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Decision on the process to follow for closing out the losses incentive mechanism for the fourth distribution price control (DPCR4)

Decision

Reference: 119/13

Publication date: 12 July 2013

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Overview:

The fourth distribution price control review (DPCR4, covering 2005-06 to 2009-10) included a losses incentive mechanism ('the mechanism'). It was designed to drive the distribution network operators (DNOs) towards achieving an efficient level of losses on their distribution networks. Issues concerning the data used for the final year of DPCR4, 2009-10, have delayed the 'closing out' of the mechanism.

In November 2012 Ofgem consulted on restatement of 2009-10 data and closing out values for the DPCR4 losses incentive mechanism. Responses to that consultation necessitated further work on both the approach and the data to be used in the close out process.

This document sets out our decision on the further process for DNOs to apply for the restatement of 2009-10 losses performance for the purpose of closing out the DPCR4 losses incentive mechanism. It also makes a data request to all DNOs to enable Ofgem to re-consult on the close out values of the mechanism.

Context

The distribution losses incentive mechanism was designed to drive the DNOs towards achieving an efficient level of losses on their distribution networks. The mechanism in the fifth Distribution Price Control Review (DPCR5) included a process to close out the DPCR4 mechanism. However, significant concerns were raised about the volatility of settlement data, which affected the 2009-10 data in particular, and we established a process to correct this data prior to determining the DPCR4 close out values ('PPL term').

In November 2012, we made a decision not to activate the DCPR5 losses incentive mechanism because of our concerns about the ongoing validity of data. We also consulted on the proposed approach to restating 2009-10 data for the purpose of closing out the DPCR4 mechanism.

Responses to our November consultation raised some key concerns. In light of these concerns, we set out our decision here on the process to follow for closing out the DPCR4 mechanism, and issue a further request for data for the purpose of closing out the DPCR4 mechanism.

Associated documents

The main documents that precede this issue are available on our website and listed below. Other relevant documents are referred to (with links) where appropriate throughout the document.

DPCR4 Electricity Distribution Price Control Review - Final Proposals; 28 November, 2004 (Ref 265/04)
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR4/Documents1/8944-26504.pdf

Electricity Distribution Price Control Review Final Proposals – Financial Methodologies; 7 December, 2009 (Ref 148/09)
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR5/Documents1/FP_6_DPCR5%20Financial%20methodologies.pdf

Electricity Distribution Price Control Review Final Proposals – Incentives and Obligations; 7 December, 2009 (Ref 145/09)
http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR5/Documents1/FP_2_Incentives%20and%20Obligations%20FINAL.pdf

Decision on regulatory measures to address the effects of gross volume correction and other settlement data adjustments on the distribution losses incentive mechanism; 9 March 2012 (Ref 29/12)
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=660&refer=Networks/ElecDist/Policy/losses-incentive-mechanism

Consultation on restatement of 2009-10 data and closing out the Distribution Price Control Review 4 (DPCR4) losses incentive mechanism: Document G; 16 November 2012
http://www.ofgem.gov.uk/Networks/ElecDist/Policy/losses-incentive-mechanism/Documents1/8G_Con_200910data_losses_DPCR4_161112.pdf

Decision on the methodology for closing out the DPCR4 Losses Incentive Mechanism; 3 January 2013
http://www.ofgem.gov.uk/Networks/ElecDist/Policy/losses-incentive-mechanism/Documents1/Methodology%20for%20closing%20out%20DPCR4%20Losses.pdf

Update on closing out the losses incentive mechanism of the Fourth Distribution Price Control Review (DPCR4); 19 April 2013
http://www.ofgem.gov.uk/Networks/ElecDist/Policy/losses-incentive-mechanism/Documents1/DPCR4%20losses%20close%20out%20update%20letter%20-%2019%20April%202013.pdf

Timing of recovery of the close out values of the Fourth Distribution Price Control Review (DCPR4); 25 April 2013
http://www.ofgem.gov.uk/Networks/ElecDist/Policy/losses-incentive-mechanism/Documents1/DPCR4%20PPL%20recovery%20letter%20-%2025%20April%202013.pdf

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Executive Summary

This document addresses concerns raised by respondents to our consultation of 16 November 2012[1] regarding the data which DNOs submitted in their restatement applications and on the restatement process more generally. In light of these concerns, we are now requesting a fresh set of data from all distribution network operators (DNOs) and fresh restatement applications from those wishing to apply for restatement of 2009-10 data.

This document contains that data request to allow Ofgem to publish a further consultation on a draft decision for the close out values of the losses incentive mechanism for DPCR4. It also outlines the process DNOs should follow where they wish to apply for the restatement of 2009-10 losses performance for the purpose of both closing out DPCR4 and the annual incentive.

This document sets out our decisions, which ensure a more robust process covering both an audit of the submitted data and the revised restatement process, including the statistical analysis. We also include details of our minded-to position on the revised approach to the credibility criteria and the application of the cap to restatement applications.

This document and the matters raised in it take into account all responses to our November consultation. Where appropriate we have summarised the key issues raised. All non-confidential responses are published on our website.

DNOs should respond to the data request in this document by 2 August 2013. Where we have set out a minded-to position, we do not seek views at this time, but we will include these issues in the consultation we will publish on our assessment of the restatement applications we are now asking DNOs to resubmit.

[1] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=762&refer=Networks/ElecDist/Policy/losses-incentive-mechanism

1. Introduction

Chapter Summary

This chapter explains the structure of the document. It provides the background to the recent steps that we have followed in closing out the DPCR4 losses incentive mechanism as well as the process going forward. It also highlights the framework for our decision making on this issue.

1.1. This document addresses concerns raised by respondents to our consultation of 16 November 2012[2] regarding the data which DNOs submitted in their restatement applications and on the close out process more generally. Chapter 2 covers the underlying data used for losses in 2009-10, setting out our decisions following the audit of losses data.

1.2. Chapter 3 addresses concerns with respect to the restatement process. It sets out our decisions on the revised process to restatement, covering statistical analysis, the approach to restatement and the precise application of the restatement methodology. It includes our minded-to position on the revised credibility criteria and application of the cap.

1.3. Chapter 4 concerns the results of the data audit and the revised restatement process as they relate to the annual incentive for 2009-10.

1.4. Chapter 5 addresses the next steps that DNOs should follow in the restatement process and for closing out the DPCR4 losses incentive mechanism.

Background

The Distribution Losses Incentive Mechanism

1.5. Electrical losses are an inevitable consequence of transferring electricity across the distribution network and they have a significant financial and environmental impact on consumers. Losses contribute to approximately 1.5 per cent of GB's greenhouse gas emissions.

1.6. To encourage DNOs to manage an efficient level of losses on their network, we introduced a losses incentive mechanism as part of our electricity distribution price control.

[2] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=762&refer=Networks/ElecDist/Policy/losses-incentive-mechanism

1.7. The distribution losses incentive mechanism was designed to drive the DNOs towards achieving an efficient level of losses on their distribution networks. Targets for DPCR4 were set for each DNO based on their historical average ten-year losses performance.[3]

1.8. DNOs calculate their losses by reference to the difference in the electricity that flows onto their network and that which flows off their network (the units distributed). The electricity that flows during any given half-hour is based on a combination of actual and estimated meter readings, recorded for the purpose of settling energy in the market (this is known as settlement data). Under the DPCR4 mechanism, DNOs generally reported their losses annually based on data available at that time (supplemented by estimates if necessary).

1.9. As more meters are read in the period after the energy flows, the measure of the electricity that was actually used should improve. The later data is based on a series of data reports (or reconciliation runs) that relate to any given period. The RF (run final) and DF (dispute final) are respectively the penultimate and last reconciliation runs affecting any given period. RF is available 14 months after the energy originally flowed, while DF, if used, is available up to another 14 months after RF.

Data cleansing affecting losses performance

1.10. Suppliers may conduct data cleansing activities to correct for errors and improve the accuracy of the settlement system. Any data cleansing activity undertaken by suppliers affects the settlement data used by DNOs to record losses performance. In some cases, these effects can be significant. For instance, if the supplier makes adjustments to correct historical data which can relate to a number of years, this places the full effect of the correction into the year during which that correction is made.

1.11. During 2010, some DNOs noted high levels of data reconciliation corrections arising from abnormal levels of Gross Volume Corrections (GVCs)[4] and other data cleansing activity by suppliers.

1.12. The data corrections that suppliers applied to reconciliation runs increased the notional losses for affected DNOs for 2009-10. This not only affected the losses incentive (reward or penalty) they earned in that year, but also affected the calculation of the close out position for DPCR4. This impact is compounded because 2009-10, the final year of DPCR4, is fundamental for the close out calculation.

[3] DPCR4 ran from 2005-06 to 2009-10.
[4] GVC is used in the settlement process as a last resort method of correcting meter data and estimated annual consumption levels where errors have affected days whose final reconciliation has passed.

Addressing abnormal levels of data cleansing

1.13. Since 2010 we have been engaging with industry extensively in seeking to resolve this issue. The following paragraphs summarise the most recent developments.

1.14. On 9 March 2012, Ofgem published a decision letter[5] stating that, where DNOs could provide statistical evidence that abnormal levels of settlement data corrections had affected their 2009-10 reported data, they could apply to have their losses performance for 2009-10 restated.

1.15. Following responses to a March 2012 consultation[6] on a related issue, it became apparent that the submissions received in response to the 9 March letter were not sufficient to restate 2009-10 losses performance for the purpose of closing out DPCR4. This is because, for the majority of DNOs, the data provided did not satisfy the relevant clauses in DPCR5 Final Proposals[7] ("Final Proposals").

1.16. Following extensive stakeholder engagement, on 30 July 2012[8] we made a data request to DNOs for the purposes of closing out the DPCR4 losses incentive mechanism. That letter outlined four approaches for restating 2009-10 data for the purposes of close out that are consistent with the requirements of Final Proposals. On 16 November 2012, we published a consultation on our assessment of the restatement applications and the PPL terms[9] for each DNO for each of the restatement approaches identified (the "November consultation").[10]

The process going forward

1.17. The respondents to the November consultation raised a number of issues, including concerns over the credibility of the underlying data used and the application of suitable statistical tests.[11] In seeking to address these issues we appointed independent data experts to examine the underlying data, and commissioned a separate independent critique of the statistical analysis.

1.18. This document includes our response to specific issues raised, while the appendices provide further details on the process to be followed by DNOs. **In light of the responses to the November consultation and the resulting decisions outlined in this letter, we are now requesting a fresh set of close out and**

[5] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=660&refer=Networks/ElecDist/PriceCntrls/DPCR5
[6] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=691&refer=Networks/ElecDist/PriceCntrls/DPCR5
[7] http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR5/Documents1/FP_6_DPCR5%20Financial%20methodologies.pdf
[8] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=17&refer=Networks/ElecDist/Policy/losses-incentive-mechanism
[9] The PPL term is the residual value of the losses incentive mechanism for DPCR4 for each DNO.
[10] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=762&refer=Networks/ElecDist/Policy/losses-incentive-mechanism
[11] We have published responses to the consultation on our website: *ibid.*

annual incentive data from all DNOs. In addition, **those DNOs wishing to apply for restatement of 2009-10 data for close out or for the annual incentive should submit restatement applications.**

1.19. This document includes both decisions and minded-to positions; the latter will be subject to specific consultation questions in our next consultation. The next consultation will focus on the revised PPL terms based on the revised data submissions and our assessment of the new restatement applications.

1.20. Following consideration of the responses to the next consultation, we will direct the final PPL values.

1.21. There are some issues from the November consultation that are not considered in this document; these will be addressed in (a) separate document(s). These issues include the target to be used for close out for DNOs with more than one DPCR4 target, the indexation of DPCR4 incentives and other issues raised in consultation responses which are not addressed here and do not directly relate to the 2009-10 data submission and restatement.

Framework for consideration

1.22. In making our decisions, we have sought to comply with our principal objective under s3A of the Electricity Act 1989 which, in summary, is to protect the interests of existing and future consumers in relation to electricity, and includes our duty, wherever appropriate, to carry out our functions in a manner which we consider will best promote effective competition in the generation, transmission, distribution or supply of electricity.

1.23. In the context of this issue, we consider that we should carry out our functions in a manner that we consider is best calculated to promote efficiency and economy on the part of DNOs and the efficient use of electricity conveyed by distribution systems.

1.24. In seeking to discharge our statutory duties, we have had regard to the criteria we set out in our 9 March 2012 decision letter, namely:

- The purpose of the distribution losses incentive mechanism, which is to drive the DNOs towards achieving lower levels of losses on their distribution networks.
- The principle that restatement in any given instance, will only be appropriate where the Authority is satisfied that there is a defect in the way in which the mechanism would operate in the event that restatement were not to be allowed, for instance by creating an inconsistency between target setting and performance monitoring.
- The need to ensure equality of treatment of licensees, with any difference in treatment between licensees being objectively justified.
- The desirability of promoting regulatory certainty, for the benefit of industry and the public.

- Our assessment of the merits of addressing any particular defect and the qualities of the methodologies proposed to achieve this, for instance, the relative accuracy of the data that result from the adjustments.

1.25. This document consolidates and replaces any previous guidance on this issue.

2. Data for close out

Chapter Summary

This chapter considers the data to be used in the close out process. It updates stakeholders on the data audit that we have undertaken and the consequent policy decisions. It also addresses comments raised in response to the November consultation concerning closing out the Scottish & Southern Energy: Power Distribution licensees.

Data audit

Summary of consultation position

2.1. Our November consultation presented the draft PPL values based on the data submitted by DNOs. We also published all of the DNOs' data to allow external scrutiny of the submitted data.

Responses to the consultation

2.2. Some respondents to the November consultation questioned the accuracy of the data provided by DNOs for the close out process. One respondent offered detailed analysis of the apparent discrepancies which fell broadly into the following two areas:

- Area 1 – Differences between fully-reconciled data provided by DNOs and other records of settlement data.
- Area 2 – Inconsistencies between the data reported by DNOs in annual revenue returns and that supplied for close out under restatement 'Approach C'.[12]

2.3. In order to address these issues, we have appointed independent auditors to examine the underlying data. The respondent that provided the analysis has been party to the data audit interactions with the DNOs. We will be publishing the auditors' report in due course.

[12] In the July data request letter, restatement Approach C stated that DNOs should use 'reported data' to test for abnormality in 2009-10. The approach to restatement is covered in Chapter 3.

Our decisions

2.4. In addressing the decisions below, DNOs should fill in the relevant parts of the data request spreadsheet accompanying this letter.

Area 1 - Differences between fully-reconciled data provided by DNOs and other records of settlement data

2.5. Working with each of the DNOs, the auditors have advised us on the extent to which each DNO has been able to reconcile the identified discrepancies, and its opinion of the validity/reasonableness of these reconciliations. In considering the validity of data, the auditors have focused on consistency with historical DPCR4 reporting by the DNOs – in terms of both methodology and practice.

2.6. This process has accounted for the majority of the identified discrepancies for each DNO.

2.7. Under Area 1, the audit has focused on 2009-10 as the key year for closing out the losses mechanism. We have grouped the reconciling items into three categories:

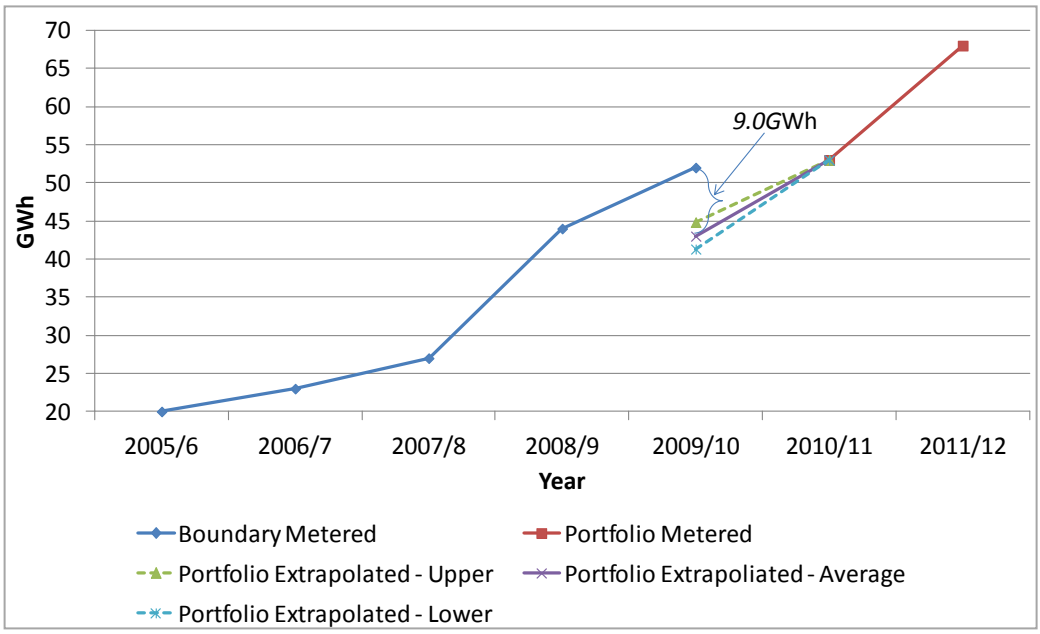
1. Non contentious differences
2. Acknowledged errors
3. Contentious differences

Non contentious differences

2.8. These are differences identified by DNOs that are reasonable and, where relevant, consistent with historical reporting. These items include the following.

- Data changes that occurred between the DNOs' submission of the data and the comparison set of settlement data.
- Differences related to different types of validation rules.
- Differences in the treatment of embedded generation between the settlement process and the DNOs' methodologies.
- Units which are supplied by a network but the customer (and the meter point administration number (MPAN)) resides in another region.
- Estimates of independent distribution network operators' (IDNO) losses that are not separately identified in the settlement data, which will be measured at the consumer premises, whereas the boundary meter (between the DNO and IDNO networks) will be upstream.
- Errors in the settlement metering of IDNO customers. These differences can be considerable. To estimate the differences, our data auditors have considered the difference between boundary metering in 2009-10 and portfolio metering in 2010-11, and considered the trend between the two and the average difference/error it could account for. A typical graph is shown below.

Figure 1 – IDNO error estimate sample graph



2.9. **These reconciling items help to account for the identified differences and do not need to be removed from the DNOs' data.** It is worth noting that some of these differences are estimates and cannot be specified more accurately.

Acknowledged errors

2.10. Through the audit process, some DNOs have uncovered errors in their data. Examples include unintentional double counting of units. In these instances, the DNOs have agreed to remove the items from their close out data. Where a DNO has uncovered such an error in 2009-10 it has reported back to the auditors on the likely occurrence of similar errors in earlier years of DPCR4. These earlier errors must also be removed from any data submitted for close out or restatement. **We would like to emphasise that DNOs should remove any such errors from all fully-reconciled settlement data submitted for the close out process and any restatement.** They should further highlight where this data has been removed (including historically) and explain where (and why) such errors do not apply to earlier years.

Contentious differences

2.11. Some differences with settlement data presented by DNOs have required policy consideration, since there is room for argument as to the legitimacy of the reconciliation items. The auditors have informed our considerations in this category, and the decisions we have taken in this area are summarised in the table below.

Table 1 – Ofgem's decisions on contentious differences raised by the data audit

DNO	Issue	Decision
Electricity North West Limited (ENWL)	ENWL's billing software includes a 10 GWh provision for unbilled units that is electronically generated and remains in the system for two years. This was always part of its methodology. These units will not now be billed and ENWL has released the revenue accrual but not the units. It has done this historically.	While the 10 GWh was part of ENWL's methodology and practice, it did not reflect electricity actually delivered in 2009-10. Therefore, while it is appropriate to include it in the annual returns as part of its standard methodology it is not appropriate to include it in the final close out calculation.
	ENWL have adjusted for a trading dispute (DA329) where a number of meters have been missed from settlement. The adjustment is a manual one and is derived from post-RF settlement data.	These units should be removed since this was not an adjustment explicitly allowed for in its methodology, which only reported settlement data to RF.
Western Power Distribution (WPD)	WPD has found areas where settlement data was under-recording the energy consumed by customers (for example due to incomplete unmetered supply inventories in all of its DNO licensees). The units it found were spread across all years of the data provided to us retrospectively. These units have in most cases now been billed through settlements and corrected going forward. WPD's methodology does not contain anything that would allow it to include this data although it was not explicitly excluded. However, this was the practice reported under SLC47 (annual revenue returns) for the South West and South Wales licensees in DPCR4.	As this was the practice in licensees South West and South Wales, we consider that the data is justifiable to include. However, since this was neither in the methodology nor the practice of East Midlands and West Midlands licensees these units should be removed. This ensures appropriate consistency with the licensees' DPCR4 methodologies.
UK Power Networks (UKPN)	UKPN has found areas where settlement data was under-recording the energy consumed by customers (for example due to unmetered supply inventory shortfalls). The units were not spread over the years they related to but all reflected in the year the error was identified. These errors, where subsequently corrected in settlements, have been billed going forward. This has been part of the UKPN methodology.	We consider that it is justifiable for UKPN to include this data in some way. However, since the close out calculation should only reflect electricity that actually flowed in 2009-10, we require that, in resubmitting its data, UKPN should allocate the units across the years to which the error relates, with appropriate evidence/reasoning for how it is spread. We acknowledge that units that relate to 2009-10 may be found in years post-DPCR4. We also acknowledge that UKPN may have changed its reporting methodology and may not have continued to record these units in the same way beyond the end of DPCR4. We will consider allowing UKPN to include units found in post-DPCR4 years that relate to energy flowing in 2009-10 where UKPN provides satisfactory evidence to justify such figures.

2.12. As mentioned above, given the difficulty in specifying the exact size of some of the reconciling items, **we do not consider it reasonable to expect DNOs to fully reconcile their losses data to settlement data. We consider a threshold of ±10 GWh for differences in losses (between DNOs' data and settlement data) to be appropriate.** Data relating to any differences larger than ±10GWh should be removed. Discussion with industry highlighted this figure as representing a proportionate approach when comparing the cost of further investigations with the value of the incentive scheme.

2.13. Data submissions by the DNOs should explain which items previously identified as reconciling items have been included or excluded from the data so that the auditors are able to ensure consistency with the process followed so far.

Area 2 – Inconsistencies between the data reported by DNOs in annual revenue returns and that supplied for close out under restatement 'Approach C'

2.14. The auditors have also advised us regarding the rationale for any inconsistencies between DNOs' annually reported data and that used under restatement Approach C. The auditors have advised us on the specific issues as they apply to each DNO. The justifications for inconsistencies put forward by DNOs include the need to depart from the annually reported data in order to be able to apply the 'SP methodology'.[13]

2.15. We consider that in making restatement applications, DNOs should explain why they consider they must depart from data provided for annual reporting. For example, some DNOs' annual returns include certain provisions. Such provisions provide for possible changes in billing data as a result of subsequent settlement reconciliation runs or amending billing data for unexpected volatility that was expected to be corrected via future settlement reconciliation runs. **We consider that DNOs may remove the effect of these provisions prior to looking for abnormality for close out since such forecast units may disguise the existence of subsequently identified abnormality and indeed have to be removed for close out purposes.**

2.16. **In addition, any data errors identified for fully-reconciled data should be removed from the equivalent reported data for all years of DPCR4 as appropriate.** We will consider the DNOs' explanations of their treatment of such errors, as well as any departure from data provided for annual reporting, in assessing the restatement applications.

[13] The SP methodology was developed by Scottish Power in collaboration with Engage Consulting. It is used by DNOs to remove the effects of abnormal data cleansing on their data and is covered in Chapter 3.

Scottish & Southern Energy: Power Distribution (SSEPD)

Summary of consultation position

2.17. Unlike all other DNOs, SSEPD used an engineering approach to report its losses in DPCR4, making limited use of settlement data in arriving at a figure for units distributed. This reporting was consistent with the basis on which its targets were set. In our November consultation, we consulted on close out values for the SSEPD licensees on the basis of fully-reconciled settlement data as prescribed by Final Proposals.

Consultation responses

2.18. In response to the November consultation, some stakeholders expressed concern with the treatment of SSEPD in the close out process. They considered that the treatment of SSEPD was inconsistent with the treatment of other DNOs given the difference between the underlying data used to calculate its close out position and that used to set its targets. The respondents considered that the treatment of SSEPD leads to unjustified rewards for the DNO. One DNO suggested that SSEPD should be subject to the restatement process.[14]

Our decision

2.19. We acknowledge the concerns raised regarding consistent treatment of all DNOs, and that the treatment of SSEPD could lead to unjustified rewards for the DNO. However, we consider that, in the interests of regulatory certainty, our decision should be consistent with the regulatory settlement reached in our Final Proposals for DPCR5. We consider that it would inappropriately undermine regulatory certainty to require SSEPD to close out on a different basis now. Therefore, **we should close out the incentive for SSEPD licensees based on fully-reconciled settlement data**. Final Proposals is clear that fully-reconciled settlement data should be used to close out the DPCR4 losses incentive mechanism.[15] It does not specifically address the extent to which any such settlement data was used in any DNO's historical reporting.

[14] SSEPD has not applied for restatement for its licensees.
[15] Paragraphs 7.10-7.14, pages 40-41 of DPCR5 Final Proposals – Incentives and Obligations (ref 145/09).

3. The restatement process

Chapter Summary

3.1. In light of stakeholder responses to the November consultation, we have refined the restatement process. We have re-examined the whole process, including the statistical tests, the application of the SP methodology, our assessment of credibility and the calculation of the cap. This chapter describes the changes to the process while the flow diagram at Appendix 1 illustrates the updated process. More details on its implementation are contained at Appendices 2 and 3 of this document. DNOs wishing to apply for restatement should submit a restatement application and fill in the relevant parts of the spreadsheet accompanying this letter.

The normal period and identification of abnormality in 2009-10

3.2. In light of responses to the November consultation we have commissioned an independent critique of our approach to the statistical analysis. We have revised the process to make it more robust and consistent across the DNOs. Appendix 2 offers further detail on the statistical analysis.

Summary of our consultation position

3.3. In our 9 March 2012 decision letter we set out the principle that restatement of 2009-10 data would only be appropriate where a DNO could demonstrate that it had been affected by abnormal levels of data cleansing activity in that year. We developed some statistical methods that DNOs could use to identify abnormality and for identifying a normal period for applying the SP methodology (discussed below).

3.4. In our July 2012 request for close out data, we identified the use of a number of different methods for testing for abnormality and identifying a suitable normal period: the variable confidence interval test, the fixed confidence interval test, sensitivity on these tests (which we called the Jack knife test), and the cumulative sum (CUSUM) analysis.[16]

3.5. To apply the SP methodology, DNOs needed to identify two normal periods: one for normalising the SF position and the other for adjusting post-SF reconciliations.[17] DNOs were able to select two years from the first three years of

[16] CUSUM charts display the magnitude of settlement reconciliations (in terms of units of energy) over time, on a cumulative basis. Such charts can be used to show the overall trend in the underlying data and any spikes or abnormalities away from the trend. These charts were used to help identify normal periods in the last round of DNO applications.
[17] SF is the Initial Settlement run in the electricity Balancing and Settlement Code settlements

DPCR4 for the SF normalisation, provided these years contained credible losses performance figures. DNOs used the statistical tests, described above, to identify a suitable normal period for adjusting post-SF reconciliations.

Consultation responses

3.6. In response to the November consultation, we received some helpful and constructive critiques of our approach to the statistical analysis. In light of these, we have re-examined our approach and sought further independent advice on the most appropriate statistical methods to use. The critiques and our response cover the normal period and abnormality testing.

Normal period

3.7. Responses to the November consultation raised concerns regarding:

- the consistency of the level of rigour being applied to the justification of a suitable normal period by different DNOs, and
- the precise period to be used.

3.8. Respondents noted the importance of the selection of the normal period in calculating the final outcome of the restatement process, and argued that more rigour and consistency should be applied in assessing the normal period across the DNOs.

Testing for abnormality

3.9. Some respondents expressed concerns over our approach to testing abnormality. In particular, one respondent highlighted some detailed concerns:

- Sample size: the sample size of the test should be five years rather than 60 months and the standard deviations should be calculated across the annual averages rather than across the individual months.
- A Student's t-distribution[18] should be used instead of a standard normal distribution.

process. The electricity recorded in settlements on a particular day (Settlement Day) can subsequently be adjusted according to a set of rules. The four reconciliation runs (R1, R2, R3 and RF) provide a progressively more accurate picture of settlement data at sequential dates after the settlement date. If any volumes at RF are still under dispute then another run (DF) may be carried out when the corrected data has been received.

[18] The Student's t-distribution is a continuous probability distribution that may be used in place of the normal distribution when the sample size is small and the population variance is unknown.

- Seasonality in the data: because the monthly data shows seasonality patterns, it should be de-seasonalised before carrying out the abnormality tests.

Our decisions

3.10. In order to address these concerns we have made some changes to our approach to both the selection of the normal period and the testing for abnormality.

Normal period

3.11. **We have decided to stipulate 2006-07 and 2007-08 as the normal years to be used by all the DNOs**, both for the SF adjustment and for the abnormal reconciliations adjustment.[19] As a consequence, DNOs do not have to use statistical means to identify a suitable normal period.

3.12. We have made this decision to help ensure equitable treatment of DNOs. This addresses both concerns raised in the November consultation responses, highlighted at 3.7 above, as it removes DNOs' discretion over the choice of a normal period.

3.13. We have chosen this period on the basis of evidence from the aggregate data reconciliations that these two years best display 'normality' across the DNOs. That is, on aggregate, the reported data for these years does not appear to have been affected by unusual levels of data correction activity. We have excluded 2005-06 because, on aggregate, for reported data, this year displayed unusually positive reconciliations compared with other years of DPCR4.[20] We have excluded 2008-09 as it is itself subject to the SF adjustment.

3.14. We previously stated in our March 2012 decision letter[21] that the normal period must be at least two years in length and occur within the DPCR4 period due to the unreliability of some data for prior years (particularly over short time periods). This leaves only 2006-07 and 2007-08 to be used as the normal period.

3.15. Given the limited sample size (of five DPCR4 years), we consider that selecting a common normal period is the fairest approach to ensuring equitable treatment across the DNOs and preventing "cherry picking" by the DNOs. We consider that it is fairer (and in consumers' interests) to exclude the possibility of

[19] These adjustments are part of the SP methodology which is explained further below.
[20] On aggregate, the level of positive reconciliations in 2005-06 was far lower than that of negative reconciliations in 2009-10.
[21] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=660&refer=Networks/ElecDist/Policy/losses-incentive-mechanism

DNOs selecting whichever period would provide them with the best outcome under the restatement process.

Testing for abnormality

3.16. **We have decided to introduce a single, more robust test, to be used for identifying abnormality in 2009-10 data.** With respect to the specific issues highlighted in response to the consultation:

- Sample size: we agree that the sample size of the test should be five years rather than 60 months. This is because the figures of interest are the annual average reconciliation figures, not the monthly reconciliation figures.
- T-distribution instead of standard normal distribution: we agree that since the sample size is small (five years) and the underlying population variance is unknown, a Student's t-distribution should be used instead of assuming a standard normal distribution.
- Seasonality in the data: while we agree that the monthly data shows seasonality patterns, we do not consider it necessary to de-seasonalise the data before carrying out the abnormality test. This is because the test compares annual means and hence any within-year seasonality will not affect the results of the test. However, in applying the SP methodology, the DNOs should make all adjustments on a monthly basis in order to account for any seasonal effects (this issue is addressed in paragraph 3.48).

3.17. The revised test is a refinement of the fixed confidence interval test described in the July 2012 data request letter.[22] In addition to addressing the sample size and distribution concerns above, we have further refined the test so that the average of 2009-10 monthly reconciliations is compared against the average of monthly reconciliations for the remainder of the DPCR4 period. That is, we are testing whether an interval estimate constructed for the average of the control group reconciliations (the first four years of DPCR4) includes the 2009-10 observed average reconciliations. Our revised test excludes 2009-10 reconciliations from the control group, as including 2009-10 reconciliations would bias the overall average should 2009-10 prove to be abnormal.

3.18. The test itself is detailed in Appendix 2, while a template for applying the test is available in the attached spreadsheet. A DNO area will be eligible for restatement of 2009-10 if it passes this test.

3.19. We have devised this revised test working with an independent consultant as well as seeking further critique from an independent expert. The test we have chosen was informed by this independent critique. We have sought to devise a test that is sufficiently statistically robust to reflect the unusual levels of reconciliations evident

22 http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=17&refer=Networks/ElecDist/Policy/losses-incentive-mechanism

in the data, despite the relatively low power of the test owing to the limited sample size.

3.20. We have attempted to design a test that is appropriate for these purposes, but it does have inevitable shortcomings. For example, its relatively low power means it may not fully reflect the extent of abnormal activity affecting some DNOs. This may be the case if, for instance, unusually high levels of data cleansing activity also affected years in the earlier part of DPCR4.

3.21. In such cases, the DNOs in question may not be able to clearly identify abnormality in 2009-10 using the statistical test. **DNOs unable to identify abnormality using the test may submit other evidence, both quantitative and qualitative, to demonstrate that they have been affected by abnormal data corrections in 2009-10.** For example, the quantitative evidence may include CUSUM charts to demonstrate the overall trend in the data, while qualitative evidence may include reports, from the period, documenting the abnormal data cleansing activities and/or their effects.

3.22. We will only consider this additional evidence where the DNO provides clear justification of its case. We are not inviting DNOs to submit alternative statistical tests. We are also considering applying a credibility check before we allow a DNO to restate its 2009-10 losses in these circumstances (see paragraph 3.67). The decision on the identification of abnormality in 2009-10 will lie with the Authority. We will include our assessment of a DNO's justification in our next consultation on the revised PPL terms.

3.23. The restatement must result in credible losses performance in 2009-10. This is covered further from paragraph 3.50.

Approach to restatement

Summary of our consultation position

3.24. Our November consultation presented draft close out values for each of the DNOs applying for restatement under four different approaches (A – RF, A – DF, B and C). Working with industry, we developed these approaches as a means of addressing the need to reflect the energy that actually flowed during DPCR4, and the effects of abnormal data cleansing.

3.25. In that consultation we presented our minded-to position in favour of Approach C. We stated that we consider that Approach C most closely aligns with the intention of Final Proposals by starting with the DNOs' historical reporting methodology approach before reconciling.

Consultation responses

3.26. Responses to the consultation largely endorsed this approach, with five DNOs supporting Approach C. Their support was principally based on Approach C reflecting the basis on which the targets were set. Only one respondent, a supplier, supported Approach A (but with no SF adjustment prior to testing for abnormality). The respondent considered that the close out of DPCR4 was always intended to be performed on fully-reconciled data. No stakeholder expressed a preference for Approach B and we continue to have some concerns regarding the logical deficiencies of that approach.

3.27. In response to the consultation, one DNO re-asserted its contention that all DNOs should close out on the basis of RF data, consistent with Final Proposals. Another respondent contested this interpretation, highlighting that the relevant section of Final Proposals refers back to DPCR5 Initial Proposals[23], which itself refers to relevant settlement data corrections for up to 28 months being used to close out the DPCR4 losses incentive mechanism. Twenty-eight months is the time period associated with the DF settlement run.

Our decisions

3.28. **We remain of the view that Approach C represents the most appropriate way to close out the DPCR4 losses mechanism for those DNOs seeking restatement.** We are therefore requesting that DNOs submit restatement applications consistent with Approach C only. We present the detailed steps for implementing Approach C in Appendix 3.

3.29. One DNO stated in its consultation response that to allow some DNOs to close out with RF data instead of DF is unfair. We disagree and continue to consider that, in order to maintain consistency with Final Proposals where possible, **Approach C should be applied on the basis consistent with the settlement run historically reported by each DNO**. We do not agree that any DNO should be treated exceptionally by using a different settlement run basis for restatement for close out to that it used historically. **Therefore, those DNOs applying for restatement should apply on the basis of DF, with the exception of ENWL, which should apply on the basis of RF.**[24]

3.30. We have updated the guidance for Approach C so that DNOs may remove provisions before testing for abnormality. Nevertheless (as stated at paragraph 2.15), **in making restatement applications for close out, DNOs should explain why they consider that they must depart from the approach that they have**

[23] http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR5/Documents1/Initial%20Proposals_2_Incentives%20and%20Obligations.pdf

[24] ENWL was the only DNO that historically reported on the basis of RF data.

taken in relation to annual reporting. We will consider these explanations in assessing the restatement applications.

3.31. The decision on whether an individual DNO's departure from annual reporting is valid lies with the Authority. DNOs should be aware that the independent auditors will be conducting assurance of all DNOs' returns.

Application of the SP methodology

3.32. Where they demonstrate that abnormal data cleansing has affected 2009-10 data, DNOs must use the SP methodology to remove the effects of abnormal levels of data cleansing for the purposes of restating 2009-10 losses data.[25] This section addresses some related policy issues raised in response to the November consultation.

Summary of our consultation position

3.33. The SP methodology contains two key components:

- Normalising SF losses (adjustment for abnormal SF)
- Normalising post-SF reconciliations (adjustment for abnormal reconciliations)

3.34. Our November consultation was based on restatement applications that permitted DNOs to normalise the SF position before testing for abnormality of post-SF reconciliations. This was in order to reflect the full extent of abnormality affecting 2009-10 reconciliation runs. For normalising SF losses, DNOs were required to identify a normal period of two years within the first three years of DPCR4 that contained credible losses. DNOs were required to use statistical techniques to identify a normal period for normalising post-SF reconciliations.

3.35. We did not stipulate the precise implementation of the SP methodology that DNOs should follow for restatement applications.

Consultation responses

3.36. Some consultation respondents questioned the validity of adjusting the SF position prior to testing for abnormality. In particular, one respondent stated that adjusting the SF position is predicated on abnormality being present before it can be identified.

[25] We have re-published Engage document ENG-GEN-002-1.0, which describes the SP methodology, alongside this letter.

3.37. Respondents to the November consultation also raised concerns with the way the adjustment for abnormal SF has been applied, including:

- DNOs using different SF normal periods with varying degrees of justification resulting in different restated losses values,
- the SF normal period being different to the normal period used for abnormal reconciliations adjustment, and
- ignoring the seasonality patterns in the data by replacing the loss percentage in each month in 2009-10 with an average loss percentage across the whole SF normal period.

3.38. Some respondents also noted minor variations in the implementation of the SP methodology between DNOs, resulting in different restated losses figures. For example, ENWL was the only DNO to apply the 'SF normalisation mapping' step to its restatement application.

Our decisions

SF adjustment prior to abnormality testing

3.39. **We remain of the view that normalisation of SF is a valid adjustment prior to testing for abnormality in 2009-10** and is consistent with the intent of the SP methodology. The rationale for adjusting for abnormal SF in 2008-09 and 2009-10 is explained on pages 7-8 of the SP methodology.[26] This adjustment is designed to recognise the impact of both the prevailing economic conditions and of any data cleansing earlier in the period.

3.40. If there is no difference between the SF position in the normal period and the SF position in the period adjusted, there will be no benefit to the DNO of applying the SF adjustment. That is, the post-SF reconciliation magnitudes will not change so the results of the abnormality test will be unaffected. Indeed, in some instances, the adjustment for abnormal SF may reduce the degree of any negative reconciliations in 2009-10 for the purposes of testing for abnormality, thereby making abnormality in 2009-10 more difficult to identify.

3.41. The SF adjustment is designed to estimate the size of the post-SF reconciliations, taking into account any abnormality at SF. The size of the post-SF reconciliations should therefore be calculated with respect to the same period of energy delivery that the adjusted SF relates to. When testing for abnormality on a fully-reconciled settlement date basis, all reconciliations are recorded on the basis of when the electricity was delivered so no additional calculation steps are necessary.

3.42. In order to ensure that the SF adjustment is properly applied in the abnormality testing, some DNOs should follow an additional step within the SP

[26] The methodology appears as an associated document on the web page for this document.

methodology. **When testing for abnormality on a non-settlement date basis (eg, a reporting date basis or equivalent), then a further adjustment, 'SF Normalisation Mapping' should be made in accordance with the SP methodology**. This ensures that the revised reconciliation levels (those taking into account the SF adjustment) are applied to the correct time periods before carrying out the statistical tests.[27]

3.43. Once the difference between the initial SF and adjusted SF has been calculated for each month, this 'SF difference' should be apportioned accordingly to subsequent reconciliations that relate to this period. For example, the first reconciliation (R1), reported in May 2009-10, for the SF for March 2009-10 is assumed to correct 31 per cent of the SF error for that same period (March 2009-10). If the SF difference is 10 GWh for March 2009-10, then 3.1 GWh should be added to the total reconciliations for May 2009-10.

3.44. This should be done for each reconciliation run, up to and including RF (which is assumed to correct all of the remaining error for the purposes of this adjustment) for each month, before conducting the statistical test. ENWL was the only DNO to apply this adjustment and its original restatement application for close out includes the detail of the calculations undertaken. We have included an example of how this can be applied in the attached spreadsheet.

3.45. **In summary, the restated initial SF for 2008-09 and 2009-10 is to be used for two purposes:**

- **determining the size of reconciliations for 2009-10 (and post 2009-10 years as appropriate) for use in the statistical test, and**
- **calculating the scale of the abnormal SF to be used in restating 2009-10 data, should abnormality be identified.**

Normal period

3.46. As described above, **we are now stipulating that 2006-07 and 2007-08 be used as the normal period for normalising both SF losses and the post-SF reconciliations**. This is consistent with the SP methodology. The choice of these years is explained in paragraphs 3.11 to 3.15, above.

3.47. Stipulating a common normal period for the SF adjustment and normal reconciliations adjustment removes the possibility of two different normal periods being used. We consider that using two different normal periods has the potential to undermine the robustness of the restatement approach, the purpose of which is to restate losses based on a period that experienced 'normal' levels of data cleansing.

[27] This time-shifting of data for abnormality testing on a non-settlement date basis need only be applied to the data to be used for the statistical tests, and not for quantifying the magnitude of the SF adjustment for 2009-10 restatement.

Seasonality

3.48. In order to address the seasonality concern with the SF adjustment, **DNOs should use the weighted average of monthly data to adjust the SF loss percentages for each month rather than use a single average weighted figure for all the months**.[28] For example, the SF in April 2009-10 should be replaced by a weighted average of the SF in April 2006-07 and 2007-08. This approach should further ensure consistency across DNOs.

Implementation of adjustment for abnormal reconciliations

3.49. In prior restatement applications there have been some minor differences in the way that DNOs have been applying the SP methodology to correct for abnormal reconciliations. In order to remove these differences, **DNOs should calculate the abnormal reconciliations in 2009-10, using monthly weighted average percentage natural variation as a percentage of SF for each run type**.[29] This step should remove any inconsistencies in the calculation of abnormal reconciliations between the DNOs.

Credibility criteria and the application of the cap

3.50. As illustrated at Appendix 1, the restatement process will continue to result in three possible outcomes for each applying licensee: restatement approved, cap applied, and no restatement. This section covers the circumstance where we may apply a cap to restatement applications (the credibility criteria), and the cap calculation itself.

3.51. Now that we have removed the requirement for statistical evidence to justify a normal period, there is only one circumstance where we would apply a cap to a restatement application, namely where a licensee's restatement application identifies abnormality in 2009-10 but the proposed restated performance is not credible. Where it is applied, the cap would become the restated value of losses performance in 2009-10.

Summary of our consultation position

3.52. We have not previously published credibility criteria in advance of the application process. This was to avoid DNOs extracting maximum benefit from the

[28] Monthly adjustments ensure that we take seasonality patterns into account, ie that the reconciliations with respect to the adjusted SF continue to display seasonal trends.
[29] For earlier applications, some DNOs were calculating the abnormal reconciliations in 2009-10 using monthly simple average percentage natural variation as a percentage of SF, as a percentage of the latest run type or as a percentage of the preceding settlement run. Moreover, some DNOs were not calculating the abnormal variations for each run type but were instead calculating an aggregate value.

restatement exercise by selecting a normal period most advantageous to them even if that normal period did not have the strongest justification. In light of the decision to stipulate a common normal period, this concern has fallen away and we are able to provide the credibility criteria.

3.53. In assessing the restatement applications for our November consultation, we used a sole credibility criterion related to historically low DPCR4 losses on a fully-reconciled basis.

3.54. The caps applied in the November consultation were equal to the DNOs' average losses performance over the first three years of DPCR4 on a fully-reconciled basis. Any year(s) found not to contain credible losses were disregarded and only the remaining year(s) used. Any such cap could not result in more beneficial losses performance compared with the restatement application.

Consultation responses

3.55. Some respondents to the November consultation were concerned with the sole criterion of comparing the restated loss percentage with historical losses during DPCR4 on a fully-reconciled basis. The key comments were that:

1. The losses target is a better measure of credibility as it is based on ten years' of historical data. Some respondents considered that a credibility test based only on historical losses in DPCR4 is not robust. They were concerned, for example, about capping historically low losses for DPCR4 even when these losses are above the target which is based on performance over a longer (ten-year) period.
2. Since the DNOs did not have clarity about Ofgem's credibility criterion, they did not choose the normal period to ensure that they satisfied this criterion. Some DNOs considered this created inconsistency between DNOs because some DNOs passed the credibility test by chance (by virtue of their selection of a normal period), while others failed. Had the DNOs understood the credibility criteria, they would have chosen a normal period accordingly.
3. One DNO considered it anomalous that the loss percentage resulting from applying the cap may be far higher than the historically low (during DPCR4) loss percentage. That is, the criterion for applying the cap and the figure resulting from applying the cap could be quite different.
4. Some DNOs stated that the change in supplier data correction behaviour affects the calculation of the figure resulting from applying the cap. Therefore, capping does not allow for the full removal of the impact of abnormal correction activity for the purpose of restating losses in 2009-10.
5. Other respondents considered that a wider credibility test should be applied, based on the overall value of the losses incentive mechanism to each DNO.

Our minded-to position

3.56. Now that we have removed discretion from DNOs by stipulating a normal period, we are setting out the proposed credibility criteria that we intend to use to assess restatement applications.

3.57. In response to the first concern above, we acknowledge that there is scope to widen the credibility criteria, taking into account the losses targets that are based on a ten-year time series. We have incorporated this into our proposed revised criteria.

3.58. With respect to the second comment, we intentionally did not publish this credibility criterion before applications were submitted so that DNOs would apply on the basis that they felt they could justify. We applied the credibility test in order to protect consumers from unreasonable applications and over recovery by DNOs. However, we agree that allowing different DNOs to choose their own normal period can lead to significantly different outcomes, with different DNOs providing different levels of justification. Therefore, as stated above, we are stipulating 2006-07 and 2007-08 as the normal period for all DNOs. Our revised criteria for assessing credibility would be applied uniformly across all DNOs to ensure equal treatment.

3.59. In response to the third comment, we have amended the proposed credibility criteria to remove the gap between the threshold for credible losses and the cap to be applied.

3.60. With respect to the fourth comment, the intent of the cap is to recognise that DNOs have been affected by abnormal data cleansing activity, while protecting consumers from unreasonable outcomes from the restatement process. We consider that the revised process for calculating the cap is consistent with these aims.

3.61. In response to the final point, the incentive was designed to be based on output data for calculating the overall value of the scheme. However, we have revised the steps for calculating the cap in response to such stakeholder concerns. The cap ensures that the exposure of customers is limited and serves to restrict the overall financial rewards of restatement to DNOs within credible limits.

3.62. We have therefore devised a wider credibility test that comprises two criteria. **We propose that a restated loss percentage would be capped if it is below the thresholds of both the criteria:**

- **Five per cent less than the target losses percentage.** The principle behind this credibility criterion is that the target loss percentage (calculated using ten-year historical losses) is itself a measure of credibility.
- **Five per cent less than the overall (weighted) loss percentage over 2006-07 and 2007-08 on a fully-reconciled basis.**[30] We have identified

[30] Fully-reconciled means to the same level of reconciliation as historically used by the DNO

that the restated loss percentage for some of the DNOs may result in significantly lower losses than those during the normal period. This criterion helps to protect consumers from unreasonable outcomes from the application of the SP methodology. The SP methodology can only estimate losses by removing abnormal correction activity; it does not remove the underlying data volatility that affects settlement data.

3.63. **If a DNO fails this credibility test, then we propose that its losses will be capped at the lower of the two loss percentage thresholds.** This approach ensures that the cap is applied consistently across the DNOs.

3.64. The two thresholds address concerns that some DNOs recorded unusually low losses in the early years of the DPCR4 period that they have been unable to sustain. They also serve to limit the exposure of consumers to the natural volatility of settlement data that is not addressed in the restatement process.

3.65. The percentages are informed by the practical limits to how much DNOs can reduce losses over short timescales. In particular, we analysed the annual performance of all DNOs for the ten years (1994-95 to 2003-04) that were the basis of target setting for DPCR4. Our analysis indicated that the vast majority (over 80 per cent) of annually-reported losses were not better than 5 per cent below the target percentage. That is, outperformance to that degree was relatively rare. Therefore, we consider that these thresholds are valid in protecting consumers from unreasonable restated losses.

3.66. The cap has always been designed to protect consumers from unreasonable outcomes from the restatement process. However, we are conscious that DNOs may also need to be protected by a credibility test given the volatility of the data.

3.67. We are therefore also considering applying a credibility check to ensure that the DNOs are not unfairly treated in the restatement process. This would apply where a DNO does not pass the abnormality test, but provides some other evidence to demonstrate it has been affected by abnormal levels of data correction activity. In such cases, the un-restated 2009-10 losses would be compared with two thresholds: 5 per cent above the DPCR4 target and 5 per cent above the normal period losses, which are the reciprocal thresholds to those detailed above. If the un-restated losses for 2009-10 are above both of these thresholds, then that DNO may be permitted to apply for restatement (any such restatement would be subject to the credibility testing common to all restatement applications).

3.68. In our next consultation on the close out values, stakeholders will have the opportunity to comment on the proposed revised credibility criteria and application of the cap.

during DPCR4.

4. Losses data for the 2009-10 annual incentive

Chapter Summary

This chapter describes the process that all DNOs should follow when updating losses data for the 2009-10 annual incentive, including where they are seeking restatement for this purpose. It highlights where any differences apply compared with the restatement process to be followed for close out data.

Summary of consultation position

4.1. In the November consultation we presented our provisional assessment of restatement applications for the 2009-10 annual incentive.[31] The applications were made based on annual reported data, and the statistical tests and guiding principles from our March 2012 decision letter.[32] We published the financial impact (on the growth term) of our provisional assessment.

4.2. In applying, where relevant, a credibility cap, we estimated the proportion of units distributed at different voltage levels. We first calculated the capped units distributed based on average losses performance over the first three years of DPCR4. We then apportioned these units distributed to different voltage levels below extra high voltage (EHV) as this voltage level was unaffected in all restatement applications. We based this apportionment on the un-weighted average proportion of units distributed at each voltage level below EHV submitted in returns for the first three years of DPCR4.

4.3. In some instances, capping resulted in a negative change to the value of the growth term, despite units distributed increasing. We considered this to be a perverse outcome and for those DNOs affected there was to be no change to the growth term.

[31] As explained in the November consultation, owing to the design of the close out of the DPCR4 losses mechanism, restatement for the purpose of the 2009-10 annual incentive at this stage is immaterial for the purpose of the losses incentive. However, the restated units distributed are also used to calculate the growth term that existed under DPCR4, which can have material implications for DNO revenues. Insofar as we consider that justifiable restatement of losses performance is appropriate for 2009-10, the same logic applies for the calculation of the growth term for 2009-10 that relies on the same data.

[32] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=660&refer=Networks/ElecDist/Policy/losses-incentive-mechanism

Responses to the consultation

4.4. The DNOs that responded on this issue were supportive to this restatement being based on annually reported data as this was the original basis on which the growth term was calculated. One DNO suggested that it should also be possible to restate annual returns for 2008-09 to remove the effects of data cleansing on that year. Another DNO considered that high voltage units should be excluded from the calculation of the cap as units distributed at this level were unaffected by the restatement application in its case.

4.5. Some respondents considered that the restatement process should be more robust, and that inconsistencies between the assessment for annual reporting and close out should be removed. One supplier expressed concerns with the credibility of some of the outcomes, and suggested that capping should be based on fully-reconciled data and should not automatically limit a DNO's financial exposure. This supplier also raised concerns over data used in calculating the growth term for previous years.

Our decisions

4.6. Our revised approach to restatement for the annual incentive for 2009-10 has been informed by both the responses to the consultation and issues emerging through the data audit process. In general, we have sought to ensure consistency, as far as possible, between the processes for the annual incentive and close out.

4.7. At this stage, we are setting out the decisions necessary to enable DNOs to follow the requirements of the data request associated with this document. In addressing the decisions below, DNOs should fill in the relevant parts of the spreadsheet accompanying this letter. We will consult on wider issues regarding the annual incentive in our next consultation.

Data issues

4.8. The data audit has uncovered some issues that affect annually reported data. As covered in Chapter 2, the audit has found 'acknowledged errors'. As stated in paragraph 2.16, **for all DNOs, any data errors identified for fully-reconciled data should be removed from the equivalent reported data for all years of DPCR4 as appropriate**.

4.9. In addition, **all DNOs should ensure that the data submitted for the 2009-10 annual incentive is consistent with their historical reporting**. For instance, where provisions have historically been included in annual reporting, they should be included for 2009-10. On the other hand, where provisions have historically been excluded, they should be excluded for 2009-10. DNOs should provide evidence that this is the case for the data they submit regardless of whether they intend to apply for restatement to remove the effects of abnormal levels of data cleansing for 2009-10.

Restatement process for the 2009-10 annual incentive

4.10. We agree that the process for restatement for the annual incentive could be more robust and should be consistent, as a far as possible, with that for close out. Therefore, in general, the approach detailed in Chapter 3 should equally be applied to the annual incentive. The exceptions are explained below and summarised in the flow charts in Appendix 3.

4.11. **In testing for abnormality for 2009-10, DNOs should use reported data**. The data used in the test should correspond with that in its annual revenue returns with the exception of changes to address the specific data issues detailed above. If, for example, a DNO has historically reported provisions, then abnormality testing should be on the basis of reported data including provisions.

4.12. **DNOs may only apply the SF adjustment prior to testing for abnormality if they report settlement data directly**. We do not consider that adjusting the SF position prior to abnormality testing is appropriate if the data includes provisions or other estimates. Any such provisions should reduce the evidence of any abnormality in data submitted for annual reporting.

4.13. If, on this basis, a DNO identifies abnormality using the test detailed in Appendix 2, then it should follow the process for restatement detailed in Appendix 4. Essentially, this is a simplified version of Approach C for close out, without the full reconciliation steps at the end.

Our minded-to position

4.14. This section sets out our minded-to position in terms of the credibility criteria and the calculation of the cap with respect to the annual incentive. **We propose to calculate the credibility criteria and the cap in a way consistent with that for the purposes of close out.**

4.15. As for the close out process, the cap we propose to apply is the loss percentage at the lower of the two credibility thresholds: 5 per cent less than the target losses percentage; and 5 per cent less than the overall (weighted) loss percentage over 2006-07 and 2007-08 on a fully-reconciled basis.

4.16. **We propose to apportion the total units distributed to different voltage levels based on the proportions at the different voltage levels reported in the normal period of 2006-07 and 2007-08**. We will then apportion these units distributed to different voltage levels for only those voltage levels where the units distributed change in the restatement applications, based on the proportions in the normal period.

4.17. **We continue to be of the view that a DNO should not be financially penalised through capping in comparison to its un-restated position**. That is, if the restatement process identifies that a DNO's units distributed for 2009-10

should be increased, then it should not be penalised financially due to the way the cap is calculated.

4.18. We consider the approach outlined above addresses the consultation responses and is a pragmatic response to the cap calculation that ensures credibility.

4.19. In our next consultation on the annual incentive for 2009-10, stakeholders will have the opportunity to comment on the proposed revised credibility criteria and application of the cap. We will also consult on wider issues regarding the growth term.

5. Next steps

5.1. We request that all DNOs re-submit their data by completing the Excel® spreadsheet accompanying this letter. The fully-reconciled data submitted should be the most up-to-date available at the time each DNO completes its submission. The DNO should indicate the timestamp of the data in its submission.

5.2. The data submitted will be subject to review by our independent auditors before it may be used in the close out process. Therefore, DNOs should include commentary to explain how they have addressed all the identified discrepancies since the start of the audit process.

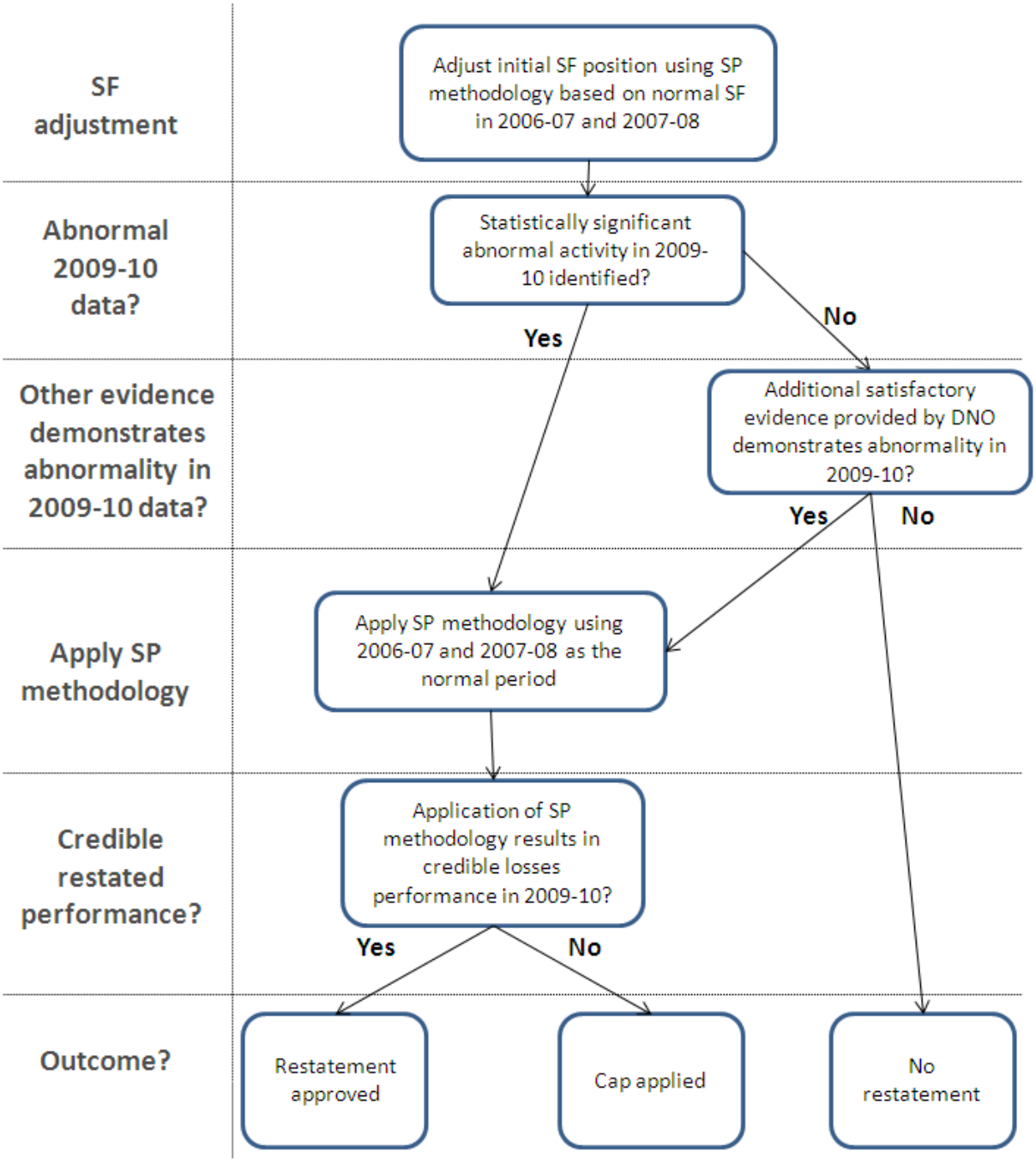
5.3. The attached spreadsheet is for completion by all DNOs. DNOs should follow the guidance outlined in this letter for each of their licence areas when resubmitting their data. Certain sections of the spreadsheet are for completion only by those DNOs applying for restatement and detailed instructions are contained within the spreadsheet. Those DNOs wishing to apply for restatement of 2009-10 data for close out or for the annual incentive should submit restatement applications alongside their data submissions.

5.4. We have set a deadline of 2 August 2013 for submissions of data and analysis. We consider that the process that the DNOs have been through to date, along with the simplification of the restatement process, should make this deadline achievable. We are happy to be contacted with queries while restatement applications are being completed.

5.5. All data submitted will be subject to an independent assurance process. Once we are satisfied that the submitted data is correct and have assessed any restatement applications, we will calculate the PPL term for each licensee. We will then consult on those PPL values and our assessment of the restatement applications. We will publish the DNOs' submissions alongside our consultation.

5.6. If you have any queries on this matter, please contact Tim Aldridge on 020 7901 7350 or at tim.aldridge@ofgem.gov.uk. Submissions should be sent to Distribution.Losses@ofgem.gov.uk.

Appendix 1 – The restatement process



Appendix 2 – Statistical analysis for restatement applications

This appendix describes in more detail the statistical test that should be applied to test for abnormality in 2009-10 data and for identifying a normal period. The spreadsheet that accompanies this letter has been created to assist in running the test described below. We expect the statistical test to be run on monthly energy data.

In stipulating a normal period common to all DNOs, we have removed the requirement for DNOs to test for normality.

The test statistic for the refined test (at the 5 per cent significance level), assuming a t-distribution with three degrees of freedom, and a sample size of four, is given in the box below:

2009-10 is normal if: $$-3.182 < \frac{\overline{X_{2009-10}} - \overline{X_{4\ years}}}{\frac{s_{4\ year\ means}}{\sqrt{n}}} < 3.182$$

Where $\overline{X_{4years}}$ is the four-year average reconciliations (2005-06 to 2008-09), $\overline{X_{2009-10}}$ is the average for 2009-10, n is the sample size of the control group and $s_{4\ year\ means}$ is the standard deviation across the four annual means.

The spreadsheet published alongside this letter includes a template for undertaking this test.

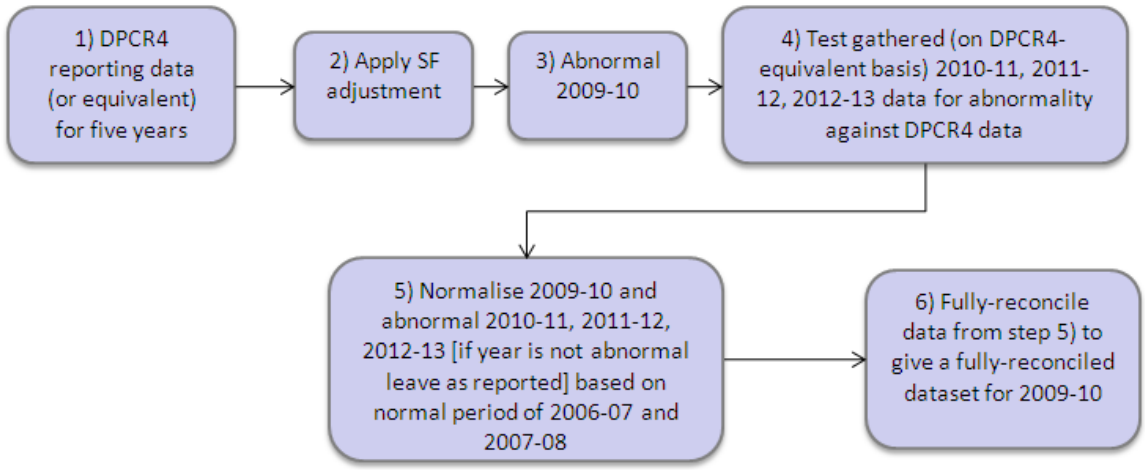
The above test can be adapted in order to identify abnormality in years subsequent to 2009-10. The annual average reconciliations for each of the post 2009-10 years should be compared with the fixed confidence intervals for the first four DPCR4 years. Twelve months' worth of data should be used for testing abnormality for 2012-13. However, if the dataset for the full year is not available, the DNOs can use the corresponding months from 2011-12 data to fill in the gaps. For example, if ten months are available for 2012-13, then the last two months of 2011-12 should be included in the data for testing abnormality of 2012-13.

Appendix 3 – Approach to restatement for close out

This appendix describes the way in which DNOs should test for, and propose corrections for, abnormal data cleansing activity for the purposes of closing out DPCR4. Normalisation should be based on the application of the SP methodology as described in Chapter 3.

In addition to closing out provision accounts and fully-reconciling non-half-hourly data, submissions should also fully-reconcile purchases and half-hourly data for 2009-10 as appropriate.

Approach C
1) Start with DPCR4 reported data (or equivalent[33]) for five years.
2) Apply SF adjustment using normalisation mapping where appropriate (see paragraphs 3.42 to 3.44).
3) Test for abnormality in 2009-10 on this dataset.
4) Test data gathered on a DPCR4 reporting methodology-equivalent basis that contains energy flowing in 2009-10, but is received in subsequent years (ie up to 2011-12 or 2012-13). Tests for abnormality for these years should be relative to the fixed confidence intervals derived from the first four years of data.
5) Normalise 2009-10 and the subsequent years identified as abnormal based on a normal period of 2006-07 and 2007-08. Post-DPCR4 years that are not identified as abnormal are left unchanged.
6) Fully reconcile the data from step 5) by moving the reconciliations received in each month to the date to which they relate to give a fully-reconciled 2009-10 dataset.



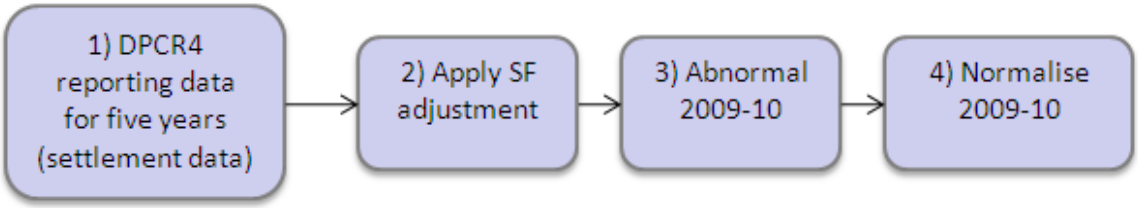
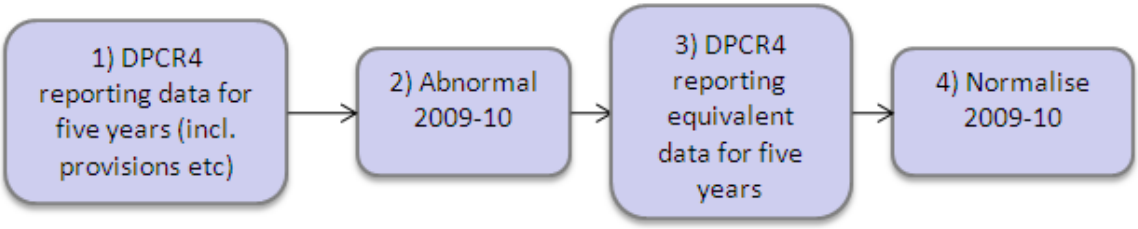
[33] Any departure from reported data must be justified. This may include, for example, removing provisions where this is necessary to apply the SP methodology.

Appendix 4 – Approach to restatement for 2009-10 annual incentive

This appendix describes the way in which DNOs should test for, and propose corrections for, abnormal data cleansing activity for the purposes of the 2009-10 annual incentive. Normalisation should be based on the application of the SP methodology as described in Chapter 3.

Submissions should be based on reported data when testing for abnormality, having addressed the data issues highlighted in Chapter 4. There are two broad approaches, dependent on the DPCR4 reporting methodologies of the DNOs.

Reporting on the basis of settlement data directly
1) Start with DPCR4 reported data for five years.
2) Apply SF adjustment using normalisation mapping where appropriate (see paragraphs 3.42 to 3.44).
3) Test for abnormality in 2009-10 on this dataset.
4) Normalise 2009-10.



Reporting including non-settlement data such as provisions
1) Start with DPCR4 reported data for five years.
2) Test for abnormality in 2009-10 on this dataset.
3) Replace with five years' worth of DPCR4 settlement data on a reported equivalent basis (as for Approach C for restatement for close out).
4) Normalise 2009-10.