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RIIO-ED1 regulatory instructions and guidance: Annex D – Secondary Deliverables

Guidance

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Publication date:	Original publication 18 June 2015 Revised publication TBC	**Team:**	RIIO-ED1
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Overview:

RIIO-ED1 is the price control for electricity distribution network operators (DNOs) from 1 April 2015 to 31 March 2023.

This document is part of the regulatory instructions and guidance (RIGs) for RIIO-ED1.
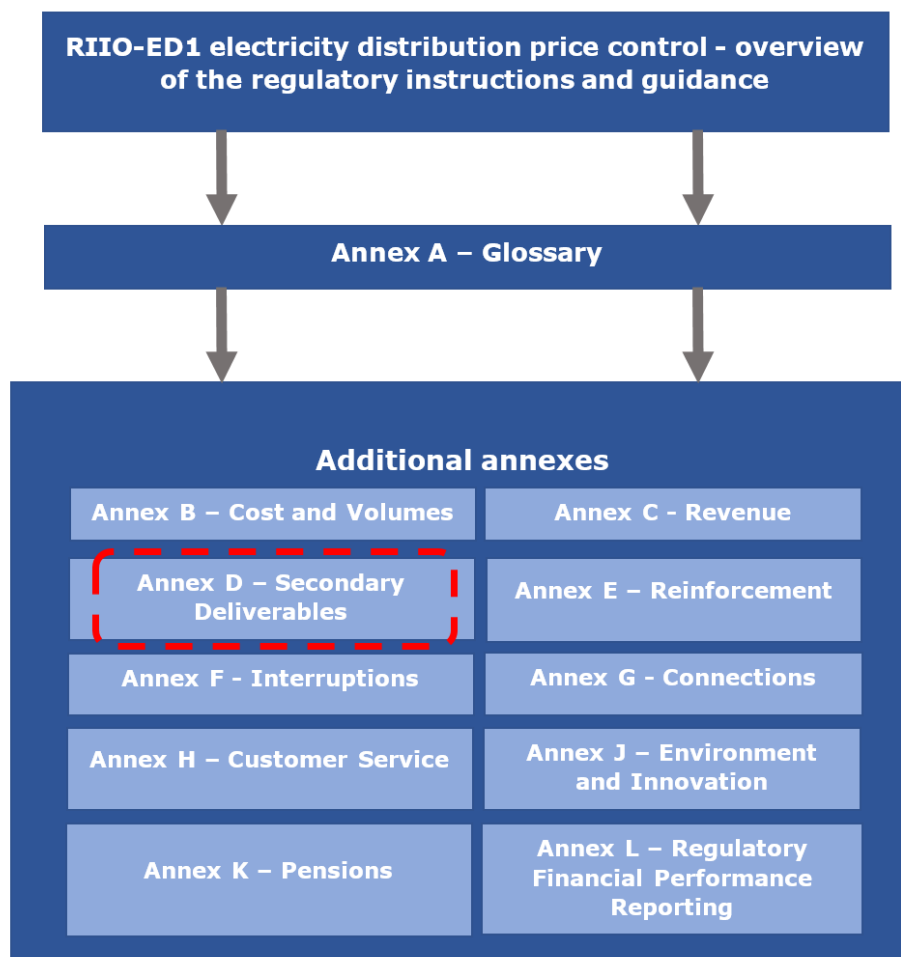
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1. Introduction

Scope of this document

1.1.   This document is part of the regulatory instructions and guidance (RIGs) for RIIO-ED1. The term RIGs refers to a collection of documents - our instructions and guidance, and the reporting packs and commentaries the electricity distribution network operators (DNOs) have to fill out.

1.2.   Figure 1.1 shows all the instructions and guidance documents for the RIIO-ED1 RIGs. This document, circled in Figure 1.1, is one of a series of annexes containing instructions and guidance. It provides DNOs with information on how to fill in the Secondary Deliverables Reporting Pack and Secondary Deliverables Commentary that they are required to submit to us.

Figure 1.1: Map of the RIIO-ED1 instructions and guidance

RIIO-ED1 electricity distribution price control - overview of the regulatory instructions and guidance

Annex A – Glossary

Additional annexes

Annex B – Cost and Volumes	Annex C - Revenue
Annex D – Secondary Deliverables	Annex E – Reinforcement
Annex F - Interruptions	Annex G - Connections
Annex H – Customer Service	Annex J – Environment and Innovation
Annex K – Pensions	Annex L – Regulatory Financial Performance Reporting

1.3.   This document should be read in conjunction with:

- the RIIO-ED1 electricity distribution price control – overview of the regulatory instructions and guidance document
- Annex A – Glossary for the regulatory instructions and guidance
- the associated Microsoft® Excel 2010 reporting pack named "Secondary Deliverables Reporting Pack"
- the associated commentary named "Secondary Deliverables Commentary"
- the electricity distribution licences for RIIO-ED1, specifically Charge Restriction Condition (CRC) 5D and Standard Licence Condition (SLC) 51.

2. Instructions for completing the Secondary Deliverables Reporting Pack

Introduction

2.1.   The purpose of the information collected in the Secondary Deliverables Reporting Pack is to provide a framework for the collection and provision of accurate and consistent information from DNOs on the movements in health and criticality of the assets for the asset categories included in the DNOs' RIIO-ED1 Network Asset Secondary Deliverables targets.

2.2.   This information is used to calculate DNOs' progress towards meeting their Network Asset Secondary Deliverables targets for RIIO-ED1, as set out in their electricity distribution licences. This assessment will be carried out on an annual basis and shall be based upon the changes in monetised risk shown within the Secondary Deliverables Reporting Pack. This calculation will also be used to inform the assessment of the end of RIIO-ED1 period performance to determine whether adjustments to revenue are required in RIIO-ED2 as set out in the DNOs' licence conditions.

2.3.   The information will also be used to inform benchmarking and analysis used for determining future price controls. It also provides visibility of the movements in health and criticality associated with additional activities which do not contribute towards either the calculation of the Network Asset Secondary Deliverables targets or DNOs' progress towards meeting these.

2.4.   The Network Asset Secondary Deliverables targets were originally specified by the DNOs using their own methodologies. The distribution licenses required the Network Asset Secondary Deliverables targets to be rebased due to the implementation of the Common Network Asset Indices Methodology and "trued up" to reflect the end of DPCR5 asset health profile at the same time, prior to the first submission of the reporting pack in July 2016 or at a later date agreed with Ofgem following acceptance of the Common Network Asset Indices Methodology. This rebasing of targets was carried out in December 2016 and has established Network Asset Secondary Deliverables targets based upon the Common Network Asset Indices Methodology. Performance assessments will be carried out with reference to these rebased targets (or subsequent versions where further revisions to the Network Asset Secondary Deliverables targets are made).

2.5.   The Secondary Deliverables Reporting Pack should also be completed in accordance with the principles and guidance agreed as part of the Common Network Asset Indices Methodology. Any additional terminology that is used in the Common Network Asset Indices Methodology will be defined there.

General instructions and guidance

2.6.   Within the Secondary Deliverables Reporting Pack, the term "Secondary Deliverables" refers to the collective movements in asset health and criticality resulting in changes to monetised risk across all of the Asset Register categories that form the Health Index Asset Categories for which DNOs specified this information in their RIIO-ED1 Business Plan Data Templates and as set out in their Network Assets Workbooks.

2.7.   The reporting pack contains the following worksheets:

- Cover Sheet
- Changes Log
- Navigation
- Summary by Voltage
- Summary by Asset
- Health and Criticality Tracker for LV Assets (HCT_LV)
- Health and Criticality Tracker for HV Assets (HCT_HV)
- Health and Criticality Tracker for EHV Assets (HCT_EHV)
- Health and Criticality Tracker for 132kV Assets (HCT_132kV)
- Health and Criticality Tracker for Other Assets (HCT_Other assets)
- Probability of Failure Values
- Consequence of Failure Values
- Asset Risk Values
- Asset Count Check

Health

2.8.   The health of an asset is derived from a combination of various factors including age and condition data. Individual assets are grouped together using Health Index Bands. A common approach to deriving asset health and assigning Health Index Bands to assets is defined as part of the Common Network Asset Indices Methodology. This approach shall be used to assign to each asset a Health Index Band between HI1 and HI5.

2.9.   The bands represent the relative Probability of Failure indicated by each asset's health. The lowest Health Index Band, HI1, is assigned to assets where the Probability of Failure is the same as would be expected for a new asset. The highest Health Index Band, HI5, is assigned to assets with the highest values of Probability of Failure relative to other assets within the same asset category.

2.10. Where the Secondary Deliverables Reporting Pack requires a forecast Health Index Band, representing the Health Index in a future year, to be reported, the future Health Index Band shall be determined in accordance with the methodology for deriving the future Health Index of an asset defined in the Common Network Asset Indices Methodology.

Criticality

Criticality Index Bands provide a comparative measure of the Consequences of Failure associated with an asset. A common approach to assigning Criticality Index Bands to assets is defined as part of the Common Network Asset Indices Methodology. This approach shall be used to assign each asset a Criticality Index Band.

Monetised Risk

2.11. Monetised Risk is the unit of measurement used to calculate the level of failure risk of each DNO's current, past and future portfolio of assets. It is based on the Health Index Band and Criticality Index Band assigned to these assets.

2.12. The monetised risk value for each asset is calculated by multiplying the average Probability of Failure value for its assigned Health Index Band, by the Average Overall Consequence of Failure value for its Asset Register category and then by the appropriate criticality weighting for the Criticality Index Band assigned to it.

2.13. As part of the RIIO-ED1 Final Determination (and subsequent rebasing of Network Asset Secondary Deliverables targets), the monetised risk values for each DNO's assets are aggregated and calculated for the following positions in the RIIO-ED1 period:

- Position at the beginning of RIIO-ED1
- Mid Period (Without Investment)
- Mid Period (With Investment)
- End of RIIO-ED1 (Without Investment)
- End of RIIO-ED1 (With Investment)

2.14. The difference between the End of RIIO-ED1 (Without Investment) and the End of RIIO-ED1 (With Investment) position provides the delta value, in Monetised Risk, for the DNO's total Network Asset Secondary Deliverables target for RIIO-ED1. All of these values are collated in the DNO's 'risk monetisation' workbooks, which are linked to the Network Assets Workbooks published as part of the RIIO-ED1 Final Determination (and subsequent rebasing of Network Asset Secondary Deliverables targets).

2.15. Each DNO's progress in delivering their Network Asset Secondary Deliverables, in terms of Monetised Risk, will be measured relative to its own Network Asset Secondary Deliverables delta.

2.16. The assessment of performance is carried out by comparing an end of 2022/23 view of the delivery against the targets. This approach is taken because the targets are derived from the end of RIIO-ED1 profiles and therefore the measure of delivery has to be on a consistent basis. In order for this comparison to be possible, the DNOs are required to state both in-year values for Health Index Bands and

Criticality Index Bands and also, for those interventions that contribute to the delivery of the targets, the forecast values at the end of 2022/23 values.

Non-Intervention Risk Changes

2.17. Non-intervention risk changes are movements to the Health Index Bands and Criticality Index Bands which are not related to activity on the assets, but are caused by changes to data or assessment approach. They are subdivided into three categories:

- Data Cleansing;
- Deterioration; and
- Other Non-Intervention Risk Changes.

2.18. The Other Non-Intervention Risk Changes are used to capture all the risk movements that are not reported elsewhere. These may be extensive movements (such as wholesale re-evaluation of how values are calculated) or minor movements (such as the change in criticality of a single asset).

2.19. The source of Other Non-Intervention Risk Changes may include (but are not limited to) the following:

- changes to the Common Network Asset Indices Methodology (not covered by a rebasing of Network Asset Secondary Deliverables and restatement of RIGs Annex D Secondary Deliverables submissions),
- changes to the type of input data being used,
- changes to the mapping of DNO data systems to the inputs required for the Common Network Asset Indices Methodology.

Cover Sheet

2.20. This worksheet is to be completed by selecting the relevant DNO from the drop down menu in cell D12 and the relevant reporting year in cell D14 (note that the format of the year represents the year in which the reporting year ends i.e. for 2015/16, 2016 should be selected).

Changes Log

2.21. The Changes Log must be used by the DNOs to record any amendments (formulae or presentation) that are made to the Secondary Deliverables Reporting Pack, including the date those changes were made. Ofgem will also record any changes made to the Secondary Deliverables Reporting Pack in this worksheet.

Navigation

2.22. This worksheet provides links to each of the other worksheets in the reporting pack. No DNO input is required.

Summary by Voltage

2.23. This worksheet requires no DNO input.

2.24. It summarises the number of net movements in monetised risk by voltage level, activity type and reporting year, relating to certain investment drivers (i.e. Asset Replacement, Refurbishment and High Value Projects for Asset Replacement or Refurbishment).

2.25. The data is presented in three main blocks:

- Columns C-I show the change to the in-year monetised risk values relating to movements in each reporting year;
- Columns K-Q show the change to the forecast end of 2022-23 monetised risk vales, relating to movements in each reporting year; and
- Columns S-Y show the difference between the in-year and end of 2022-23 monetised risk values.

2.26. Each block of data has two separate types of summary presentation:

- Rows 3 to 46 show a summary by activity type (total, Asset Replacement, Refurbishment and High Value Projects for Asset Replacement or Refurbishment);
- Rows 50 to 98 show a summary by voltage.

Summary by Asset

2.27. This worksheet requires no DNO input.

2.28. It summarises the profile and net movements in terms of monetised risk by Asset Register category, reason for movement and reporting year.

2.29. The data is presented in two main blocks:

- Columns D-O show in-year monetised risk values;
- Columns Q-S show the change to the forecast end of 2022-23 monetised risk values relating to movements in each reporting year.

2.30. Each block of data has two separate types of summary presentation:

- Rows 3 to 8 show a summary at the total level and by voltage;
- Rows 11-671 show a summary by Asset Register category and reporting year.

Health and Criticality Tracker Worksheets (HCT_LV, HCT_HV, HCT_EHV, HCT_132kV and HCT_Other Assets)

2.31.   These worksheets require DNO input.

2.32.   They record the changes to the health and criticality profile over RIIO-ED1 on an annual basis, for each Asset Register category that contributes to the DNO's Network Asset Secondary Deliverables targets, as set out using the Health Index Asset Categories in the DNO's Network Assets Workbook. Note that the Health and Criticality Tracker worksheets are structured in a more disaggregated way (using Asset Register categories) compared to the Network Assets Workbook (which uses Health Index Asset Categories).

2.33.   Accordingly, the Health and Criticality Tracker worksheets should only be populated for those Asset Register categories that relate to the Health Index Asset categories within the DNO's own Network Assets Workbook. For all other Asset Register categories the input cells should be left blank.

2.34.   DNOs must update each of the Health and Criticality Tracker worksheets on an annual basis. The worksheets contain rows dedicated for the recording of health and criticality movements for each year of RIIO-ED1. Data for the current reporting year should be added to data reported for previous reporting years, building a cumulative view throughout the RIIO-ED1 period.

2.35.   There are five worksheets, four covering the different voltage levels of assets (LV, HV, EHV and 132kV) and one for all other assets. These worksheets are all built to record data in the same way with the only difference being the specific asset types covered by each.

2.36.   The net movements in Health Index and Criticality Index should reconcile to the Asset Register movements, or activity volumes, shown in the RIGs Annex B Cost and Volumes Reporting Pack for the same investment drivers/ reasons for movement.

2.37.   The sections below provide guidance on the data reporting requirements and operation of these worksheets.

Start of year (Columns D to J)

2.38.   In these columns, for each Asset Register category, input the number of assets in each combination of HI bands, HI1 to HI5, and criticality bands, C1 to C4, (health and criticality profile) for the reporting year 2015-16 into the 2016 block of data (yellow input cells).

2.39.   The equivalent information for the remaining years of RIIO-ED1 (2017-2023) will auto-populate with the closing balance from the previous year from columns CD-CI.

Impact on volumes of data cleansing (Columns L to Q)

2.40.   Data Cleansing within RIGs Annex B relates to changes to Asset Register volumes that account for assets previously not recorded in the Asset Register or discount assets that are found to be no longer on the network but remain in the Asset Register.

2.41.   In these columns, enter the movements in health and criticality profile due to Data Cleansing in the rows relating to the reporting year. The impact of these changes must be entered relative to the "start of year" health and criticality profile.

2.42.   The net Health Index and Criticality Index movements reported in the Secondary Deliverables Reporting Pack due to Data Cleansing should align to the Asset Register movements due to Data Cleansing reported in the RIGs Annex B Cost and Volumes Reporting Pack.

Impact of deterioration (Columns S to X)

2.43.   Deterioration represents the change in Health Index, between successive years, observed as a result of updated health information (such as changes in age or condition data). Deterioration relates only to the impact on the Health Index Band and therefore should not include changes to the Criticality Index Band.

2.44.   In these columns, enter the movements to the health and criticality profile due to the actual deterioration that has occurred during the year in the rows relating to the reporting year. Movements should be reported with respect to the Start of Year profile following any adjustments reported for Data Cleansing, but before accounting for the impact of any Other Non-Intervention Risk Changes.

2.45.   It is anticipated that most movements due to deterioration will relate to movements to higher Health Index Bands. It is, however, feasible that updated health information may lead to movements to lower Health Index Bands.

Variance due to Other Non-Intervention Risk Changes (Columns Z to AE)

2.46.   Other Non-Intervention Risk Changes are used to capture all other impacts on the health and criticality profiles which are not due to interventions, Data Cleansing or deterioration.

2.47.   This includes minor changes such as re-evaluation of an individual asset's Criticality Index.

2.48. In these columns, enter the movements to the health and criticality profile due to Other Non-Intervention Risk Changes in the rows relating to the reporting year. The movements should be entered relative to the position after the impacts of Data Cleansing and deterioration have been recorded. Details on the nature and impact of significant Other Non-Intervention Risk Changes should be included in the commentary accompanying the submission.

Movements due to asset replacement (Columns AG to AL)

2.49. Asset Replacement interventions contribute to the delivery of the Network Asset Secondary Deliverables targets.

2.50. In these columns, enter the movements to the health and criticality profile due to asset replacement interventions that have occurred during the year, in the rows relating to the reporting year.

2.51. The net volume of movements should reconcile with relevant volumes of Asset Register additions and disposals in the 'CV7 – Asset Replacement' worksheet in the RIGs Annex B Costs and Volumes Reporting Pack.

2.52. Where the overall net movements to the health and criticality profiles are different to the additions and disposals reported in CV7 (eg where an intervention drives movement within a particular health index band (e.g. HI1 to HI1) and not between different health index bands) this should be explained in the accompanying commentary.

Movements due to refurbishment activity (Columns AN to AS)

2.53. Certain refurbishment interventions contribute to the delivery of the Network Asset Secondary Deliverables targets. The specific types of interventions that can be included are defined in Section 4 of RIGs Annex A Glossary under the Refurbishment (SDI) category. The change in risk values for an asset shall be calculated in accordance with the guidance in Appendix C of the Common Network Asset Indices Methodology.

2.54. In these columns, enter the movements to the health and criticality profile due to refurbishment activities that have occurred during the year, in the rows relating to the reporting year.

2.55. The net volume of movements should reconcile with relevant volumes of activities in the 'CV9 – Refurbishment SDI' worksheet in the RIGs Annex B Costs and Volumes Reporting Pack.

2.56. Where the overall net movements to the health and criticality profiles are different to the interventions reported in CV9 (eg where an intervention drives movement within a particular health index band (i.e. HI3 to HI3) and not between

different health index bands) this should be explained in the accompanying commentary.

Movements due to General Reinforcement activity (Columns AU to AZ)

2.57. General Reinforcement interventions do not contribute to the delivery of the Network Asset Secondary Deliverables targets.

2.58. The impact of General Reinforcement is reported separately because the interventions could address higher HI band assets, removing the scope to deliver Network Asset Secondary Deliverables for a specific Asset Register category. This data may be used to provide justification for under-delivery at the end of RIIO-ED1.

2.59. In these columns, enter the movements to the health and criticality profile due to General Reinforcement interventions that have occurred during the year, in the rows relating to the reporting year.

2.60. The net volume of movements should reconcile with relevant volumes of asset additions and disposals in the in the 'CV1 – Primary Reinforcement', 'CV2 – Secondary Reinforcement' and 'CV3 – Fault Level Reinforcement' worksheets in the RIGs Annex B Costs and Volumes Reporting Pack.

2.61. Where the overall net movements to the health and criticality profiles are different to the relevant asset additions and disposals interventions reported in CV1, CV2 or CV3 (eg where an intervention drives movement within a particular health index band (e.g. HI1-HI1) and not between different health index bands) this should be explained in the accompanying commentary.

Movements due to Fault activity (Columns BB to BG)

2.62. Fault interventions do not contribute to the delivery of the Network Asset Secondary Deliverables targets.

2.63. The impact of faults is reported separately because the interventions could address higher Health Index Band assets, removing the scope to deliver Network Asset Secondary Deliverables for a specific Asset Register category. This data may be used to provide justification for under-delivery at the end of RIIO-ED1.

2.64. In these columns, enter the movements to the health and criticality profile due to fault interventions that have occurred during the year, in the rows relating to the reporting year.

2.65. The net volumes of movement should reconcile with relevant volumes of asset additions and disposals in the 'CV26 – Faults' worksheet in the RIGs Annex B Costs and Volumes Reporting Pack.

2.66. Where the overall net movements to the health and criticality profiles are different to the volume of relevant asset additions and disposals reported in CV26 (eg where an intervention drives movement within a particular health index band (e.g. HI1-HI1) and not between different health index bands) this should be explained in the accompanying commentary.

Movements due to High Value Projects – Asset Replacement and Refurbishment drivers (Columns BI to BN)

2.67. High Value Projects that have a primary driver of Asset Replacement contribute to the delivery of the Network Asset Secondary Deliverables targets. Also, High Value Projects that have Refurbishment interventions that are defined in Section 4 of RIGs Annex A Glossary under the Refurbishment (SDI) category also contribute to the delivery of the Network Asset Secondary Deliverables targets.

2.68. In these columns, enter the movements to the health and criticality profile resulting from High Value Projects, where the primary driver for the project is Asset Replacement or Refurbishment, that have occurred during the year, in the rows relating to the reporting year.

2.69. The net volume of movements should reconcile with relevant volumes of asset additions and disposals in the 'CV23a – HVP1' - 'CV23e – HVP5' worksheets in the RIGs Annex B Costs and Volumes Reporting Pack. The reconciliation will only be possible for asset replacement volumes, because the HVP worksheets do not record details of refurbishment activities. The impact of refurbishment activities on the health and criticality profiles should be explained in the accompanying commentary with details of the relevant asset numbers provided and the type of Refurbishment (SDI) activity undertaken.

Movements due to High Value Projects – Other drivers (Columns BP to BU)

2.70. High Value Projects that have a primary driver of general reinforcement, fault level reinforcement, legal and safety, BT21CN or other investment driver (except for asset replacement and refurbishment) do not contribute to the delivery of the Network Asset Secondary Deliverables targets.

2.71. The impact of High Value Projects – Other drivers is reported separately because the interventions could address higher Health Index Band assets, removing the scope to deliver Network Asset Secondary Deliverables for a specific Asset Register category. This data may be used to provide justification for under-delivery at the end of RIIO-ED1.

2.72. In these columns, enter the movements to the health and criticality profile resulting from High Value Projects, where the primary driver for the project is any activity other than asset replacement or refurbishment, that have occurred during the year, in the rows relevant to the reporting year.

2.73. The net volume of movements should reconcile with relevant volumes of asset additions and disposals in the 'CV23a – HVP1' - 'CV23e – HVP5' worksheets in the RIGs Annex B Costs and Volumes Reporting Pack.

Movements due to "All other" activity (Columns BW to CB)

2.74. To provide a complete view of the impact of all interventions on the health and criticality profiles, "all other" interventions (i.e. any movements in health and criticality due to Asset Register movements not covered in the data provided in other columns relating to interventions in these worksheets) are also reported. "All other" interventions do not contribute to the delivery of the Network Asset Secondary Deliverables targets.

2.75. The impact of "all other" is reported separately because the interventions could address higher HI band assets, removing the scope to deliver Network Asset Secondary Deliverables for a specific Asset Register category. This data may be used to provide justification for under-delivery at the end of RIIO-ED1.

2.76. In these columns, enter the movements to the health and criticality profile due to any other activities not covered by data provided in other columns that have occurred during the year, in the rows relevant to the reporting year.

End of year (Columns CD to CI)

2.77. These columns auto-calculate the end of year health and criticality profile for the relevant asset, based on the impact to the start of year position of the aggregated movements from all of the non-intervention movements as captured in columns L to AE (i.e. Data Cleansing, deterioration and Other Non-Intervention Risk Changes) and the intervention movements as captured in columns AG to CB (i.e. Asset Replacement, Refurbishment, General Reinforcement, Faults, HVP (Asset Replacement and Refurbishment), HVP (other drivers), all other).

Asset count, asset register count and cross-check (Columns CK to CM)

2.78. The active cells in column CK "asset count" count the number of assets for each Asset Register category recorded in the 5 (HI) x 4 (CI) tables for the end of year position for the relevant year.

2.79. The input cells in column CL "asset register count" should be linked to the appropriate cells in RIGs Annex B AP1 - Asset Register worksheet so that the total number of assets recorded in each Asset Register category can be cross checked with the values in the Asset Register.

2.80. The active cells in column CM "Cross-check" perform the cross-check between these two values for each Asset Register category. If the cross-check shows 'error', there is a discrepancy between the two values and the reasons for this should be explained in the accompanying commentary.

Monetised risk calculations (Columns CP to FV)

2.81.   These columns collectively calculate the monetised risk score movements for each Asset Register category arising from the different non-intervention and intervention related movements in the health and criticality profiles. All of the cells in these columns auto-calculate based on the data entered into the health and criticality profile movement columns (L to CI) and the data in the 'Asset Risk Values' worksheet. Each block of columns is described in more detail below.

Monetised Risk values for start of year (Columns CP to CU)

2.82. For each Asset Register category, in the first five rows in these columns the monetised risk score is calculated as at the beginning of the 2015-16 reporting year for each point in the 5 x 4 table. The score is calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the start of year health and criticality profile (from columns E to I), by the appropriate asset risk score for the Asset Register category, as calculated in the 'Asset Risk Values' worksheet. These scores are then auto-summed by Health Index Band in the row immediately below the 5 x 4 table and by Criticality Index Band in column CU, immediately to the right of the 5 x 4 table. The total monetised risk score for the asset as at the beginning of the 2015-16 reporting year is auto-calculated in the bottom right cell of the block of data.

2.83. For the rows corresponding to the beginning of each of the reporting years 2016-17 (2017) to 2022-2023 (2023) inclusive, data is carried forward from the end of the previous year's position, as calculated in columns FO to FT.

Monetised Risk values for Impact on volumes of data cleansing (Columns CW to DB)

2.84.   In these columns, the movements from the start of year monetised risk score due to Data Cleansing are calculated in the rows relating to the reporting year. The impacts of these changes are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the impact on volumes of Data Cleansing to the health and criticality profile (from columns L to Q), by the asset risk score for the relevant Asset Register category, as calculated in the 'Asset Risk Values' worksheet.

Monetised Risk values for Impact of deterioration (Columns DD to DI)

2.85. In these columns, the movements from the start of year monetised risk score due to deterioration are calculated in the rows relating to the relevant reporting year. The impacts of these changes are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the impact of deterioration to the health and criticality profile (from columns S to X), by the asset risk score for the relevant Asset Register category, as calculated in the 'Asset Risk Values' worksheet.

Monetised Risk values for Variance due to Other Non-Intervention Risk Changes (Columns DK to DP)

2.86.   In these columns, the movements from the start of year monetised risk score due to Other Non-Intervention Risk Changes are calculated in the rows relating to the relevant reporting year. The impacts of these changes are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the variance due to Other Non-Intervention Risk Changes to the health and criticality profile (from columns Z to AE), by the asset risk score for the relevant Asset Register category, as calculated in the 'Asset Risk Values' worksheet.

Monetised Risk values for Asset register movements for Asset Replacement (Columns DR to DW)

2.87.   In these columns, the movements from the start of year monetised risk score due to Asset Replacement interventions are calculated in the rows relating to the relevant reporting year. The impacts of these changes are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the Asset Register movements for Asset Replacement to the health and criticality profile (from columns AG to AL), by the asset risk score for the relevant Asset Register category, as calculated in the 'Asset Risk Values' worksheet.

Monetised Risk values for movements due to Refurbishment activity (Columns DY to ED)

2.88.   In these columns, the movements from the start of year monetised risk score resulting from Refurbishment activities are calculated in the rows relating to the relevant reporting year. The impacts of these changes are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the movements due to Refurbishment activity to the health and criticality profile (from columns AN to AS), by the asset risk score for the relevant Asset Register category, as calculated in the 'Asset Risk Values' worksheet.

Monetised Risk values for movements due to General Reinforcement activity (Columns EF to EK)

2.89.   In these columns, the movements from the start of year monetised risk score resulting from General Reinforcement driven activities are calculated in the rows relating to the relevant reporting year. The impacts of these changes are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the movements due to General Reinforcement activity to the health and criticality profile (from columns AU to AZ), by the asset risk score for the relevant Asset Register category, as calculated in the 'Asset Risk Values' worksheet.

Monetised Risk values for movements due to Fault activity (Columns EM to ER)

2.90. In these columns, the movements from the start of year monetised risk score resulting from fault driven activities are calculated in the rows relating to the relevant reporting year. The impacts of these changes are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the movements due to Faults activity to the health and criticality profile (from columns BB to BG), by the asset risk score for the relevant Asset Register category, as calculated in the 'Asset Risk Values' worksheet.

Monetised Risk values for movements due to HVP activity – Asset Replacement and Refurbishment Drivers (Columns ET to EY)

2.91. In these columns, the movements from the start of year monetised risk score resulting from High Value Projects where the primary driver for the project is Asset Replacement or Refurbishment are calculated in the rows relating to the relevant reporting year. The impacts of these changes are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the movements due to High Value Projects activity – Asset Replacement & Refurbishment driven to the health and criticality profile (from columns BI to BN), by the asset risk score for the relevant Asset Register category, as calculated in the 'Asset Risk Values' worksheet.

Monetised Risk values for movements due to HVP activity – Other drivers (Columns FA to FF)

2.92. In these columns, the movements from the start of year monetised risk score resulting from High Value Projects where the primary driver for the project is any driver other than Asset Replacement or Refurbishment are calculated in the rows relating to the relevant reporting year. The impacts of these changes are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the movements due to HVP activity – other drivers to the health and criticality profile (from columns BP to BU), by the asset risk score for the relevant Asset Register category, as calculated in the 'Asset Risk Values' worksheet.

Monetised Risk values for movements due to "All other" activity – Other drivers (Columns FH to FM)

2.93. In these columns, the movements from the start of year monetised risk score resulting from all other activities not covered elsewhere are calculated in the rows relating to the relevant reporting year. The impacts of these changes are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the movements due to "all other" activity – to the health and criticality profile (from columns BW to CB), by the asset risk score for the relevant Asset Register category, as calculated in the 'Asset Risk Values' worksheet.

Monetised Risk values for End of year (Columns FO to FT)

2.94. In these columns the movements from the start of year monetised risk score resulting from all non-intervention movements and intervention activities are summed up for the relevant year. The "end of year" monetised risk score is carried forward to the following year's start of year position (except for the end of year values for reporting year 2022-23).

Total Risk (Column FV)

2.95. This column calculates the total risk score for the relevant Asset Register category as at the end of the reporting year.

Forecast 2023 health and criticality profiles due to interventions included in Secondary Deliverable targets (Columns FX to HS)

2.96. These columns show the impact of interventions upon the DNO's forecast 2023 position, i.e. each movement shown is the difference between the forecast 2023 position without the intervention and the forecast 2023 position with the intervention. This 2023 view is required to make the delivery values consistent with the methodology used to calculate the Network Asset Secondary Deliverables targets. Without this 2023 view the contribution to the Network Asset Secondary Deliverables target is materially understated.

2.97. The data should represent the total volume of assets associated with the interventions (not just the assets which lead to incremental change from the in-year values).

2.98. The future Health Index Bands for each asset in both the with intervention and without intervention positions shall be determined in accordance with the methodology for deriving the future Health Index of an asset defined in the Common Network Asset Indices Methodology, based on forecasting forwards to the end of 2022/23.

2.99. Each block of columns is described in more detail below.

Forecast movements due to Asset Replacement upon 2023 Profile (Columns FX to GC)

2.100. In these columns, enter the movements relative to the 2023 forecast health and criticality profile without investment resulting from any Asset Replacement interventions that have occurred during the year, in the rows relating to the reporting year.

2.101. The movements should be based upon the same Asset Register movements that were used to determine the movement values in columns AG-AL.

2.102. Where there are significant differences to the in-year profile provide an explanation in the accompanying commentary.

Forecast movements due to Refurbishment upon 2023 Profile (Columns GE to GJ)

2.103. In these columns, enter the movements relative to the 2023 forecast health and criticality profile without investment resulting from Refurbishment interventions that have occurred during the year, in the rows relating to the reporting year.

2.104. The movements should be based upon the same activity volumes used to determine the movement values in columns AN-AS.

2.105. Where there are significant differences to the in-year provide an explanation in the accompanying commentary.

Forecast movements due to High Value Projects (asset replacement and refurbishment) upon 2023 Profile (Columns GL to GQ)

2.106. In these columns, enter the movements relative to the 2023 forecast health and criticality profile without investment resulting from High Value Projects where the primary driver is Asset Replacement or Refurbishment interventions that have occurred during the year, in the rows relating to the reporting year.

2.107. The movements should be based upon the same Asset Register movements or activity volumes that were used to determine the movement values in columns BI-BN.

2.108. Where there are significant differences to the in-year profile provide an explanation in the accompanying commentary.

Forecast monetised risk movements due to Asset Replacement upon 2023 Profile (Columns GS to GX)

2.109. In these columns, the contributions to delivery against the 2023 Network Asset Secondary Deliverables target as measured in monetised risk, and resulting from Asset Replacement interventions, are calculated in the rows relating to the reporting year. These monetised risk values are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the movements in forecast 2023 health and criticality profile due to Asset Replacement (in columns FX to GB) by the asset risk score for the relevant Asset Register category taken from the 'Asset Risk Values' worksheet.

Forecast monetised risk movements due to Refurbishment upon 2023 Profile (Columns GZ to HE)

2.110. In these columns, the contributions to delivery against the 2023 Network Asset Secondary Deliverables target as measured in monetised risk, and resulting from Refurbishment interventions, are calculated in the rows relating to the relevant reporting year. These monetised risk values are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the movements in forecast 2023 health and criticality profile due to Refurbishment (in columns GE to GI), by the asset risk score for the relevant Asset Register category, taken from the 'Asset Risk Values' worksheet.

Forecast monetised risk movements due to High Value Projects (asset replacement and refurbishment) upon 2023 Profile (Columns HG to HL)

2.111. In these columns, the contributions to delivery against the 2023 Network Asset Secondary Deliverables target as measured in monetised risk, and resulting from High Value Projects (Asset Replacement and Refurbishment) interventions, are calculated in the rows relating to the relevant reporting year. These monetised risk values are calculated by multiplying the number of assets in each cell of the 5 x 4 table recording the movements in forecast 2023 health and criticality profile due to High Value Projects (Asset Replacement and Refurbishment) (in columns GL to GP), by the relevant asset risk score for the Asset Register category, taken from the 'Asset Risk Values' worksheet.

Monetised Risk Delivered by Asset Repl. & Refurb. (incl. relevant HVP) (columns HN to HS)

2.112. In these columns, the overall contribution to delivery against the 2023 Network Asset Secondary Deliverables targets, as measured in monetised risk are calculated. This includes the changes resulting from Asset Replacement interventions, Refurbishment interventions and interventions associated with High Value Projects primarily driven by Asset Replacement and Refurbishment activities.

Difference between in-year health and criticality profiles and forecast 2023 health and criticality profiles for interventions included in Secondary Deliverable targets (Columns HU to JP)

2.113. These columns show the incremental difference between the in-year values and the 2023 values for reported asset movements and calculated monetised risk values.

2.114. This data is to be used to identify significant differences that may require further explanation in the accompanying narrative.

2.115. The application of deterioration to the in-year profiles will result in some assets moving to a higher Health Index Band. Differences could arise where

interventions are carried out on assets in a lower Health Index Band in the year that the intervention was undertaken, which move to a higher Health Index Band by the end of 2022/23. Differences could also arise where the Health Index of added assets or refurbished assets moves from a lower Health Index Band to a higher Health Index Band.

Difference between in-year profile and 2023 profile - Asset Replacement (Columns HU to HZ)

2.116. These columns calculate the difference between the in-year values and the end of 2022/23 values for the movements in health and criticality profile due to Asset Replacement interventions.

2.117. The calculation uses the end of 2022/23 movement values in columns FX to GB and subtracts the in-year movement values in columns AG to AK, respectively.

Difference between in-year profile and 2023 profile - Refurbishment (Columns IB to IG)

2.118. These columns calculate the difference between the in-year values and the end of 2022/23 values for the movements in health and criticality profile due to Refurbishment interventions.

2.119. The calculation uses the end of 2022/23 movement values in columns GE to GI and subtracts the in-year movement values in columns AN to AR, respectively.

Difference between in-year profile and 2023 profile - HVP (Asset Replacement and Refurbishment) (Columns GL to GQ)

2.120. These columns calculate the difference between the in-year values and the end of 2022/23 values for the movements in health and criticality profile due to High Value Projects where the primary driver is Asset Replacement or Refurbishment.

2.121. The calculation uses the end of 2022/23 movement values in columns GL to GP and subtracts the in-year movement values in columns BI to BM, respectively.

Monetised risk value of difference between in-year values and 2023 values - Asset Replacement (Columns IP to IU)

2.122. These columns calculate the difference between the in-year values and the end of 2022/23 values for monetised risk associated with the movements in health and criticality profile due to Asset Replacement interventions.

2.123. These monetised risk values are calculated by multiplying the number of assets in each cell of the 5 x 4 table representing the difference between in-year health and criticality profiles and end of 2022/23 health and criticality profiles (in

columns HU to HZ) by the asset risk score for the relevant Asset Register category taken from the 'Asset Risk Values' worksheet.

Monetised risk value of difference between in-year values and 2023 values - Refurbishment (Columns IW to JB)

2.124. These columns calculate the difference between the in-year values and the end of 2022/23 values for monetised risk associated with the movements in health and criticality profile due to Refurbishment interventions.

2.125. These monetised risk values are calculated by multiplying the number of assets in each cell of the 5 x 4 table representing the difference between in-year health and criticality profiles and end of 2022/23 health and criticality profiles (in columns IB to IF) by the asset risk score for the relevant Asset Register category taken from the 'Asset Risk Values' worksheet.

Monetised risk value of difference between in-year values and 2023 values - HVP (Asset Replacement and Refurbishment) (Columns JD to JI)

2.126. These columns calculate the difference between the in-year values and the end of 2022/23 values for monetised risk associated with the movements in health and criticality profile due to High Value Projects where the primary driver is Asset Replacement or Refurbishment.

2.127. These monetised risk values are calculated by multiplying the number of assets in each cell of the 5 x 4 table representing the difference between in-year health and criticality profiles and end of 2022/23 health and criticality profiles (in columns II to IM) by the asset risk score for the relevant Asset Register category taken from the 'Asset Risk Values' worksheet.

Total Monetised Risk value of difference between in-year values and 2023 values - Asset Repl. & Refurb. (incl. relevant HVP) (incl. relevant HVP) (columns JK to JP)

2.128. These columns calculate the total monetised risk value of the difference between the in-year values and the end of 2022/23 values. This includes the differences resulting from Asset Replacement interventions, Refurbishment interventions and interventions associated with High Value Projects primarily driven by Asset Replacement and Refurbishment activities.

Probability of Failure Values

2.129. This worksheet requires input of the Probability of Failure values associated with Health Index Bands HI1 to HI5 for each Asset Register category for which a DNO has Health Index Asset Categories specified as part of its Network Asset Secondary Deliverables as set out in the DNO's Network Assets Workbook.

2.130. The Probability of Failure values recorded in this worksheet will be fixed for the RIIO-ED1 period to enable the measurement of DNOs' progress towards achieving their Network Asset Secondary Deliverables target on a consistent basis.

2.131. The Probability of Failure values should be derived from the Common Network Asset Indices Methodology.

2.132. For Asset Register categories which are part of an aggregated Health Index Asset Category contained within the RIIO-ED1 Business Plan Data Templates and Network Assets Workbook, the Probability of Failure values must be consistent with other Asset Register categories which are also part of the same Health Index Asset Category.

2.133. Where the Asset Register categories which are aggregated to form a Health Index Asset Category have different Probability of Failure values in the Common Network Asset Indices Methodology, the Network Asset Secondary Deliverable targets will have been set using Probability of Failure values for the Health Index Asset Category derived from an Asset Register volume weighted average. This weighted average will apply to all the Asset Categories within the Health Index Asset Category and should be populated in the Probability of Failure worksheet against all Asset Register categories within the Health Index Asset Category. During the RIIO-ED1 period, the Asset Register volumes may change, which could result in a different Asset Register volume weighted average being calculated. However, in order to ensure consistency with the targets, the original weighted average used in setting the targets should always be used when populating the Probability of Failure worksheet (i.e. the weighted average should not be updated for changes to the Asset Register volumes).

Do you report health and criticality for this asset? (Yes/No) (Column C)

2.134. Complete column C to indicate whether or not the Asset Register category forms part of the Network Asset Secondary Deliverables targets as set out in the DNOs Network Assets Workbook.

2.135. The calculation of risk values in the 'Asset Risk Values' worksheet is dependent upon the selection being set to 'Yes'.

Probability of Failure value ranges (Columns D-M)

2.136. These input cells require the values for the low and high boundary values for Probability of Failure for bands HI1 to HI5 for the relevant Asset Register category.

Probability of Failure value ranges (Columns O-S)

2.137. These input cells require the values for Average Probability of Asset Failure values for bands HI1 to HI5 for the relevant Asset Register category. These values

are used in the derivation of monetised risk values in the 'Asset Risk Values' worksheet.

Consequence of Failure Values

2.138. This worksheet requires input of the Average Consequence of Asset Failure values for each relevant Asset Register category.

2.139. The Consequence of Failure values recorded in this worksheet will be fixed for the RIIO-ED1 period to enable the measurement of a DNO's progress towards achieving its Network Asset Secondary Deliverables target on a consistent basis. The values quoted should be the same as those that have been used in setting the Network Asset Secondary Deliverable targets within the Network Assets Workbook.

2.140. The Consequence of Failure values should be derived from the Common Network Asset Indices Methodology.

2.141. For Asset Register categories that are part of an aggregated Health Index Asset Category contained within the RIIO-ED1 Business Plan Data Templates and Network Assets Workbook, the Consequence of Failure values must be consistent with other assets categories which are also part of the same Health Index Asset Category.

Average Consequence of Asset Failure values (Columns C-G)

2.142. The Average Overall Consequence of Failure values (column G) are derived from four component consequence factors (columns C to F).

2.143. Input values in columns C to F for the component Average Consequence of Asset Failure values (Network Performance, Safety, Environmental, and Financial) for each relevant Asset Register category.

2.144. Input the Average Overall Consequence of Failure in column G for each relevant Asset Register category.

Criticality Rating (Columns I-L)

2.145. The values of Consequence of Failure for Criticality Index bands C1 to C4 are derived by the application of weighting factors to the Average Overall Consequence of Failure values. The weightings are fixed and specified in cells K2:L5.

2.146. The criticality rating values for each relevant Asset Register category are calculated in columns I to L from the product of the Average Overall Consequence of Failure values and the weighting values for each Criticality Index Band C1 to C4.

Asset Risk Values

2.147. No DNO input is required in this worksheet.

2.148. The worksheet is comprised of 5 x 4 tables for each Asset Register category with the Monetised Risk value for each combination of HI1 and C1 bands being calculated by multiplying the relevant Average Probability of Asset Failure value (for the HI1 to HI5 band) with the relevant weighted Average Consequence of Asset Failure value (for the C1 to C4 band) for the Asset Register category.

2.149. The values in this worksheet auto-calculate based on the information entered into the 'Probability of Failure values' and 'Consequence of Failure values' worksheets. Note that Monetised Risk values are only calculated when the selection in column C of the 'Probability of Failure values' worksheet has been set to 'Yes'.

2.150. The monetised risk values are used in the calculation of Monetised Risk movements in the Health and Criticality Tracker worksheets.

Asset Count Check

2.151. No DNO input is required in this worksheet.

2.152. This worksheet summarises the cumulative RIIO-ED1 period number of net asset count changes reported for each Asset Register category associated with the different non-intervention movements and intervention activities, recorded in both the Secondary Deliverables Reporting Pack and the RIGs Annex B Cost and Volumes Reporting Pack. The worksheet compares the equivalent movements recorded in the two reporting packs to highlight any differences across them.

2.153. Columns C to L show the cumulative total reported net asset count changes reported in the Secondary Deliverables Reporting Pack and columns O to X have blank input cells that will hold the link to show the cumulative total reported asset count changes in the RIGs Annex B Cost and Volumes Reporting Pack. Columns AA to AJ show the differences across the two packs.

2.154. This worksheet will be linked to the relevant cells in the two reporting packs by Ofgem following submission of the completed Secondary Deliverables Reporting Pack by the DNOs.

Data assurance

2.155. No DNO input is required in this worksheet.

2.156. This worksheet provides a check on the input data for the 'HCT_LV','HVT_HV', 'HCT_EHV', 'HCT_132kV', and 'HCT_Other Assets' worksheets. The worksheet checks

for negatives in the end of year profile (Columns C to J), movements in Criticality due to deterioration (columns K to R), change in asset totals due to refurbishment or deterioration (columns S to Z), and Criticality movements due to asset replacement (columns AA to AH) for each asset category. Asset categories are grouped by voltage levels: LV network (rows 6 to 14), HV network (rows 16 to 32), EHV network (rows 34 to 61), 132kV network (rows 63 to 74), and 'Other' (rows 76 to 86).

2.157. This worksheet is linked to the relevant cells in this workbook. The formulae in this worksheet automatically identify where the values reported in worksheets elsewhere in this workbook do not match the expected profile.