

Distribution networks operators

*Promoting choice and value for
all gas and electricity customers*

Our Ref: 107/12

Direct Dial: 020 7901 7165

Email: Hannah.Nixon@ofgem.gov.uk

Date: 30 July 2012

Dear colleague

Request for data for the close out of the fourth distribution price control review (DPCR4) losses incentive mechanism

This letter makes a data request of all distribution network operators (DNOs) to allow Ofgem to publish a consultation on a draft decision for the close out values of the losses incentive mechanism for DPCR4. It also outlines the process DNOs should take where they wish to apply for the restatement of 2009-10 losses performance for the purpose of closing out DPCR4.

1) Data request for close out

We request that all DNOs complete the Excel ® spreadsheet accompanying this letter. This will allow us to calculate and consult on a value of PPL¹ for all licensees in order to close out the DPCR4 losses incentive mechanism. Certain sections are for completion by only those DNO licence areas applying for restatement. Detailed instructions are contained within the spreadsheet.

2) Applications for restatement of 2009-10 for the purposes of close out

Background to restatement

On 9 March 2012, Ofgem published a decision letter² stating that where DNOs could provide statistical evidence that abnormal levels of settlement data corrections had affected their 2009-10 reporting data, they could apply to have their losses performance for 2009-10 restated.

Following responses to a March 2012 consultation³ on a related issue we established that the approach taken in the 9 March letter was 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 does not satisfy the clauses in DPCR5 *Final Proposals – Financial*

¹ The acronym "PPL" has no derivation – it refers to the residual incentive left over from the close out of the losses mechanism in the fourth distribution price control.

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<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=660&refer=Networks/ElecDist/PriceControls/DPCR5>

³

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=691&refer=Networks/ElecDist/PriceControls/DPCR5>

*Methodologies*⁴ ("Final Proposals") concerning removal of provision accounting and full reconciliation of data before closing out DPCR4.

Restatement approach for close out

Over the past months we have undertaken extensive stakeholder engagement to establish a pragmatic approach to restatement of 2009-10 data for the purposes of close out that is consistent with the requirements of *Final Proposals*.

This letter outlines the approach DNOs must take where, for each of their licence areas, they wish to apply to have units distributed for 2009-10 restated for the purposes of close out. Annex A sets out the statistical tests and guiding principles that we will use to assess restatement applications. By way of guidance, Annex B then sets out how the statistical tests work and the method by which they should be applied. Finally, Annex C sets out three different ways of reaching a restated figure for 2009-10 that have been worked up with industry. DNOs seeking restatement for their licence areas should comply with all of the requirements of this letter and its annexes.

3) Next steps

We have set a deadline for data and analysis in respect of sections 1 and 2 above of 20 August 2012. We acknowledge the complexity of the work required where DNOs are seeking restatement of their 2009-10 losses performance, and are happy to be contacted with queries while restatement applications are being completed.

Once we have received the all of the data and 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 for both annual reporting (received in response to the 9 March 2012 decision letter) and close out. This consultation will include an impact assessment.

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 the same address.

Yours faithfully,



 **Hannah Nixon**
Senior Partner – SG&G (Distribution)

Annex A: Method for the assessment of restatement applications

This annex outlines the statistical tests and guiding principles that we will use to assess restatement applications, along with the required content of applications.

Statistical tests

Consistent with the 9 March decision, all restatement applications must use statistical methods to first prove the existence of abnormal data correction activity in 2009-10 and subsequently identify an appropriate 'normal' period where reconciliation corrections are at a more stable level.

Since the first round of restatement applications, we have devised some additional statistical tests. This is to make our assessment more robust and because the previous approach, which only tested post-SF⁵ reconciliation runs, did not fully reflect the abnormal activity that the Scottish Power (SP) methodology seeks to address. That is, it did not take account of abnormal correction activity affecting the SF position ('abnormal SF'). We give details of this adaptation and the additional statistical tests in Annex B.

We will use the tests in Annex B and guiding principles below to assess applications. In supplement to these tests, DNOs may undertake their own additional statistical tests. We will only consider these tests where DNOs provide clear justification and evidence of the need for such additional tests. The final say on whether to allow any additional tests rests with the Authority.

Guiding principles

We have also updated the guiding principles by which we will be assessing any restatement applications. DNOs should use these guiding principles in combination with the statistical tests. They are as follows:

- The normal period must occur within the DPCR4 period.
- The normal period should cover a continuous period of at least two years and be longer in duration than the abnormal period.
- In addition to relatively stable reconciliation levels, reported losses performance during the normal period must be credible – the normal period should not include, for example, comparatively low, one-off, losses levels.
- The baseline period for identifying 'abnormal SF' should be at least two years and contain credible losses performance.
- The restatement must result in credible losses performance in 2009-10, that the licensee can justify would have been achievable.

Finally, there are two circumstances where we may apply a cap to restatement applications. The cap will become the value for close out performance in 2009-10. In both circumstances, DNOs will not be able to benefit from the application of the cap relative to an accepted restatement application, and the value calculated must itself be credible. Where these conditions are not met we may set the value of the cap at a fair and appropriate level. The two circumstances where a cap may be applied are as follows:

- 1) If a licensee's restatement application meets with the statistical tests and guiding principles but the restated performance is not credible. In this instance the cap will be equal to the licensee's average losses performance over the first three years of DPCR4. Performance will be assessed on a fully-reconciled basis.⁶ Only years containing credible losses will be used to calculate average performance; any year(s) found not to contain credible losses will be disregarded and only the remaining year(s) will be used.

⁵ SF is the Initial Settlement run in the electricity Balancing and Settlement Code settlements process.

⁶ In the context of the cap, fully reconciled means to the same level of reconciliation as the approach to restatement in use has gone to.

- 2) If a licensee can identify abnormal activity affecting 2009-10, but is unable to establish a normal period using the statistical tests and guiding principles. In this case the 2009-10 restated performance will be capped at the least beneficial of:
- a) The licensee's average losses performance over the first three years of DPCR4, on a fully-reconciled basis. Only years containing credible losses will be used to calculate average performance; any year(s) found not to contain credible losses will be disregarded and only the remaining year(s) will be used.
 - b) A notional restated losses performance for the licensee, calculated by Ofgem, based on a normal period also set by Ofgem.

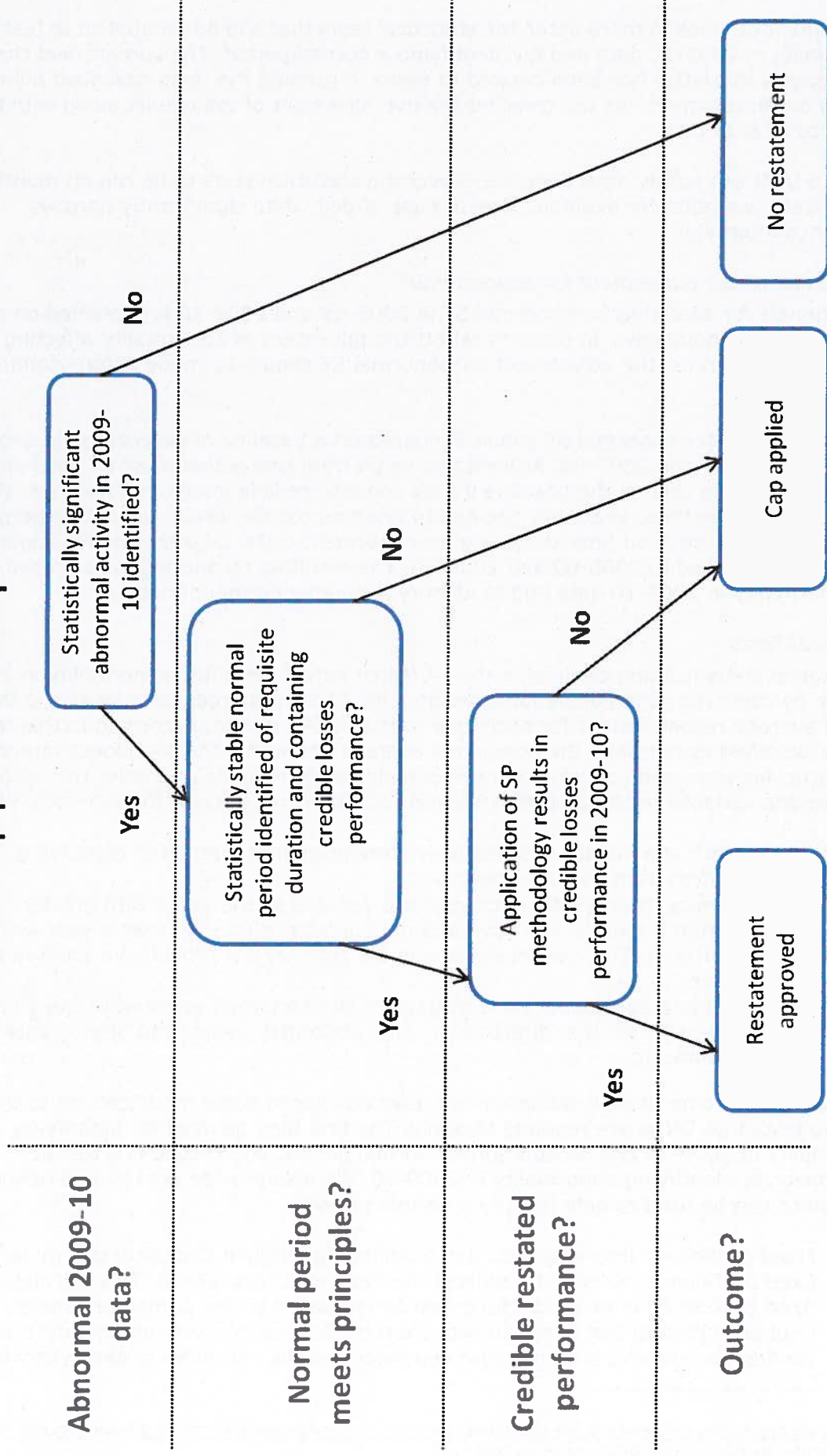
Content of applications

The Authority needs to be able to satisfy itself that the applicant has met the tests and principles for restatement described above. DNOs are required, as a minimum, to:

- fill in the accompanying spreadsheet
- for each of the restatement approaches (Annex C) use the templates in the spreadsheet to assist with identifying abnormality and a normal period (these templates will need to be adapted to undertake the jack-knife analysis)
- provide justification and commentary for any results, in particular addressing the guiding principles outlined in this letter.

We will publish all restatement applications to ensure transparency of the process. The diagram below summarises the application process, common to all approaches.

The application process



Annex B – Statistical analysis for restatement applications

This Annex describes in more detail the statistical tests 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 tests described below. In making our assessment, we will consider the overall weight of the results along with the relevance of each test.

Unless a DNO can justify otherwise, we expect the statistical tests to be run on monthly energy data (we note, for example, that the use of daily data significantly narrows confidence intervals).

Explanation of the adjustment for abnormal SF

The rationale for adjusting for abnormal SF in 2008-09 and 2009-10 is explained on page 10 of the SP methodology. In order to reflect the full extent of abnormality affecting 2009-10 reconciliation runs, the adjustment for abnormal SF should be made before running the statistical tests.

The adjustments for abnormal SF should be based on a baseline of percentage losses in 2005-06, 2006-07 and 2007-08. At least two years from this period must be used and years may only be used in the baseline if they contain credible losses performance. Where two or more of the three years are deemed to be non-credible, DNOs will not be permitted to adjust their SF position prior to testing for abnormality. The adjustments for abnormal SF should be applied to 2008-09 and 2009-10. The resulting reconciliations are used to test for abnormality in 2009-10 data and to identify a suitable normal period.

Statistical Tests

The original statistical test outlined in the 14 March letter⁷ identified abnormality in 2009-10 data by comparing the population average (DPCR4 average reconciliations) and the annual average reconciliations for each year in the DPCR4 period. According to this test, a year is identified as normal if the population average lies within the confidence intervals for that particular year, and abnormal if it lies outside the confidence intervals. The confidence intervals are variable insofar as they are based on the reconciliations for individual years.

While this approach is a helpful and relatively straightforward method of identifying abnormality it suffers from two weaknesses:

- i. the confidence intervals for each year are variable so the years with greater variance from the mean will have a larger confidence interval than a year with smaller variance. This can create bias in the tests by not providing a uniform test for all the years
- ii. the overall average includes the average of the abnormal years which may drive the overall average in the direction of the abnormal years and hence make their detection difficult.

In order to overcome these weaknesses we have developed some modifications to the existing tests that DNOs are required to apply. The first may be used for identifying abnormality in 2009-10 and an appropriate normal period. The second is a test of robustness for identifying abnormality in 2009-10. We also provide details on a new test (3.), which can be used to help identify a normal period:

1. Fixed confidence intervals test: this modifies the original statistical test by using fixed confidence intervals to address the first weakness, above. This calculates a fixed confidence interval for the entire period based on the complete dataset. The original statistical test is re-run with fixed confidence intervals and means that the confidence intervals are no longer dependent on the variances in each year. In this

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<http://www.ofgem.gov.uk/Networks/ElecDist/PriceCtrls/DPCR5/Documents1/Further%20information%20for%20restatement%20of%202009-10%20losses%20data.pdf>

test the annual average reconciliations are compared with the fixed confidence intervals. A year is abnormal if the average reconciliations for that year lie outside the fixed confidence intervals.

2. Jack knife: this tests the robustness of the results of both the variable and fixed confidence interval tests by removing some observations and checking if the results remain the same. It helps address the second weakness, above. The test removes the observations for a single year from the population average or confidence intervals and re-runs the fixed and variable confidence intervals tests and notes the results. This should be done for all the years, removing one year at a time. For example, after running the original statistical test on variable confidence intervals using the entire population (60 observations), one can re-run the test, removing 2005-06 observations from the population average (this leaves a total of 48 observations). This should be repeated removing 2006-07 next, 2007-08 after that and so on.
3. CUSUM (cumulative sum analysis): The cumulative sum analysis looks at the graph for cumulative monthly observed variation figures for all the years over DPCR4. The observed variations are simply the sum of the reconciliations in the units distributed over time. This helps identify the normal period by showing the overall trend in the underlying data and any spikes or abnormalities away from the trend. This may help identify a normal period across periods other than discrete financial years.

For restatement under Approach C (Annex C) the original and fixed confidence interval tests can be adapted in order to identify abnormality in years subsequent to 2009-10. On the original test, the confidence intervals for post-2009-10 years may be compared with the average reconciliations for the five DPCR4 years. On the fixed interval test the annual average reconciliations for the post 2009-10 years may be compared with the fixed confidence intervals for the five DPCR4 years.

Annex C – Approaches to restatement for close out

This annex describes the three different ways 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 methodology⁸.

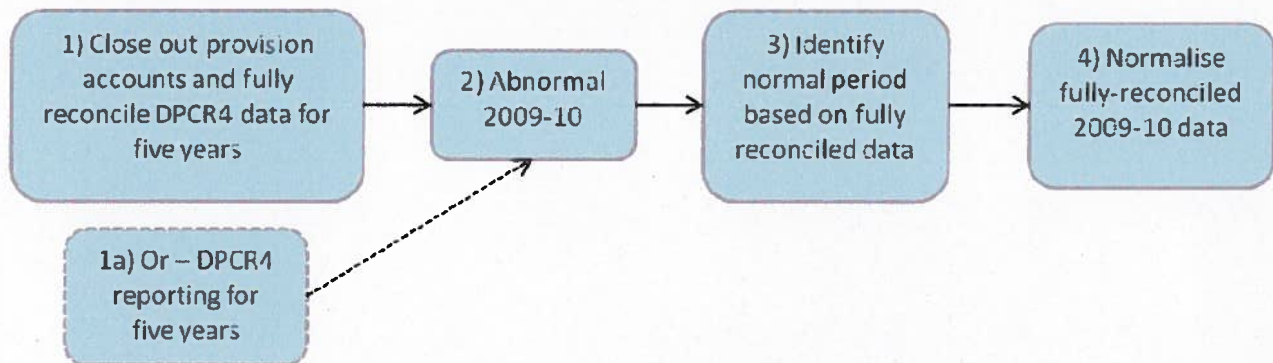
DNOs submitting restatement applications must separately apply all three approaches. For Approach A, DNOs should use data that is reconciled up to Final Reconciliation (RF) and separately up to Dispute Final (DF). For Approaches B and C, DNOs should use data that is reconciled in line with their historic DPCR4 reporting methodology. This will result in four sets of data. DNOs must also explain in their applications whether their historic DPCR4 reporting methodologies used only RF data or included DF data as well.

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.

The diagrams that follow demonstrate the process to be followed for each approach. Annex A illustrates when restatement would be rejected or a cap applied – in a sequence that is common to all three approaches.

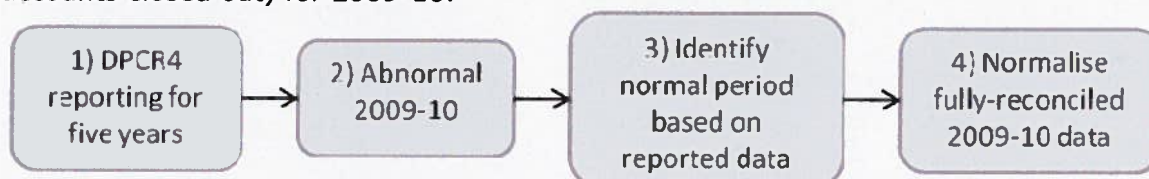
Approach A

- 1) Close out provision accounts and fully reconcile data for all five years of DPCR4.
- 2) Test for abnormality in 2009-10 for this fully-reconciled dataset (DNOs that cannot demonstrate abnormality in 2009-10 on a fully-reconciled basis also test for abnormality in 2009-10 on a reported data basis).
- 3) Identify a normal period based on five years of fully-reconciled data that meets the principles set out in Annex A.
- 4) Normalise the fully-reconciled 2009-10 data based on the normal period identified in step 3.



Approach B

- 1) Start with DPCR4 reported data for five years.
- 2) Test for abnormality in 2009-10 on this reported dataset.
- 3) Identify a normal period within the five years of reported data that meets the principles set out in Annex A.
- 4) Use the normal period from step 3) to normalise fully-reconciled data (with provision accounts closed out) for 2009-10.



Approach C

- 1) Start with DPCR4 reported data for five years.
- 2) Test for abnormality in 2009-10 on this reported dataset.
- 3a) Identify a normal period within the five years of reported data that meets the principles set out in Annex A.
- 3b) Test data gathered on a DPCR4-equivalent basis that relates to 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 average reconciliations or fixed confidence intervals derived from the first five years of reported data.
- 4) Normalise 2009-10 and the subsequent years identified as abnormal based on the normal period identified at step 3a). Post-DPCR4 years that are not identified as abnormal are left unchanged.
- 5) Fully-reconcile the data from step 4) by moving the reconciliations received in each month to the date to which they relate to give a fully-reconciled 2009-10 dataset (this should also involve closing out any outstanding provision accounts).

