

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

## Guidance

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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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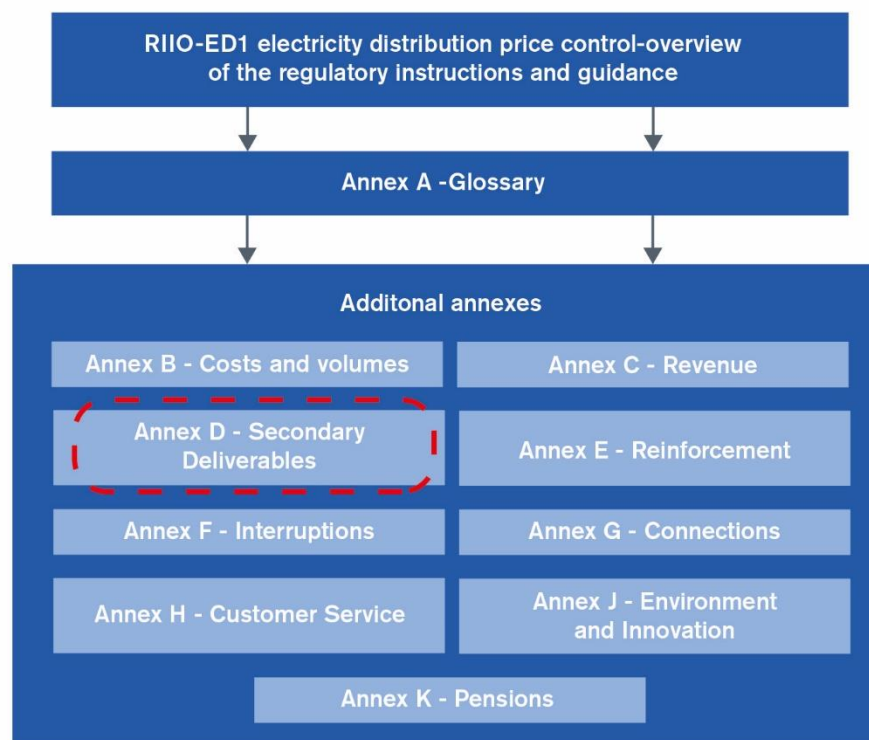
# 1. Introduction

## 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**



1.3. This document should be read in conjunction with:



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

- 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

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### 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 their assets.

2.2. This information is used to calculate DNOs' progress towards meeting their Secondary Deliverables targets for RIIO-ED1, as set out in their electricity distribution licences. This will be done on an annual basis and be used to inform benchmarking and analysis used for determining future price controls. It also provides visibility of the movements associated with additional activities which do not contribute towards either the calculation of the Secondary Deliverables targets or DNOs' progress towards meeting these.

2.3. The Secondary Deliverables targets will 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. 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

2.4. Within the Secondary Deliverables Reporting Pack, the term "Secondary Deliverables" refers to the collective movements in asset health, criticality and monetised risk across all of the asset categories for which DNOs collected and reported this information in their RIIO-ED1 Business Plan Data Templates and as set out in their Network Assets Workbooks.

2.5. 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

2.6. A common approach to assigning Health Index bands to assets will be defined as part of the Common Network Asset Indices Methodology. Prior to the common approach being defined, the approach to assigning bands used in the completion of the RIIO-ED1 Business Plan Data Templates and Network Assets Workbook is retained.

2.7. Using this approach each asset is assigned a band between Health Index (HI) 1 and HI5 by the DNO based on its assessment of the asset's overall health or condition. For forecasts of future positions the DNO's views about future degradation is used to assign the appropriate HI Band.

2.8. The bands are assigned to assets on the following basis:

- HI1 - New or as New
- HI2 - Good or serviceable condition
- HI3 - Deterioration requires assessment and monitoring
- HI4 - Material deterioration, intervention requires consideration
- HI5 - End of serviceable life, intervention required.

## Criticality

2.9. A common approach to assigning Criticality bands to assets will be defined as part of the Common Network Asset Indices Methodology. Prior to the common approach being defined, the approach to assigning bands used in the completion of the RIIO-ED1 Business Plan Data Templates and Network Assets Workbook is retained.

2.10. Each asset should be assigned a Criticality Index Band, based upon the relative magnitude of the Overall Consequence of Failure of the asset, compared to the Average Overall Consequence of Failure for all assets of the same asset category. There are four Criticality Index Bands:

- C1 – 'Low' criticality
- C2 – 'Average' criticality
- C3 – 'High' criticality
- C4 – 'Very High' criticality.

2.11. The C2 Criticality Index Band should be assigned to assets where the Overall Consequence of Failure is approximately the same as the Average Overall Consequence of Failure for all assets of the same asset category.

2.12. Each Criticality Index Band shall be defined in terms of bandings of magnitude of Overall Consequence of Failure, expressed as a percentage of the Average Overall Consequence of Failure for all assets in the same Health Index Asset Category.

2.13. The following Criticality Index banding criteria shall be used to assign the appropriate Criticality Index Band for all assets:

- C1 – less than 75% of the Average Overall Consequence of Failure
- C2 – greater than, or equal to, 75% and less than 125% of the Average Overall Consequence of Failure
- C3 – greater than, or equal to, 125% and less than 200% of the Average Overall Consequence of Failure
- C4 – greater than, or equal to, 200% of the Average Overall Consequence of Failure

2.14. Whilst this type of banding may not exactly reflect the underlying engineering distinctions between assets, efforts should be made to match these relationships where possible.

### **Monetised Risk**

2.15. Monetised Risk is the unit of measurement used to calculate the level of risk of each DNO's current, past and future portfolio of assets. It is based on the health and criticality bands assigned to these assets.

2.16. The monetised risk value for each asset is calculated by multiplying the average probability of failure value for its assigned HI band, by the average consequence of failure value for its asset category and then by the appropriate criticality weighting for the criticality band assigned to it.

2.17. As part of the RIIO-ED1 Final Determination, the monetised risk values for each DNO's assets were 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)

2.18. The difference between the End of RIIO-ED1 (Without Investment) and the End of RIIO-ED1 (With Investment) position subsequently provided the value, in Monetised Risk, for the DNO's total secondary deliverables for RIIO-ED1. All of these values were collated in the DNO's Monetised Risk workbooks published as part of the RIIO-ED1 Final Determination.

2.19. Each DNO's progress in delivering their secondary deliverables, in terms of Monetised Risk, will be measured relative to its own secondary deliverables delta.

This delta will be rebased once a Common Network Asset Indices Methodology is in place for all DNOs.

## **Material Changes**

2.20. The following detail should be provided in relation to reported Material Changes, where relevant, within the Secondary Deliverables Commentary:

- date from which the change came into effect
- asset categories affected
- Source of change which may include (but are not limited to the following): implementation of the Common Methodology, input data, assessment technique, calculation methodology, external factor and asset management strategy or approach
- how the impact of the change has been quantified
- reason and explanation for the change
- description of the effect of the change on the Network Asset Secondary Deliverables.

2.21. The information provided on Material Changes must be auditable and include details of, and reasons for, all those changes that result in changes to the Network Asset Secondary Deliverables.

## **Cover Sheet**

2.22. 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.

## **Changes Log**

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

## **Navigation**

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

## **Summary by Voltage**

2.25. This worksheet summarises the number of net movements in monetised risk that have been reported by voltage level and broken down by reporting year.



## Summary by Asset

2.26. This worksheet summarises the number of assets where net movements in health and criticality have been reported by asset category and broken down by reporting year.

## Health and Criticality Tracker Worksheets (LV, HV, EHV, 132kV and Other Assets)

2.27. These worksheets record the changes to the health and criticality over RIIO-ED1 on an annual basis, for each asset register category that you report health and criticality movements and which contribute to your Secondary Deliverables targets, as set out in your Network Assets Workbook. DNOs must update the Health and Criticality Tracker worksheets for each voltage level on an annual basis. The worksheets contain rows dedicated for the recording of health and criticality movements for each year of RIIO-ED1.

2.28. 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. In each worksheet, please enter the end date of the latest complete regulatory year in cell D2.

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

### Start of year (Columns D to J)

2.30. In these columns, for each asset category, please 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 yellow input cells.

2.31. The equivalent information for the remaining years of RIIO-ED1 (2017-2023) will auto-populate based on data inputted elsewhere in the worksheet.

### Impact on volumes of data cleansing (before Material Changes) (Columns L to Q)

2.32. In these columns, please enter the movements from the previous year's health and criticality profile due to data cleansing<sup>1</sup> in the rows relating to the

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<sup>1</sup> Data cleansing is defined as the act of detecting and correcting (or removing) corrupt or inaccurate records from the health and criticality profile for an asset category.

appropriate year. The impact of these changes must be entered relative to the “start of year” health and criticality profile, before accounting for any Material Changes.

### **Impact of deterioration (Columns S to X)**

2.33. In these columns, please enter the movements to the health and criticality from the actual deterioration that has occurred during the 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 Material Changes.

### **Variance due to Material Changes (Columns Z to AE)**

2.34. In these columns, please enter the movements to the health and criticality profile due to Material Changes in the rows relating to the appropriate 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 Material Changes must be contained in commentary accompanying the submission.

### **Movements due to asset replacement (Columns AG to AL)**

2.35. In these columns, please enter the movements to the health and criticality profile resulting from any asset replacement interventions that have occurred during the year, in the appropriate rows for this year. These numbers should reconcile with relevant volumes in the ‘CV7 – Asset Replacement’ worksheet in the Costs and Volumes Reporting Pack. Where the overall net movements to the health and criticality profiles are different to the interventions reported in CV7 (eg where an intervention drives movement within a particular health index band and not between different health index bands) this should be explained in the accompanying commentary with details of the relevant asset numbers provided.

### **Movements due to refurbishment activity (Columns AN to AS)**

2.36. In these columns, please enter the movements to the health and criticality profile resulting from any refurbishment activities that have occurred during the year, in the appropriate rows for this year. These numbers should reconcile with relevant volumes in the ‘CV9 – Refurbishment SDI’ worksheet in the Costs and Volumes Reporting Pack. 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 and not between different health index bands) this should be explained in the accompanying commentary with details of the relevant asset numbers provided.

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

2.37. In these columns, please enter the movements to the health and criticality profile resulting from any General Reinforcement driven activities that have occurred

during the year, in the appropriate rows for this year. These numbers should reconcile with relevant volumes in the 'CV1 – Primary Reinforcement', 'CV2 – Secondary Reinforcement' and 'CV3 – Fault Level Reinforcement' worksheets in the Costs and Volumes Reporting Pack. Where the overall net movements to the health and criticality profiles are different to the interventions reported in CV1, CV2 or CV3 (eg where an intervention drives movement within a particular health index band and not between different health index bands) this should be explained in the accompanying commentary with details of the relevant asset numbers provided.

### **Movements due to Fault activity (Columns BB to BG)**

2.38. In these columns, please enter the movements to the health and criticality profile resulting from any Fault driven activities that have occurred during the year, in the appropriate rows for this year. These numbers will reconcile with relevant volumes in the 'CV26 – Faults' worksheet in the Costs and Volumes Reporting Pack. Where the overall net movements to the health and criticality profiles are different to the interventions reported in CV26 (eg where an intervention drives movement within a particular health index band and not between different health index bands) this should be explained in the accompanying commentary with details of the relevant asset numbers provided.

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

2.39. In these columns, please enter the movements to the health and criticality profile resulting from any High Value Projects, where the primary driver for the project is asset replacement or refurbishment, that have occurred during the year, in the appropriate rows for this year. These numbers will reconcile with relevant volumes in the 'CV23 – High Value Projects' worksheet in the Costs and Volumes Reporting Pack.

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

2.40. In these columns, please enter the movements to the health and criticality profile resulting from any 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 appropriate rows for this year. These numbers will reconcile with relevant volumes in the 'CV23 – High Value Projects' worksheet in the Costs and Volumes Reporting Pack.

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

2.41. In these columns, please enter the movements to the health and criticality profile resulting from any other activities not covered in other columns that have occurred during the year, in the appropriate rows for this year.

### **End of year (Columns CD to CI)**

2.42. 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 activities described above (as captured in columns L to CB).

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

2.43. The active cells in column CK “asset count” count the number of assets for each asset category recorded in the 5 x 4 tables for the relevant year. The input cells in column CL “asset register count” should be linked to the appropriate cells in the Asset Register so that the total number of assets recorded in each asset category can be cross checked with the values in the Asset Register. The active cells in column CM “Cross-check” then perform the cross-check between these two values for each asset category. If the cross-check shows a discrepancy between the two values, the reasons for this should be explained in the accompanying commentary.

### **Monetised risk calculations (Columns CP to FV)**

2.44. These columns collectively calculate the monetised risk score movements for each asset category arising from different intervention types. All of the cells in these columns auto-calculate based on the data entered into the Health Index movement columns described above and the data in the ‘Asset Risk Values’ worksheet. Each block of columns is described in more detail below.

### **Start of year (Columns CP to CU)**

2.45. For each asset 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 this asset category, as calculated in the ‘Asset Risk Values’ worksheet. These scores are then summed by HI1 to HI5 band in the row immediately below the 5 x 4 table and by C1 to C4 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 end of the 2015-16 reporting year is therefore calculated in the bottom right cell.

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

### **Impact on volumes of data cleansing (before Material Changes) (Columns CW to DB)**

2.47. In these columns, the movements from the previous year's monetised risk score due to data cleansing are calculated in the rows relating to the appropriate 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 (before Material Changes) to the health and criticality profile (from columns L to Q), by the appropriate asset risk score for this asset category, as calculated in the 'Asset Risk Values' worksheet. These calculated values are therefore relative to the Start of year monetised risk scores, before accounting for any Material Changes.

### **Impact of deterioration (Columns DD to DI)**

2.48. In these columns, the movements from the previous year's monetised risk score due to deterioration are calculated in the rows relating to the appropriate 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 (before Material Changes) to the health and criticality profile (from columns S to X), by the appropriate asset risk score for this asset category, as calculated in the 'Asset Risk Values' worksheet. These calculated values reflect the normal path of deterioration assumed as at the previous year's submission, before accounting for any Material Changes that have occurred during the year.

### **Variance due to Material Changes (Columns DK to DP)**

2.49. In these columns, the movements from the previous year's monetised risk score due to Material Changes are calculated in the rows relating to the appropriate 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 Material Changes to the health and criticality profile (from columns Z to AE), by the appropriate asset risk score for this asset category, as calculated in the 'Asset Risk Values' worksheet. These calculated values reflect the movements relative to the position after the impacts of data cleansing and deterioration have been recorded.

### **Asset register movements for Asset Replacement (Columns DR to DW)**

2.50. In these columns, the movements from the previous year's monetised risk score due to asset replacement are calculated in the rows relating to the appropriate 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 appropriate asset risk score for this asset category, as calculated in the 'Asset Risk Values' worksheet.

### **Monetised risk movements due to Refurbishment activity (Columns DY to ED)**

2.51. In these columns, the movements from the previous year's monetised risk score resulting from any refurbishment activities are calculated in the rows relating to the appropriate 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 Health Index movements due to Refurbishment activity to the health and criticality profile (from columns AN to AS), by the appropriate asset risk score for this asset category, as calculated in the 'Asset Risk Values' worksheet.

### **Monetised risk movements due to General Reinforcement activity (Columns EF to EK)**

2.52. In these columns, the movements from the previous year's monetised risk score resulting from any General Reinforcement driven activities are calculated in the rows relating to the appropriate 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 Health Index movements due to General Reinforcement activity to the health and criticality profile (from columns AU to AZ), by the appropriate asset risk score for this asset category, as calculated in the 'Asset Risk Values' worksheet.

### **Monetised risk movements due to Fault activity (Columns EM to ER)**

2.53. In these columns, the movements from the previous year's monetised risk score resulting from any Fault driven activities are calculated in the rows relating to the appropriate 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 Health Index movements due to General Reinforcement activity to the health and criticality profile (from columns BB to BG), by the appropriate asset risk score for this asset category, as calculated in the 'Asset Risk Values' worksheet.

### **Monetised risk movements due to HVP activity – Asset Replacement and Refurbishment Driven (Columns ET to EY)**

2.54. In these columns, the movements from the previous year's monetised risk score resulting from any High Value Projects where the primary driver for the project is asset replacement or refurbishment are calculated in the rows relating to the appropriate 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 Health Index movements due to High Value Projects activity – Asset Replacement & Refurbishment Driven to the health and criticality profile (from columns BI to BN), by the appropriate asset risk score for this asset category, as calculated in the 'Asset Risk Values' worksheet.

### **Monetised risk movements due to HVP activity – Other drivers (Columns FA to FF)**

2.55. In these columns, the movements from the previous year's monetised risk score resulting from any 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 appropriate 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 Health Index movements due to HVP activity – Other Drivers to the health and criticality profile (from columns BP to BU), by the appropriate asset risk score for this asset category, as calculated in the 'Asset Risk Values' worksheet.

### **Monetised risk movements due to "All other" activity – Other drivers (Columns FH to FM)**

2.56. In these columns, the movements from the previous year's monetised risk score resulting from any other activities not covered elsewhere are calculated in the rows relating to the appropriate 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 Health Index movements due to "all other" activity – to the health and criticality profile (from columns BW to CB), by the appropriate asset risk score for this asset category, as calculated in the 'Asset Risk Values' worksheet.

### **End of year (Columns FO to FT)**

2.57. In these columns the movements from the previous year's monetised risk score resulting from all activities are summed up in aggregate from the movements driven by all component activities described above, for the relevant year. The monetised risk score is carried forward to the following year's Start of year position (except for reporting year 2022-23).

### **Total Risk (Column FV)**

2.58. This column calculates the total risk score for the relevant asset as at the end of the relevant reporting year.

### **Movements in forecast 2023 health and criticality profiles due to interventions (Columns FX to HE)**

2.59. These columns show the impact of interventions upon the DNO's forecast 2023 position, ie each movement shown is the difference between the forecast 2023 position without the intervention and the forecast 2023 position with the intervention. This is required as the methodology used to calculate the Secondary Deliverables targets means there are a number of factors associated with interventions which can mean the contribution to the Secondary Deliverables target is materially understated.

2.60. The impact of these factors and the resultant movements must be described in detail in the accompanying commentary.

2.61. The net total asset movements in the 5 x 4 tables in columns FX to GC and columns GE to GJ should be equal to the net movements in the equivalent 5 x 4 tables (as at the end of the relevant reporting year) in columns AG to AL and AN to AS respectively.

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

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

2.63. In these columns, please enter the movements to the 2023 forecast health and criticality profile resulting from any asset replacement interventions that have occurred during the year, in the appropriate rows for this year. Please provide further details on any movements reported in these columns in the accompanying commentary. This is required to correctly assess the overall delivery of monetised risk removed under the price control.

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

2.64. In these columns, please enter the movements to the 2023 forecast health and criticality profile resulting from any refurbishment interventions that have occurred during the year, in the appropriate rows for this year. Please provide further details on any movements reported in these columns in the accompanying commentary. This is required to correctly assess the overall delivery of monetised risk removed under the price control.

**Forecast monetised risk movements due to Asset Replacement upon 2023 Profile (Columns GL to GQ)**

2.65. In these columns, the changes to the 2023 Secondary Deliverables target as measured in monetised risk, and resulting from asset replacement interventions, are calculated in the rows relating to the appropriate year. These changes to monetised risk 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 by the appropriate asset risk score for this asset category taken from the 'Asset Risk Values' worksheet.

**Forecast monetised risk movements due to Refurbishment upon 2023 Profile (Columns GS to GX)**

2.66. In these columns, the changes to the 2023 Secondary Deliverables target as measured in monetised risk, and resulting from refurbishment interventions, are calculated in the rows relating to the appropriate year. These changes to monetised



risk 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, by the appropriate asset risk score for this asset category, taken from the 'Asset Risk Values' worksheet.

### **Monetised Risk Delivered by Asset Repl. & Refurb. (incl. relevant HVP)**

2.67. In these columns, the overall changes to the 2023 Secondary Deliverables targets, as measured in monetised risk are calculated. This includes the changes resulting from asset replacement and refurbishment interventions and interventions associated with High Value Projects primarily driven by asset replacement and refurbishment activities.

### **Probability of Failure Values**

2.68. This worksheet shows the Probability of Failure values associated with HI bands HI1 to HI5 for each asset for which a DNO collects this information. Columns D to M show the high and low boundary values and Columns O to S show the Average Probability of Asset Failure values for bands HI1 to HI5 for the relevant asset category. The Average Probability of Asset Failure value for each asset should be the value you consider is the most representative Probability of Failure value for all assets on your network belonging to the relevant asset category.

2.69. Please complete column C to indicate whether or not you report health and criticality information for the relevant asset. For those assets where you do collect this information, please complete the yellow input cells in columns D to S with values indicating your current view of Probability of Failure.

2.70. For asset 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 assets categories which are also part of this Health Index Asset Category.

2.71. 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 Secondary Deliverables target, which DNOs will also be required to rebase following the implementation of the Common Network Asset Indices Methodology.

2.72. To note, the Common Network Asset Indices Methodology when agreed may result in changes to the Probability of Failure values associated with each Health Index band. The process for recording and tracking amended Probability of Failure values will be determined when the Common Network Asset Indices Methodology has been agreed.

## Consequence of Failure Values

2.73. This worksheet shows the average consequence of asset failure values broken down by asset category. This is comprised of the four component consequence factors (columns C to F), from which the Average Overall Consequence of Failure value is calculated (column G). In columns I to L, the Average Overall Consequence of Failure values have a weighting applied to them on the basis of which Criticality Index Band C1 to C4 an asset will be assessed as. These weightings are shown in the worksheet in cells K2:L5.

2.74. Please complete columns C to F indicating the component Consequence of Failure values (Network Performance, Safety, Environmental, and Financial) for each asset category. The other values in the worksheet will auto-calculate.

2.75. For asset 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 Consequence of Failure values must be consistent with other assets categories which are also part of this Health Index Asset Category.

2.76. The Consequence 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 Secondary Deliverables target, which DNOs will also be required to rebase following the implementation of the Common Network Asset Indices Methodology.

2.77. To note, the Common Network Asset Indices Methodology when agreed may result in changes to the Probability of Failure values associated with each Health Index band. The process for recording and tracking amended Consequence of Failure values will be determined when the Common Network Asset Indices Methodology has been agreed.

## Asset Risk Values

2.78. This worksheet calculates the monetised risk value of an individual asset based on its asset category, HI1 to HI5 health and C1 to C4 criticality bands.

2.79. The worksheet is comprised of 5 x 4 tables for each asset 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 this asset.

2.80. The values in this worksheet auto-calculate based on the information entered into the 'Probability of Failure values' and 'Consequence of Failure values' worksheets.

2.81. The monetised risk values feed into calculations of overall movements on the Health and Criticality Tracker worksheets.

### **Asset Count Check**

2.82. This worksheet summarises the cumulative number of asset count changes reported for each asset type associated with the different intervention types or other causes, recorded in both the Secondary Deliverables Reporting Pack and the Cost and Volumes Reporting Pack, as at the end of the relevant regulatory year under report. The worksheet compares the equivalent movements recorded in the two reporting packs to highlight any differences across them.

2.83. Columns C to L show the cumulative total reported asset count changes reported in the Secondary Deliverables Reporting Pack and columns O to X show the cumulative total reported asset count changes in the Cost and Volumes Reporting Pack. Columns AA to AJ show the differences across the two packs.

2.84. 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. No input is required from the DNOs.