook (.xlsb).</p>
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Sector-specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

Specific definitions for this worksheet

None	
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N0.12 Contents

Purpose and use by Ofgem	Lists all worksheets in workbook. Checks for Error flags on individual worksheets.
General guidance on completing this worksheet	<p>No licensee input required.</p> <p>Licensees should ensure that Data Error Check column does not return 'Error' flag for any worksheets before submission.</p>

Sector specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

Specific definitions for this worksheet

None	
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N0.23 Submission Version History

Purpose and use by Ofgem	Will be used to help track changes between a licensee's submissions and/or any resubmissions .
General guidance on completing this worksheet	<p>Licensees are required to provide as much detail as is practical on changes between submission versions.</p> <p>Details of the overall submission should be entered in the green cells, with table specific detail entered in yellow cells. Licensees may add or insert as many green or yellow rows as required.</p>

Sector specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

Specific definitions for this worksheet

None	
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N0.34 Template Version History

Purpose and use by Ofgem	Contains details of changes to the template.
General guidance on completing this worksheet	Licensees should not make changes to the template and therefore licensees are not required to input this table unless instructed to make changes by Ofgem.

Sector specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

Specific definitions for this worksheet

None	
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N0.45 Related [WorkbooksFiles](#)

Purpose and use by Ofgem	To ensure maintenance and alignment between related workbook submissions. For licensees to provide relevant details of related or supporting files. This worksheet will help correct referencing across related files/documents.
General guidance on completing this worksheet	<p>This workbook contains two sections:</p> <ul style="list-style-type: none"> • 'Linked To' (top section): Licensees should enter details of any workbooks that links to the corresponding Cost and Volumes (CV) RRP, i.e. the CV RRP with volumes aligned through the NARM workbook, e.g. if link to project listing Interface sheet (in the CV RRP) and N1.1 NARM Summary tab, and contain associated cost and volume pack. <p>'Linked From' (bottom section): Licensees should enter details of any workbooks that NARM links to the NARM workbook or workbook that data from the NARM workbook.</p> <p>Licensees may add rows to either of the sections as required. Licensee may also provide details of any supporting files or documents (e.g. narrative document).</p>

Sector specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

Specific definitions for this worksheet

None	
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N0.5 Data Constants

Purpose and use by Ofgem	This table gives details of any constants used by licensee in populating the template. This will be used where appropriate to check consistency across the entire business plan.
General guidance on completing this worksheet	Licensees should enter details of data constants used in deriving the data contained in the NARM RRP submission.

Sector specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

Specific definitions for this worksheet

None	
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N0.6 ~~Lookup References~~ Data Constants

Purpose and use by Ofgem	Contains data for use in dropdown lists and other lookup values used in the template. This table gives details of any material constants used by licensee in populating the template. This will be used where appropriate to check sector consistency and monitor any potential future amendments (e.g. that may require a methodology change)..
General guidance on completing this worksheet	Asset categories are a full list of asset categories agreed between Licensees and Ofgem's cost assessment teams. Licensee should not change asset categories. Licensees should enter details of data constants used in deriving the data contained in the NARM RRP submission. Unless updated for the purpose of the RRP then, data constants with values set by the NARM Methodology do not need to be recorded on this worksheet.

Sector specific guidance

<u>Electricity Transmission</u>	<u>N/A</u>
<u>Gas Transmission</u>	<u>N/A</u>
<u>Gas Distribution</u>	<u>N/A</u>

Specific definitions for this worksheet

<u>None</u>	
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N0.7 Lookup References

Purpose and use by Ofgem	Contains data for use in dropdown menus and other lookup values used in the template.
General guidance on completing this worksheet	Asset categories are a full list of asset categories agreed between Licensees and Ofgem's cost assessment teams. Licensee must receive explicit consent from Ofgem to change any of the data on this worksheet.

Sector specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

Specific definitions for this worksheet

None	
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3. N1 Output Delivery Worksheets

Purpose of reporting requirements

- 3.1. ~~Provides~~These worksheets provide relevant detail on ~~the~~ type of interventions and intervention options for Monetised Risk Output delivery, as well as details of projects or schemes for delivering outputs.

~~Overview of worksheets~~

- 3.2. ~~The worksheets included within this chapter are:~~

Electricity Transmission	Gas Transmission	Gas Distribution
<ul style="list-style-type: none">•N1.1 NARM Summary•N1.2 Intervention Listing•N1.3 Project Listing•N1.4 ET Asset MR	<ul style="list-style-type: none">•Same for all sectors	<ul style="list-style-type: none">•Same for all sectors

~~N1.1 NARM Summary~~

N1.1 Intervention Summary

Purpose and use by Ofgem	<p>Provides summary of the intervention volumes and monetised risk for NARM asset categories. The summary tab also operates as an interface sheet with the sector specific Costs and Volumes RRP.</p> <p>The data reported through the Cost and Volumes RRP must reconcile with data reported through the NARM RRP. This worksheet and counterpart NARM_Interface worksheet in the CV RRP will help confirm alignment between the NARM output delivery (reported through the NARM RRP) with the associated costs of delivering those outputs (reported through the CV RRP).</p> <p>This worksheet aggregates the intervention volumes and outputs for each NARM Asset Category. NARM_Interface worksheet contained in the CV RRP provides intervention volumes and costs by NARM Asset Category. Intervention</p>
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	volumes reported in the CV RRP and intervention NARM RRP must align for each NARM Asset Category.
General guidance on completing this worksheet	<p>This worksheet is auto-populated from the N1.3_Project_ListingDelivery worksheet.</p> <p>The licensee is required to ensure that the NARM intervention volumes reported through the NARM RRP and those reported in the CV RRP are aligned. Should any misalignment occur due to a resubmission of either RRP, then the other RRP must also be resubmitted with input data updated to bring the two submissions back into alignment.</p>

[Sector specific guidance](#)

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

[Specific definitions for this worksheet](#)

None	
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[N1.2 Intervention Listing](#)

Purpose and use by Ofgem	<p>Provides details on interventions by asset category, the expected longevity of interventions and the annual profile of intervention volumes.</p> <p>This table is intended to enable Ofgem to understand the characteristics of interventions and the delivery profile of interventions.</p>
General guidance on completing this worksheet	<p>Licensees are required to provide details of all interventions that could potentially impact Monetised Risk.</p> <p>‘Intervention Type ID’, is an identifier unique to each line item line item. Licensees may insert additional rows above the ‘End’ row. If doing so it must ensure that sequential numbering of ‘Intervention Type ID’ is maintained.</p> <p>Licensees must ensure consistency in referencing across</p>

	<p><u>regulatory years. We may consider locking in some data on this sheet in future years.</u></p> <p><u>Licencees must populate the following fields for every reported line item:</u></p> <ul style="list-style-type: none"> <u>a. NARM Asset Category: populated using dropdown menu. The dropdown menu is populated from worksheet N0.7 Lookup References.</u> <u>b. Intervention Category: populated using dropdown menu. The dropdown menu is populated from worksheet N0.7 Lookup References.</u> <u>c. Expected Life of Intervention: free entry cells. The licensee should enter the average expected life of the intervention in years or as a range or years.</u> <u>d. Description (including general description of expected effect on monetised risk): free entry cells – explanation of the nature of the intervention and effect expected to have in general cases on monetised risk.</u> <p><u>Licensees must populate the following fields where relevant to a line item:</u></p> <ul style="list-style-type: none"> <u>e. Item/sub-component: free entry cells – licensee to enter name of sub-component sub-category of a NARM Asset Category where it is necessary, e.g. replacing the tap changer on a 132kV Transformer might be classified as a 132kV Transformer Refurbishment. The licensee should enter 'Tap Changer' in this field. Licensees should use consistent terminology and syntax across 'Item/sub-component' entries.</u> <u>f. Distinguisher: This field is to be used to distinguish between interventions with the same 'NARM Asset Category', 'Intervention Category', and 'Item/Sub-component'.</u>
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	<p>The following field is auto-populated dependant on the data entered for a. to e. above for each line item:</p> <p>g. <u>Intervention Type</u>: this field is auto-generated by combining the entries in fields a, d, e, and b. Licensees must ensure that each line item value is unique and must utilise the 'Distinguisher' field to distinguish between interventions with the same 'NARM Asset Category', 'Intervention Category', and 'Item/Sub-component'.</p>
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Sector specific guidance

<u>Electricity Transmission</u>	N/A
<u>Gas Transmission</u>	N/A
<u>Gas Distribution</u>	N/A

Specific definitions for this worksheet

<u>NARM Asset Category</u>	<p>The asset grouping as agreed between Ofgem and the licensee(s) in a given sector as suitable for NARM reporting purposes. Agreed NARM Asset Categories for each sector are entered by Ofgem on N0.7 Lookup References worksheet.</p>
<u>Item/sub-component</u>	<p>Where known the specific asset component(s) replaced or refurbished or otherwise intervened on through a given intervention, if not the complete asset.</p> <p>Examples:</p> <p>Transformer – [Main Tank*][Selector*][Tap Changer*][Divertor*][Selector*][Bushing*][Ancillary Plant*]</p> <p>Circuit Breaker – [Drive Mech*][Pressure Vessel*][Main Tank*][Bushing*][Ancillary Plant*]</p> <p>*please provide/ignore as required</p>
<u>Intervention Type</u>	<p>A unique descriptor of the listed intervention associated with an Intervention Type ID.</p>

Expected Life of Intervention (yrs)	This is a free text field. Licensees are required to provide explanation of number of years they expect, on average, from the date of a given intervention type before a subsequent intervention will be required in order to address the failure modes that the original intervention was planned to address. This may be given as a range of years to reflect uncertainty and the distribution across an asset population.
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N1.3 Project Delivery

Purpose and use by Ofgem	To understand the delivery of a licensee's Monetised Risk Outputs through its proposed intervention work programme. This data will be used to annually monitor licensee's delivery of its Baseline Network Risk Outputs (BNRO) and to understand how outturn compares to business plan assumptions as well as the impact and implications of any differences from what was assumed in setting RIIO-2 Final Determinations.
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<p>General guidance on completing this worksheet</p>	<p>Licensees are required to report schemes/projects/generic work programmes as set out in the sector specific guidance below.</p> <p>All schemes/projects/generic work programmes recorded as line items in the licensee's Network Asset Risk Workbook (NARM Workbook), as well as any new schemes in NARM Funding Category A1, must be reported. Licensees may also record schemes in NARM Funding Categories A2, A3, and B, if in its view doing so will aid transparency and/or under-standing of its' overall RIIO-2 performance.</p> <p>The licensee is required to report details related to all RIIO-2 schemes/projects/generic work programmes even if they have been cancelled or deferred.</p> <p>Please note that any new schemes/projects/generic work programmes (i.e. not in baseline) must be added to N1.4 Project Details before they can be entered on this worksheet.</p> <p>Licencees must populate the following fields for every reported line item:</p> <ol style="list-style-type: none"> a. Scheme/Asset Category Reference: entry selected from dropdown menu. Dropdown menu is populated from worksheet N1.4. b. Intervention Type: selected from dropdown menu. Dropdown menu is populated from worksheet N1.1. The licensee is required to enter a minimum of one new line item for each 'Intervention Type' associated with a 'Scheme/Asset Category Reference'. c. Delivery Year: The licensee is required to enter the 'Delivery Year' associated with each line item. If delivery of an 'Intervention Type' for a given Scheme/Asset Category Reference is spread across
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	<p><u>multiple Delivery Years then each Delivery Year must be entered as a separate line item.</u></p> <p>d. <u>'Replace Addition', 'Replace Disposal', 'Refurb and other': For replacement interventions then asset volumes must be entered into the 'Replace Addition' and/or 'Replace Disposal' field. For like-for-like replacement (e.g. 3 no. 132kV Transformers replaced with 4 no. 132 kV Transformers) then volumes should be entered in both fields. For non-like-for-like replacements (e.g. 3 no. 132kV Transformers replaced with 2 no. 400kV Transformers) each should be entered as separate line items with zero values entered in the relevant 'Replace Addition'. For Refurbishments and any other reportable interventions then the intervention volumes should be entered under 'Refurb and other'. Both additions and disposals are to be entered as positive numbers.</u></p> <p>e. <u>Pre-Intervention Risk (R£m), Post Intervention Risk (R£m), and Long Term Benefit (R£m); values to be entered for each line item. At present GDNs are not required to report Long Term Benefit values.</u></p> <p>f. <u>Asset volume before intervention (# or km), Asset volume after intervention (# or km): licensees to enter the risk profile of assets of asset volume related to each line item.</u></p> <p><u>Licensees must populate the following fields where relevant to a line item:</u></p> <p>g. <u>Proposed CIOD/CIUD: where in the licensee's view a line item meets the criteria for Clearly Identifiable Over-Delivery (CIOD), or Clearly Identifiable Under-Delivery (CIUD) then it should indicated by selecting CIOD or CIUD as relevant from the dropdown menu. The licensee should provide explanation as part of is supporting commentary.</u></p>
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	<p><u>The following fields are autopopulated dependant on other entries for a given line item:</u></p> <ul style="list-style-type: none"> <u>h. Scheme/Asset Category Description,</u> <u>i. Funding Category,</u> <u>j. Risk Sub-Cat,</u> <u>k. Project Status,</u> <u>l. NARM Asset Category,</u> <u>m. Intervention Type ID,</u> <u>n. Intervention Category,</u> <u>o. Volume of Interventions</u> <u>p. Units,</u> <u>q. RIIO-2 Output Metric,</u> <u>r. RIIO-2 Output (R£m).</u>
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Sector specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	<p><u>N/A GDNs are at present not required to report Long Term Risk Benefit. However, a GDN may report any preliminary views it might have on long term benefit in order to assist in the development of this metric for the GD sector. GDNs are expected to develop Long Term Risk Benefit metric during RIIO-2 in time for use in RIIO-3 business planning.</u></p>

Specific definitions for this worksheet

<u>None</u> <u>Delivery Year</u>	<p><u>Delivery Year is the regulatory year in which interventions are delivered or forecast to be delivered. Licensees must report either the actual or forecast delivery year as relevant. Licensees must enter the Delivery Year in four</u></p>
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	<u>digit format (YYYY), e.g. 2022 for the regulatory year 2021/22.</u>
<u>Volume of Interventions (#)</u>	<u>Means the number of intervention activities delivered or forecast to be delivered in a given Delivery Year. In the case of refurbishment, each refurbishment activity counts as one intervention. In the case of replacement, each addition or disposal counts as half an intervention. A full like for like replacement will therefore equal one intervention (0.5 x addition + 0.5 x disposal). For non-like-for-like replacement</u>
<u>Pre Intervention Risk (R£m)</u>	<u>Pre Intervention is the forecasted monetised risk position without intervention, with the assumption applied that the asset has deteriorated to the End of 2025/26 for associated asset category under reported project/scheme.</u>
<u>Post Intervention Risk (R£m)</u>	<u>Post Intervention is the forecasted monetised risk position with intervention, with the assumption applied that the intervention takes place at the End of 2025/26 for associated asset category under reported project/scheme.</u>
<u>Long Term Benefit (R£m)</u>	<p><u>The long term benefit resulting from replacements and refurbishments forecast to be delivered over RIIO-2.</u></p> <p><u>For long term benefit output calculation:</u></p> <ol style="list-style-type: none"> <u>1. Benefits shall be calculated by applying the assumption that all interventions take place at the end of RIIO-2.</u> <u>2. Only the benefits of the interventions proposed for delivery in RIIO-2 are to be included for the purpose of calculating RIIO-2 outputs. The benefit of any subsequent interventions assumed for other purposes, such as for CBA, shall be discounted for this purpose.</u> <p><u>Outputs should be discounted using the same discount factors as per those for Business Plan submissions, unless otherwise agreed with Ofgem in advance of submission.</u></p>

N1.2 Intervention Listing4 Project Details

Purpose and use by Ofgem	<p>Provides details on interventions by asset category, the expected longevity of interventions and the annual profile of intervention volumes.</p> <p>The intended use of table is to understand the characteristics of interventions and the delivery profile of interventions. The purpose of this worksheet is to provide a fill listing of the licensees RIIO-2 schemes/projects/generic work project data. It is used to populate the relevant project fields of N1.3 worksheet.</p>
General guidance on completing this worksheet	<p>Licensees are required to provide details of all interventions that could potentially impact Monetised Risk.</p> <p>This worksheet is pre-populated with each licensee's baseline projects, i.e. the schemes/projects/generic work programmes from each licensee's NARM Workbook.</p> <p>Licencees should must populate the following columns/fields for every reported line item:</p> <ul style="list-style-type: none"> • NARM Asset Category, populated using drop-down list (column-B). • Item/sub-component, freeProject Status: entry cells (column-C) • Intervention, selected from dropdown menu. Dropdown menu is populated using drop-down list (column-D) • Expected Life of Intervention, free-entry cells (column-E) <p>a. Licensees should populate details of any intervention from worksheet N0.7. Status options with potential Monetised Risk impact are:</p> <ul style="list-style-type: none"> • Column A, 'Intervention Type ID', is a unique identifier reference for the

	<p>information entered in columns B to E. Licensees must ensure that information entered against an Intervention Type ID, in columns B to E, is a sole and unique representation of an asset intervention, to ensure a one to one relationship. Forecast: where scheme is expected to commence, or in the pre-construction stage.</p> <ul style="list-style-type: none"> • <u>Commenced: where construction has commenced, or where outputs have been partially delivered.</u> • <u>Cancelled: where scheme has been cancelled. Details should still be reported in years following cancellation.</u> • <u>Deferred: delivery has been deferred to beyond the end of RIIO-2.</u> • <u>Delivered: all monetised risk outputs from a scheme have been delivered.</u> <p><u>Licensees must populate the following fields where relevant to a line item:</u></p> <p><u>b. Scheme/Asset Category Reference: Licensee must enter new unique references (in accordance with the referencing convention used for CV RRP) by overwriting the formula in the next available line. Once a new scheme has been reported it must remain for future year's RRP's regardless of status.</u></p> <p><u>b-c. Scheme/Asset Category Description: Licensee must enter a meaningful description related to new Scheme/Asset Category Reference by overwriting the formula in the relevant cell.</u></p>
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Sector specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

Specific definitions for this worksheet

NARM Asset Category Project/Scheme Reference	<p>[To Be Confirmed] The asset grouping that is relevant for NARM reporting purposes for each sector:</p> <ul style="list-style-type: none"> • Electricity transmission: seven categories at each of the three voltage levels (132 kV, 275 kV, 400 kV) making 21 asset categories in total • Gas transmission: 37 secondary asset categorie • Gas distribution: 18 secondary asset classes <p><u>The Project/Scheme Reference should be consistent and align with the referencing used for the sector specific Cost and Volumes RRs. Where a project/scheme delivers Monetised Risk Outputs in multiple Cost and Volume Asset Categories, then each Cost and Volume Asset Category should be recorded as a separate line item, a NARM referencing function has been included (column A) to ensure line items are unique.</u></p>
Item/sub-component	<p>Where known the specific asset component(s) replaced or refurbished or otherwise intervened on through a given intervention, if not the complete asset.</p> <p>Examples:</p> <p>Transformer—[Main Tank*][Selector*][Tap Change*][Divertor*][Selector*][Bushing*][Ancillary Plant*]</p> <p>Circuit Breaker—[Drive Mech*][Pressure Vessel*][Main Tank*][Bushing*][Ancillary Plant*]</p> <p>*please provide/ignore as required</p>
Intervention	Description of the listed intervention
Expected Life of Intervention (yrs) Funding Category	<p>This is a free text field. Licensees are required to provide explanation of number of years they expect, on average, from the date of a given intervention type before a subsequent intervention will be required in order to address the failure modes that the the original intervention was planned to address. This may be given as a range of years to reflect uncertainty and the distribution</p>

	<p><u>across an asset population. Assets are classed into two high level categories:</u></p> <p><u>A. NARM Assets – assets where, by applying the relevant sector/company NARM Methodology, the Monetised Risk of the asset can be estimated.</u></p> <p><u>B. Non NARM Assets – this is work on assets or interventions not currently covered by a network company’s NARM Methodology. Some assets may be brought into the scope of NARM during RIIO-2 for including in future price controls. This will be dependent on development of suitable methodologies for deriving Network Risk Outputs.</u></p> <p><u>For Category A (NARM Assets), some will be subject to NARM funding and incentive mechanisms and others may not be. Category A assets can therefore be further assigned to three sub-categories:</u></p> <p><u>A1 – NARM Funding Adjustment and Penalty Mechanism this is work within the initial scope of the NARM Funding Adjustment and Penalty Mechanism and which contributes to a company’s BNRO. Network companies have discretion to design their delivery programmes to efficiently deliver their BNRO (i.e. trade risk).</u></p> <p><u>A2 – Funding Under Separate Mechanism this is work delivering Network Risk Outputs that is not currently within the scope of the NARM Funding Adjustment and Penalty Mechanism (e.g. replacement or refurbishment work carried out and funded as part of a load related scheme). The Network Risk Outputs associated with this work does not contribute to the BNRO. However, should the case for funding under the original mechanism fall away then, subject to any specified</u></p>
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	<p><u>qualifying criteria, the Network Risk Output associated with this work may contribute to a company's final ONRO.</u></p> <p><u>A3 – Ring-fenced Project/Activity</u> <u>this is work that will deliver Network Risk Outputs but which is not within the scope of the NARM Funding Adjustment and Penalty Mechanism. The Network Risk Output associated with this work will not contribute to a company's final ONRO.</u></p> <p><u>Licensees are required to populate in the 'Funding Category' column the category (A1, A2, or A3) that was agreed for that project, scheme, or generic work programme.</u></p>
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~~N1.3 Project Listing~~

Purpose and use by Ofgem	To understand the project delivery of a licensee's Monetised Risk Outputs. This data will be used to monitor licensee's delivery of their NARM targets and to understand how outturn compares to business plan assumptions as well as the impact and implications of any differences from what was assumed in setting RIIO-2 final determinations.
General guidance on completing this worksheet	<p>Licensees are required to report schemes/projects/generic work programmes as set out in the sector specific guidance below.</p> <p>Licencees should populate the following columns:-</p> <ul style="list-style-type: none"> • Ofgem Project/Scheme Reference, free entry cells (column B) • Cost and Volume Asset Category, populated using drop down list (column C). • Funding Category, populated using drop down list (column D). • Risk Sub Category, populated using drop down list (column E)

	<ul style="list-style-type: none"> • Intervention Type ID, populated using drop down list (column F). • Qualitative Detail on Monetised Risk: <ul style="list-style-type: none"> ◦ Impacts MR (Yes/No), populated using drop down list (column H) ◦ Impact on (Pof/CoF), populated using drop down list (column I) ◦ Additional Explanation, free entry cells (column J) • Delivery Date (2022 to 2026), populated using drop down list (column L) • Volume of Interventions (#), free entry cells (columns M) • MR Delivered (R£m), free entry cells (columns O) • Pre Intervention (R£m), free entry cells (column P) • Post Intervention (R£m), free entry cells (column Q) • Long Term Risk Benefit (LR£m), free entry cells (column R) • Asset volume before intervention (#), free entry cells (columns U-AD) • Asset volume after intervention (#), free entry cells (columns AE-AN) <p>Column A, NARM_Ref, is a project listing reference code for the NARM RRP. This will provide consistent, and unique identification, of line items for annual NARM RRP.</p> <p>Column G, Intervention, is a look-up function linked, via the Intervention Type ID, to the intervention information entered in N1.2_Intervention_Listing.</p> <p>Column N, units, is auto-populated from N0.6_Lookup_Reference tab.</p>
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	<p>Column S, Intervention Delta is auto-calculated from the different of Post Intervention and Pre Intervention Monetised Risk (R£m).</p> <p>Columns AO and AQ, Total Asset vol. before and Total Asset vol. after, are the totals volumes determined from the data entered into columns U-AN. Column AQ, Volume Change, is the difference between the two.</p>
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Sector specific guidance

Electricity Transmission	<p>All schemes that deliver Monetised Risk Outputs (A1) must be listed. If there is mis-alignment between the NARM RRP and cost and volume RRP, then the licensee must provide the suitable database mapping to re-establish the relationship between the NARM RRP and cost and volume RRP.</p> <p>ET Licensees should also use the Risk Sub Category (column E) drop-down to select the most relevant sub-category. The Risk Sub Categories are;</p> <ul style="list-style-type: none"> • ET CB (Circuit Breaker) • ET OHL Conductor (Overhead Line Conductor) • ET OHL Fittings (Overhead Line Fittings) • ET OHL Tower (Overhead Line Tower) • ET Reactor • ET Transformer • ET UG Cable (Underground Cable)
Gas Transmission	<p>All projects that are separately identified and deliver a Monetised Risk Output (A1) must be listed individually. In order to reconcile with other RRP tables, licensee may group generic work programmes together to report as projects on this table. Any groupings must reconcile with GT cost and volume RRP. If there is mis-alignment between the NARM RRP and cost and volume RRP, then the licensee must provide the suitable database mapping to re-establish</p>

	<p>the relationship between the NARM RRP and cost and volume RRP.</p> <p>GT Licencee should also use the Risk Sub Category (column E) drop down to select the most relevant sub category. The Risk Sub Categories are;</p> <ul style="list-style-type: none"> • GT Low • GT Medium • GT High
Gas Distribution	<p>All projects that are separately identified within the business plan and deliver a Monetised Risk Output must be listed individually. In order to reconcile with other RRP tables, licensee may group generic work programmes together to report as projects on this table. Any groupings must reconcile and align with GD cost and volume RRP.</p> <p>For GD Licencees there is no subdivision of Baseline Network Risk Output, therefore, 'GD Network' should be selected in Risk Sub Category (column E) for all entries.</p>

Specific definitions for this worksheet

Ofgem Project/Scheme Reference	<p>The Ofgem Project/Scheme Reference should be consistent and align with the referencing used for the sector specific Cost and Volumes RRP. Where a project/scheme delivers Monetised Risk Outputs in multiple Cost and Volume Asset Categories, then each Cost and Volume Asset Category should be recorded as a separate line item, a NARM referencing function has been included (column A) to ensure line items are unique.</p>
Funding Category	<p>Assets are classed into two high level categories:</p> <p>A. NARM Assets—assets where, by applying the relevant sector/company NOMs Methodology, the Monetised Risk of the asset can be estimated.</p>

	<p>B. Non NARM Assets—this is work on assets or interventions not currently covered by a network company's NARM Methodology. Some assets may be brought into the scope of NARM during RIIO-2 for including in future price controls. This will be dependent on development of suitable methodologies for deriving Network Risk Outputs.</p> <p>For Category A (NARM Assets), some will be subject to NARM funding and incentive mechanisms and others may not be. Category A assets can therefore be further assigned to three sub-categories:</p> <p><u>A1—NARM Funding Adjustment and Penalty Mechanism</u> this is work within the initial scope of the NARM Funding Adjustment and Penalty Mechanism and which contributes to a company's BNRO. Network companies have discretion to design their delivery programmes to efficiently delivery their BNRO (i.e. trade risk).</p> <p><u>A2—Funding Under Separate Mechanism</u> this is work delivering Network Risk Outputs that is not currently within the scope of the NARM Funding Adjustment and Penalty Mechanism (e.g. replacement or refurbishment work carried out and funded as part of a load related scheme). The Network Risk Outputs associated with this work does not contribute to the BNRO. However, should the case for funding under the original mechanism fall away then, subject to any specified qualifying criteria, the Network Risk Output associated with this work <u>may contribute</u> to a company's final ONRO.</p> <p><u>A3—Ring fenced Project/Activity</u> this is work that will deliver Network Risk Outputs but which is not within the scope of the NARM Funding Adjustment and Penalty Mechanism. The Network Risk Output associated with this work <u>will not contribute</u> to a</p>
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	<p>company's final ONRO.</p> <p>Licensees are required to populate in the 'Funding Category' column the category (A1, A2, or A3) that was agreed for that project, scheme, or generic work programme.</p>
Risk Sub-Category	<p>For the ET and GT sectors, the A1 category is further segmented into 7 and 3 Risk Sub-Categories respectively. The NARM Funding Adjustment and Penalty Mechanism will operate independently for each Risk Sub-Category, and network companies will not be permitted to automatically trade risk across Risk Sub-Categories. However, there may be crossover considerations when it comes to justifying over-delivery or under-delivery of BNRO (e.g. over-delivery in one Risk Sub-Category might justify under-delivery in another).</p> <p>See sector specific guidance for further detail.</p>

N1.5 Project Summary – NARW Format

Intervention Type ID	<p>When selecting the suitable intervention type ID (column F), licencees should ensure the selection aligns with the correct intervention that is documented on</p> <p>N1.2_Intervention_Listing.</p>
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Qualitative Detail on Monetised Risk Purpose and use by Ofgem	<p>Section allows licencees to enter qualitative information against line items. The qualitative information to be entered is:</p> <ul style="list-style-type: none"> • Impacts MR (Yes/No), is an indicator for whether there is a monetised risk impact project/scheme. • Impact on (PoF/CoF), is to indicate the specific benefit gained through the intervention. <p>Additional explanation, is to allow the licencee to provide any supplementary information. The purpose of this worksheet is to present data reported on N1.3 in the same format as in the Network Asset Risk Workbook (NARM Workbook). It will be used by Ofgem to help understand licensees' delivery of their BNRO.</p>
Delivery Date	Delivery date is the date of delivery for the intervention volumes. Licencees should provide their current and forecast intervention delivery year to the best of their knowledge.
Volume of Interventions (#)	Volume of interventions is the number of intervention completed. Licencees should make their best and most reasonable effort to populate intervention volumes based on their current understanding and knowledge of their delivery work programme.
Monetised Risk (R£m): Pre Intervention	Pre Intervention is the forecasted monetised risk position without intervention at End of 2025/26 (i.e. snapshot view) for associated asset category under reported project/scheme.
Monetised Risk (R£m): Post Intervention	Post Intervention is the forecasted monetised risk position with intervention at End of 2025/26 (i.e. snapshot view) for associated asset category under reported project/scheme.
Long Term Benefit General guidance on completing this worksheet	<p>This worksheet is auto-populated from the N1.3 and N1.4 worksheets. Licensees should use this worksheet as a cross-check to help verify the accuracy of the data reported on these two worksheets. The long term benefit resulting from replacements and refurbishments forecast to be delivered over RIIO-2.</p>

	<p>For long term benefit output calculation:</p> <p>1. Benefits shall be calculated by applying the assumption that all interventions take place at the end of RIIO-2</p> <p>2.1. Only the benefits of the interventions proposed for delivery in RIIO-2 are to be included for the purpose of calculating RIIO-2 outputs. The benefit of any subsequent interventions assumed for other purposes, such as for CBA, shall be discounted for this purpose.</p> <p>Outputs should be discounted using the same discount factors as per those for Business Plan submissions, unless otherwise agreed with Ofgem in advance of submission.</p>
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Sector specific guidance

<u>Electricity Transmission</u>	<u>N/A</u>
<u>Gas Transmission</u>	<u>N/A</u>
<u>Gas Distribution</u>	<u>N/A</u>

Specific definitions for this worksheet

<u>None</u>	
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4. N2 Network Risk Worksheets

Purpose of reporting requirements

- 4.1. The purpose of these worksheets is to enable understanding of the total monetised risk on the network at both the start and end of RIIO-2, including the distribution of Monetised Risk, and impact on risk and risk movements of individual asset categories, risk factor components, and interventions.

~~Overview of worksheets~~

- ~~4.2. The worksheets included within this chapter are:~~

N2.1 Network Risk Summary

Electricity Transmission	Gas Transmission	Gas Distribution

~~N2.1 Network Risk Summary~~

Purpose and use by Ofgem	Provides summary view of Monetised Risk on a network at start and end of RIIO-2 disaggregated by Asset Category.
General guidance on completing this worksheet	This worksheet is auto populated and requires no input from licensees.

Sector specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

Specific definitions for this worksheet

None	
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N2.2 Risk Banding

Purpose and use by Ofgem	Defines the risk banding that each licensee will utilise for reporting purposes.
General guidance on completing this worksheet	<p><u>Licensees are required to utilise banding that is consistent with those used for its RIIO-2 Business Plan in its Network Asset Risk Workbook (NARW).</u></p> <p>Licensees are required to report the minimum and maximum points of the Risk and Probability of Failure (PoF) bands that was agreed, and is consistent with, those used in the licensee's Network Asset Risk Workbook (NARW). <u>will be utilised for reporting throughout the NARM RRP. A licensee may utilise an alternative Health Indicator measure as a proxy for PoF provided it receives Ofgem's prior agreement to do so. Licensees should explain in their accompanying commentary documents the PoF/Health Indicator measure that has been used.</u></p> <p><u>Licensees may use different banding values for different asset categories. However, the approach to determining the banding approach should be consistent for all Asset Categories.</u></p> <p><u>In defining bands licensees should ensure that the bands:</u></p> <ol style="list-style-type: none"> <u>1. sufficiently differentiate asset populations,</u> <u>2. are not skewed by outliers in the population,</u> <u>3. will be enduring – the intention is that the same bandings will be used throughout RIIO-2 implementation. Therefore, licensees should take account of the expected deterioration of assets and risk of any new assets likely to be installed on the network.</u> <p><u>Licensees within the same company group should utilise the same bandings.</u></p> <p><u>For linear assets, the banding should be based on the per kilometre risk, e.g. a 10km pipeline with total risk of R£10m</u></p>

	<p>should be assigned to the same risk band as a 1km pipeline with a total risk of R£1m.</p> <p>For non-linear assets the banding should be based on the individual asset risk.</p> <p>Licensees should explain in their supporting narratives the approach that the banding approach they have applied.</p>
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Sector specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

Specific definitions for this worksheet

None	
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N2.3 – N2.5 ~~RIIO-2~~ RIIO-2 Total Risk Start 2021/Without 2026/With 2026 Worksheets

Purpose and use by Ofgem	Provides summary view of distribution profile of Monetised Risk on a network at start and end of RIIO-2 disaggregated by Asset Category.
General guidance on completing this worksheet	<p>Licensees are required to their view on these three worksheet on the following:</p> <ul style="list-style-type: none"> • N2.3 RIIO2 Risk Start 2021—this should align with the start position set out in the licensee's Network Asset Risk Workbook (NARW). • N2.4 RIIO2 Risk Without 2026—this should be current view (2022) which is based on the assumption that no additional work (above work assumed for N2.3) will take place to the end of 2025/26

	<ul style="list-style-type: none"> • N2.5 RIIO2 Risk With 2026—this view should be the current view (2022) based on the interventions reported on tables N1.2 and N1.3 being delivered in the year planned. <p>Licensees are required to report PoF, and Volumes for total population of each NARM Asset Category on each worksheet. Risk is auto-populated from N3 tabs in the workbook. <u>These worksheets are fully autopopulated from the N3 worksheets.</u></p> <p>Licensees must complete the N3 worksheets so as to ensure the data reported on these (N2.3 to N2.6) worksheets accurately reflect their best views of:</p> <ul style="list-style-type: none"> • <u>Total Risk at the Start of RIIO-2 (N2.3)</u> • <u>Total Risk at the end of RIIO-2 without A1 Intervention.</u> • <u>Total Risk at the end of RIIO-2 with A1 Baseline interventions (N2.5), and</u> • <u>Total Risk at the end of RIIO-2 with A1 Outturn/Forecast interventions (N2.6).</u>
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Sector specific guidance

<u>Electricity Transmission</u>	<u>N/A</u>
<u>Gas Transmission</u>	<u>N/A</u>
<u>Gas Distribution</u>	<u>N/A</u>

Specific definitions for this worksheet

<u>None</u>	
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~~Sector specific guidance~~

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

~~Specific definitions for this worksheet~~

None	
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N2.67 – N2.89 Risk Components Start 2021/Without 2026/With 2026 Component Worksheets

Purpose and use by Ofgem	Provides summary view of distribution profile of Monetised Risk on a network at start and end of RIIO-2 disaggregated by Asset Category and by component elements of risk (i.e. Environmental Risk, Safety Risk, System Risk, Financial Risk).
General guidance on completing this worksheet	<p>Licensees are required to provide their view on these three worksheetworksheets on the following:</p> <ul style="list-style-type: none"> • N2.67 Risk Component Start 2021 —this should align— data reported on this worksheet must reconcile with the start position set out in the licensee's Network Asset Risk Workbook (NARW).total risk and volume values reported on N2.3 worksheet. • N2.78 N2.78 Risk Component Without 2026 – data reported on this worksheet must reconcile with the total risk and volume values reported on N2.4 worksheet. • N2.9 N2.9 Risk Component With 2026 – this should be the licensee's the current view (2022) which is based on the assumption that no additional work (above work assumed for N2.3) will take place to the end of 2025/26 • N2.8 N2.8 Risk Component With 2026 —this view should be the current view (2022)— based on the interventions reported on tables N1.2 and N1.3 being delivered in the year planned. Data reported on this worksheet must reconcile with the total risk and volume values reported on N2.6 worksheet.

	<p>Licensees are required to report breakdown of Total Risk into Environment Risk, Safety Risk, System Risk, and Financial Risk for total population of each NARM Asset Category on each worksheet.</p> <p>Environmental, Safety, System, and Financial risks should be reported utilising the same banding as for Total Risk, i.e. each component risk value should sum up to the total risk values in each band.</p>
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Sector specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

Specific definitions for this worksheet

None	
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5. N3 Asset Category Risk Worksheets

Purpose of reporting requirements

- 5.1. The purpose of these worksheets ~~are~~is to provide details, for each Asset Category, ~~of~~on the factors ~~forecast to contribute~~contributing to the risk movements over ~~two time steps (i.e. remaining two years of RIIO-1 and five years of RIIO-2)~~, and ~~to provide view of~~on the ~~long term benefit forecast to be delivered by a licensee's replacement and refurbishment activities over~~network companies' delivery of their RIIO-2 NARM Outputs.

~~Overview of worksheets~~

- 5.2. ~~The worksheets included within this chapter are:~~

N3.n Worksheets

<p>Electricity Transmission <u>Purpose and use by Ofgem</u></p>	<p>Gas Transmission<u>Provides detailed view, for each Asset Category, of the factors forecast to contribute to the risk movements over two time steps (i.e. Closeout of RIIO-1 and the five years of RIIO-2). This data will be used to monitor licensee's delivery of their BNRO, to understand how outturn compares to business plan assumptions, and to inform future development of NARM and setting of future price controls.</u></p> <p><u>Please see 'Appendix 2 – N3 Worksheet Illustration of Risk Positions and Risk Changes', which provides a chart to help understanding of the relationship between the line items contained on these worksheets.</u></p>
<ul style="list-style-type: none"> •N3.00 Asset Category Risk Summary •N3.n tabs <u>General guidance on completing this worksheet</u> 	<ul style="list-style-type: none"> •N3.00 Asset Category Risk Summary •N3.n tabs <u>Licensees are required to report the impact on monetised risk, distribution of asset volumes in Risk and PoF bands, and effect of relevant factors likely to contribute to risk movements.</u>

	<p><u>The NARM RRP contains 50 sequentially numbered N3 worksheets (N3.01 to N3.50). Licensees are required to complete one worksheet per NARM Asset Category. The worksheets are autopopulated with the relevant NARM Asset Category names depending on the licensee name selected on the N0.1 Submission Details worksheet.</u></p> <p><u>Licensees may hide unused N3 worksheets. However, they must not be deleted as this will cause error in linked worksheets.</u></p> <p><u>Licensee's must complete the N3 worksheets so as to ensure the data reported on worksheets N2.3 to N2.6 accurately reflect their best views of:</u></p> <ul style="list-style-type: none"> <u>• Total Risk at the Start of RIIO-2 (N2.3)</u> <u>• Total Risk at the end of RIIO-2 without A1 Intervention,</u> <u>• Total Risk at the end of RIIO-2 with A1 Baseline interventions (N2.5), and</u> <u>• Total Risk at the end of RIIO-2 with A1 Outturn/Forecast interventions (N2.6).</u> <p><u>Categories of data to be reported</u></p> <p><u>Licensees must report values for the following for all Asset Category Total Risk Positions (see below) and for all relevant Risk Movements (see below):</u></p> <ul style="list-style-type: none"> <u>• Single Year Risk</u> <u>• Long Term Risk Benefits</u> <u>• Asset Interventions</u> <u>• Asset Populations</u> <ul style="list-style-type: none"> <u>○ for Risk Movements, the population change value is to be entered. Where the population does not change for a given Risk Movement the population change value reported will be zero.</u> <u>○ for Asset Category Total Risk Positions, the total asset population is calculated from the volumes entered in the relevant risk or PoF bands.</u>
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	<p><u>Licensees must report risk or PoF banded values for the following for all Asset Category Total Risk Positions:</u></p> <ul style="list-style-type: none"> <u>Asset Population – Risk Banding</u> <u>Risk Distribution</u> <u>Asset Population - PoF/Health Score Banding</u> <u>Average PoF/Health Score Per Risk Band</u> <p><u>Asset Category Total Risk Positions</u></p> <p><u>Licensees are required to report the above categories of data for the seven risk positions 1A to 3C below. Please see Appendix 2 for an illustration of the relationship between these risk positions.</u></p> <ul style="list-style-type: none"> <u>1A: RIIO-1 Closeout Position: this is the total asset category for all NARM Assets installed on the licensees network as at the end of RIIO-1 (31 March 2021). The data reported must be aligned with the equivalent data reported in the final RIIO-1 NOMs Closeout submission.</u> <u>1B: RIIO-2 Start: This is the RIIO-2 start position (1 April 2021). It is equivalent to the RIIO-1 Closeout Position after it has been adjusted for any data cleanse and/or change in methodology between RIIO-1 and RIIO-2. Once set in the 2021/22 RRP the values are expected to be fixed for subsequent years.</u> <u>2A: RIIO-2 End - Without Intervention (Pre-Normalisation): This is the risk/volume position as at the end of RIIO-2 (31 March 2026). It is derived by adding the expected deterioration (as assumed for the BNRO) to the RIIO-2 Start position. Once set in the 2021/22 RRP the values are expected to be fixed for subsequent years.</u> <u>2B: RIIO-2 End - Without A1 Intervention (Normalised): this is equal to 2A once the effect of normalisations (Non-Intervention Risk Changes and Non-NARM Interventions) have been accounted for.</u>
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	<p><u>The values reported may vary year-on-year as normalisation values are updated.</u></p> <ul style="list-style-type: none"> • <u>3A: Baseline RIIO-2 End - With A1 Intervention (Pre-Normalisation): This is the risk/volume position as at the end of RIIO-2 (31 March 2026) once the effect of Baseline NARM interventions have been accounted for and before any normalisations. Once set in the 2021/22 RRP the values are expected to be fixed for subsequent years.</u> • <u>3B: Baseline RIIO-2 End - With A1 Intervention (Normalised): this is equal to 3A once the effect of normalisations (Non-Intervention Risk Changes and Non-NARM Interventions) on both 2A and 3A have been accounted for. The values reported may vary year-on-year as normalisation values are updated.</u> • <u>3C: Outturn/Forecast RIIO-2 End - With A1 Intervention: This is the licensees best view of its licensees Outturn Network Risk Outputs (ONRO). No normalisation is required as the values reported must reflect the impact of any methodology changes, data cleans, etc.</u> <p>Risk Movements <u>Where relevant to an asset category then licensees must report its estimates of impact of the factors listed (a to q) below on the Single Year Risk, Long Term Risk Benefits, Asset Interventions, and Asset Populations:</u></p> <ul style="list-style-type: none"> <u>a. Data Cleansing</u> <u>b. NOMs to NARM Methodology Change</u> <u>c. Forecast Deterioration</u> <u>d. Faster/Slower Deterioration</u> <u>e. NARM Methodology Change</u> <u>f. CoF Change: Category 1 - Network configuration</u> <u>g. CoF Change: Category 2 – Financial</u> <u>h. CoF Change: Category 3 - Indirect interventions</u>
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	<p> i. PoF Change: Extension of Expected Asset Life j. A2 Funding Category Replacements and Refurbishments k. A3 Funding Category Replacements and Refurbishments l. Asset Additions (not part of A1 interventions) m. Asset Disposals (not part of A1 interventions) n. Changes in Maintenance Programme o. A1 Asset Replacement [autopopulated from N1.3 Project Delivery Worksheet] p. A1 Asset Refurbishment [autopopulated from N1.3 worksheet] q. A1 Other (including Decommissioning) [autopopulated from N1.3 worksheet] </p> <p> The licensee must explain the basis for its estimates of the above metrics within its accompanying commentary. </p> <p> Please refer to the NARM Handbook for further guidance on the principles relating to the above factors. </p> <p> Order of derivation The estimated value of the above metrics may be partly dependant on the order in which they are derived. For consistency of reporting licensees should derive their estimated values in the order in which they are listed on the N3 worksheets. </p> <p> Treatment to be applied in specific scenarios </p> <ul style="list-style-type: none"> Early life failures: Changes in risk due to unplanned replacement of failed or functionally failed assets. Two scenarios apply: <ul style="list-style-type: none"> Potential alternative funding mechanism available to licensee: impact of early life failure should be recorded under 'A2 Funding Category Replacements and Refurbishments'.
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	<ul style="list-style-type: none"> ○ <u>No potential alternative funding mechanism available to licensee: effect should be recorded under 'A1 Asset Replacement' or 'A1 Asset Refurbishment'. Licensees should recorded the intervention volumes, even if no monetised risk benefit delivered by replacement of the failed asset.</u> <u>Licensees should provide explanation of any reporting of early life failures as part of its supporting commentary.</u> • <u>Non-like-for-like replacements: please see instructions on worksheet N1.3.</u> • <u>Identification a new failure mode that needs addressed by maintenance (increasing risk on assets): should be treated as Methodology Change</u> • <u>Changes to which failure modes that are reset by a particular type of maintenance: should be treated as Methodology Change</u>
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~~N3.00 Asset Category Risk Summary~~

Purpose and use by Ofgem	Provides summary view, by Asset Category, of the factors that contribute to the risk movements over two time steps (i.e. Closeout of RIIO-1 and the five years of RIIO-2). This data will be used to monitor licensee's delivery of their NARM targets and to understand how outturn compares to business plan assumptions as well as the impact and implications of any differences from what was assumed in setting RIIO-2 final determinations.
General guidance on completing this worksheet	This worksheet is auto-populated and therefore no licensee input is required.

~~Sector-specific guidance~~

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

~~Specific definitions for this worksheet~~

None	
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~~N3.n tabs~~

Purpose and use by Ofgem	Provides detailed view, for each Asset Category, of the factors forecast to contribute to the risk movements over two time steps (i.e. Closeout of RIIO-1 and the five years of RIIO-2). This data will be used to monitor licensee's delivery of their NARM targets and to understand how outturn compares to business plan assumptions as well as the impact and implications of any differences from what was assumed in setting RIIO-2 final determinations.
General guidance on completing this worksheet	Licensees are required to report the impact on monetised risk, and distribution of asset volume in Risk and PoF, due to the following factors likely to contribute to risk movements: <ol style="list-style-type: none">1. Stage 1: RIIO-1 to RIIO-2 True-up <ol style="list-style-type: none">a. Data Revisionb. Methodological Changec. Option Entries2. Stage 2: Without Intervention Risk Change <ol style="list-style-type: none">a. Original Deteriorationb. Revised Deteriorationc. Revised Forecast Methodology Changed. Load-related work <ol style="list-style-type: none">i. Asset Additions (not part of replace or refurb)ii. Asset Disposals (not part of replace or refurb)e. Changes to Maintenance Programmef. Manual Over-ride on PoF or CoFg. Extension of Expected Asset Life (not required for business plan submission)h. Consequence Interventions

	<p>i.—Option Entry</p> <p>3.—Stage 3: With Intervention Risk Change</p> <p>a.—Methodology Change Impact</p> <p>b.—Data Revision Impact</p> <p>c.—Manual Over-ride on PoF or CoF</p> <p>d.—Extension of Asset Life</p> <p>e.—Consequence Interventions</p> <p>f.—Asset Replacement (PoF driven)</p> <p>g.—Asset Replacement (CoF driven)</p> <p>h.—Asset Replacement (Other Driven)</p> <p>i.—Asset Refurbishment (PoF driven)</p> <p>j.—Asset Refurbishment (CoF driven)</p> <p>k.—Asset Refurbishment (Other Driven)</p> <p>l.—Asset Replacement Due to Early Life Failures (not required for business plan submission)</p> <p>m.—Optional Entry</p> <p>Licensees are also required to report the long term benefit of replacement and refurbishment activities forecast to be delivered in a given year. Long term risks should be reported in accordance with the licensee's NARM Methodology or, if the NARM Methodology does not yet cover long term risk, then in accordance with the methodology agreed with Ofgem for RIIO-2 Business Plan.</p> <p>Non-like for like replacements: Licensees are required to report the removal and addition elements of non-like for like replacements (e.g. replacing a 132kV Transformer with a 275kV Transformer, or replacing an iron main with a PE main) split across the two categories.</p> <p>For example, replacing 5km Iron Mains with 5km PE Mains:</p> <ul style="list-style-type: none"> • Input 'replacement removal' as -ve numbers (i.e. -5 in R10 band) in the corresponding replacement driver row in Iron Main tab; • Input 'replacement addition' as +ve numbers (i.e. +5 in R2 band) in same row but different risk band in PE Mains tab; • Input Volume Impacted for the removed asset as the absolute value of 'replacement removal' numbers (i.e. 5 in Column T in Iron Mains tab); • Input Volume Impacted for the added asset as the 'replacement addition' numbers (i.e. +5 in Column T in PE Mains tab).
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Sector specific guidance

Electricity Transmission	N/A
Gas Transmission	N/A
Gas Distribution	N/A

Specific definitions for this worksheet

Long Term Benefit of Interventions During RIIO-2	The long term benefit resulting from replacements and refurbishments <u>interventions</u> forecast to be delivered over RIIO-2 (please refer to general guidance of tab N1.3 for calculation of long term benefit).
<u>A2 Funding Category Replacements and Refurbishments</u>	<u>The replacement or refurbishment element of any activities funded, or expected to be funded, under NARM Funding Category A2. For example a project involving the construction of a new transmission circuit, including the replacement of certain existing assets at a substation: the licensee must report the risk and volumes associated with the replacement of the existing substation assets. However, risk and volumes associated with the new transmission circuit is not reported.</u>
<u>A3 Funding Category Replacements and Refurbishments</u>	<u>The replacement or refurbishment element of any activates funded, or expected to be funded, under NARM Funding Category A2. For example replacement of iron mains under the GDNs' Iron Mains Risk Reduction Programme (IMRRP), must be reported in this category.</u>
Asset Additions (not part of replace or refurb) <u>A1 interventions</u>	As per 'Addition' definition in Appendix 1 At this stage licensees are not required to report the impact of any new network assets that are planned in RIIO-2 (other than those added as part of a replacement). If a load related (or growth) project <u>Licensees should report their best view of new assets added through load related (or growth) project, taking account of the complexity and accuracy of any modelling involved in making these estimate. The</u>

	<p><u>licensee must explain the basis and accuracy of its estimates in its accompanying narratives. While we encourage licensees to provide a view, a zero entry is permissible in cases of extremely low accuracy.</u></p> <p><u>Where a load related (or growth) project contains an element of replacement or refurbishment, then the impact of the replacement or refurbishments should must be reported as Asset A2 Funding Category Replacements or Refurbishments or A3 Funding Category Replacement (Other Driven) or Asset Refurbishment (Other Driven)—see below of Refurbishments.</u></p>
Asset Disposals (not part of replace or refurb)	As per 'Removal' definition in Appendix 1
Deterioration	Actual or forecast deterioration of asset assuming no intervention.
<p>Manual Over-ride on PoF or CoF <u>Asset Disposals (not part of A1 interventions)</u></p>	<p>Any change in licensee's view of the PoF or CoF based on engineering judgement to account for factors not directly covered by defined rules under the NOMs Methodology e.g. application of a PoF or CoF modifier parameter to account for an identified type issue. As per 'Addition' definition in Appendix 1</p> <p><u>Licensees should report their best view of assets removed through load related (or growth) or non-A1 decommissioning project, taking account of the complexity and accuracy of any modelling involved in making these estimate. The licensee must explain the basis and accuracy of its estimates in its accompanying narratives. While we encourage licensees to provide a view, a zero entry is permissible in cases of extremely low accuracy.</u></p> <p><u>Where a load related (or growth) or non-A1 decommissioning project contains an element of replacement or refurbishment, then the impact of the replacement or refurbishments must be reported as A2</u></p>

	Funding Category Replacements or Refurbishments or A3 Funding Category Replacement of Refurbishments.
Forecast Deterioration	The deterioration over RIIO-2 that was assumed within the BNRO.
Faster/Slower Deterioration	See NARM Handbook
PoF Change: Extension of Expected Asset Life	Any change due to revised view on the expected life of an asset or a revision of the deterioration curve. -An Expected Asset Life extension applies to an Asset Category as a whole or to an Asset Family and may be applied due to updated data on asset failures or better understanding of failure modes.
Asset Replacement (PoF driven)	Replacement aimed at reducing risk, where the probability of failure or asset health justifies intervention.
Asset Replacement (CoF driven) CoF Change: Category 1 - Network configuration	Replacement aimed at reducing risk, where consequence of failure justifies prioritisation for intervention over assets of similar risk and/or higher probability of failure/worse asset health.— See NARM Handbook
Asset Replacement (Other Driven) CoF Change: Category 2 – Financial	Replacement other than PoF/CoF driven (including load-related replacement work).— See NARM Handbook
Asset Refurbishment (PoF driven)	Refurbishment aimed at reducing risk, where the probability of failure or asset health justifies intervention.
Asset Refurbishment (CoF driven)	Refurbishment aimed at reducing risk, where the consequence of failure justifies prioritisation for intervention over assets of similar risk and/or higher probability of failure/worse asset health.
Asset Refurbishment (Other Driven)	Refurbishment other than PoF/CoF driven (including load-related refurbishment work).
CoF Change: Category 3 - Indirect Interventions	As per 'Indirect Intervention' definition in Appendix 1. To be populated under option entry, if required.
Changes in Maintenance Programme	Changes in risk due to change of maintenance programme. If changes in asset maintenance from those funded through RIIO-2 price control leads to faster asset

	<p><u>deterioration then the impact must be recorded under 'Changes in Maintenance Programme', e.g. a licensee does not carry out planned maintenance that is necessary to achieve expected asset life at a given site.</u></p> <p><u>Normalisations should be applied to both the baseline with and without intervention positions as relevant.</u></p> <p><u>When applied to the with intervention position (baseline) the effect should be to reduce the with intervention position by a value equal to the additional risk benefit actually delivered by interventions.</u></p> <p><u>Any changes in maintenance programme that do not lead to faster deterioration, e.g. change in type of maintenance activity that still achieves expected asset life, does not need to be reported.</u></p>
Asset Replacement Due to Early Life Failures	Changes in risk due to unplanned replacement of failed assets.
Methodological Changes NARM Methodology Change	Changes in risk due to changes in NOMs <u>NARM</u> Methodology.
Data Cleanse	Changes in reported risk, <u>asset populations, or asset interventions</u> due to correction of data errors detected during the year.
Optional Entry	Any changes in risk not falling within any other category.

6. N4 Supporting Data Worksheets

Purpose of reporting requirements

6.1. Five blank worksheets are provided for the licensee to submit any data necessary to support its submission.

Instructions for using supporting data worksheets

6.2. The licensee should, where possible, format and order the data on supporting data worksheet in way that is consistent with the preceding worksheets. Where relevant, data definitions and terminology used on these worksheets should be consistent with the preceding worksheets and with this guidance document.

6.3. If a supporting data worksheet is used, then the licensee must:

1. Rename the tab with a meaningful name. When renaming, the numbering system, i.e. 4.1, 4.2, etc should be retained. The tab name should not contain any spaces. Underscore character should be used in place of spaces.
2. Overwrite the relevant tab name on worksheet 0.1 Contents with the new tab name.
3. Overwrite the relevant worksheet title on '0.1 Contents' worksheet with an appropriately descriptive title.
4. Delete the instruction box on the supporting data worksheet.

6.4. If a supporting data worksheet is used to calculate values to input preceding worksheets, then the inputs should be entered as links directly to the supporting data worksheet.

7. Commentary requirements

- 7.1. Licensees are required to submit a supporting commentary document to provide understanding of the data contained in the RRP as well as explanation or updates on any previously identified or emerging issues related to NARM and/or the licensee's delivery of its Baseline Network Risk Outputs (BNRO).
- 7.2. The licensee must provide cross-reference to data values reported in the RRP for all numerical values quoted in the supporting commentary. The licensee may use the N4 Supporting Data worksheets, including additional supporting data or derivation of values, where this is necessary. The licensee must also submit copy of any tables or charts contained in the supporting commentary through the N4 Supporting Data worksheets.
- 7.3. We are not requiring the licensee to use a proforma template for its narrative submissions. However, the narrative submissions should, as a minimum, include the sections set out below:
 1. Executive summary – short overview of the main points of the commentary document.
 2. Definitions and assumptions – explanation of any definitions or assumptions (not covered by this guidance) that the licensee has applied in order to comply with the reporting requirements including:
 - a. Asset definitions and intervention definitions – an explanation of the asset and intervention definitions the licensee has applied, as well as any assumptions that it has applied in order to report data in accordance with the definitions.
 - b. General assumptions – explanation, including limitations, of any assumptions not covered under the 'Asset and intervention definitions' section, that the licensee has found necessary to apply in order to populate the RRP. Where possible these should be related to individual worksheets.
 3. RIIO-2 BNRO Delivery – commentary on the licensee's delivery of its BNRO, including:
 - a. Delivery to date – explanation of the progress to date, including how it compares to expectations at the time of BNRO setting and compared the previous reporting year's expectations. This should include explanation of any factors/issues that led to over-delivery or under-delivery to date versus expectations.
 - b. Full RIIO-2 period expected delivery – explanation of licensee's expectation of its delivery of its BNRO. This commentary must be aligned with the data reported on N3 worksheets. The licensee is required to provide individual commentary for each populated N3 worksheet, with reference to the relevant intervention and project data reported on the N1 worksheets.

The commentary in the section must cover both volumes and monetised risk, as well as the relationship between the two sets of metrics.
 4. Network Risk – commentary on the data reported on N2 tabs with particular emphasis on explanation of changes from previously reported views of network risk.
 5. Non-intervention Risk Changes – explanation of each of the Non-intervention risk Changes (normalisations) reported on N3 worksheets. Each Non-intervention Risk Change should be addressed separately. This must include, as a minimum:
 - details of the methodological approach used to derive values,

- rationale for choosing the derivation approach; and
- explanation of any assumptions applied.

6. Proposed Clearly Identifiable Over-Delivery or Clearly Identifiable Under-Delivery - explanation of the without intervention and with intervention risk values reported on worksheet 3.2 and the underlying asset and intervention volumes reported on table 3.2.1, including any embedded assumptions and variables that have had a material impact on the results.

Appendix 1 – Glossary and Definitions

A

Addition

The addition of an asset to the network of load related work, not including additions carried out as part of a replacement or refurbishment activity.

(NARM) Asset Category

~~[To be Confirmed]~~ See NARM Handbook. The ~~asset grouping that is relevant for NARM reporting purposes~~ NARM Asset Categories for each sector:

~~Electricity transmission: seven categories at each of the three voltage levels (132 kV, 275 kV, 400 kV) making 21 asset categories are set out in total~~ NARM RRP worksheet

N0.7 Lookup References.

- ~~• Gas transmission: 37 secondary asset categories~~
- ~~• Gas distribution: 18 secondary asset classes~~

Asset Family

A subdivision of an Asset Category where differentiation within an Asset Category is required due to differences in deterioration characteristics, expected asset life, or methodological approach to deriving Monetised Risk.

B

Baseline Network Risk Outputs (BNRO)

See NARM Handbook

C

Costs and Volumes (CV) RRP

The RIIO-2 ET, GT or GD specific cost and volume regulatory reporting pack (RRP). The cost and volume RRP is how we collect data to enable us to administer the Conditions of the Licence (the conditions which relate to the price control) which include monitoring the performance of Licensees against our final proposals/determinations, monitor compliance with price control obligations and to allow analysis between price controls and at the subsequent price control review.

D

Disposal

See removal

I

Indirect Intervention

Any intervention on a network asset, or other infrastructure asset, that modifies the probability of failure, or consequence of failure of another network asset.

~~So #~~[This](#) is an indirect intervention from Asset B's perspective, and it is designed for the specific purpose of reducing risk on specific assets, and indirect intervention ~~can~~ include, for example:

- a. installation or removal of physical infrastructure designed to prevent damage to adjacent assets in the event of an asset failure (e.g. installation of a blast wall).
 - in such a case the risk reduction impact on the protected adjacent assets should be entered as 'Indirect Intervention' risk
- b. addition or disposal that increases or decreases the resilience of a local or regional network and hence modifies the consequence of failure of other asset(s) in the locality or region.
 - the risk impact on the other network assets should be entered as 'Indirect Intervention' risk. The risk impact of the additions and disposals themselves are not included in this category.

L

[Long-term Monetised Risk](#)

[See NARM Handbook](#)

[Long Term \(Risk\) Benefit](#)

[The benefit delivered by an asset intervention as measured by the Long-term Monetised Risk reduction.](#)

M

Maintenance & Repair

Any activity required or assumed to be necessary to achieve the expected life of an asset.

[Therefore](#), Maintenance & Repair activities, if carried out as assumed to be necessary, do not impact the Monetised Risk of an asset. [Failure to carry out Maintenance & Repair may, however, increase the Monetised Risk of an asset due to the increased likelihood of it failing to achieve its expected asset life.](#)

Monetised Risk

~~The risk value associated with an asset(s) as derived in accordance with the relevant licensee's Network Output Measures (NOMs) methodology. Unless otherwise stated, reference to 'Risk' means 'Monetised Risk'.~~

[See NARM Handbook](#)

Monetised Risk Output

The risk benefit delivered or expected to be delivered by an asset intervention. The difference between without intervention and with intervention Monetised Risk. Can be measured over one year or over a longer period of time.

N

NARM Assets

~~Assets where, by applying the relevant sector/company NOMs~~[See NARM Handbook](#)

~~[NARM Methodology](#), the Monetised~~

[See NARM Handbook](#)

O

~~Outturn Network Risk of the asset can be estimated. [Outputs \(ONRO\)](#)~~

[See NARM Handbook](#)

R

Refurbishment

A one-off activity undertaken on an asset that is deemed to be close to end of life or is otherwise requiring intervention that extends the life of that asset or restores its functionality. This activity does not result in the recording of a new or disposed asset in the Asset Register, but may improve the health indicator (or probability of failure) of the asset. Refurbishment can include the replacement or reconditioning of components of an asset.

Removal

The permanent removal of an asset from the network, not including removals carried out as part of a replacement or refurbishment activity.

Replacement

Asset replacement is an activity undertaken by a network company to remove an existing asset(s) and install a new asset. The asset replacement activity includes:

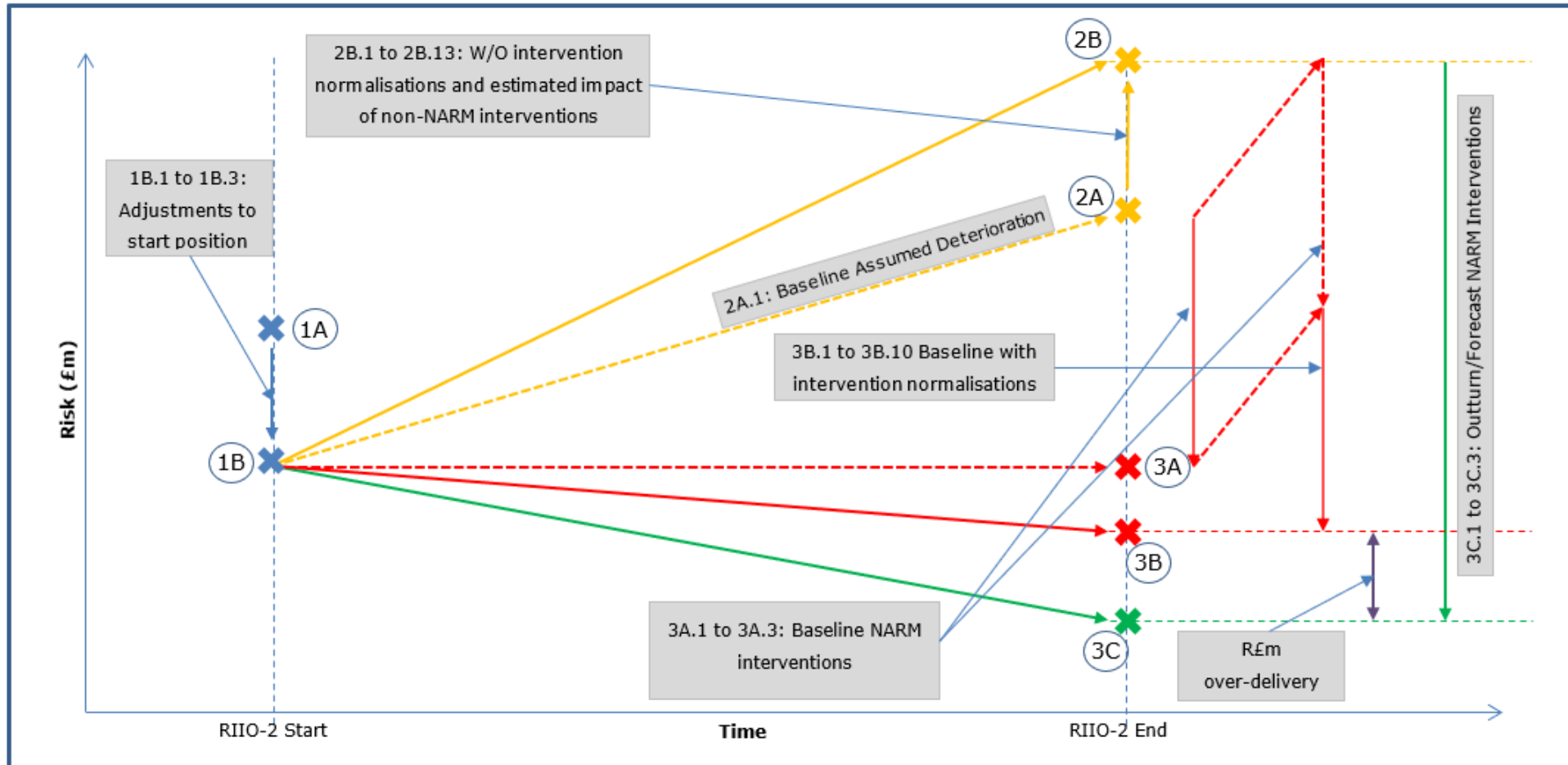
- the installation of replacement assets
- the dismantlement of existing assets where the dismantlement is undertaken as part of the asset replacement works.

S

[Single Year Risk/Single-Year Monetised Risk](#)

[See NARM Handbook](#)

Appendix 2 – N3 Worksheet Illustration of Risk Positions and Risk Changes



- 1A: RIIO-1 Closeout Position
- 1B: RIIO-2 Start
- 2A: RIIO-2 End - Without Intervention (Pre-Normalisation)
- 2B: RIIO-2 End - Without A1 Intervention (Normalised)
- 3A: Baseline RIIO-2 End - With A1 Intervention (Pre-Normalisation)
- 3B: Baseline RIIO-2 End - With A1 Intervention (Normalised)
- 3C: Outturn/Forecast RIIO-2 End - With A1 Intervention