

Consultation on close out methodologies for the DPCR5 Price Control

Consultation

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Overview:

The fifth electricity distribution price control (DPCR5) ended on 31 March 2015. It had several elements which could not be settled until the price control had ended. We have committed to creating methodologies for assessing some of these. They are the Network Output Measures relating to asset health, loading and fault rates, load-related expenditure, High Value Projects and Traffic Management Act mechanisms. We are consulting on draft methodologies. We will publish the final versions in the RIIO-ED1 Price Control Financial Handbook by 31 March 2016.

Context

In February 2015, we modified the Distribution Network Operator (DNO) licence to incorporate arrangements for closing out the fifth electricity distribution price control (DPCR5). These arrangements are governed by special licence condition CRC3A *Legacy price control adjustments* and Part 3 of the RIIO-ED1 Price Control Financial Handbook (the Handbook) *Legacy price control adjustment methodologies*.

CRC 3A and Part 3 of the Handbook include methodologies for closing out most outstanding elements for the price control. However, for several more complex areas, we have committed to define detailed methodologies for their assessment. These are:

- Network Output Measures relating to asset health, loading and fault rates;
- Load-related expenditure reopener;
- High Value Projects (HVP) expenditure reopener and outputs assessment; and
- Traffic Management Act reopener.

We have committed in the Handbook to develop these methodologies and formally incorporate them in CRC3A and Part 3 of the Handbook by way of licence modification by 31 March 2016. This consultation marks the first step in this process.

Associated documents

[Electricity Distribution Price Control Review Final Proposals - Allowed revenue - Cost assessment](#)

[Electricity Distribution Price Control Review Final Proposals - Incentives and Obligations](#)

[Network Outputs Data and Performance Reporting \(NADPR\) Regulatory Instructions and Guidance \(RIGs\)](#)

[RIIO-ED1: Modifications to special conditions of the electricity distribution licences held by the slow-track licensees](#)

[Modifications to special conditions of the electricity distribution licences held by WPD licensees to incorporate DPCR5 closeout provisions](#)

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Executive Summary

We are proposing methodologies to close out four elements of DPCR5:

- the assessment of delivery against the asset health, loading and fault rates deliverables;
- the reopener of DPCR5 load-related expenditure;
- the reopener of expenditure and the assessment of delivery against outputs for “high value projects”; and
- the reopener for expenditure associated with the Traffic Management Act.

We have based the methodologies on the approach and principles we described in DPCR5 Final Proposals (FPs). However, these were not detailed enough, and in some cases our thinking (and that of the DNOs) has evolved during the five years of the price control. We have highlighted any significant changes from what we originally set out at DPCR5 FPs for each area in this document together with our rationale for the changes.

We have worked with the Distribution Network Operators (DNOs) to develop these methodologies. We will include the final versions in the Price Control Financial Handbook. We will publish the statutory consultation on the Handbook changes early next year and issue the modifications by 31 March 2016.

We welcome views from stakeholders on our suggested approach outlined in chapters 1 to 5 and on the detailed draft methodologies set out in the appendices.

1. Background and overview

Chapter Summary

Background on the DPCR5 price control and the elements of the price control that still need to be settled.

Background

1.1. DPCR5 was the fifth electricity distribution price control which ran from 1 April 2010 to 31 March 2015. The price control set the allowed revenue that the DNOs could recover from customers and what the DNOs were required to deliver in return.

1.2. There are elements which couldn't be settled until the end of DPCR5. We list those that are covered in this document in Table 1.1 below, along with the year in which they will be settled ("closed-out"). They are governed by special condition CRC3A of the distribution licence and Part 3 of the RIIO-ED1 Price Control Financial Handbook (the Handbook)¹.

1.3. These cover a range of areas including efficiency incentives, output incentives and uncertainty mechanisms relating to expenditure.

1.4. Our close out of each of these mechanisms will probably impact the DNOs financially. We will report the impact as part of the DNOs' total returns for DPCR5. They will receive/pay any amounts due as part of the allowed revenue in RIIO-ED1.

1.5. For some of these mechanisms we estimated the close out adjustment as part of RIIO-ED1 final determinations, so the adjustments applied now will be the incremental amount between the final determinations adjustments and the finalised close out values.

1.6. Table 1.1 provides a brief description of the four areas for which we still need to define methodologies and in the year any adjustments will be accounted for in the annual iteration process (AIP).

¹ CRC3A and the Handbook were published on 3 February 2015.

Table 1.1 - Overview of closeout areas requiring additional methodologies and year adjustment made

Area	Description	AIP 16/17	AIP 17/18	AIP 18/19
DPCR5 Network Output Measures (NOMs)	NOMs are a key indicator of asset health used during DPCR5. There are three measures of asset health within the NOMs: Health Indices (HIs), Load Indices (LIs) and fault rates. The DNOs have committed to delivering specific outputs relating to NOMs. We can adjust DNOs' revenue downwards where they have failed to deliver outputs.		✓	
Load-related Expenditure Reopener	The Load-related Reopener applies to uncertain costs relating to increasing capacity on the network. It can be triggered upwards by the DNOs or we can trigger it downwards.		✓	
DPCR5 High Value Projects Expenditure Reopener	The High Value Projects Reopener applies to uncertain costs relating to individual high-cost projects which the DNOs planned to undertake. It can be triggered upwards by the DNOs or we can trigger it downwards.		✓	
DPCR5 High Value Projects Outputs performance	The DNOs have committed to delivering specific outputs relating to their DPCR5 High Value Projects. We can adjust DNOs' revenue downwards where they have failed to deliver outputs.		✓	✓

<p>Traffic Management Act Reopener²</p>	<p>The Traffic Management Act Reopener applies to uncertain costs relating to the costs of permits DNOs require when working on roads and highways. This can only be triggered upwards by the DNOs as no allowance was made for these costs as part of DPCR5 base revenue.</p>	<p>✓</p>	<p>✓</p>	
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1.7. This document consults on our proposals for these methodologies.

Approach

1.8. Our starting point for each of the methodologies has been what was set out in our DPCR5 Final Proposals and the Network Outputs Data and Performance Reporting (NADPR) Regulatory Instructions and Guidance (RIGs)³. The NADPR RIGs were developed in cooperation with the DNOs after FPs were published and reflect evolutions in our thinking. We have followed the principles that were set out at FPs and the RIGs, but in some case we had to make changes to reflect what is practical for each of these assessments and further work that we have done in discussion with the industry since DPCR5 FPs. We give further detail in the individual chapters on each of the mechanisms.

1.9. The following basic principles apply to all methodologies:

- **Efficiency:** our assessments will look at whether costs have been efficiently incurred and we will take into account any efficiencies or inefficiencies that the DNOs have made in delivering their outputs.
- **Materiality:** the DPCR5 cost efficiency incentives apply normally within certain bounds for load-related expenditure and High Value Projects expenditure. DNOs retain a fixed percentage of any underspend (the IQI efficiency incentive rate) and are exposed to the same fixed percentage of any overspend⁴. Outside these materiality limits, expenditure reopens apply. For the output assessment, we said in DPCR5 FPs that we will only apply financial adjustments where there has been a significant and material under delivery. We have set out the principles applying to individual methodologies in more detail in each chapter.

² We are looking to close out the TMA reopener earlier than we originally set out in the Financial Handbook.

³ The RIGs are our main tool for monitoring DNO performance under the price control. Under the RIGs, DNOs submit performance data to us on a yearly basis.

⁴ The IQI Incentive rate for each DNOs is set out in Special Condition 18 *Arrangements for the recovery of uncertain costs* of the DPCR5 electricity distribution licence.

- **Information requests:** our assessments under the methodologies will be based on data provided by the companies under the DPCR5 RIGs as far as possible. It is likely that we will need to request additional data from the DNOs (and possibly gas distribution network operations (GDNs)), for the purpose of closing out this mechanism. We will only request data that is not currently available to us and will specify any additional information requests as far as possible in advance. We expect data submitted to be subjected to appropriate assurance as set out in the Data Assurance Guidance document.⁵ We will take into account any concerns we may have with the quality and robustness of the data submitted by the DNOs (and GDNs) in conducting our assessment under the methodologies and in issuing our final decisions on the value of any adjustments to revenue.

1.10. We explained in DPCR5 FP that we made a fixed assumption for input price growth above inflation as measured by RPI. As such we considered the risk of RPEs exceeding, or dropping below, the levels assumed in our cost baselines was for the DNOs to manage. We will discount the impact of real price effects (RPEs) from any adjustments applied under the load-related and HVP reopeners. We are giving further thought to how this can best be done and have therefore only made limited reference to this in our draft methodologies.

1.11. The reopener adjustments we discuss in this document have an impact on revenue in 2 ways:

- We give the DNO increased or lower financing costs to take account of the higher/reduced baseline allowance (after the application of the efficiency incentive rate)
- We give the DNO an increased/reduced baseline for the efficiency incentive.

1.12. We also make use of the efficiency incentive rate in the calculation of materiality for the reopeners. The additional/reduced costs (above/below the relevant reopener thresholds in the case of the load-related reopener and TMA) must be greater than 1% of base demand revenue.

1.13. Any output adjustments feed directly to allowed revenue rather than through efficiency incentive.

1.14. All adjustments will be made on an NPV neutral basis taking into account Time Value of Money adjustments.

⁵https://www.ofgem.gov.uk/sites/default/files/docs/2015/04/dag_guidance_document_v1.1_clean_version_0.pdf

Next Steps

1.15. We will update the methodologies in light of the comments in response to this consultation and further discussions with the DNOs. In parallel with this, we will convert each of the methodologies into language consistent with the rest of the Handbook.

1.16. We will issue a statutory consultation on the Handbook changes in February 2016 with a view to issuing the final version by 31 March 2016. We will also correct a number of minor errors and typos in the legacy chapters of the current Handbook.

Timetable

1.17. Table 1.2 sets out the timetable of how we will develop and implement the close out methodologies.

Table 1.2 - Timetable for development and implementation of the methodologies

Milestone	Timing
Kick off meeting with all DNOs	31 July 2015
Meeting 2 with all DNOs	26 August 2015
Informal consultation published	28 September 2015
Meeting 3 with all DNOs	October 2015
Initial draft of handbook sections	October 2015
Responses to consultation	9 November 2015
Meeting 4 with all DNOs	Late October 2015/early November 2015
Meeting 5 with all DNOs	Late November/early December 2015
Finalise methodologies	January 2016
Statutory Consultation on methodology sections for Financial Handbook	February 2016
Methodologies in place in the Financial Handbook	By 31 March 2016

Interactions with RIIO-ED1 and other price controls

1.18. We are developing these methodologies specifically within the context of DPCR5. The methodologies are not intended to set a precedent for how we will deal with similar mechanisms in other price controls and in other sectors, though they may be used to inform our approach in the future.

Overview of this document

1.19. Chapter 2 to Chapter 5 provide an overview of our proposed methodologies. The detailed methodologies are set out in Appendices 2 to 5.

2. Network Output Measures

Chapter Summary

Background to the Network Output Measures, an explanation of our key principles for assessing the measures and a summary of our methodology for doing so.

Question 1: Do you agree with the principles for the NOMs assessment?

Question 2: Do you agree with our approach to assessing performance on Health Indices?

Question 3: Which of the two approaches to valuing the Health Indices outputs gap do you consider to be more appropriate?

Question 4: Do you agree with our approach to assessing performance on Load Indices and valuing any associated outputs gap?

Question 5: Do you agree with our approach to assessing fault rate performance?

Question 6: Do you agree with our proposal not to make any financial adjustments associated with fault rate performance?

Question 7: Do you agree with the changes we have made to the assessment approach from DPCR5 FPs and the NADPR RIGs?

Background

2.1. In the DPCR5 price control review we created new indicators called Network Output Measures (NOMs)⁶. These were designed to distinguish between DNOs that had innovated and found alternative methods to deliver customers' needs more efficiently, against those that had deferred investment at the expense of network health, loading and/or performance. We concluded that DNOs should retain a share of genuine efficiency improvements and should not benefit from not doing work or deferring work that benefits consumers.

2.2. If a company fails to invest in the network it is likely that the network reliability will suffer. However, it may be a long time before network interruptions increase as a result of reduced maintenance expenditure, lower asset replacement or refurbishment expenditure.

2.3. The NOMs are leading indicators of the performance of network assets and link closely with network expenditure. There are three measures:

⁶ We have similar measures in RIIO-ED1, but have renamed them Network Asset Secondary Deliverables.

- **asset health indices (HI)** – these cover the health of the DNOs’ assets and are based on a combination of age, condition data and fault history. Asset categories range from HI1 assets, which are new or “as new” assets at the beginning of their asset lives, to HI5 assets which are towards the end of their asset lives. HI4 and HI5 assets may require replacement or refurbishment⁷. HIs only applies to a subset of DNO assets⁸ for which condition information is available. There are some differences between DNOs in terms of which assets were in scope for DPCR5.
- **load indices (LI)** – these cover the loading on primary substations on the DNOs’ networks based on peak demand at each substation site and firm capacity. Asset categories range from LI1 with a relatively low level of loading to LI4 and LI5 which represent peak loading above firm capacity and which may require adding additional capacity through network reinforcement.
- **fault rates** – these apply to assets with no HIs. They measure asset reliability in terms of the number of faults which occur annually and over a number of years.

2.4. As part of DPCR5 FPs we published the agreed NOMs deliverables for each DNO⁹.

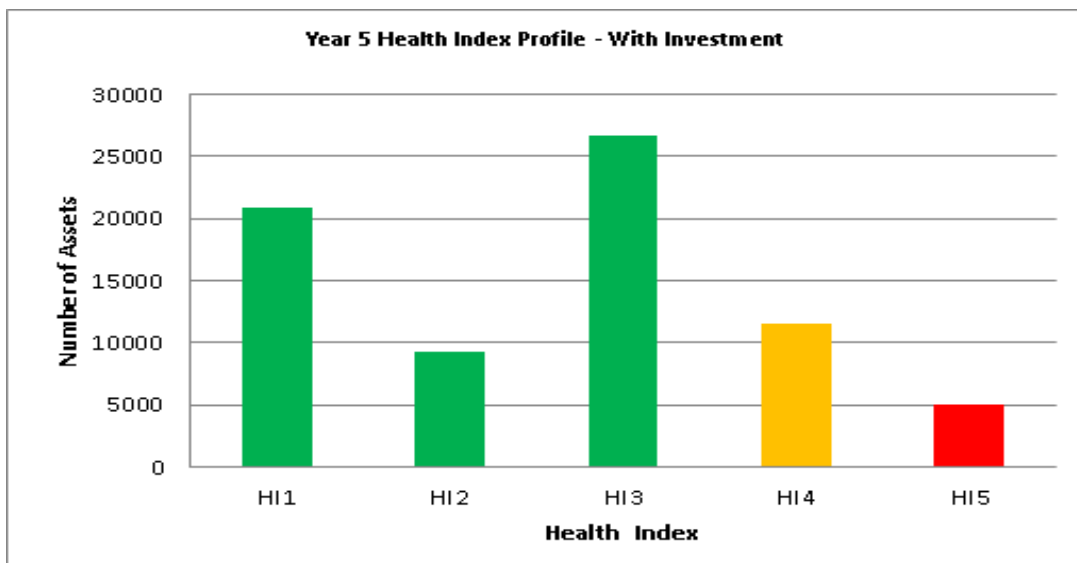
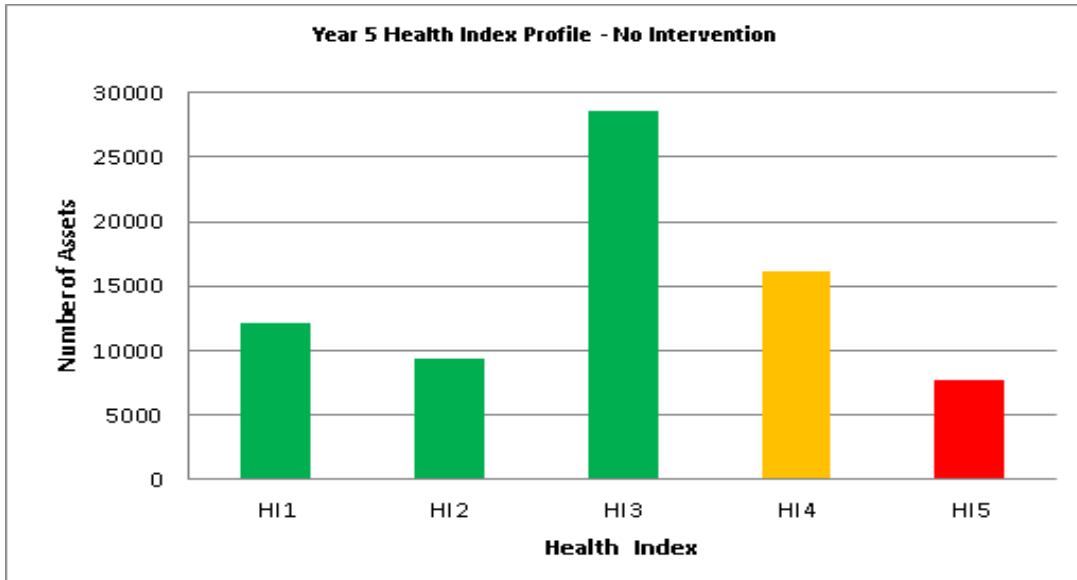
2.5. For HIs, the deliverable was the difference, or delta, between the agreed HI profiles at the end of DPCR5 without intervention and the agreed HI profiles with intervention (ie asset replacement or refurbishment). This is illustrated with an example in Figure 2.1 below.

⁷ HI5 assets are assets which have suffered material deterioration, and for which intervention requires consideration. HI5 assets are assets which have reached the end of their serviceable life, and for which intervention is required.

⁸ This is also the case for RIIO-ED1 although the scope has increased with some additional assets included. We are considering extending the scope to all assets for RIIO-ED2.

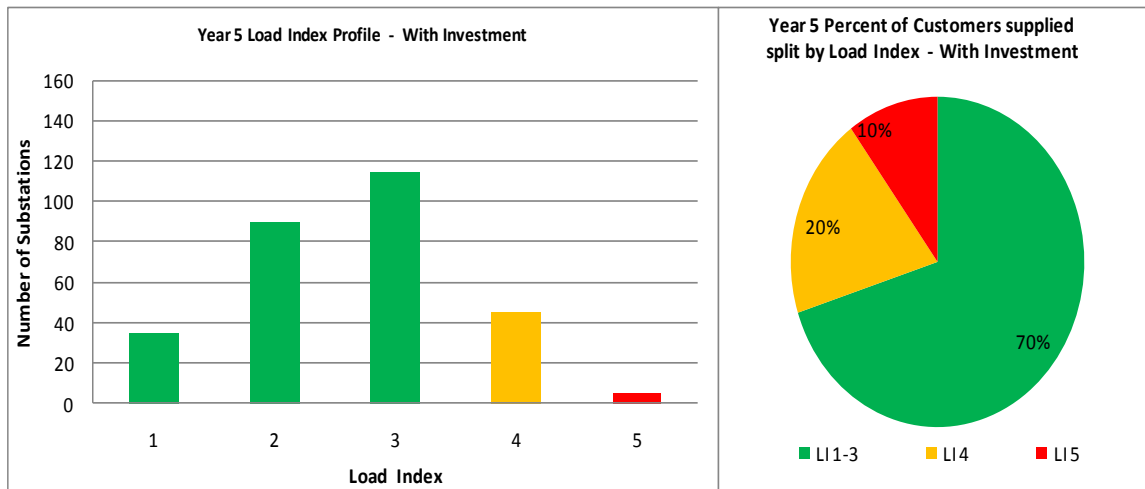
⁹ <https://www.ofgem.gov.uk/publications-and-updates/electricity-distribution-price-control-review-final-proposals-allowed-revenue-cost-assessment>

Figure 2.1 – Example HIs profile and the end of DPCR5 with and without intervention



2.7. For LIs, the deliverable was the agreed profile of LIs at the end DPCR5 with intervention. This differs from the HIs in that LI is an absolute deliverable, rather than the difference between profiles with and without investment.

Figure 2.2 – Example LI profile and the end of DPCR5 with and without intervention



2.8. For fault rates the deliverable is the agreed average fault rates during DPCR5.

2.9. The NOMs deliverables were not intended to apply on a line-by-line basis to the individual HI, LI or fault rate categories. DNOs were able to trade-off over-deliveries in one category with under-deliveries in another, provided that they delivered the agreed outputs overall.

2.10. We explained in DPCR5 FPs that we would carry out a performance assessment to determine whether or not a DNO had satisfactorily delivered a package of outputs which were consistent with the change in the level of risk funded by its customers through the DPCR5 settlement.

2.11. During DPCR5 we developed a mechanism for trading between HI asset categories and assessing the overall level of delivery against the asset health requirements. This was done in consultation with the DNOs. The approach involves calculating an overall risk score, or risk points, by applying a scoring, or weighting, scheme to the DNO' assets in each of the HI bands and asset categories. We can assess whether DNOs have met their asset health targets by comparing the actual level of risk reduction they have delivered against the agreed risk reduction at DPCR5. We have developed a similar risk scoring approach for LIs. If we determine that a DNO has satisfactorily delivered its HI and LI deliverables (or equivalent) over DPCR5, we will apply the efficiency incentives to an under or overspend in the

normal way¹⁰. If we determine that a DNO has not satisfactorily delivered it's agreed outputs, we can penalise them.

2.12. We have made a number of changes to the NOMs assessment methodology based on further work we have done since DPCR5 FPs. We have added clarifications, developed the details and taken a practical approach to the NOMs assessment.

2.13. We describe the changes in Table 2.1 below together with the rationale for each change.

Table 2.1 – Differences to DPCR5 FPs and the NADPR RIGs

Change from DPCR5 FP and the NADPR RIGs	Rationale
We propose quantitative and qualitative assessment of DNO performance rather than just carrying out qualitative assessment of the NOMs.	FPs was published before the risks points methodology was developed. This quantitative method of assessing DNOs' performance is more systematic and transparent.
We propose a threshold for materiality (DPCR5 FP stated that significant and material issues need to be identified before we made a financial adjustment).	We are now able to define a quantitative materiality threshold using the risks points approach, which provides a fairer and more transparent way of assessing materiality.

¹⁰ Under our RAV efficiency incentive for DPCR5 DNOs share a fixed percentage of any overspend or underspend against the price control cost allowances.

Change from DPCR5 FP and the NADPR RIGs	Rationale
We propose not to make changes to the HI NOMs deliverables for material changes, despite this being stated in FPs	As the DNO deliverables for HIs are based on the delta between the asset profiles with and without investment, it is not necessary to make adjustments for material changes before assessing performance. We will take into account material changes as part of our qualitative assessment of whether any under-delivery is justified.
We propose not to apply financial adjustments for fault rates.	We do not consider it possible to establish a clear link between costs and fault rates. If DNOs have under-delivered on fault rates we would expect them to provide assurance of how they will address the issue in RIIO-ED1.

Principles

2.14. Our assessment of the NOMs will use key principles which we have derived from the DPCR5 FPs, the NADPR RIGs and ongoing development of the approach to NOMs during DPCR5:

1. DNOs should retain a share of genuine efficiency improvements and should not benefit from not doing work or deferring work that benefits consumers.
2. We expect and encourage efficient reprioritisation of asset management activities in the NOMs. DNOs must retain the flexibility to respond quickly to new information and will not be penalised for doing the right thing in the interests of customers. This encourages effective and innovative asset management by the DNOs. The key consideration is the change in the overall level of network risk provided by the DNOs in their delivered NOMs, ie the overall level of risk reduction provided through interventions should be in line with, or better than the agreed deliverables for DPCR5.
3. We will assess whether companies have met or failed to meet the NOMs deliverables at an overall level for each of the HIs, LIs and fault rates. However, our assessment will be informed by the data and commentary provided for the individual HI asset categories (in the case of asset health), for individual

substations/voltage levels (in the case of loading) and individual voltages or categories (in the case of fault rates).

4. We encourage further improvement and innovation in asset management techniques and will not discourage these through our performance assessment process.
5. The efficiency of significant decisions related to the timing of interventions (eg replacement/refurbishment; reinforcement/load transfers) must be justified ,where appropriate, through whole life Cost-Benefit Analysis. We will review these justifications as part of our NOMs assessment.
6. We need to find significant and material issues with the NOMs at an overall level rather than on a line-by-line basis before we can determine that a DNO has not met its NOMs deliverables.

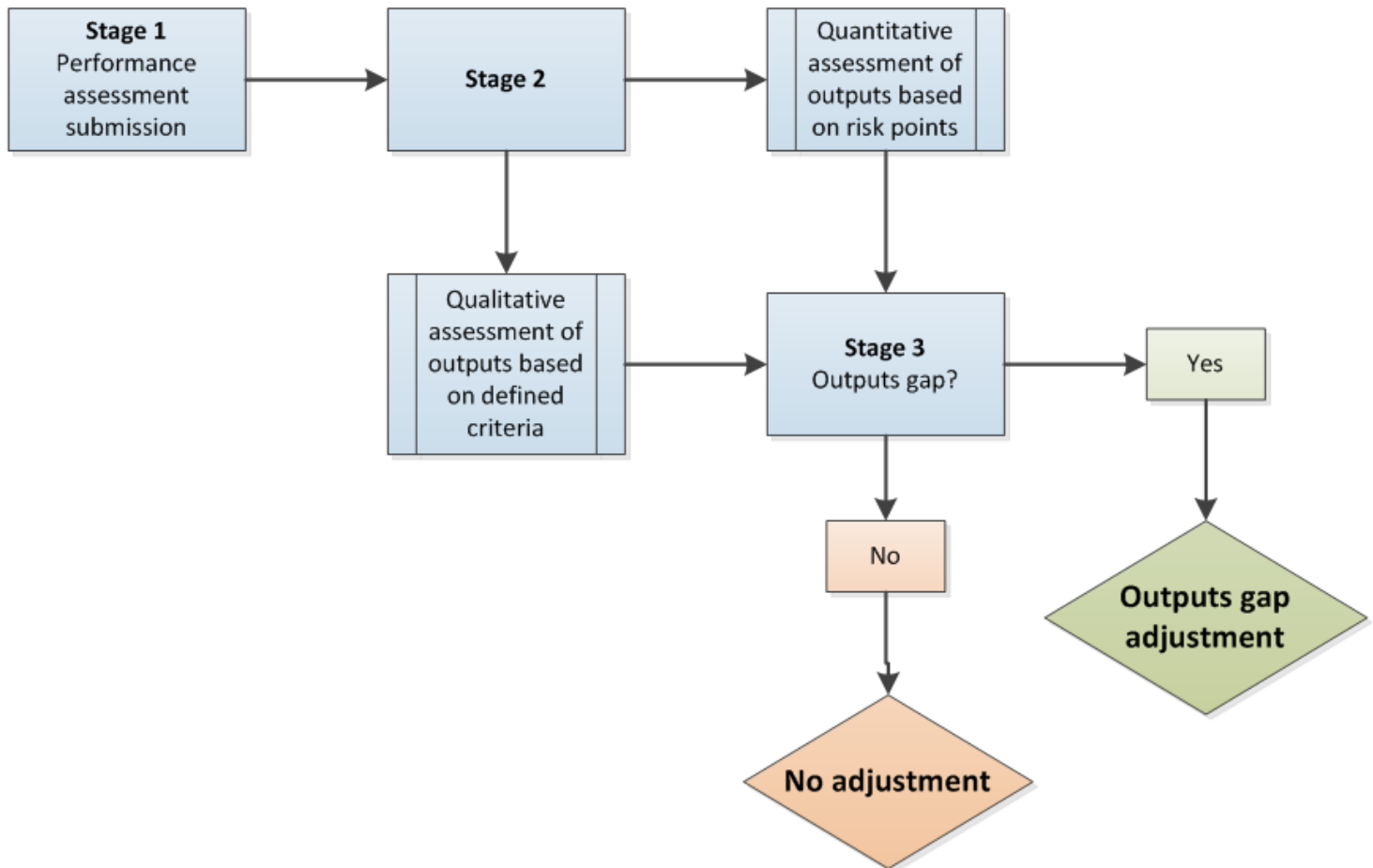
Summary of Proposed Methodology

2.15. Our proposed methodology maintains the three stages included in DPCR5 FP:

1. DNOs will be required to submit a 'performance assessment submission' setting out whether they consider they have met the NOMs requirement and providing further information to explain and justify their performance.
2. We will assess whether the DNO has met its NOMs deliverables or whether there is an outputs gap.
3. If there is a gap, we will determine the value and apply a revenue adjustment. This will be calculated by multiplying the outputs gap by the Network Outputs incentive rate.¹¹

¹¹ The Network Outputs Incentive Rate is equal to the DPCR5 IQI efficiency incentive rate times 1.025. The marginally higher incentive rate is to ensure that DNOs have a stronger incentive to deliver their outputs rather than under deliver.

Figure 2.3 Summary of the NOMs close out methodology



2.16. We will only carry out steps 1 and 2 for fault rates as there is no direct and quantifiable link to expenditure. However, we consider it is important to understand whether fault rates have increased significantly compared to what was agreed in DPCR5. If they have, the DNO must provide assurance on how they will address this in RIIO-ED1.

2.17. We explain our proposed methodology for each of three NOMs elements below.

Asset health indices

Performance assessment submission

2.18. DNOs will need to provide an HI performance assessment submission. It should include their assessment of whether they have delivered the agreed risk delta using our risk point methodology and other information they consider appropriate. We expect further justification where the risk point analysis suggests that they have under delivered.

2.19. Where DNOs have significantly rebalanced their investment programme between asset categories and between asset replacement and refurbishment in accordance with the principles in paragraph 2.13, they should justify why this was appropriate including appropriate cost benefit analysis.

2.20. The DNO performance assessment submissions should also explain data quality issues over the period and any material changes which have impacted their HIs. The DNO should explain and quantify the impact material changes have had on the measurement of HI delivery and how they have addressed data quality issues.

2.21. We have set out further details of the performance submission in Appendix 2.

Ofgem performance assessment

2.22. We will carry out a quantitative assessment based on the risk points methodology described above and explained in more detail in Appendix 2. We will use a points weighting for each of the HI bands, from HI1 to HI5, and DPCR5 asset replacement unit costs for each HI asset category. The asset replacement unit costs are a proxy for the value of work in each of the asset categories.

2.23. We will carry out a qualitative assessment of DNO's supporting information to understand whether any under delivery, reprioritisation and data quality issues have been appropriately addressed.

2.24. Based on the outcome of these two assessments, we will make an overall assessment of whether there is an outputs gap (under delivery) and whether it is material.

2.25. At DPCR5 we said that under deliveries would need to be material and significant enough for us to make a financial adjustment to DNOs' revenue. Although the risk point methodology was introduced early in the DPCR5 period, it is still relatively new. As such it is appropriate to have a materiality tolerance for the agreed HI NOMs deliverables. We consider that the materiality test should be based on 5% of the agreed risk point reduction for DPCR5. This means that a DNO could under deliver by up to 5% before any financial adjustment would apply to allow for measurement error. We have estimated that the average value that customers could lose from a 5% under delivery would be £4m for an average DNO.

Valuing the outputs gap

2.26. The final step in the HI assessment is the valuation of the outputs gap. We propose two potential options for this:

1. **Detailed valuation based on each HI asset category** – this approach is in line with DPCR5 FP but with a number of refinements to make it practical. The risk point for an under or over delivery in each HI asset category is translated into a volume of asset replacement work by dividing the risk points gap by the DPCR5 asset replacement unit costs, described above, and by 99 (the risk points effect of replacing one asset). The volume of work is then multiplied by the higher of the DPCR5 FP asset replacement unit costs (used in setting the relevant DNO's cost allowance) and the actual DPCR5 unit cost for asset replacement calculated from the relevant DNO's DPCR5 2014-15 RIGs submission if there is an under delivery. If there is an over delivery we simply multiply by the DPCR5 FP unit costs. We then sum the results across all the HI asset categories.
2. **High level valuation of the outputs gap** – this is a simpler approach but involves a larger change to what was proposed at DPCR5 FPs. We divide the actual expenditure during DPCR5 on asset replacement and refurbishment which has had an impact on risk points by the total number of risk points delivered by the relevant DNO. This give us a unit rate in £ per risk point. We then multiply the outputs gap by the unit rate to determine the value of the gap.

2.27. There is a potential risk with the second approach. If a DNO has an outputs gap and chosen the cheapest work in selecting the outputs it has delivered, the unit rate would not be cost reflective of those outputs it still needs to deliver.

2.28. The final step is to multiply the value of the gap by the Network Outputs Incentive rate to determine the financial adjustment for the NOMs.

Load indices

Performance assessment submission

2.29. DNOs will need to provide an LI performance assessment submission. It should include their assessment of whether they have delivered the agreed LI deliverables using our risk point methodology and other information they consider to be appropriate. We expect further justification where the risk point analysis suggests that they have under delivered.

2.30. Where DNOs have significantly changed their reinforcement programme associated with the LIs in accordance with the principles in paragraph 2.1, they should provide justification of why this was appropriate, including appropriate cost benefit analysis.

2.31. The DNO performance assessment submissions should also explain data quality issues over the period and any material changes which have impacted LI. The

DNO should explain and quantify the impact material changes have had on the measurement of LI delivery and how they have addressed the data quality issues.

2.32. We have set out further details of the performance submission in Appendix 2.

Ofgem performance assessment

2.33. We will carry out a quantitative assessment based on the risk points methodology described above and explained in more detail in Appendix 2. We use a points weighting for each of the LI bands from LI1 to LI5 and the number of customers or peak demand to weigh each of the primary substations. The number of customers or peak demand are measures of the importance of each of the substations to customers.

2.34. We propose to carry out a qualitative assessment of whether the LI profiles (the number of substations in each LI band) at the end of DPCR5 is equivalent to or better than the agreed profile with investment for the end of DPCR5. We will also qualitatively assess the supporting information to understand whether any under delivery, reprioritisation and data quality issues have been appropriately justified in their submission.

2.35. Based on the outcome of these two assessments, we will make an overall assessment of whether there is an outputs gap (under delivery) and whether it is material.

2.36. We consider that the materiality test should be based on 5% of the risk points for the agreed LI deliverable, ie. the risk points for the forecast profile of substations in different LI bands with investment. This is consistent with the approach for HIs.

Valuing the outputs gap

2.37. The final step in the LI assessment is the valuation of the outputs gap. We will calculate the difference in risk points between the agreed LI profiles at the end of DPCR5 against the actual LI risk points removed at the end of DPCR5. We will then divide the allowed expenditure related to LIs in DPCR5 by the number of risk points. This establishes a unit rate in £ per risk point. We will then multiply the outputs gap by the unit rate to determine the value of the gap.

2.38. The final step is to multiply the value of the gap by the Network Outputs Incentive rate to determine the financial adjustment for the LI NOMs.

Fault rates

Performance assessment submission

2.39. DNOs will need to provide a fault rate performance assessment submission. It should include their assessment of whether they have delivered the agreed fault rate deliverables using our risk point methodology and other information they consider to be appropriate. We expect more justification where the risk point analysis suggests that they have under delivered.

2.40. We have set out further details of the performance submission in Appendix 2.

Ofgem performance assessment

2.41. Our proposed performance assessment of fault rates will be in two stages. First, we will carry out a quantitative assessment of how fault rates have differed from those forecast at DPCR5 and historical averages. Secondly, we will do a qualitative assessment of their supporting information to understand whether any under delivery issues have been appropriately addressed. Where there is an under-delivery, we expect DNOs to provide appropriate assurances on how the fault rate issues will be addressed in RIIO-ED1.

3. Load-related reopener

Chapter Summary

An overview of the DPCR5 closeout load-related reopener mechanism and a summary of our proposed methodology. Our detailed methodology is available in Appendix 3.

Question 1: Do you agree with the principles for the Load-related reopener assessment?

Question 2: Do you agree with our approach to assessing expenditure on low volume high cost (LVHC) connections?

Question 3: Do you agree with our approach to assessing expenditure on general reinforcement?

Question 4: Do you agree with our approach to assessing avoided reinforcement?

Question 5: For non-DNO interested parties, do you have any evidence you can provide that would support our assessment of the load-related reopener?

Background

3.1. Load-related expenditure is the costs of adding more capacity to the distribution networks to connect more customers and to accommodate increased demand. When we set the DPCR5 price control we recognised that there was significant uncertainty in economic conditions which could impact on forecast load growth and volume of new connections and therefore the need for investment. We therefore included two uncertainty mechanisms to allow the DNOs to be funded for these costs later in the period.

3.2. Firstly, there is a volume driver for high volume low cost (HVLC) connections. The volume drivers modify the allowed revenues according to the volume of work done. This is appropriate for HVLC connections because these connections are done in larger numbers and have limited variability in unit costs. The volume driver for these connections adjusts to HVLC connections baseline to reflect the actual volume of connections times the unit cost we specified at DPCR5. It also takes account of the actual proportion of gross HVLC connections expenditure that is recovered through connection charges.

3.3. Secondly, there is a reopener where we can recalculate the allowed revenues for specified costs (called the load-related reopener) for general reinforcement (excluding fault level reinforcement) and low volume high cost (LVHC) connections.

3.4. General reinforcement is work on the network to enable load growth (from both demand and generation) which is not attributable to specific customers. The DPCR5 reopener excluded costs associated with distributed generation (DG) because they were covered in a separate mechanism (called the DG incentive). It also excluded costs associated with HVPs which are addressed in Chapter 4.

3.5. General reinforcement typically consists of lumpy projects at the higher voltages which have significant variability in unit costs. LVHC connections are subset of demand connections for which there are relatively small volumes and significant variability in unit costs. As such we did not consider general reinforcement or LVHC connections expenditure would be suitable for a volume driver. LVHC connections include metered, shared use demand connections work, subject to the apportionment rule¹², excluding any low voltage connections (because low voltage connections are high volume). It also includes work as a result of ICP or third-party connections at all voltages. It excludes any sole use connections work at any voltage which fall outside the price control because they are a directly remunerated service.

3.6. We made an assumption for the level of general reinforcement expenditure plus LVHC connections expenditure in setting the price control – the load-related baseline. This is set out in Special Condition 18 Arrangements for the recovery of uncertain costs of the DPCR5 distribution licence.

Table 3.1 – Load-related expenditure baselines

DNO	Load-related baseline (£m 12-13 prices)
ENWL	104.6
NPgN	66.7
NPgY	57.1
WMID	176.0
EMID	198.2
SWALES	25.0
SWEST	30.1
LPN	128.7
SPN	139.2
EPN	197.7
SPD	85.5
SPMW	116.5
SSEH	33.7
SSES	162.4

3.7. The reopener applies to the sum of general reinforcement and LVHC connections expenditure. DNOs are able to trigger the reopener if they can demonstrate that efficient expenditure is at least 20% higher than the baseline. We are able to trigger if efficient expenditure is at least 20% lower than the baseline. In addition, the additional costs above or reduced costs below the reopener threshold baseline, after application of the efficiency incentive rate, must be greater than 1% of DPCR5 base revenue for an adjustment to be made.

¹² Refer to our Connections Guidance document - <https://www.ofgem.gov.uk/publications-and-updates/guide-electricity-distribution-connections-policy> for further details.

3.8. The DNOs were able to trigger the load-related reopener in January 2013. In practice no DNO triggered it. There is another opportunity for the DNOs to trigger the reopener in May 2016. We have seen a downturn in economic growth, load growth and the volume of new connections so we do not expect any DNOs to trigger it. Given the size of the downturn, we expect to trigger the reopener downwards for a number of the DNOs.

3.9. In assessing the reopener, we will take into account any efficiencies that the companies have made through innovative techniques to avoid general reinforcement or LVHC connections expenditure such as demand-side management, smart grid technologies, energy storage or other innovative approaches. This is to ensure that we do not create any perverse incentives which would discourage DNOs from undertaking such activities. We will also take into account any other genuine cost efficiencies they have made. DNOs should retain the benefit under the efficiency incentive rate of such efficiencies.

3.10. Where the reopener thresholds have been met, we would expect to make adjustments to the DPCR5 FP load-related expenditure baselines to reflect expenditure that was no longer needed due to changes in demand growth and the volume of connections.

3.11. We would also make adjustments to the baseline where we identify that actual expenditure is higher because of cost inefficiencies. This is the opposite of avoided reinforcement or other cost efficiencies the DNOs may achieve and will be identified through the same ex-post efficiency analysis as part of the reopener.

3.12. As explained in Chapter 2 on the NOMs, we published agreed LI deliverables for each DNO as part of DPCR5 FP. We will assess LIs under the NOMs closeout mechanism, but will also use LI information to inform our analysis of the load-related reopener.

Differences to DPCR5 FPs

3.13. Our proposed methodology builds on the approach set out at DPCR5 FPs and NADPR RIGs. We have made limited changes to the Load-related reopener assessment methodology. We have added clarifications based on further work we have done since DPCR5 FP, developed the details and taken a practical approach to the Load-related reopener and LI outputs assessments.

3.14. We describe the changes in Table 3.2 below together with the rationale for each change.

Table 3.2 - Changes from DPCR5 FP and the NADPR RIGs

Change from DPCR5 FP and the NADPR RIGs	Rationale
<p><i>Interactions between the two mechanisms:</i> FPs do not provide a clear indication on how these should be treated. We will carry the load-related expenditure efficiency analysis together with the LI NOMs assessment to ensure that there is no doubling counting.</p>	<p>We want to ensure that DNOs are not penalised twice for the same under-delivery under the LI NOMs and the load-related expenditure. By carrying out the analysis for both mechanisms together we will avoid this risk.</p>
<p><i>Avoided reinforcement methodology:</i> In FP we had only specified avoided reinforcement through demand side management (DSM). We propose to include smart grids, energy storage or any other innovative technique that the DNOs used to avoid network reinforcement during DPCR5.</p>	<p>This reflects the original intent of DPCR5 FP but takes account of the development of technologies during the period</p>

Principles

3.15. Our assessment of the Load-related reopener will use key principles which we have derived from the DPCR5 FP and further work we have carried out since their publication:

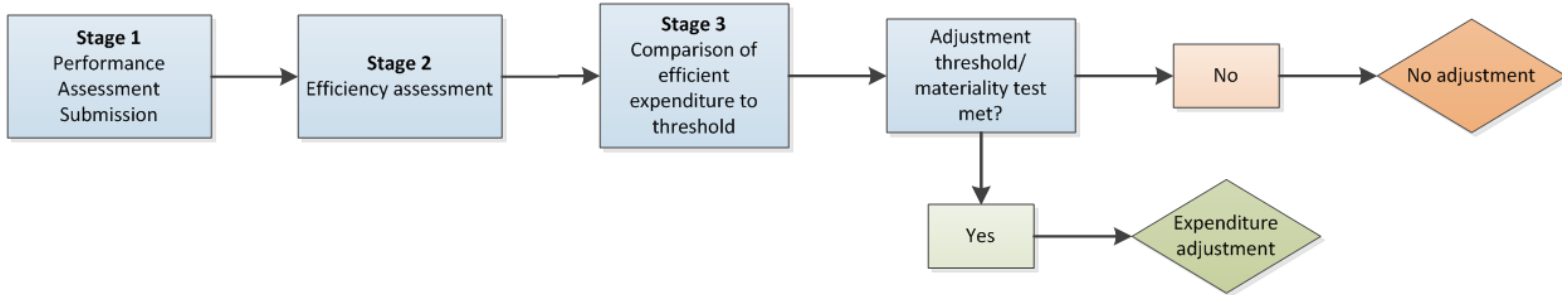
1. DNOs should retain a share of genuine efficiency improvements under the efficiency incentives and should not benefit from not doing work or deferring work that benefits consumers.
2. DNOs must provide robust information justifying the efficiency of their load-related expenditure with reference to suitable supporting information that was used at the time including appropriate Cost-Benefit Analysis, output, secondary deliverable information and management information on efficiency.
3. DNOs must provide robust information on avoided reinforcement or LVHC connections expenditure with reference to suitable supporting information that was used at the time including appropriate Cost-Benefit Analysis, output, secondary deliverable information and management information on efficiency.

4. Where possible we will make use of comparative information to assess the efficiency of these load-related expenditure.
5. Where comparative assessment is not possible, we will make use of other quantitative and qualitative assessment tools to assess the reasonableness of the DNOs' expenditure including but not limited to techniques developed at DPCR5 and RIIO-ED1.
6. We will ensure there is no double counting of adjustments between the load-related reopener ex-post assessment and the NOMs LI assessment.
7. As part of our assessment, we will consider any offsetting impact from the DNOs undertaking innovative activities to avoid general reinforcement or LVHC connections expenditure such as efficient demand side management (DSM), smart grid solutions or energy storage to ensure we do not discourage such activities.
8. As part of our assessment, we will consider any offsetting impact from delivery efficiencies for general reinforcement or LVHC connections work to ensure we do not discourage efficiency.
9. We will consider any inefficiencies due to projects being carried out where they were no longer needed or for an inefficient level of costs.
10. We will consider any changes in the proportion of costs that are recovered upfront from customers through connections charges as they do not represent changes in efficiency. We want to ensure that DNOs do not benefit through the efficiency incentives from changes in net costs that have been funded through connection charges.
11. As set out in DPCR5 FP we made a fixed assumption for input price growth above inflation as measured by RPI. As such we considered the risk of RPEs exceeding, or dropping below, the levels assumed in our baselines was for the DNOs to manage. As such we will discount the impact of real price effects (RPEs) from any adjustments applied under the load-related reopener.

Summary of Proposed Methodology

3.16. For assessing the load-related reopener we will follow a three stage process. The methodology will include quantitative and qualitative analysis.

Figure 3.1 – Load-related reopener methodology



Stage 1. Performance assessment submission

3.17. The DNOs must provide a performance assessment submission. This should include information for general reinforcement, LVHC connections and their assumptions for avoided reinforcement and cost efficiencies. We expect the level of information that the DNOs submits to be proportionate to whether they fall within the deadband (ie a reopener cannot be triggered) or whether they fall outside the deadband (ie the reopener can be triggered).

3.18. Typically around 80 per cent of the relevant load-related expenditure is general reinforcement so we would expect the DNOs' submission to reflect this.

3.19. We expect the DNOs to provide supporting information and appropriate audit trails to justify the efficiency of their expenditure and their assumptions for avoided reinforcement including relevant cost benefit analysis and LI information. We also expect the DNOs to provide variance analysis of their actual expenditure relative to the DPCR5 FP baseline.

3.20. The DNOs performance assessment submissions should also explain any data quality issues over the period which have impacted their general reinforcement and LVHC connections.

3.21. For further details on requirement for each area please refer to Appendix 3.

Stage 2. Analysis to determine efficient expenditure

3.22. We will carry out an assessment of efficient load-related expenditure under the reopener taking into account information from the LIs.

3.23. We will carry out variance analysis to determine the difference between baseline expenditure and actual expenditure that is due to:

- changes in demand growth or connections activity
- improvements in delivery efficiency (eg lower unit costs)
- avoided reinforcement through innovation

- recovering greater costs upfront from customer through connections charges (a higher net to gross ratio than assumed at DPCR5 FP).

Assessing LVHC connections

3.24. To assess changes in LVHC connections expenditure we propose to consider both the impact of changes in volume and the proportion of costs that have been recovered upfront through connection charges (the net to gross ratio). We will carry out quantitative and qualitative analysis. First, we will review submitted expenditure in the RIGs submissions against the DPCR5 baseline and then carry out a sample check, focusing on the outlier schemes.

3.25. We will compare the actual proportion of connections expenditure charged upfront through connections charges to the assumption made in setting the price control.

3.26. We will consider trade-offs between LVHC connections and general reinforcement taking into account information provided by the DNOs.

Assessing general reinforcement

3.27. For general reinforcement, we will assess expenditure efficiencies, changes due to demand growth and information included within the LIs. We will carry out high level ratio analysis using techniques developed at DPCR5 and RIIO-ED1 such as the ratio of capacity added to demand growth above firm capacity and the ratio of actual unit costs to benchmark unit cost. We will also carry out more detailed substation level analysis to inform the efficient level of reinforcement, given changes in demand.

3.28. We will check a sample of investment schemes, focusing on the higher cost investments. We will review DNOs unit costs, comparing them against our view from DPCR5 FPs and run sensitivity analysis using RIIO-ED1 data. We will make qualitative adjustments where higher unit costs are justified. We propose to carry out variance analysis based on the results and our assessment of avoided reinforcement to attribute difference between allowed and actual expenditure.

Assessing avoided reinforcement

3.29. For avoided reinforcement, the onus is on the DNOs to provide robust information to support the assumption they have made including tying this back to relevant information from the DPCR5 business plans and ongoing requirement for capacity. They will have to demonstrate that they have used innovative techniques to avoid conventional general reinforcement or LVHC expenditure. The DNOs should use Cost Benefit Analysis to demonstrate that the innovative techniques deliver benefits to customers.

3.30. Based on the information provided, we will consider the extent of expenditure that has been avoided through DSM or other innovative techniques.

Stage 3. Comparison of efficient expenditure to thresholds

3.31. We will compare DNOs' efficient expenditure on general reinforcement and LVHC connections, to the thresholds, to check if the reopener mechanism will be triggered. The thresholds are $\pm 20\%$ of the load-related expenditure baseline and for the amount above/below the threshold to be greater than 1% of base revenue post-application of the efficiency incentive rate. If the efficient costs are found to be within the deadband, no further adjustment is required. In the case the reopener is triggered, we will carry out further work to calculate and apply a revenue adjustment.

3.32. As we have stated before, LIs will be assessed as part of the NOMs close out methodology. LIs will be used in the Load-related reopener to inform our assessment. We will carry out the analysis for both mechanisms together to ensure there is no double counting between the two methodologies.

4. High Value Projects

Chapter Summary

An overview of the DPCR5 closeout High Value Projects Outputs mechanism and expenditure reopener and a summary of our proposed methodology for both. Our detailed methodology is in Appendix 4.

Question 1: Do you agree with the principles and general approach in this chapter?

Question 2: Do you agree with the changes we have made to the assessment approach from DPCR5 FPs?

Question 3: Do you have any suggestions on how we can assess outputs under the individual project categories in this document?

Question 4: For non-DNO interested parties, do you have any evidence that would help with our assessment of HVPs?

Background

4.1. High Value Projects (HVPs) were defined in DPCR5 as discrete projects with a value of more than £15m over the lifetime of the project (in 2007-08 prices).

4.2. At DPCR5 there were a range of large projects with high costs which we considered separately as part of the cost assessment. We included an assumption for the costs associated with these projects in the FP allowed revenues on the basis that we would hold the DNOs to specific outputs associated with them. We recognised that there was uncertainty as to the need and costs of this work and therefore we also included an expenditure reopener for HVPs.

4.3. We term the total assumed expenditure across all HVPs for each DNO the DPCR5 HVP baseline. We set out the HVP expenditure baseline in Special Condition 18 Arrangements for the recovery of uncertain costs of the DPCR5 distribution licence (see Table 4.1 below). Not all DNOs had HVPs in DPCR5.

4.4. As part of the DPCR5 settlement, the DNOs agreed to deliver specific outputs for each HVP. The outputs differed depending on the type of project. For example, outputs included improvements in the HIs or LIs associated with installing new assets as part of a project.

Table 4.1 – HVP related expenditure baseline

DNO	HVP baseline (£m 12/13 prices)
ENWL	45.9
NPgN	-
NPgY	32.0
WMID	-
EMID	76.2
SWALES	-
SWEST	-
LPN	161.4
SPN	63.7
EPN	158.6
SPD	-
SPMW	29.7
SSEH	-
SSES	96.7

4.5. The reopener for HVP expenditure works in a similar manner to the load-related reopener in Chapter 3.

4.6. The reopener applies to the sum of each DNO’s HVP efficient expenditure. DNOs are able to trigger the reopener if they can demonstrate that efficient expenditure is at least 20% higher than the baseline. We are able to trigger if efficient expenditure is at least 20% lower than the baseline. In addition the additional costs above or below the reopener threshold after application of the efficiency incentive rate must be greater than one per cent of DPCR5 base revenue for an adjustment to be made.

4.7. The DNOs were able to trigger the HVP reopener in January 2013; no DNOs triggered it. DNOs can also trigger in May 2016. As we have seen a downturn in economic growth and the need for certain projects lessening we are not anticipating any DNOs will apply. We also have the opportunity to trigger in May 2016, and we expect to trigger the reopener downwards for a number of the DNOs.

4.8. In assessing the reopener, we intend to take into account any efficiencies that the companies have made through innovative techniques to avoid HVP expenditure while still delivering the outputs. Innovative techniques might include demand-side management, smart grid technologies, energy storage among others. This is to ensure that we do not create any perverse incentives on DNOs which would discourage them from undertaking such activities. We also intend to take into account any other genuine cost efficiencies they have made.

4.9. DNOs should retain the benefit that they have earned through the efficiency incentive of such efficiencies.

4.10. Where expenditure/work is no longer needed due to changes in circumstances such as changes in demand growth or updated condition data we would expect to take this into account through the network outputs adjustment.

4.11. We would make adjustments through the reopener where we identify that actual expenditure is higher because of cost inefficiencies. This is the opposite of avoided expenditure or other cost efficiencies the DNO may achieve and will be identified through the same ex-post efficiency analysis.

4.12. We also included an outputs mechanism in DPCR5 FP to hold DNOs accountable for delivery of the outputs they are funded for. We explained that this outputs mechanism would work in a similar manner to the NOMs assessment described in Chapter 2.

Differences to DPCR5 FPs

4.13. Our proposed methodology builds on the approach set out at DPCR5 FPs and NADPR RIGs. We have made a number of changes to the NOMs assessment methodology based on further work we have done since DPCR5 FP. We have added clarifications, developed the details and taken a practical approach to the HVP expenditure reopener and HVP output assessments.

4.14. We describe the changes in Table 4.2 below together with the rationale for each change.

Table 4.2 - Changes from DPCR5 FP and the NADPR RIGs

Change from DPCR5 FP and the NADPR RIGs	Rationale
<i>Interactions between the two mechanisms:</i> FPs do not provide a clear indication on how these should be treated. We propose a methodology for ensuring that there is no double counting between the HVP reopener and HVP output adjustments.	We want to ensure that there is no double counting between the two HVP mechanisms. We have developed our methodology for HVPs to ensure that such double counting does not happen.
<i>Project status:</i> FPs do not take into account the fact that projects may be at different stages in their delivery. Table 4.3 summarises our approach for dealing with projects at different stages	Our methodologies need to be tailored to take into account the fact that some projects may not have been fully completed at DPCR5 or may have been

Change from DPCR5 FP and the NADPR RIGs	Rationale
of delivery.	cancelled.
<i>Bespoke outputs assessment:</i> FPs state that where possible, we should use existing methodologies (for example HIs) in our assessment of High Value Projects. In addition, we propose to develop individual methodologies applying to other types of projects.	We are developing additional approaches based on four different categories of project to ensure that our assessment accurately reflects whether or not outputs have been delivered and the type of projects delivered. These are set out in Appendix 4 as part of the HVP methodology.
<i>Partial delivery and/or change in outputs:</i> FPs are not explicit on how a partial delivery of outputs and/or a change in outputs should be treated. We are suggesting we make a partial adjustment in the case of partial delivery and that we assess any changed outputs to determine whether they are equivalent to outputs initially agreed at DPCR5 FPs.	Any partial delivery of outputs and/or any changes in outputs must be reflected in our assessment of whether there is an outputs gap and the valuation of the outputs gap.

Principles

4.15. Our proposed methodologies are based on the principles set out at DPCR5 FPs and in the NADPR RIGs and further work done since their publication. These principles are similar to those for the NOMs and the load-related reopener.

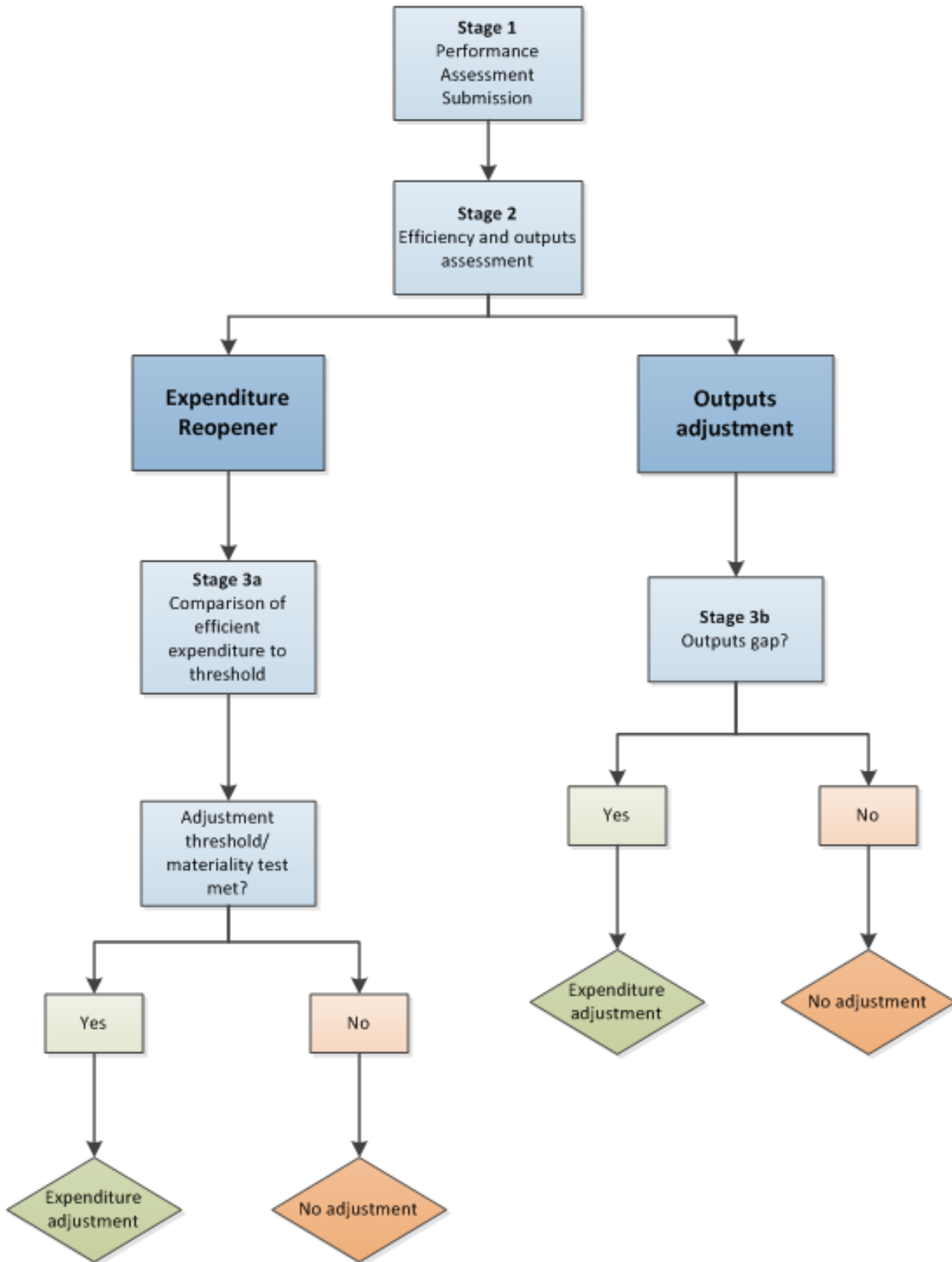
1. DNOs should retain a share of genuine efficiency improvements under the efficiency incentives and should not benefit from not doing work or deferring work that benefits consumers.
2. DNOs must provide robust information justifying the efficiency of their HVP expenditure with reference to suitable supporting information that was used at the time of the DPCR5 price control review, including appropriate Cost-Benefit Analysis, output and secondary deliverable information, and management information on efficiency.
3. DNOs must provide robust information on HVP expenditure avoided through innovation and efficiencies in delivery of HVP with reference to suitable

supporting information that was used at the time of the DPCR5 price control review including appropriate Cost-Benefit Analysis, output and secondary deliverable information, and management information on efficiency.

4. Where possible we propose to make use of comparative information to assess the efficiency of HVP expenditure.
5. Where comparative assessment is not possible, we will make use of other quantitative and qualitative assessment tools to assess the reasonableness of the DNOs' expenditure including but not limited to techniques developed at DPCR5 and RIIO-ED1.
6. As part of our assessment, we propose to consider any offsetting impact from the DNOs undertaking innovative activities to avoid HVP expenditure to ensure we do not discourage such activities.
7. As part of our assessment, we intend to consider any offsetting impact from delivery efficiencies for HVPs to ensure we do not discourage efficiency.
8. We intend to consider any inefficiencies due to projects being carried out where they were no longer needed or for an inefficient level of costs.
9. As set out at DPCR5 FP, we made a fixed assumption for input price growth above inflation as measured by RPI. As such we considered the risk of RPEs exceeding or dropping below the levels assumed in our baselines was for the DNOs to manage. As such we will discount the impact of real price effects (RPEs) from any adjustments applied under the HVP reopener.

Summary of Proposed Methodology

- 4.16. Our methodology is summarised in the following flow chart.



Stage 1 Performance assessment submission

4.17. The DNOs must provide a performance assessment submission for each HVP to inform our cost efficiency and outputs gap assessment.

4.18. This should include information on:

- the activities they have carried out for each HVP;
- the stage that the project is at (cancelled, completed, ongoing);
- supporting information, including cost benefit analysis, and appropriate audit trails to justify the efficiency of their expenditure and their assumptions for avoided HVP expenditure;
- variance analysis of their actual expenditure relative to the DPCR5 FP baseline;
- whether or not they have delivered the agreed outputs; and
- justification for changes to the agreed outputs.

We would expect detailed explanations where outputs have been under delivered or outputs have changed. For further details on the requirements for each area please refer to Appendix 4.

Stage 2 Efficiency and outputs assessment

4.19. We intend to carry out a project by project efficiency and outputs assessment taking into account supporting information provided by the DNOs.

4.20. We propose to carry out variance analysis to determine the difference between baseline expenditure and actual expenditure that is due to:

- cancelled projects;
- non-delivery or partial delivery of the HVP outputs; and
- efficiencies including:
 - improvements in delivery efficiency (eg lower unit costs)
 - avoided HVP expenditure through innovation.

4.21. We also propose to assess whether there are any cost inefficiencies for the outputs which have been delivered.

4.22. For improvements in delivery and avoided HVP expenditure by delivering the outputs through innovative solutions, the onus is on the DNOs to provide robust information to support the assumptions they have made including tying this back to relevant information from the DPCR5 business plans. They will need to demonstrate that they have used innovative techniques to reduce expenditure. The DNOs should use cost benefit analysis to demonstrate that the innovative techniques deliver benefits to customers. Based on the information provided, we intend to consider the extent of expenditure that has been avoided through innovative techniques.

4.23. We propose to tailor our efficiency assessment for each project to the type of project in question. For example, for asset replacement HVPs we intend to consider the efficiency of unit costs against DPCR5 benchmark unit costs. For HVPs caused by BT 21st Century (BT21CN)¹³ we intend to consider the unit costs across DNOs of delivering the same solutions to BT migration, while taking account of the DNO specific factors that could explain genuine differences in unit costs.

4.24. In assessing whether the outputs have been delivered and determining the value of the outputs gap, we propose to take into account, amongst other considerations, whether:

- the overall need has been met and/or whether the need has changed;
- the chosen solution is an enduring solution; and
- the chosen solution is in the interest of consumers.

4.25. HVPs vary significantly in nature and in terms of outputs. As a result, we cannot assess all projects in the same way. We therefore suggest categorising the projects as follows:

- general reinforcement;
- asset replacement;
- BT21CN; and
- legal and safety.

4.26. We have proposed a methodology applicable to each of these project categories in our detailed methodology set out in Appendix 4.

4.27. For each project category:

- *Where no outputs have been delivered or the project has been cancelled:* we propose an adjustment to recover the full value of the project in the DPCR5 FP HVP baseline.
- *Where there has been a change in outputs:* we intend to assess whether the new outputs are fully or partially equivalent to the originally agreed outputs. Where we do not agree that outputs are equivalent there will an adjustment based on the difference in value of the outputs.
- *Where outputs have only partially been delivered:* we intend to determine what proportion of outputs has been delivered and this will form the basis of our calculation of the outputs gap value.

¹³ BT21CN refers to the roll out of BT's next generation communications network. DNOs will be migrating off BTs network and must therefore find an alternative solution. DNOs lease communication circuits from BT for critical protection applications, including unit protection and intertripping.

4.28. Where projects are on-going we propose to assess the projects based on the outputs delivered at DPCR5 and determine the value of the outputs gap accordingly.

4.29. Table 4.3 summarises our approach to assessing outputs and determining the value of the outputs gap for projects at various stages of implementation:

Table 4.3 – Summary of assessing outputs gap for projects at different stages

	Completed Projects				On-going projects	Cancelled projects
	Full output delivery	Partial output delivery	Change in outputs	No outputs delivery		
Outputs assessment	No adjustment	Partial adjustment	Assessment of outputs equivalence and appropriate adjustment	Full adjustment	Partial adjustment or no adjustment based on outputs delivered at DPCR5	Full adjustment ¹⁴

4.30. Overall, we anticipate two main outcomes of this assessment. For each project we will have:

1. the value of the outputs gap if one exists; and
2. the value of the efficiencies or inefficiencies for the project.

¹⁴ If the cancellation of the project is justified, we will value the outputs gap based on the amount allowed for that project in DPCR5 FP. If the cancellation of the project is not justified, then we will value the outputs gap based on the higher of the DPCR5 FP amount and the current estimated cost of delivering the project. This is consistent with the approach for the HI NOMs in Chapter 2.

Stage 3a. Expenditure reopener adjustments - Comparison of efficient expenditure to thresholds

4.31. The next step is to determine if the expenditure reopener has been triggered.

4.32. First we propose to sum our view of efficient costs of each project to achieve a total efficient value of costs. At a total level each DNOs' costs will either be efficient or inefficient (ie below or above our view of total costs).

4.33. Next we intend to compare our view of total efficient cost to the total HVP allowance set. We intend to apply the reopener thresholds ($\pm 20\%$ of the DPCR5 FP baseline and one per cent of base revenue post-application of the efficiency incentive rate) to our view of efficient expenditure. If the thresholds are met, we intend to apply a revenue adjustment. If the thresholds are not met, we do not intend to apply a revenue adjustment.

4.34. All adjustments made here are downward adjustments to account for inefficiencies. No adjustment is made for achieving efficiencies as these should be retained by the DNO.

Stage 3b. Outputs gap adjustment

4.35. Where there is an outputs gap, the total value will be calculated from adding up all the project by project output gaps assessments. This will then be multiplied by the network output incentive rate to reach a final value.

4.36. Overall, we believe our method results in a total adjustment that comprises:

- a revenue adjustment to reflect inefficiencies in what has been delivered; and
- an outputs gap adjustment which reflects non delivery of outputs.

4.37. We have designed the methodology so that there is no double counting between the efficiency and output adjustments.

5. Traffic Management Act

Chapter Summary

Background and principles to the Traffic Management Act (TMA) permitting schemes reopener and our proposed methodology for adjusting licensees' allowances to account for permitting scheme costs.

Question box

Question 1: Do you agree with our proposed methodology for adjusting DNOs' allowances to account for permitting costs?

Question 2: For non-DNO interested parties – Do you have any information or evidence which would assist us in carrying out the TMA reopener assessment?

Question 3: Do you agree with our proposal to settle the TMA reopener mechanism early as part of the 2016 annual iteration?

Background

5.1. Traffic management costs are the costs of complying with traffic management legislation when a company is undertaking activities which involve the occupation of the highway.¹⁵ For example, it includes the cost of administering notifications of street works, suspensions and closures of the highway such as traffic signals, the cost of inspections undertaken by the highway authority, and congestion charging.

5.2. When we set allowances for traffic management costs at DPCR5, we did not include the costs of permit schemes as there was insufficient information on these costs at the time. The introduction of permit schemes is entirely at the discretion of the local authorities. Permit schemes provide local authorities with an alternative to the noticing system whereby DNOs inform them of their intentions to carry out work.¹⁶ A permit scheme requires a DNO to apply for a permit to do the works which incur a cost. The local authority can also set conditions when granting the permit.

5.3. The costs associated with permit schemes were instead logged up by companies to be reclaimed at the end of the period. These costs include the cost of the permits, conditions associated with the permits, set up and administration costs. These logged up costs can now be assessed in order to make appropriate adjustments to allowances through the TMA permitting schemes reopener.

¹⁵ The costs associated with permitting under the Traffic Management Act 2004 (TMA) and the Transport (Scotland) Act 2005 (T(S)A).

¹⁶ The noticing system was introduced under the New Roads and Street Works Act 1991 (NRSWA).

5.4. The reopener had two windows – one in 2012 and one at the end of the DPCR5 price control period. Only LPN triggered the 2012 reopener,¹⁷ and its allowances for the DPCR5 period were adjusted accordingly.¹⁸ This does not preclude LPN applying for the end of period reopener provided it meets the necessary materiality threshold (see Appendix 5 for details of this threshold).

5.5. We have made no changes in the approach set out in DPCR5 FP. This section provides further clarification.

Principles

5.6. Our proposed methodologies are based on the principles below:

1. Permit schemes were new at the time of setting DPCR5 allowances and the costs were uncertain. It was not possible to accurately assess costs and provide ex ante allowances. Nonetheless DNOs would incur costs if and when local authorities introduced permit schemes. It is appropriate that allowances are adjusted when sufficient evidence of costs incurred becomes available.
2. These costs should be material to justify additional price control allowances. If immaterial, the companies should bear a share of these costs as normal under the efficiency incentives. The materiality test value is calculated as one percent of the DPCR5 Revenue Allowance for the licensee for the Regulatory Year 2010-11, restated in 2012-13 prices.
3. All permitting costs are subject to an efficiency assessment. Companies should be protected from the costs incurred as a result of local authority practices but customers should only pay for costs efficiently incurred.
4. DNOs must provide robust information justifying the efficiency of their permit costs.
5. Where possible we propose to make use of comparative information to assess the efficiency of permit costs.
6. Where comparative assessment is not possible, we intend to make use of other quantitative and qualitative assessment tools to assess the reasonableness of the DNOs' expenditure including, but not limited to, techniques developed at DPCR5 and RIIO-ED1.
7. We intend to ensure that DNOs only recover efficient permit costs that are within the price control and not for those permit schemes that have been funded

¹⁷ <https://www.ofgem.gov.uk/publications-and-updates/electricity-distribution-price-control-review-final-proposals-allowed-revenue-cost-assessment>

¹⁸ <https://www.ofgem.gov.uk/ofgem-publications/46507/tmamindedtoconsultation061112.pdf>

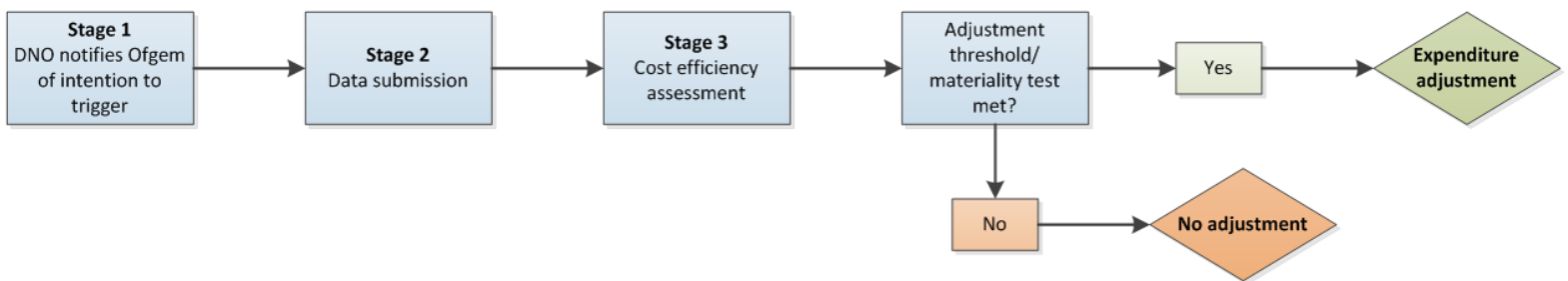
through customer funded connection or recovered through customer connection charges.

Summary of Proposed Methodology

5.7. We intend to carry out a quantitative and qualitative assessment of permitting costs to determine the efficient level of incurred costs and the value of the subsequent adjustment to the licensee's allowed revenue.

5.8. We propose a four stage process as below.

Figure 5.1: TMA reopener proposed methodology



Stage 1 DNOs triggering reopener to inform Ofgem

5.9. Those DNOs that intend to trigger the TMA reopener must inform us of their intention to do so by a deadline set by 31 April 2016.

Stage 2 Data submission

5.10. The DNOs submitted cost and volume data relating to the TMA permitting schemes reopener in their annual Regulatory Reporting Packs (RRPs) in July 2015. We intend to use this data to form the basis of our assessment. ¹⁹ It provides us with the following, for each year of DPCR5:

- the costs of the four components of permit costs – permits, permit condition costs, permit set up costs and permit incremental admin costs; and
- the volume of permits.

¹⁹ The materiality test value will be calculated as one percent of the DPCR5 Revenue Allowance for the licensee for the Regulatory Year 2010/11, restated in 2012/13 prices.

5.11. We also intend to compare these costs to the data we have for the GDNs. We may ask GDNs to submit data to us should there be some inconsistencies in how this is reported compared to the DNO data.

5.12. We intend to ask the DNOs, regardless of whether they are triggering the reopener, and GDNs to provide detail on permit condition costs by 31 May 2016 to allow for a comparative assessment including:

- the type of conditions imposed;
- how the conditions are met, including alternative methods to meet the conditions and evidence that the licensee has engaged effectively with the relevant local authorities to negotiate the conditions imposed;
- if the licensees have made any appropriate efficiency savings to meet these conditions at a lower cost.

5.13. Before sending out data requests we review all data already available to us and the further requests will only be used to supplement this.

Stage 3 Cost efficiency assessment

5.14. We propose to undertake a detailed review to determine efficient levels of costs at a disaggregated level, ie assess the costs of each component of the total permitting costs and then aggregate this for total costs. The four cost components are:

- **Permits:** the costs of the permits themselves paid for by the licensee to the local authority.
- **Permit condition costs:** the costs of adhering to conditions of undertaking works that require a permit, eg a requirement from the local authority to work at non-peak times. It includes the costs of codes of practice such as the London Code of Practice. It includes only the incremental costs resulting from the permit conditions; any costs that would have been incurred in their absence as part of usual operating practices should not be included.
- **Permit set up costs:** the one-off costs of developing the necessary IT system to process permit applications. These costs should only be incurred in the first two years of DPCR5.
- **Permit incremental admin costs:** the additional costs from processing permit applications over and above the cost of processing an equivalent New Roads and Street Works Act (NRSWA) 1991 notification.

5.15. The TMA adjustment does not include the cost of permitting penalties.

Permit Costs

5.16. DNOs do not have control over the adoption of permit schemes nor do they have control over the cost of each permit. This is decided by local authorities. If we are assured that the data is accurate, we propose to accept the volumes and costs for the permits as submitted.

5.17. For LPN, the only DNO to trigger the reopener in 2012, we will ensure that there is no double counting of allowances should it also trigger the end of period TMA adjustment.

Permit condition costs

5.18. We propose to undertake a qualitative review of the permit condition costs submitted by each DNO. The conditions imposed on DNOs vary depending on the requirements imposed by the local authority. In reviewing this we will consider the information provided to us.

Permit incremental admin costs

5.19. We propose to benchmark permit incremental administration costs incurred by each DNO with other DNOs' costs. We also propose considering similar costs incurred by the gas distribution network operators (GDNs). The proposed unit cost for benchmarking purposes is the average incremental admin cost per permit and the benchmark cost is the industry upper quartile (ie the lower cost). We intend to multiply this unit cost by the accepted number of permits. We propose that the allowed costs will be the lower of the benchmark costs or the actual costs incurred.

Permit set up costs

5.20. We propose to benchmark permit set up costs incurred by each licensee with other DNOs' costs. The set up costs should be similar for all the DNOs regardless of the number of permits. We suggest that the benchmark cost is the industry upper quartile (ie the lower cost) and that the allowed costs are the lower of the benchmark costs or the actual costs incurred.

Stage 4 Adjustment to allowed revenue

5.21. We intend to apply the materiality test using our efficient view of total costs rather than the DNOs' submitted view.²⁰ This is to ensure that companies that incur inefficient costs do not benefit from the reopener mechanism when their view of costs meets the test but our view of efficient costs does not.

5.22. If the efficient view of costs meets the materiality test then we intend to make an adjustment to that efficient amount. If the costs do not meet the test, no adjustment will be made.

5.23. Full detail of our methodology is set out in Appendix 5.

²⁰ The materiality test value will be calculated as one percent of the DPCR5 Revenue Allowance for the licensee for the Regulatory Year 2010/11, restated in 2012/13 prices.

Appendices

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Appendix 1 - Consultation Response and Questions

A1.1 Ofgem would like to hear the views of interested parties in relation to any of the issues set out in this document.

A1.2 We would especially welcome responses to the specific questions which we have set out at the beginning of each chapter heading and which are replicated below.

A1.3 Responses should be received by 9th November 2015 and should be sent to:

Chris Watts

RIIO Implementation Team
SG&G
9 Millbank
London
SW1P 3GE
020 7901 7333
chris.watts@ofgem.gov.uk

A1.4 Unless marked confidential, all responses will be published by placing them in Ofgem's library and on its website www.ofgem.gov.uk. Respondents may request that their response is kept confidential. Ofgem shall respect this request, subject to any obligations to disclose information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

A1.5 Respondents who wish to have their responses remain confidential should clearly mark the document/s to that effect and include the reasons for confidentiality. It would be helpful if responses could be submitted both electronically and in writing. Respondents are asked to put any confidential material in the appendices to their responses.

A1.6 Next steps: We will update the methodologies in light of the comments in response to this consultation and further discussions with the DNOs. In parallel with this we will convert each of the methodologies into language consistent with the rest of the Handbook.

A1.7 We will issue a statutory consultation on the Handbook changes in February 2016 with a view to issuing the final version by 31 March 2016. We will also correct a number of minor errors and typos in the legacy chapters of the current Handbook.

A1.8 Any questions on this document should, in the first instance, be directed to:

Chris Watts

RIIO Implementation Team
SG&G
9 Millbank
London
SW1P 3GE
020 7901 7333
chris.watts@ofgem.gov.uk

CHAPTER: Two

Question 1: Do you agree with the principles for the NOMs assessment?

Question 2: Do you agree with our approach to assessing performance on Health Indices?

Question 3: Which of the two approaches to valuing the Health Indices outputs gap do you consider to be more appropriate?

Question 4: Do you agree with our approach to assessing performance on Load Indices and valuing any associated outputs gap?

Question 5: Do you agree with our approach to assessing fault rate performance?

Question 6: Do you agree with our proposal not to make any financial adjustments associated with fault rate performance?

Question 7: Do you agree with the changes we have made to the assessment approach from DPCR5 FPs and the NADPR RIGs?

CHAPTER: Three

Question 1: Do you agree with the principles for the load-related reopener assessment?

Question 2: Do you agree with our approach to assessing expenditure on low volume high cost (LVHC) connections?

Question 3: Do you agree with our approach to assessing expenditure on general reinforcement?

Question 4: Do you agree with our approach to assessing avoided reinforcement?

Question 5: For non-DNO interested parties, do you have any evidence you can provide that would support our assessment of the load-related reopener?

CHAPTER: Four

Question 1: Do you agree with the principles and general approach set out in this chapter?

Question 2: Do you agree with the changes we have made to the assessment approach from DPCR5 FPs?

Question 3: Do you have any suggestions on how we can assess outputs under the individual project categories set out in this document?

Question 4: For non-DNO interested parties, do you have any evidence that would help with our assessment of HVPs?

CHAPTER: Five

Question 1: Do you agree with our proposed methodology for adjusting DNOs' allowances to account for permitting costs?

Question 2: For wider stakeholders non-DNO interested parties – Do you have any information or evidence which would assist us in carrying out the TMA reopener assessment?

Question 3: Do you agree with our proposal to settle the TMA reopener mechanism early as part of the 2016 annual iteration?

Appendix 2 – Draft Network Output Measures Methodology

Introduction

A2.1 There are three elements to DNO Network Output Measures (NOMs) requirements:

- Health Indices;
- Load Indices; and
- Fault rates.

A2.2 There are three stages to the DPCR5 close out assessment of these requirements:

1. DNOs provide their performance assessment submissions to Ofgem
2. Ofgem carries out an assessment of whether the output requirements have been met.
3. If the output requirements have not been met, then Ofgem values the output gap and applies the appropriate adjustment to the DNO's allowed revenue.

A2.3 This document provides details on each stage of the DPCR5 close out assessment for the three elements of the NOMs. Stage 3 is not applicable to fault rates.

Health Indices

Stage 1 - performance assessment submissions

A2.4 Each DNO will be required to provide evidence for those asset categories covered by the asset health indices²¹ to demonstrate and explain:

- Whether the DNO has delivered the required asset health outputs for DPCR5, using a combination of their submitted HI profile information, Ofgem's risk point methodology and other supporting information.
- The nature of all material changes which have impacted on HI. This should include an audit trail to demonstrate changes that have occurred and the impact they have had on outputs or risk point delta (if any). For example, if the material changes have caused a significant increase in the delivered asset health delta

²¹ For any asset categories not covered by health indices, the DNO is required to report fault rates for the NOMs assessment.

without the company increasing asset replacement or refurbishment, the DNO should justify why it is appropriate for this to be factored into the assessment. The DNO should also explain any asset management decisions it has taken in response to the material changes including reprioritising their asset plans. Material changes include:

- changes to input data changes to the assessment technique/calculation methodologies changes due to external factors and changes to their asset management strategy approach.
- If the DNO has delivered a worse HI profile than agreed at DPCR5 or the number of risk points is higher, the DNO should provide a justification of:
 - why this was appropriate why it was not practicable to deliver the agreed output why interventions or further interventions had not been undertaken to address this.
- Why no asset replacement/refurbishment occurred at HI5 assets where investment was planned based on the DNO's forecasts/Ofgem allowances.
- Why no asset replacement/refurbishment occurred at assets where investment was not planned based on the DNO's forecasts/Ofgem allowances but the asset is currently HI5.
- Whether any other non-forecast asset replacement/refurbishment was required and the impact this had on HI /risk points.
- How the DNO has reprioritised work across HI asset categories and justify why the reprioritisation was appropriate.
- How the DNO has updated its relevant asset replacement/refurbishment investment plan to take account of changes in demand, consideration of alternative solutions etc, including CBAs where appropriate.
- How the DNO has traded off between asset replacement and refurbishment work and why this trade-off was appropriate. If DNOs have carried out substantial volumes of refurbishment, this should include justification for this decision and to show that this work provides appropriate value for money for consumers.
- How the asset health interventions appropriately reconcile with the volumes for the relevant activities in the DPCR5 Cost and Volumes RIGs.

Stage 2 – performance assessment process

A2.5 There are a number of key pieces of evidence that Ofgem may use in the assessment of the delivery of the asset health output requirements including but not limited to the following:

- the submitted HI network outputs workbook
- the risk point calculation methodology developed during DPCR5 and detailed further below
- analysis of the agreed DPCR5 HI profiles with investment and without intervention, relative to the actual HI profile at the end of DPCR5
- analysis reconciling the asset health interventions in the HI tracking workbook to the additions in CV3 in the Cost and Volumes RIGs
- analysis reconciling the asset volumes in the HI tracking workbook to worksheet V1 in the Cost and Volumes RIGs
- sensitivity analysis relating to HI index weightings and unit costs (details below),

- the commentary and any supporting analysis provided as part of the performance assessment submission
- the Networks Outputs commentary as part of the annual RIGs returns,
- further supplementary questions raised after the initial assessment process if there is an issue with either the profile of health indices or the risk points, and
- quantitative and qualitative work by external consultants where Ofgem decide this is appropriate.

Quantitative assessment

A2.6 The HI requirement on DNOs in DPCR5 is to deliver a programme of work or “risk delta” that is consistent with the change in level of asset health risk funded by its customers through the DPCR5 settlement.

A2.7 Ofgem will carry out a risk point assessment based on the methodology developed during DPCR5 to understand whether DNOs have met this requirement. This is to calculate the agreed and the actual risk points removed for each HI asset category in DPCR5 and overall.

A2.8 The assessment provides a numerical means of trading off between asset categories and HI bands and between asset replacement and refurbishment interventions,

A2.9 Three separate derivations of unit costs are referred to in this quantitative assessment and are denoted throughout this document with the terminology below and as (i), (ii) or (iii). Where unit costs are available at the disaggregated asset category level, these are mapped into a single HI asset category weighted by the relative volumes. For each case, the source of unweighted unit costs and volumes are stated below:

- i. Ofgem DPCR5 Survey unit cost – this is the Ofgem asset replacement unit cost weighted per DNO for a given HI asset category. Unweighted unit costs are taken for all DNOs from a unit cost survey for DPCR5 and volumes are taken from the DNO’s FBPQ submissions (ie the volumes of asset disposals). Different variations of these weighted unit costs are tested in the sensitivity analysis and include an “expert view” of asset replacement unit costs used for RIIO-ED1.
- ii. DNO DPCR5 outturn unit cost – this is the DNO’s actual unit cost incurred, weighted per DNO for a given HI asset category. Unweighted unit costs and actual volumes are taken from the DNO’s DPCR5 Cost and Volumes data pack.
- iii. DNO DPCR5 FBPQ unit cost – this is the DNO’s proposed asset replacement unit cost weighted per DNO for a given HI asset category. Unweighted unit costs and volumes are taken from the DNO’s FBPQ submissions.

A2.10 Ofgem will calculate the number of risk points that companies were assumed to deliver with and without intervention at the end of DPCR5 in each HI asset category and overall using the DPCR5 Agreed Network Outputs workbook. This will involve the following steps:

- a) for each HI asset category, Ofgem will multiply the number of assets in each HI band by the HI band weightings defined below.
- b) The results will then be summed across the HI bands.
- c) Ofgem will then multiply the result of a) by the Ofgem DPCR5 Survey unit cost for that HI asset category to generate risk points. In some cases this will require Ofgem to determine a weighted unit cost derived from a number of different asset categories as defined above.
- d) Ofgem will sum the results of b) for all HI asset categories for a given voltage and then across all HI asset categories.
- e) Ofgem will then repeat the same calculations for each HI asset category for the asset profile at March 2015 with intervention.

A2.11 The difference between the risk points without intervention and with intervention for each HI asset category is the assumption of the level of risk points that would be removed in DPCR5 for that category. The overall risk points delta for DPCR5 is the target deliverable for the price control period.

A2.12 Ofgem will calculate the actual improvement in risk points which has been delivered through asset replacement and refurbishment expenditure during DPCR5 using the submitted HI workbooks. This will involve the following steps:

- a) For each HI asset category, Ofgem will multiply each HI movement by the HI band weightings. The results are then summed across the HI asset categories.
- b) Ofgem will then multiply the result from a) by the Ofgem DPCR5 Survey unit cost (i) for that HI asset category to generate risk points removed.
- c) Ofgem will sum the results for all asset categories from b) for a given voltage and then across all asset categories

A2.13 Ofgem will compare the delivered risk points delta at the end of DPCR5 with the agreed target risk points delta to identify whether there are any material and significant differences. If there are, this may trigger Ofgem asking further questions to determine whether the delivered outputs are appropriate.

A2.14 Ofgem will carry out sensitivity analysis for alternative HI bands and unit cost weightings. The unit cost weightings analysis is discussed above. HI Band Weightings are defined as the number points attributed to each of the HI asset categories from HI1 to HI5. The baseline weightings (as previously used) are set out below. Alternative HI band weightings will also be used.

Table A1.1 – HI Band Weightings

	HI1	HI2	HI3	HI4	HI5
Main weighting	1	10	30	70	100

Qualitative assessment

A2.15 Ofgem will form a qualitative view on whether there is an outputs gap on HIs based on the following six criteria:

1. How well have the movements in the material changes log been explained and justified?
2. Have any significant HI band reductions by the DNO for particular asset categories and overall been adequately explained (ie through the material change log or other explanations)
3. Has the DNO explained the impact of its asset management decisions (eg using lower cost, shorter-term solutions, refurbishment versus asset replacement, and reprioritisation between asset categories)? Have they justified that these are in the best interest of consumers?
4. Has asset health deteriorated significantly in asset categories which have been deprioritised by the DNO? Is this deterioration beyond what was forecast at DPCR5?
5. Have any discrepancies between the HI tracking workbook and C&V RIGS been adequately explained?
6. Where the asset health risk delta is worse than that assumed at DPCR5, why haven't interventions or further interventions been undertaken to address this?

A2.16 Ofgem will use the result of both quantitative and qualitative assessments to reach an initial decision on whether there are significant issues with the DNO's performance and whether there is an outputs gap. Ofgem will apply a materiality of 5% of the agreed DPCR5 risk points reduction to determine whether there is a material and significant issue.

Stage 3 – Valuation of the outputs gap

Option 1

A2.17 If Ofgem identifies that there is an outputs gap, the next step is to translate this into a volume of work and apply the appropriate unit costs. This requires the following steps:

- a) For each HI asset category, Ofgem divides the risk points gap (whether positive or negative) by the Ofgem DPCR5 Survey unit costs (i) and by 99 (to reflect the weighting²² associated with the replacement of an HI5 asset) to translate the risk points into a volume of work. This effectively assumes that the work delivering the HI movements is asset replacement.
- b) If there is under-delivery in the HI asset category the volume of work is multiplied by the higher of the DNO DPCR5 outturn unit cost (ii) and the DNO DPCR5 FBPQ unit cost (iii) to convert it into a financial value in £. If there is over-delivery then the volume of work is multiplied by the DNO DPCR5 FBPQ unit cost (iii) to get a value in £. The resulting values across all the asset categories are summed to calculate a total monetary gap. The appropriate network outputs incentive rate as defined in the NADPR RIGS is then applied to this monetary gap (this is the IQI incentive rate multiplied by 1.025).

A2.18 The different approach that is applied for under-delivery and over-delivery is to avoid the DNOs benefiting from reprioritising work to asset categories where they are incurring higher unit costs than were allowed at the time of FPs.

Option 2

A2.19 If Ofgem identify that there is an outputs gap, the next step is to assign a financial value to this gap. This requires the following steps:

- a) Calculate total expenditure in DPCR5 on asset health movements based on Table C11 in the Cost and Volumes RIGs.
- b) Divide the expenditure from a) by the delivered risk points to calculate a £ value per risk point.
- c) Multiply the risk points gap by the £ value per risk to calculate a monetary value for the outputs gap.
- d) Ofgem will apply the network outputs incentive rate as defined in the NADPR RIGS to this monetary gap (this is the IQI incentive rate multiplied by 1.025).

²² This weighting will need to be adjusted when we vary the HI band weighting as part of our sensitivity analysis.

Load Indices

Stage 1 - performance assessment submissions

A2.20 Each DNO will be required to provide evidence to demonstrate and explain:

- Whether the DNO has delivered the overall load-related outputs for DPCR5, using a combination of their submitted LI profile information, Ofgem's risk points methodology, and other supporting information.
- The nature of all material changes which have impacted on LI. This should include an audit trail to demonstrate that the change occurred and the impact it had on outputs or risk points (if any). For example, if the material changes have caused a significant reduction in risk points without the company increasing primary reinforcement or carrying out some other intervention, the DNO should justify why it is appropriate for this to be factored into the assessment. The DNO should also explain any asset management decisions it has taken in response to the material changes including relevant changes to their load-related expenditure. Material changes include:
 - changes to input data
 - changes to the assessment technique/calculation methodologies
 - changes due to external factors and
 - changes to their asset management strategy/approach.
- If the DNO has delivered a worse load profile than agreed at DPCR5 or the number of risk points is higher, the DNO should provide a justification of:
 - why this was appropriate
 - why it was not practicable to deliver the agreed output
 - why interventions or further interventions had not been undertaken to address this.
 - Why no load reinforcement occurred at LI5 substations where investment was planned based on the DNO's forecasts/Ofgem allowances.
 - Why no load reinforcement occurred at substations where investment was not planned based on the DNO's forecasts/Ofgem allowances but the substation is currently an LI5.
 - Whether any other non-forecast network load reinforcement was required and the impact this had on LI /risk points.
- How the DNO has reprioritised work across substations and justify why the reprioritisation was appropriate.
- How the DNO has updated its relevant load-related investment plan to take account of changes in demand, consideration of alternative solutions etc, including CBAs where appropriate.

Stage 2 – performance assessment process

A2.21 There are a number of key pieces of evidence that Ofgem may use in the assessment of the delivery of the load output requirements including but not limited to the following:

- The submitted LI network outputs workbook,
- the risk point calculation methodology developed during DPCR5 and detailed further below,
- analysis of the agreed DPCR5 LI profiles with investment and without investment, relative to the actual LI profile at the end of DPCR5,
- sensitivity analysis relating to LI index weightings and the use of connected customers or maximum demand (MVA) for weighting each of the substations (details below),
- the commentary and any supporting analysis provided as part of the performance assessment submission,
- the Networks Outputs commentary as part of the annual RIGs returns,
- further supplementary questions raised after the initial assessment process if there is an issue with either the profile of load indices or the risk points, and
- quantitative and qualitative by external consultants where Ofgem decide this is appropriate.

Quantitative assessment

A2.22 The LI requirement on DNOs in DPCR5 is to deliver an LI profile at the end of DPCR5 that is consistent with the agreed profile of LIs at the end of DPCR5 with intervention.

A2.23 Our assessment will review of how many substations there are at LI1 to 5. There should be fewer LI4 and LI5 substations than in the agreed profile if the DNO is meeting its requirements. If the DNO has a higher proportion in LI4 and 5 it does not mean that it will necessarily have failed the requirements, but Ofgem will ask further follow-up questions and carry out further analysis to assess whether the delivered outputs are appropriate.

A2.24 Ofgem will also carry out a risk point assessment based on the methodology developed during DPCR5 to understand whether DNOs have met the LI deliverable.

A2.25 Ofgem will calculate the LI risk points that DNO were assumed to deliver with and without intervention at the end of DPCR5 at each voltage level and overall using the DPCR5 Agreed Network Outputs workbook. This will involve the following steps:

- a) For each substation, Ofgem will multiply the number of connected customers for that substation by the appropriate LI band weighting defined below.
- b) Ofgem will sum the risks points across substations to derive voltage level totals and the overall risk points.
- c) Ofgem will repeat these steps for the LI scores with intervention as at March 2015.

A2.26 Ofgem will calculate the actual risk points which has been delivered through load reinforcement expenditure during DPCR5 using the submitted LI workbooks. This will involve the following steps:

- a) For each substation, Ofgem will apply the appropriate LI band weighting based on the latest LI score in the submitted 2014-15 LI workbook, checking that the DNO has used allocation to LI bands that is consistent with the DPCR5 Agreed Network Outputs Workbook. The relevant LI band weightings are defined below.
- b) For each substation, Ofgem will then multiply the LI band weighting by the number of connected customers to determine the risk points for that substation
- c) Ofgem will then sum the risks points across substations to derive voltage level totals and the overall risk points.

A2.27 Ofgem will compare the delivered risk points at the end of DPCR5 with the agreed target risk points with intervention to identify whether there are any significant differences.

A2.28 Ofgem will carry out sensitivity analysis for alternative LI band weightings and substation weightings. LI band weightings are defined as the number of points attributed to each LI category. The baseline weightings (as previously used) are set out in Table 2. Alternative LI band weightings will also be used.

Table A2.2 – LI Band Weightings

	LI1	LI2	LI3	LI4	LI5
Main weighting	1	1	1	20	100

Qualitative assessment

A2.29 Ofgem will form a qualitative view on whether there is an outputs gap on LIs based on the following 5 criteria:

1. How well have the movements in the material changes log been explained and justified?
2. Have any significant LI band reductions for particular substations and overall been adequately explained (ie through the material change log or other explanations)
3. Has the DNO explained the impact of its load reinforcement decisions? Have they justified that these are in the best interest of consumers?
4. Has load risk increased significantly at substations which have been deprioritised by the DNO? Is this risk beyond what was forecast at DPCR5?
5. Where the LI profile is worse than that assumed at DPCR5, why haven't interventions or further interventions been undertaken to address this?

A2.30 Ofgem will use the result of both quantitative and qualitative assessments to reach an initial decision on whether there are significant issues with the DNO's performance and whether there is an outputs gap. Ofgem will apply a materiality test based on 5% of the risk points associated with the agreed profile of substations across the LIs at 2015 with investment.

Stage 3 – Valuation of the outputs gap

A2.31 If Ofgem identify that there is an outputs gap, the next step is to assign a financial value to this gap.

A2.32 Ofgem have considered a number of alternative approaches for valuing a LI outputs gap. Ofgem do not consider it is possible to do this on an asset basis as it is impractical to determine what assets have not been installed. It is also impractical to do this on a scheme basis as there will have been reiterations in schemes during DPCR5 and cost data per scheme has not been reported as part of the RIGs.

A2.33 We will use the primary reinforcement allowances and the risk point delta based on the agreed outputs to calculate the value of a risk point and then use this value to monetise the outputs gap.

A2.34 This requires the following steps:

- a) Calculate the difference between the LI Risk Points at the end of DPCR5 without intervention and with intervention based on the DPCR5 Agreed Outputs Workbook.
- b) Divide the DPCR5 allowances for EHV and 132kV reinforcement by the risk point delta calculated at a) to calculate the value of a risk point
- c) Ofgem will multiply the risk point gap (the difference between the risk points forecast with intervention and the actual risk points in 2015) by the value of a risk point
- d) Ofgem will apply the network output incentive rate as defined in the NADPR RIGS to this monetary gap (this is the IQI incentive rate multiplied by 1.025).

Fault rates

Stage 1 - performance assessment submissions

A2.35 Each DNO will be required to provide evidence to demonstrate and explain:

- the overall trends in fault rates compared to their forecasts and historical data.
- if fault rates have deteriorated significantly across a number of categories they should explain the reasons and why further intervention has not been carried out and provide assurance on how these issues will be addressed as part of RIIO-ED1.

Stage 2 –performance assessment process

A2.36 Ofgem will compare the average actual fault rates on each DNO's network with historical average fault rates and the forecast DPCR5 fault rates. This will be based on 5-year averages. there is a substantial increase over the comparator fault rates in a number of categories, Ofgem expects the DNO to provide further explanation on the rationale for the deterioration in the fault rates and to provide assurance on how the issues will be addressed in RIIO-ED1.

Appendix 3 – Draft Load-related Reopener Methodology

Introduction

A3.1 In DPCR5 FP we included a load-related reopener, which could be triggered by the DNOs during or at the end of DPCR5. Ofgem can also trigger the reopener at the end of DPCR5. The reopener covers low volume high cost (LVHC) connections and general reinforcement (excluding fault level reinforcement and costs associated with DG).

A3.2 The reopener is applied to costs in aggregate across these categories and may be triggered by the DNO, if the efficient expenditure is greater than 120% of the ex-ante allowance; or by Ofgem if the efficient expenditure is below 80% of the ex-ante allowance. The additional/reduced funding required as part of the reopener ,after application of the efficiency incentive, needs to pass a 1% base demand revenue materiality threshold in order to be triggered.

A3.3 The load-related expenditure reopener does not consider high value projects.

A3.4 For assessing the load-related reopener we will follow a three stage process.

Stage 1: Performance assessment submission

A3.5 The DNOs will be required to submit a performance assessment submission to inform Ofgem’s DPCR5 close out assessment of the load-related reopener by 31 May 2016.

A3.6 The extent of narrative and supporting evidence should be proportionate to the degree to which actual expenditure is higher/lower than the relevant materiality thresholds.

A3.7 The DNOs performance assessment submissions should also explain any data quality issues over the period which have impacted their general reinforcement and LVHC connections.

LVHC Connections costs

A3.8 DNOs should explain the actual LVHC connections expenditure and the variance to the DPCR5 FP baseline. The information should include:

- Explanation of changes in the volume and mix of connections schemes
- Explanation of the cost associated with the connections schemes

- Explanation of the net to gross ratio, how it has changed and what has impacted it
- Justification and quantification of cost efficiencies
- Trade off / relationship with general reinforcement
- The DNOs performance with respect to accuracy and timeliness in collecting customer contributions for connections work
- The number of connections carried out by independent connection providers where the DNOs were required to carry out associated non-contestable work.

General reinforcement

A3.9 On general reinforcement it should include:

- Justification of expenditure with reference to load indices (LIs)
- Justification of expenditure which is not related to load indices (ie circuit reinforcement, voltage regulation schemes and secondary reinforcement)
- Explanation of how changes in load growth have affected the general reinforcement investments with reference to the DPCR5 reinforcement baseline and actual reinforcement expenditure
- Demonstration that the expenditure is efficient
- Variance analysis of changes of expenditure relative to allowance. Proportion relating to:
 - changes where expenditure was no longer required
 - changes where there was a new requirement for expenditure
 - changes to scopes of work (including more efficient solutions)
 - avoided reinforcement
 - differences in actual RPEs from the assumptions made in setting DPCR5.

Avoided reinforcement

A3.10 For avoided reinforcement the submission should include:

- Explanation of innovative solutions adopted
- Justification of ongoing need for reinforcement which the innovative solution is avoiding (CBAs, LIs)
- Where relevant, a link back to schemes included in a DNOs DPCR5 plans.
- A description and justification of the requirement where a new need was identified.

A3.11 The submission will be assessed based on the strength of justification and audit trail of the information provided.

Stage 2: Analysis to determine efficient expenditure

A3.12 Ofgem will assess the submitted information to determine the efficient expenditure for:

- LVHC connections

- General reinforcement

A3.13 The assessment will also consider avoided reinforcement using innovative methods and the efficiencies achieved.

Assessing LVHC connections

A3.14 To assess LVHC connections we will consider both the impact of changes in volume and appropriate proportion of costs that have been recovered upfront through connection charges. We will consider the net to gross ratio, and the justification provided by the DNOs. We will carry out quantitative and qualitative analysis.

A3.15 First we will review submitted expenditure (actual) in the RIGs submissions against the DPCR5 baseline. We will benchmark, where applicable, different DNOs costs using the industry median.

A3.16 As a second step, we will review any variance by sample checking specific outlier schemes. Depending on the results we may make qualitative adjustments.

A3.17 We will compare the actual net to gross ratio with that assumed in setting DPCR5 FP, taking into account supporting narrative provided by the DNOs.

A3.18 We will consider trade-offs between LVHC connections and general reinforcement taking into account information provided by the DNOs.

Assessing general reinforcement

A3.19 For general reinforcement, we will consider the efficient expenditure with reference to LIs and changes in demand. We will run analysis at an aggregate level and for individual substations and substation groups to inform efficient level of reinforcement, given changes in demand. We will run similar ratio analysis to that used for DPR5 and ED1. We will consider:

- Capacity added versus growth in maximum demand above firm capacity.
- The cost of capacity added versus historical and industry median costs.

A3.20 We will also check a sample of investment schemes, focusing on the high cost investments. We will review DNOs unit costs comparing them against our view from DPCR5 FP and run a sensitivity analysis using ED1 data. We may make qualitative adjustments where higher unit costs are justified. We will also look at investment schemes that were originally proposed, but no investment was carried out during DPCR5, taking into account the LIs and risk points the start and end of the period and the justification provided.

A3.21 We intend to carry out variance analysis based on the results of the work described above and our assessment of avoided reinforcement to attribute difference between allowed and actual expenditure to:

- efficiencies through innovative solutions or avoided reinforcement
- efficiencies in delivering conventional solutions; and
- changes in demand.

A3.22 We will also identify any cost inefficiencies.

A3.23 The analysis for secondary reinforcement will be quantitative and qualitative. Based on the justification provided, if there is a strong case from the DNOs, additional qualitative adjustment may be made.

Assessing avoided reinforcement

A3.24 For avoided reinforcement, it will be up to the DNO to demonstrate the avoided reinforcement efficiencies.

A3.25 Based on the information provided, we will consider the extent of expenditure that has been avoided through DSM or other innovative techniques. The assessment will be mostly qualitative and will be based on the strength and justification of the information provided and the related audit trail. The DNOs should use cost benefit analysis to demonstrate the innovative techniques deliver benefits to customers.

A3.26 In addition, depending on the available information, we will compare efficient use of technologies between DNOs in terms of added capacity, incurred costs etc.

Stage 3: Comparison of efficient expenditure to thresholds

A3.27 We will calculate the DNOs qualifying expenditure (sum of efficient general reinforcement and LVHC connections, justified avoided reinforcement and efficiencies) we will then subtract the qualifying expenditure from the DPCR5 FP load-related expenditure baseline.

A3.28 DNOs are able to trigger the reopener if qualifying expenditure is at least 20% higher than the baseline. Ofgem is able to trigger if qualifying expenditure is at least 20% lower than the baseline. Further the additional costs above or reduced costs below the reopener threshold, after application of the efficiency incentive rate, must be greater than 1% of DPCR5 base revenue for an adjustment to be made.

A3.29 If the thresholds are not met, we will make no further adjustments.

A3.30 If the reopener is triggered, we will apply the revenue adjustment based on the additional costs above or the reduced costs below the reopener threshold (as appropriate) after application of the efficiency incentive rate.



Consultation on close out methodologies for the DPCR5 Price Control

A3.31 For assessing the reopeners we will use 2012-13 prices as a common basis.

A3.32 The LIs outputs are assessed through NOMs methodology. We will ensure there is no double counting between the two methodologies.

Appendix 4 – Draft High Value Projects Methodology

Overview

A4.1 There are two aspects to closing out the DPCR5 High Value Project (HVP) schemes:

- a High Value Project expenditure reopener which adjusts the licensee's baseline allowed revenue for inefficiencies; and
- an outputs gap adjustment to the licensee's allowed revenue, where outputs for HVPs have not been delivered.

Performance assessment submission

A4.2 The licensee will by 31 May 2016 submit to the Authority a performance assessment submission relating to all DPCR5 HVPs in order for the Authority to conduct both an efficiency and outputs gap assessment. This applies to all licensees with HVPs.

A4.3 For the efficiency element of the assessment, the licensee's performance assessment submission must include as a minimum:

- information and audit trails justifying the licensee's efficiency in terms of expenditure;
- information on how actual RPEs have differed from the assumptions made in setting DPCR5 FP;
- any relevant cost benefit analysis; and
- variance analysis of the licensee's actual expenditure to the DPCR5 baseline for the licensee.

A4.4 For the outputs element of the assessment, the performance submission requirements vary depending on the stage of the project, as detailed paragraphs A4.5 and A4.10.

For projects that have started and finished in DPCR5

A4.5 The output performance assessment prepared by the licensee must set out the following minimum information:

- a) background information on each HVP as originally set out at DPCR5 including:
 - project category based on categories set out in paragraph A4.13;
 - details of project scope and need;

- details and reasons behind delays in project start and/or delivery or other rephrasing of the work;
 - project outputs as agreed at the start of DPCR5 where project outputs were agreed;
 - where project outputs were not agreed at the start of DPCR5, a description of the intended project outputs;
 - project outputs delivered;
 - any additional DPCR5 HVP reporting requirements prepared by the Authority; and/or
 - any of relevant information relating to the licensee's DPCR5 HVPs, such as cost benefit analyses.
- b) an initial assessment carried out by the licensee including:
- an assessment of whether the project need endured throughout DPCR5 justifying that the project go ahead;
 - an assessment of whether or not the project addressed the enduring need;
 - a review of intended outputs at the start of DPCR5 (if any) and any changes in outputs;
 - an assessment of whether or not outputs have been delivered and reasons for failure to deliver outputs;
 - where the licensee considers that outputs have been delivered, an assessment of whether outputs have been delivered in a cost-efficient manner and whether the delivered outputs are in the interest of consumers;
 - where the licensee has adopted an alternative solution to address the enduring need and deliver the output, a justification of why that was adopted and whether any other funding was already provided for that solution; and
 - an assessment of the difference between the agreed outputs or the intended outputs at the start of DPCR5 and the adjusted outputs ('the outputs gap'), based on the methodologies set out in paragraph A4.18 to A4.26.

A4.6 Where there has been a change in outputs, the licensee will need to set out in its performance assessment submission:

- what the new outputs for the project are and reason for the change in outputs;
- an assessment of whether it considers these new outputs to be fully equivalent to the outputs originally set out at DPCR5;
- an assessment of whether outputs have been delivered in a cost-efficient manner and whether the delivered outputs are in the interest of consumers; and
- an assessment of the difference between the agreed outputs and the adjusted outputs ('the outputs gap').

For projects that have started in DPCR5 and will be on-going in RIIO-ED1

A4.7 Where a project will be on-going during RIIO-ED1, the licensee will be required to submit a performance assessment submission in line with paragraphs A4.5 and A4.6.

A4.8 In addition, the licensee is also required to identify in its performance assessment submission:

- a) where there is no additional allowance for the project in RIIO-ED1:
 - o the percentage of the DPCR5 allowance for the project which will be used to in order to complete the project during RIIO-ED1; and
 - o a description of outputs which were not delivered during DPCR5 and are expected to be delivered during RIIO-ED1 including the timing of this work.
- b) where there is an additional allowance for the project in RIIO-ED1:
 - o a summary of DPCR5 expenditure for the project against the DPCR5 allowance and new RIIO-ED1 allowance for the project;
 - o a revised forecast of actual expenditure in RIIO-ED1; and
 - o a description of outputs which were not delivered during DPCR5 and are expected to be delivered during RIIO-ED1 including the timing of delivery of the outputs.

Cancelled projects

A4.9 For projects that were cancelled and did not start during DPCR5, the licensee will not be required to submit a full performance assessment submission. The licensee will be required to submit a review of intended outputs and expenditure by 31 May 2016. This should include an explanation of why the project has not gone ahead.

Efficiency and outputs assessment

A4.10 By 31 July 2016, the Authority will commence a quantitative and qualitative assessment of the licensee's cost efficiency and output performance in relation to all HVPs on a project by project basis. This will be based on the information provided by the licensee as part of its performance assessment submission and other information submitted as part of the DPCR5 RIGs.

A4.11 Where the Authority requires additional information from the licensee, it will request any additional information by 31 September 2016. The licensee will provide the remaining information within 14 days unless otherwise specified.

A4.12 Because all HVPs vary in terms of project type and outputs, the assessment methodology has been tailored as appropriate to the project and output type.

A4.13 For this purpose, we propose to split HVPs into the following categories:

- general reinforcement;
- asset replacement;
- BT21CN; and
- legal and safety.

Efficient expenditure analysis

A4.14 The Authority's analysis of efficient expenditure will include variance analysis to determine whether any difference in the licensee's baseline and actual expenditure is the result of:

- the licensee cancelling one or more DPCR5 HVPs;
- the non-delivery or partial delivery of outputs as identified by the Authority in its outputs assessment;
- an improvement in cost efficiency; and/or
- avoided expenditure resulting from the deployment of innovative techniques.

A4.15 In the case of avoided expenditure resulting from the deployment of innovative techniques, the licensee will be required to provide robust information including but not limited to cost benefit analysis demonstrating how the use of innovative techniques has led to a reduction in expenditure.

A4.16 Based on the analysis the Authority will determine the efficient expenditure for DPCR5 HVPs for the licensee and use this to adjust the licensee's allowed revenue.

Outputs performance analysis

A4.17 The Authority will assess the licensee's outputs performance for all individual HVPs against the following criteria:

- a) did the outputs or adjusted outputs meet the overall need?
- b) is the chosen solution an enduring solution?
- c) is the chosen solution in the interest of consumers?
- d) were outputs delivered efficiently?
- e) have there been any changes in the project scope or project need?
- f) where outputs have been adjusted, are these outputs fully equivalent to the outputs originally set out?

General Reinforcement

A4.18 Where there are Load Indices (LIs) associated with a DPCR5 HVP, the Authority will use LI information in order to inform:

- a) whether the project was still needed; and

- b) determine how much LI risk was removed compared to what was originally intended.

Asset replacement

A4.19 Where there are Health Indices (HIs) associated with a DPCR5 HVP, the Authority will ensure that interactions between the DPCR5 HVPs outputs assessment mechanism and the DPCR5 Network Output Measures assessment are managed to ensure there is no double counting.

A4.20 Where there are no HIs associated with a DPCR5 HVP, the Authority will determine the outputs gap and the value of the outputs gap on an asset by asset basis.

A4.21 The Authority will value the outputs gap based on the higher of the DPCR5 FP unit costs and actual asset replacement unit costs consistent with the NOMs HI assessment.

BT21CN

A4.22 The Authority will carry out a bespoke qualitative and quantitative assessment of the outputs gap of the DPCR5 High-Value Projects for the licensee based on the principles set out in paragraph A4.17.

A4.23 In addition, the Authority will carry out an efficiency analysis. The Authority will analyse the overall cost of the package of solutions adopted by the licensee and the comparative unit costs of the same solutions across all licensees.

A4.24 In particular, the Authority will seek to collect costs and volume information relating to BT circuits and associated assets to enable benchmarking across the industry.

Legal and safety

A4.25 The Authority will carry out a bespoke qualitative and quantitative assessment of the outputs gap of the DPCR5 High-Value Projects for the licensee based on the principles set out in paragraph A4.17.

A4.26 We will assess the chosen solution to assess what proportion of the agreed outputs the DNOs has actually delivered.

Additional considerations

A4.27 Where the Authority determines that no outputs have been delivered, the outputs gap will be valued at the full amount of the DPCR5 HVP allowance for the project for the licensee in 2012-13 prices.

A4.28 Where the Authority determines that the delivered outputs are different to the outputs initially set out at DPCR5 FPs, the Authority will assess the new outputs against the criteria set out in paragraph A4.17.

A4.29 Where a DPCR5 HVP is likely to be on-going during RIIO-ED1, the Authority will assess the project and value the outputs gap, based on the outputs that have been delivered during DPCR5.

Calculating the adjustment values

Expenditure reopener adjustment

A4.30 The expenditure reopener can be triggered by the Authority or by the licensee.

A4.31 The Authority will trigger the reopener if:

- the licensee's total DPCR5 HVPs efficient expenditure, as determined following the Authority review set out in paragraphs A4.14 to A4.16, is sufficiently lower than its aggregate baseline expenditure allowances for there to be a post-threshold amount. The threshold is set out in paragraph A4.34; and
- the materiality test set out in paragraph A4.35 is passed.

A4.32 If the licensee wishes to trigger the expenditure reopener the following conditions must be met:

- a) the licensee must lodge an application during a window that runs from 1 May 2016 to 31 May 2016;
- b) following an assessment by the Authority, as described in paragraphs A4.11 to A4.30 the licensee's total DPCR5 HVPs expenditure is sufficiently higher than its aggregate baseline expenditure allowances for there to be a post-threshold amount. The threshold is set out in paragraph A4.34;
- c) the materiality test set out in paragraph A4.35 is passed; and
- d) the licensee has delivered the agreed outputs for all DPCR5 HVPs.

A4.33 Any DPCR5 HVPs Reopener adjustment will be calculated on a per licensee basis. The total efficient costs following a review by the Authority, as detailed in paragraphs A4.14 to A4.16, will be compared to the licensee's baseline allowed revenue.

A4.34 The DPCR5 HVPs Reopener adjustment is subject to an adjustment threshold (for both upward and downward adjustments). Under the threshold, only a portion of total DPCR5 HVPs expenditure (or saved expenditure) restated in 2012/13 prices, that is:

- a) above a figure calculated as 120 per cent; or
- b) below a figure calculated as 80 per cent,

of the aggregate baseline expenditure allowances for HVPs for the licensee, restated in 2012-13 prices, (the 'post-threshold' amount) will be taken into account for the purposes of any calculation of a HVPs adjustment.

A4.35 The DPCR5 HVPs Reopener adjustment materiality test is set at one percent of the licensee's DPCR5 Revenue Allowance for Regulatory Year 2010/11, restated in 2012/13 prices. The test is applied to a post-threshold amount, after it has been multiplied by the DPCR5 efficiency Incentive Rate for the licensee.

A4.36 If the Authority decides that revised efficient expenditure allowance amounts should be used to calculate a DPCR5 HVPs Reopener adjustment following either an Authority trigger or licensee trigger, then the following steps will be carried out to calculate the DPCR5 HVPs Reopener adjustment value:

- i. The efficient post-threshold change (reduction or increase) to the licensee's expenditure allowance amount for each Regulatory Year of DPCR5 will be obtained and stated in 2012/13 prices.
- ii. The values obtained under step (i) will be multiplied by 15% to calculate DPCR5 Fast Money amounts for the DPCR5 HVPs Reopener adjustment for each Regulatory Year in DPCR5.
- iii. The values obtained at step (i) will be multiplied by 85% to calculate an amount for each Regulatory Year in DPCR5 that would have been added to the licensee's RAV if the values calculated at step (i) had been taken into account.
- iv. The values calculated at step (iii) will be used to calculate:
 - a) an amount of depreciation (being annual values calculated as the applicable value divided by 20); and
 - b) an amount of return, at WACC for DPCR5 (applied to the NNRRB²³), for each Regulatory Year in DPCR5 on the basis of attributable, notional RAV balance impacts.
- v. The values obtained at steps (ii) and (iv) will be summed to give a total value for each Regulatory Year of DPCR5.
- vi. DPCR5 Time Value of Money adjustments will be applied to the values calculated under step (v) to put them on a common 2015/16 time value basis and the values will then be totalled.
- vii. Any provisional DPCR5 HVPs Reopener adjustment that was included in the calculation of the licensee's Opening Base Revenue Allowances will be deducted from the value calculated at step (vi).

A4.37 The value obtained at step (vii) is the DPCR5 HVPs Reopener adjustment for the licensee.

Outputs gap adjustment

A4.38 Based on the assessment of the outputs gap the Authority will determine whether:

²³ NPV Neutral RAV Return Base

- a) no outputs gap has arisen; or
- b) an outputs gap has arisen.

A4.39 Where the Authority has determined that there is an outputs gap it will:

- a) multiply the value of the outputs gap by the DPCR5 IQI Incentive Rate for the licensee multiplied by a factor of 1.025;
- b) apply DPCR5 Time Value of Money Adjustments to the value calculated under subparagraph (a) to put them on a common 2015/16 time value basis and then total the values for the whole of DPCR5; and
- c) multiply the total value calculated under subparagraph (b) by minus 1, so that it is a negative value.

Appendix 5 – Draft Traffic Management Act Methodology

Overview

A5.1 The Authority proposes to carry out this assessment in accordance with the methodology set out in paragraphs A5.5 to A5.29.

A5.2 The relevant costs considered in the TMA permitting reopener are:

- Permits: the cost of the permits paid for by the licensee to the relevant local authority or highways authority.
- Permit condition costs: the costs of adhering to conditions of undertaking works that require a permit, eg a requirement from the local authority to work at non-peak times. It includes the costs of codes of practice such as the London Code of Practice. It includes only the incremental costs resulting from the permit conditions; any costs that would have been incurred in their absence as part of usual operating practices will not be included.
- Permit set up costs: the one-off costs of developing the necessary IT system to process permit applications. These costs should only be incurred in the first two years of DPCR5.
- Permit incremental admin costs: the additional costs from processing permit applications over and above the cost of processing an equivalent New Roads and Street Works Act (NRSWA) 1991 notification.

A5.3 The TMA permitting reopener costs do not include the cost of permitting penalties.

A5.4 The Authority will only consider those costs that are within the price control.

TMA permitting reopener methodology

A5.5 This subsection sets out the methodology for determining adjustments to the licensee's allowed revenue for RIIO-ED1 in respect of efficient TMA costs incurred.

A5.6 We propose a number of stages in the assessment process:

- DNOs inform the Authority of their intention to trigger the TMA reopener;
- the Authority requests data from DNOs and GDNs;
- the Authority conducts an efficiency assessment of the costs reported;

- the Authority then applies a materiality test of the licensees who intend to trigger the reopener, using our view of efficient costs;²⁴
- if the materiality test is not met, we propose that no adjustment to allowances will be made;
- if the materiality test is met, the Authority proposes to adjust allowances in line with our efficient view of costs.

A5.7 In the assessment the Authority will only consider those costs that are within the price control. In table CM15 of the Memo and Disagg Regulatory Reporting Pack those costs associated with "Connection project which has no element subject to the apportionment rules" will be excluded as these costs are customer funded. We will also exclude will any element of permit costs that are recovered through connection charges.

Stage 1 DNOs triggering reopener to inform Ofgem

A5.8 Those DNOs that intend to trigger the TMA reopener must inform us of their intention to do so by 30 April 2016.

Stage 2 Data request

A5.9 The DNOs submitted cost and volume data relating to the TMA permitting schemes reopener in their annual Regulatory Reporting Packs (RRPs) in July 2015. We intend to use this data to form the basis of our assessment. It provides us with:

- the costs of the four components of permit costs – permits, permit condition costs, permit set up costs and permit incremental admin costs; and
- the volume of permits

for each year of DPCR5.

A5.10 We also intend to compare these costs to that of the data we have for GDNs. We may ask GDNs to submit data to us by 31 May 2016 should there be some inconsistencies in how this is reported compared to the DNO data.

A5.11 We intend to ask the DNOs, regardless of whether they are triggering the reopener, and GDNs to provide detail on permit condition costs by 31 May 2016 to allow for a comparative assessment including:

- the type of conditions imposed;

²⁴ The materiality test value will be calculated as one percent of the DPCR5 Revenue Allowance for the licensee for the Regulatory Year 2010-11, restated in 2012-13 prices.

- how the conditions are met, including alternative methods to meet the conditions and evidence that the licensee has engaged effectively with the relevant local authorities to negotiate the conditions imposed;
- if the licensees have made any appropriate efficiency savings to meet these conditions at a lower cost.

A5.12 Before sending out data requests we review all data already available to us and the further requests will only be used to supplement this.

Stage 3 Cost efficiency assessment

A5.13 The Authority intends to conduct an efficiency assessment for those licensees triggering the reopener.

A5.14 We propose to carry out this analysis at the disaggregated level, ie costs for each component of the total permit costs set out in paragraph A5.2 will be assessed separately and then aggregated to reach total permit costs.

Permit costs

A5.15 The Authority intends to undertake a review of the volumes of permits and costs of permits submitted by the DNOs to check for accuracy.

A5.16 The Authority proposes to accept both volumes and costs as submitted by the licensee if satisfied with the accuracy of data. The submitted cost will be accepted as efficient costs.

A5.17 If the Authority is not satisfied with the accuracy of data, the licensee will be asked to resubmit the data until the Authority is assured of data accuracy. The Authority proposes to accept both volumes and costs as resubmitted by the licensee once relevant assurances have been made. The resubmitted costs will be accepted as efficient costs.

Permit condition costs

A5.18 The Authority proposes to undertake a qualitative review of the permit condition costs, considering each licensee's costs individually. The Authority intends to consider:

- the type of conditions imposed
- if the costs to meet the conditions imposed are efficient costs by reviewing:
 - how other licensees meet the conditions, both DNOs and GDNs
 - alternative methods to meet the conditions
- if the licensees provide evidence that they have engaged with the relevant local authorities to negotiate the conditions imposed
- if the licensees have made any appropriate efficiency savings during DPCR5 to meet these conditions at a lower cost

- evidence submitted as part of the 2012 reopener
- evidence submitted as part of the RIIO-ED1 business plans where appropriate inferences can be made to DPCR5 data.

Permit incremental admin costs

A5.19 The Authority proposes to benchmark permit set up costs incurred by each licensee with other licensees' costs.

A5.20 The proposed unit cost for benchmarking purposes is the average incremental admin cost per permit. The volumes of permits used are those submitted by the DNO and checked for accuracy by the Authority. The benchmark cost is the industry upper quartile (ie the lower cost). We intend to multiply this unit cost by the accepted number of permits.

A5.21 We propose that the allowed costs will be the lower of the benchmark costs or the actual costs incurred.

Permit set up costs

A5.22 We propose to benchmark permit set up costs incurred by each licensee with other licensees' costs.

A5.23 The set up costs should be similar for all the licensees regardless of the number of permits.

A5.24 We suggest that the benchmark cost is the industry upper quartile (ie the lower cost) and the allowed costs are the lower of the benchmark costs or the actual costs incurred.

Total efficient permit costs

A5.25 The total efficient permit costs will be the aggregate of the four disaggregated efficient costs – permits, permit conditions costs, permit incremental administration costs and permit set up costs.

Stage 4 Adjustment to allowed revenue

A5.26 We intend to apply the materiality test using our efficient view of total costs rather than the DNOs' submitted view. This is to ensure that companies that incur inefficient costs do not benefit from the reopener mechanism when their view of costs meets the test but our view of efficient costs does not.

A5.27 The materiality test is that the Authority's efficient view of total TMA permitting scheme reopener costs must be at least one percent of the DPCR5

Revenue Allowance for the licensee for the Regulatory Year 2010-11, restated in 2012-13 prices.

A5.28 If the Authority's efficient view of costs passes the materiality test then the Authority proposes making an adjustment to that value for the licensee.

A5.29 If the Authority's efficient view of costs does not pass the test, then the Authority proposes making no adjustment to the licensee's allowances.

Appendix 6 - Feedback Questionnaire

A6.1 Ofgem considers that consultation is at the heart of good policy development. We are keen to consider any comments or complaints about the manner in which this consultation has been conducted. In any case we would be keen to get your answers to the following questions:

1. Do you have any comments about the overall process, which was adopted for this consultation?
2. Do you have any comments about the overall tone and content of the report?
3. Was the report easy to read and understand, could it have been better written?
4. To what extent did the report's conclusions provide a balanced view?
5. To what extent did the report make reasoned recommendations for improvement?
6. Please add any further comments?

A6.2 Please send your comments to:

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