

Network Asset Secondary Deliverables Rebasing Requirements and Assessment Methodology

Guidance

Publication date: 06/12/2016

Contact: Kiran Turner, Senior Analyst

Team: Networks Analysis

Tel: 020 7901 9839

Email: Kiran.turner@ofgem.gov.uk

Overview:

Further to Ofgem's direction letter on 1 February 2016 and the subsequent approval of the Common Network Asset Indices Methodology v1.0 (CNAIM) on 21 October 2016, CRC 5D Part C of the Electricity Distribution Licence sets out the requirements for rebasing the Network Asset Secondary Deliverables (NASD) monetised risk target. This document provides guidance to the Distribution Network Operators (DNOs) on the rebasing methodology and Ofgem's assessment process.

Context

As part of the RII0-ED1 price control review, DNOs provided forecasts of their asset health and criticality positions 'with intervention' and 'without intervention'. We used these to create secondary deliverable targets, setting out the required improvements in asset health and criticality.

SLC 51 of the Electricity Distribution Licence ("Licence") requires the DNOs to have a common methodology for asset health, criticality and monetised risk. Pursuant to SLC 51, the DNOs worked together to develop the Common Network Asset Indices Methodology draft version V4 which we approved on 1 February 2016 based on the fulfilment of the predefined criteria set out in SLC 51.6¹. In our approval letter and pursuant to CRC 5D.17, we directed the licensees to rebase their Network Asset Secondary Deliverables by 30 December 2016.

During the subsequent implementation of the approved Common Network Asset Indices Methodology draft version V4, the DNOs made a number of amendments to correct errors or omissions. As part of the requirements of Part I of SLC51, the DNOs consulted on these proposed changes on the Energy Networks Association website from 26 August 2016 to 23 September 2016². We considered the modified Common Network Asset Indices Methodology v1.0 to be in line with the predefined criteria set out in SLC 51.6 and approved it pursuant to SLC 51.27 on 21 October 2016³. The decision also confirmed that the licensees would continue to work to the 30 December 2016 deadline for rebasing the Network Asset Secondary Deliverables.

Associated documents

[RIIO-ED1: Modifications to special conditions of the electricity distribution licences held by the slow-track licensees – 3 February 2015](#)
[Decision on DNO Common Network Asset Indices Methodology – 1 February 2016](#)
[Decision on distribution network operators Common Network Asset Indices Methodology – 21 October 2016](#)

¹ <https://www.ofgem.gov.uk/publications-and-updates/decision-dno-common-network-asset-indices-methodology>

² <http://www.energynetworks.org/news/publications/consultations-and-responses/>

³ <https://www.ofgem.gov.uk/publications-and-updates/decision-distribution-network-operators-common-network-asset-indices-methodology>

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1. Rebasing submission requirements

Chapter Summary

This section introduces the rebasing of the secondary deliverables monetised risk targets and sets out the requirements for the DNOs submission.

Introduction

1.1. In order to complete the implementation of the Common Network Asset Indices Methodology (CNAIM) the secondary deliverables monetised risk target must be rebased in accordance with this new methodology. The current targets have been agreed as part of the RIIO-ED1 price control and the purpose of the rebasing is to translate the agreed targets using the CNAIM and not to revise the targets that were originally agreed.

1.2. The CNAIM shall be used to determine the health and criticality of the DNOs network assets, this chapter explains how this information shall be presented, as part of the rebasing submission, in the Network Asset Workbook (NAW).

1.3. Chapter 2 describes how the forecast 'with intervention' and 'without intervention' profiles, that are the basis of the rebased secondary deliverable monetised risk target, will be determined in the rebased NAW.

1.4. Chapter 3 describes how Ofgem will assess the rebased secondary deliverables monetised risk target proposed by the DNOs, the outcome of which shall be subject to a public consultation.

Licence requirements

1.5. Part C of CRC 5D of the Licence sets out the requirements for rebasing and modification of the NAW.

1.6. Further, CRC 5D.17 and 5D.18 are of particular relevance:

- CRC 5D.17 states that the licensees:

'must develop and submit for approval to the Authority a revised set of Network Asset Secondary Deliverables ("Rebased Network Asset Secondary Deliverables") in accordance with the Common Network Asset Indices Methodology, which are tried up to take account of actual data up to and including 31 March 2015.'

- CRC 5D.18 states that:

'The Rebased Network Asset Secondary Deliverables must:

- a) be consistent with the Common Network Asset Indices Methodology;
- b) remain equally as challenging as those set out in the Network Assets Workbook that was applicable at 1 April 2015, as calculated using the values for Average Probability of Asset Failure and Average Consequence of Asset Failure applied at that time adjusted for any modification to the Regulatory Instructions and Guidance (RIGs) or Common Network Asset Indices Methodology;
- c) be in the same format as the Network Assets Workbook; and
- d) be based on actual rather than forecast data up to and including 31 March 2015'.

Required documents

1.7. Pursuant to CRC 5D, Part C, the DNOs are required to submit a rebased NAW. In order to facilitate our assessment the DNOs are required to submit 1-5 listed below, in their 30 December 2016 submission for rebasing the Network Asset Secondary Deliverables:

1. restatement of the Network Assets Workbook (NAW);
2. restatement of the Secondary Deliverables monetised risk file (SDMR);
3. submission of the Secondary Deliverables Reporting Pack (Annex D of the RIGs);
4. Rebasing Commentary pack associated with the restatement of the NAW; and
5. Asset additions and removals file.

1.8. For all elements, the Network Asset Indices shall be calculated in accordance with the Common Network Asset Indices Methodology v1.0.

1.9. The rebasing submission is not limited to the requirements outlined in this document. Any relevant additional material may be submitted as part of the Rebasing Commentary pack.

Restated Network Assets Workbook (NAW)

1.10. The basis of the restated NAW shall be the original NAW as published on 3 February 2015⁴ (29 January 2016 for WPD⁵).

1.11. A single restated NAW shall be submitted per DNO group and worksheets 'NAW2 – Total', 'NAW3 – Asset Repl', 'NAW4 – Refurbishment', 'NAW7 – HVP', 'NAW8 – Average CoF' and 'Probs. Of Failure' shall be populated, in accordance with the RIGs, with:

- Network Asset Indices profiles for:
 - 'End of DPCR5 (31 March 2015) with investment';
 - 'Mid-Period Review (31 March 2019) without investment' and
 - 'End of RIIO-ED1 (31 March 2023) without investment'
- Network Asset Indices movements for 'Mid-Period Review (31 March 2019) planned investment' and 'End of RIIO-ED1 (31 March 2023) planned investment' for:
 - Asset Replacement;
 - Refurbishment;
 - High Value Projects that are Asset Replacement or Refurbishment driven.
- Average Consequences of Failure for each Health Index Asset Category; and
- Probabilities of Failure for each boundary between Health Index bands, for each Health Index Asset Category.

1.12. There is no requirement to populate the Network Asset Indices profiles for 'End of DPCR5 (31 March 2015) without investment' on 'NAW2'.

1.13. The Network Asset Indices movements for 'Mid-Period Review (31 March 2019) planned investment' and 'End of RIIO-ED1 (31 March 2023) planned investment' on worksheets 'NAW5 – Reinforcement', 'NAW6 – Faults' and 'NAW7b – HVP' (Reinforcement and Other Drivers). Additionally, worksheet 'NAW1 – DPCR5 View' should be populated with blanks.

1.14. This information is required for the purposes of rebasing the Network Asset Secondary Deliverables and we reserve the right to require the NAW to be fully populated in future.

Secondary Deliverables monetised risk file (SDMR)

⁴ <https://www.ofgem.gov.uk/publications-and-updates/riio-ed1-modifications-special-conditions-electricity-distribution-licences-held-slow-track-licensees>

⁵ <https://www.ofgem.gov.uk/publications-and-updates/riio-ed1-decision-minor-modifications-special-conditions-electricity-distribution-licences-held-western-power-distribution-plc-wpd>

1.15. A single SDMR file shall be submitted per DNO group and link to the restated NAW. The 'HI Probs. Of Failure' worksheet should be populated with the 'Average Probability of Failure' values. Where these values differ from the reference values determined from the CNAIM v1.0 the reasons for the differences shall be explained in the Rebasing Commentary Pack.

Secondary Deliverables Reporting Pack (Annex D of the RIGs)

1.16. When populating the Secondary Deliverables Reporting Pack for 2015/16, the 'Start of Year' profiles must be consistent with the 'End of DPCR5' profiles in the restated NAW.

Rebasing Commentary Pack

1.17. A Rebasing Commentary file template, developed in conjunction with the DNOs shall be completed and submitted.

Asset Additions and Removals file

1.18. A breakdown of 'Mid-Period Review (31 March 2019) planned investment' and 'End of RIIO-ED1 (31 March 2023) planned investment' profiles showing additions and removals separately should be provided for both the original and restated NAW.

2. Principles of the rebasing

Chapter Summary

This section sets out the principles that should be adopted in order to restate the NAW and provides guidance on the requirements of CRC 5D.18.

General principles

2.1. The Licensees shall use best endeavours to ensure that the submission is compiled using robust methods and that the data is free from error and accurately reflective of health and criticality of asset. Any errors that are identified with the original NAW must be clearly identified, with justification provided for a proposed solution that enables Ofgem to carry out an assessment.

2.2. The restated intervention plan in the NAW, where possible, shall be a direct translation of the original intervention plan. Where this is not possible it shall use the principles from the original intervention plan to produce the restatement so it reflects the original as closely possible. The restated intervention plan should ensure consistent volumes of interventions at an Asset Register category level and make no attempt to revise the original intervention plan.

Identifying the 1 April 2015 start position

Network Asset Indices profile for 'End of DPCR5 (31 March 2015) with investment'

2.3. CRC 5D.18(d) requires the Network Asset Secondary Deliverables to be based on actual rather than forecast data up to and including 31 March 2015. Therefore the 'End of DPCR5 (31 March 2015) with investment' profile should be trued up to represent the actual asset population at 31 March 2015 as reported in the RIIO-ED1 Cost and Volumes Reporting Pack.

2.4. Given that this restatement is the first implementation of a Common Network Asset Indices Methodology, two alternative approaches to calculating the Network Asset Indices 'End of DPCR5' positions may be permitted:

- asset health and criticality input data representing the values for these inputs as at the end of 2014/15; or
- asset health and criticality input data representing the values for these inputs after the start of 2015/16, with the exception of:
 - input data for assets where Refurbishment (SDI) activities were undertaken since the start of 2015/16;

- input data for assets removed since the start of 2015/16; and accounting for:
- the deterioration of assets since the start of 2015/16.

2.5. Taking account of practical considerations, licensees should employ the approach to determine the 'End of DPCR5 (31 March 2015) with investment' profile that will in their view lead to the most robust results. The explanation and justification of the rationale behind their chosen approach shall be provided in the Rebasing Commentary Pack which forms part of Ofgem's assessment.

2.6. For assets where Refurbishment (SDI) has occurred, the input data shall reflect the 'pre-Refurbishment' values. For assets removed after the start of 2015/16, the input data shall represent either the inputs as at the end of 2014/15, or the last recorded data for these assets.

2.7. Where input data representing the inputs after the start of 2015/16 is to be used, it is for the licensee to consider the deterioration of assets since 1 April 2015.

2.8. Where input data representing the inputs as at the end of 2014/15 is to be used, it is recognised that not all the required input data may have been captured at the end of 2014/15. In such circumstances it is acceptable for any data gaps to be filled by using currently held data for the required data inputs. The Average Consequences of Failure for each Health Index Asset Category shall be calculated from the consequences of failure shown in the rebased 'End of DPCR5 (31 March 2015) with investment' population. The Criticality bandings shall be assigned relative to these new Average Consequences of Failure.

Restating the ED1 intervention plan in the NAW

Network Asset Indices profiles for 'Mid-Period Review (31 March 2019) without investment' and 'End of RIIO-ED1 (31 March 2023) without investment'

2.9. The Mid-Period and End of RIIO-ED1 'without investment profiles' shall be calculated in accordance with the calculation of Future Health Scores as outlined in the CNAIM, using the input data used for the calculation of the 'End of DPCR5' profile. No further adjustments are permitted to be made to the resultant profiles.

Network Asset Indices movements for 'Mid-Period Review (31 March 2019) planned investment' and 'End of RIIO-ED1 (31 March 2023) planned investment'

2.10. The planned interventions, as seen at mid period and end of RIIO-ED1, shall be included in the restated NAW and consistent with Asset Replacement removals shown in the final Business Plan Data Templates (BPDT). Interventions shall relate to the positioning of volumes within the 'without investment' profiles.

2.11. For Asset Replacement (including any HVP driven by Asset Replacement) the intervention volumes should be consistent with the intervention volumes in each Asset Register category that was included within a HI Asset category represented in the original NAW. An explanation shall be provided in the Rebasing Commentary Pack where this is not the case.

2.12. For Refurbishment, the intervention volumes shall be consistent with the Refurbishment volumes shown in the final Business Plan Data Templates (BPDT), but should only include those volumes that relate to the classification of the intervention as Refurbishment (SDI) under the RIIO-ED1 RIGs⁶. Where this results in a materially different volume of Refurbishment interventions (increases or decreases) being shown in the restated NAW (compared to the original), DNOs will need to provide a narrative explaining the differences for each Health Index Asset Category in which they occur.

2.13. Where, due to the true-up of volumes to the actual end March 2015 position, there are lower volumes reported in the 'without investment' profiles for an individual Asset Register category than interventions in the original Network Assets Workbook, then the intervention volumes should match those in the 'without investment' profile. DNOs should provide an explanation where this situation arises.

⁶ <https://www.ofgem.gov.uk/publications-and-updates/direction-make-modifications-regulatory-instructions-and-guidance-rigs-riio-ed1>

3. Ofgem's assessment methodology

Chapter Summary

This chapter sets out Ofgem's assessment methodology for determining whether the restated NAW for the licensees are equally as challenging as the original NAW as set out in CRC 5D.18.

Assessment of restated NAW

3.1. Ofgem shall undertake an assessment to determine whether the restated NAW for the licensees meets the requirements of CRC 5D.18. The burden of proof to demonstrate this rests with the licensees and the submission should be of a sufficient standard, providing all of the required information to ensure we are able to carry out a complete assessment. Any supplementary questions raised during the assessment must be answered in a timely manner to prevent delaying the process.

3.2. Where, following qualitative assessment where the licensees have had an opportunity to provide revised information and a public consultation, Ofgem concludes that the rebased information for a particular Health Index Asset Category is not demonstrated as being equally as challenging, then Ofgem will direct modifications to the Network Assets Workbook pursuant to CRC 5D.26.

3.3. The assessment shall comprise three tests described below. These tests shall consider the restated matrices for each intervention type and each Health Index Asset Category separately. Each of the three tests shall only consider the asset removals in the NAW. Where the absolute number of asset removals in the NAW, due to asset additions, are lower than those in the Asset Additions and Removals file the later value shall be used.

3.4. Where all three tests are passed for a Health Index Asset Category, then that category is likely to be considered equally as challenging and no qualitative assessment would be required for that category.

3.5. If any of these tests are failed, for a particular Health Index Asset Category, then a qualitative assessment relating to the failed categories only should be provided as part of the Rebasing of Network Asset Secondary Deliverables Commentary document.

3.6. It is recognised that that there may be valid reasons that rebased interventions may not pass the three tests while still being equally as challenging. For any required qualitative assessment, the licensee will be required to prove that the submitted rebased interventions are equally as challenging as those in the original NAW.

Test 1 – Statistical test of “equally as challenging”

3.7. Test 1 will comprise of seven steps. These are set out below.

- Step 1: From the original NAW evaluate the removed risk points shown by the Network Asset Indices movements for ‘End of RIIO-ED1 (31 March 2023) planned investment’ using the weightings for probability of failure and consequence of failure, in each Health Index/ Criticality Index combination, as taken from the original secondary deliverables monetised risk file.
- Step 2: From the original NAW evaluate the maximum risk points that could have been removed by the Network Asset Indices movements for ‘End of RIIO-ED1 (31 March 2023) planned investment’ had the same volume of interventions been applied to the highest risk assets within ‘End of RIIO-ED1 (31 March 2023) without investment’ (using the same weightings for probability of failure and consequence of failure, in each Health Index/ Criticality Index combination, that were used in Step 1).
- Step 3: Compare the results from step 1 and step 2 to express the risk points removed from the intervention plan, in a Health Index Asset Category, as a percentage of the maximum risk points that may be removed from the same volume of interventions.
- Step 4: From the rebased NAW evaluate the removed risk points shown by the Network Asset Indices movements for ‘End of RIIO-ED1 (31 March 2023) planned investment’ using the weightings for probability of failure and consequence of failure, in each Health Index/ Criticality Index combination, that are consistent with the Average Consequences Of Failure and Probability Of Failure data in the rebased workbook. The Consequences of Failure or Probability of Failure, where different from those in the Common Methodology, should be justified in the Rebasing of Network Asset Secondary Deliverables Commentary document.
- Step 5: Evaluate the maximum risk points that could have been removed by the Network Asset Indices movements for ‘End of RIIO-ED1 (31 March 2023) planned investment’, in the rebased workbook, had the same volume of interventions been applied to the highest risk assets within ‘End of RIIO-ED1 (31 March 2023) without investment’ (using the same weightings for probability of failure and consequence of failure, in each Health Index/ Criticality Index combination, that were used in Step 4).
- Step 6: Compare the results from step 4 and step 5 to express the risk points removed from the rebased intervention plan, in a Health Index Asset Category, as a percentage of the maximum risk points that may be removed from the same volume of interventions.

- Step 7: Test 1 is considered to be passed, where the percentage calculated in Step 6 is equal to, or greater than, that calculated in Step 3. Where this test is not passed, the DNO will be required to provide evidence to support its view that the rebased interventions are equally as challenging.

3.8. Where a Health Indices Asset Category has no associated risk points, due to zero Consequence of Failure or Probability of Failure values, in the original NAW then the values will be taken from the restated NAW for the purposes of this test. This is likely to apply where the classification of an intervention is now Refurbishment (SDI), due to changes to the RIIO-ED1 RIGs.

3.9. Where a Health Indices Asset Category no longer has any associated risk points due to zero Consequence of Failure or Probability of Failure values, or is no longer an SDI refurbishment activity in the restated NAW, there is no requirement to provide rebased information as there will be no contribution to the overall monetised risk target. Ofgem will not undertake an assessment on these Health Indices Asset Categories but appropriate commentary must be provided to explain the reason for omitting this category.

3.10. For refurbishment interventions where Test 1 is failed for a particular Asset Health Index Category, Ofgem shall re-run the test, from Step 1 above, but first removing the replacement interventions for that category from the 'End of DPCR5 (31 March 2015) with investment' refurbishment profile. The results of the re-run test shall be subject to a qualitative assessment and be considered alongside the commentary provided in the Rebasing Commentary Pack due to Test 1 being failed.

Test 2 – Volumes of interventions test

3.11. This test will examine whether the volume of interventions in each Health Index Asset Category in the rebased NAW, for each investment driver, is the same as shown in the Business Plan Data Templates (BPDT).

3.12. Test 2 is considered to be passed where the volumes of interventions agree. Where this test is not passed for a Health Index Asset Category, our qualitative assessment will include determination of the positioning within the interventions for the Health Index Asset Category of additional interventions, such that volumes agree to the original NAW.

Test 3 – Consequential intervention test

3.13. For the Network Asset Indices 'End of RIIO-ED1 (31 March 2023) planned investment' removal profiles in both the original NAW and the rebased NAW, the proportion of assets that are in the Health Indices bands where intervention would not be expected shall be examined. For the original NAW, this would be the proportion of interventions across all three of the HI1, HI2 and HI3 bands to the total number of interventions. For the rebased NAW, this would be the proportion of

interventions across both the HI1 and HI2 bands to the total number of interventions.

3.14. Where the proportions in the rebased matrix are higher than in the original then this test is considered to be failed and the DNO will be required to provide evidence to support its view that the rebased interventions are equally as challenging.