



ELECTRICITY NORTH WEST LIMITED'S 2009/10 REPORTED LOSSES

Electricity North West Limited
Registered Office:
304 Bridgewater Place,
Birchwood Park,
Warrington,
Cheshire.
WA3 6XG.

Registered no: 2366949 (England)

Contents

1. Background	3
2. DPCR4 Losses Reporting Methodology	4
General Principles	4
System Entry Volumes	4
System Exit Volumes	4
3. Evidence of Anomalies in 2009/10 Reporting	6
Internal Analysis	6
Information from electricity suppliers	8
Information from Elexon	9
Alternative Analysis	9
Analysis Summary	9
4. Proposed Methodology for Restating Data	10
Reporting Correction	10
Gross Volume Correction	10
Negative EAC values	11
5. Impact	13
Effect on 2009/10 Allowed Revenue	13
Effect on DPCR4 Closeout and DPCR5 Target	13
6. Conclusion	14
7. Appendices	15
Appendix A. Further Detail on DPCR4 Losses Reporting Methodology	15
Appendix B. Supporting Data – 2009/10 Reporting	16
Appendix C. Information from Electricity Suppliers	22
Appendix D. Supporting Data – GVC adjustments	23
Appendix E. Supporting Data – Negative EAC adjustments	24
Appendix F. Revised Revenue Return	26

1. Background

- 1.1. In August 2010, we requested relief from the consequences of over-recovery of price controlled allowed revenues on the basis that accelerated gross volume corrections (GVC) may have distorted losses reporting. This request followed an Ofgem industry consultation in July 2010.
- 1.2. This request was accepted on 14 December 2010 as we had provided information to Ofgem's satisfaction that:
 - (i) our reportable losses for 2009/10 were abnormally high as a result of settlement data adjustments;
 - (ii) those adjustments are unrelated to actual network performance and are outside our control; and
 - (iii) if those adjustments had not arisen, our recovery would have been less than 103 per cent of allowed revenue.
- 1.3. In its decision letter, Ofgem also went on to consider the implications for substantive losses incentive adjustments and the DPCR4 revenue driver, with the following conclusions:

"We will therefore consider any further representations from DNOs for relief from penalty adjustment for 2009/10 on their merits and in light of all available information, including the opinion of the Appropriate Auditor referred to under Standard Condition 47 (Reporting of Price Control Revenue Information) of the Electricity Distribution Licence. Such representations would be likely to take the form of a request for agreement to restate numbers of units distributed on a different basis of calculation under paragraph 9 of Licence Special Condition C1."
- 1.4. Ofgem also stated that in reaching any decisions on such representations they would also take into account following factors:
 - (i) The timing of the representation and any consequences that a change in allowed revenue would have on use of system charges, in particular whether electricity suppliers are faced with late notice of changes to charges; and
 - (ii) The fact that a revenue adjustment in respect of the losses incentive scheme will, in any case, have to be applied under Special Condition CRC 7 during 2012 which would provide an opportunity to apply any further adjustment which might be appropriate.
- 1.5. In December 2010, Ofgem permitted the recalculation of 2009/10 losses by CE Electric for both of its distribution licensees.
- 1.6. On 21 March 2011, Ofgem issued a further consultation on this issue and stated that they would review any applications for an adjustment to reported losses related to GVC which are received up to 15 April 2011 and which are supported by the necessary data. This report sets out the evidence and proposed methodology for the restatement by Electricity North West Limited of number of units distributed for 2009/10 and the associated revised revenue return.
- 1.7. In accordance with paragraph 7 of the consultation, it is not proposed to make any price adjustments as a result of this restatement until April 2012, if the restatement of units distributed for 2009/10 is approved.

2. DPCR4 Losses Reporting Methodology

- 2.1. We have employed the following approach in reporting losses for DPCR4 and this methodology has remained unchanged since 2002/03 in accordance with the provisions of our distribution licence. A detailed explanation of this methodology was provided to Ofgem on 12th March 2009 and this is attached at Appendix A.
- 2.2. As part of this investigation it has been identified that the 2009/10 revenue return did not follow this methodology precisely in that data from Dispute Final (DF) reconciliations were included for the first time in 2009/10. The Supercustomer Monthly Sales Report (explained below in section 2.9) that was used for regulatory years 2005/06 to 2008/09 was amended to reflect various improvements, which were implemented in April 2009. One of the changes made to the report was the inclusion of DF reconciliations; however the methodology used in 2002/03 for establishing DPCR4 losses target had not included DF reconciliations, since at that time these were insignificant amounts. The impact of the new report in terms of consistency with the 2002/03 losses reporting methodology was unfortunately overlooked at the time the report was implemented. This resulted in 2009/10 losses being overstated by 36GWh.

General Principles

- 2.3. We do not use provision accounting for calculating and attributing actual revenue values or units distributed to a particular regulatory year.
- 2.4. We attribute System Exit Volumes to the regulatory year in which they are invoiced to customers; there is no subsequent revision to system exit volumes after the end of the regulatory year.
- 2.5. There is a defined process in place to estimate unbilled consumption for the days of consumption not included on the final invoice produced prior to year end up to the year end date.

System Entry Volumes

- 2.6. All dataflows are received automatically on a daily basis and interface directly with the data capture system, GTDVS (Grid Take Data Validation System). This is our single source repository for validated Half Hourly metered Central Volume Allocation (CVA) and Supplier Volume Allocation (SVA) export data (ie inflow into the system).
- 2.7. System entry dataflows (eg IO29, D0275) are received from two external parties, the Central Data Collection Agent (CDCA) and the Master Registration Agent (MRA). There is no manipulation of the data in terms of timing or value before entering into the losses calculation.
- 2.8. The only subsequent adjustment is for generation sites with entry points with Loss Adjustment factors of less than 0.997. The Distributed Generation Adjustment (DGA) value for 2009/10 was 25GWh for nine relevant sites.

System Exit Volumes

- 2.9. We use the following data sources for obtaining units distributed:
 - (i) **Supercustomer NHH profile classes 1 to 4.** Data is received on the daily dataflow D0030's from the Supplier Volume Allocation Agent (SVAA). Volumes are summed for each settlement day in the period and reported on

the "Supercustomer Monthly Sales Report". This is an ENWL customised report detailing total units distributed (MWh) by settlement class category and by volume allocation run (SF to RF);

- (ii) **Site Specific customers NHH profile classes 5 to 8.** Data is received on the monthly dataflow D0010. They are loaded into our bespoke site specific billing system, and summated for the billing period;
 - (iii) **HH customers profile class 0.** Data is received on the daily dataflow D0275 (validated HH advances from the MRA). They are loaded into our bespoke site specific billing system, and summated for the billing period; and
 - (iv) **IDNO boundary.** HH Meter reads are received from the data collector for all relevant sites (LV, HV and EHV). Units distributed via IDNO's in 2009/10 totalled 37GWh.
- 2.10. As units distributed summated from the billing systems do not align with the regulatory reporting period an accrual estimate has to be made for the unbilled period. The accrual is performed at voltage basket level (eg LV1) and is calculated on a daily usage rate, taking into account historic monthly movements.
- 2.11. The only adjustment made to system exit volumes in DPCR4 related to our own usage at electricity substations. This consumption was not processed through settlements, but was instead added as an adjustment to units distributed. In DPCR5 this consumption will be included in units distributed as measured by settlement, and an adjustment will be made to the DPCR5 target to take account of this change in reporting. The adjustment of 14GWh in the Final Proposals was based on the then forecast annual substation electricity usage (based on the previous four years' average); however for 2009/10 this amounted to 16GWh additional units distributed.
- 2.12. A summary of units distributed as reported in the Revenue RIGs for DPCR4 is presented in the spreadsheet "ATT1 Units Distributed Summary".

3. Evidence of Anomalies in 2009/10 Reporting

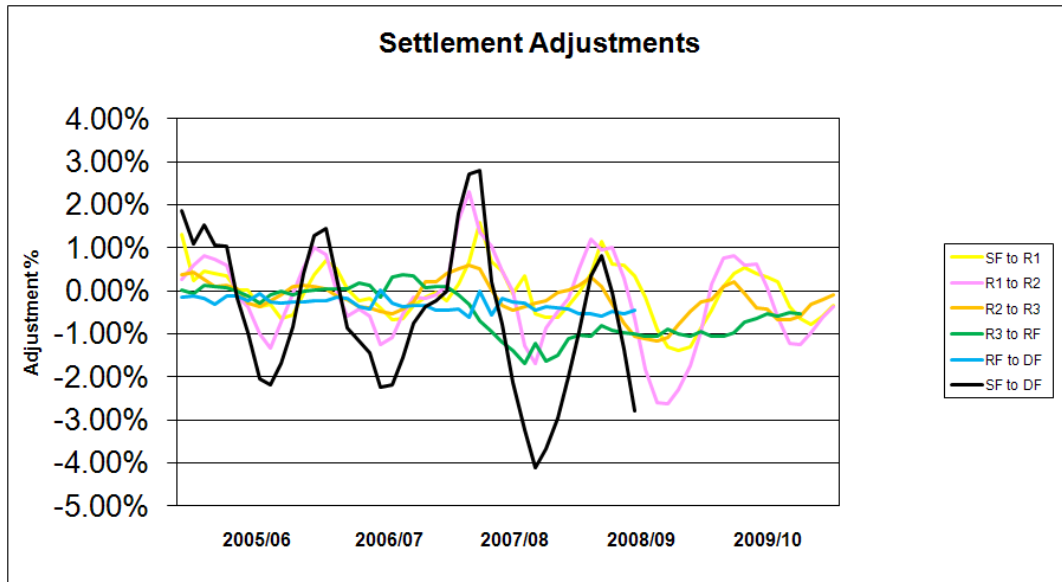
Internal Analysis

- 3.1. Our August 2010 submission for relief from the consequences of over recovery of price controlled allowed revenues provided initial analysis which demonstrated that settlement adjustments in 2009/10 were atypically high. Our further analysis is provided in more detail in Appendix B and summarised below.
- 3.2. The first indication of the issue was the significant movement in losses performance between 2008/09 and 2009/10. The reported DPCR4 performance is summarised in the table below. This shows that the absolute level of losses was between 1200GWh and 1300GWh for the first four years, but in 2009/10 this increased to over 1600GWh. This significant increase in losses coincided with a tightened level of Allowed Losses, due to the associated reduction in Distributed Units. Whilst this was partly due to a real fall in units distributed as observed through the volume of units entering our network it was also affected by settlement adjustments from previous years. These effects led to a reported losses performance of -323GWh, a movement of 436GWh from the previous year. This cannot be explained by any physical changes or actions by us on our network.

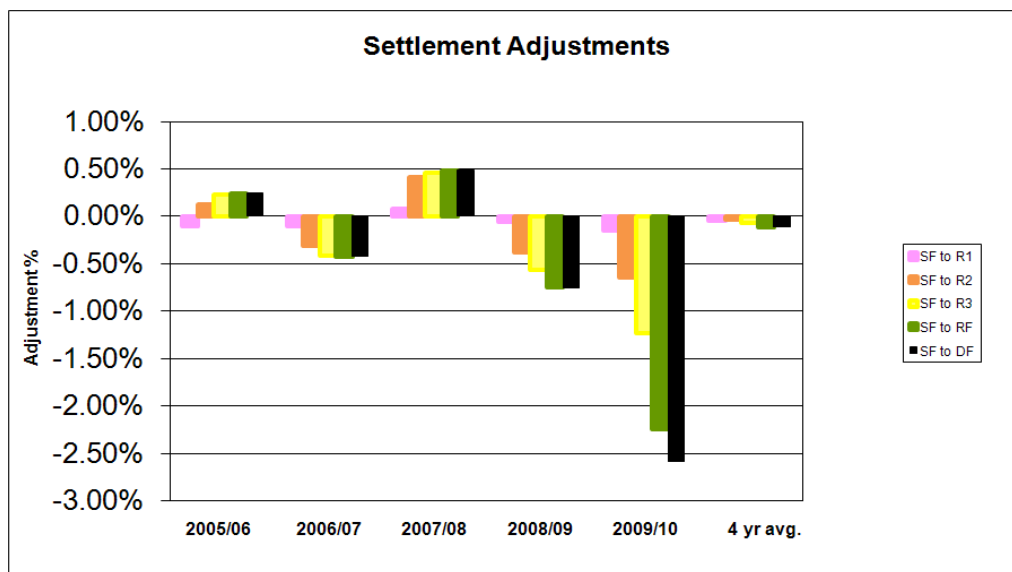
GWh	2005/06	2006/07	2007/08	2008/09	2009/10
Allowed Loss %	5.68%	5.68%	5.48%	5.48%	5.48%
Allowed Loss	1,510	1,465	1,403	1,389	1,316
Reported Loss	1,271	1,202	1,278	1,276	1,639
Loss Performance	239	263	125	113	- 323
Performance %	4.78%	4.66%	4.99%	5.04%	6.82%

- 3.3. Appendix B sets out further analysis of the movements in distributed units, and in particular of Non-Half-Hourly (NHH) units reported in Supercustomer billing. These were compared with estimates derived from metered data, ie (HH metered Units Entering minus HH metered Units Distributed). The 2008/09 to 2009/10 movement in this estimate was only -1.95% compared with the -5.37% movement in reported Supercustomer data. Applying these relative % movements to the 2008/09 reported Supercustomer data indicates that the 2009/10 NHH Units Distributed would be expected to be 421GWh above the level of reported data. Thus our initial estimate of the scale of the issue is 421GWh.
- 3.4. The first part of the more detailed analysis was to review Volume Allocation Run Data for the DPCR4 period on a Settlement Date basis, ie showing the build up of flows for each Settlement Date, irrespective of when the report was delivered. A particular issue was identified in the 2005/06 data, caused by an abnormal settlement error occurring in September 2005. In order to amend the 2005/06 R1 and R2 movements to be reflective of a "normal year" the average movements for the rest of the year (excluding the outliers) were calculated and applied back to the September and October R2 and R1 data in order to estimate what the SF and R1 runs would have been if the abnormal error had not occurred. This is explained in more detail in Appendix B.

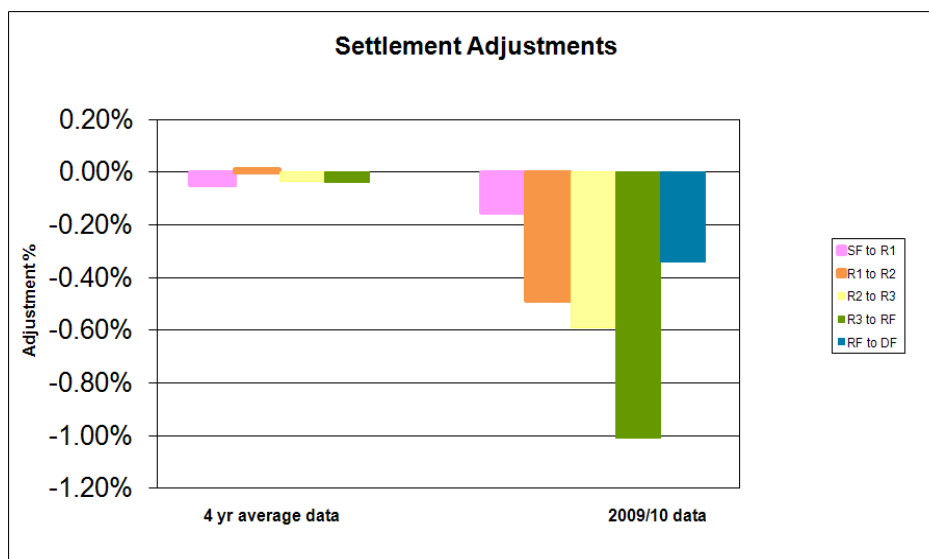
- 3.5. The graph below shows the increasing trend in the magnitude of negative settlement adjustments over time, particularly for 2007/08 (R3-RF) and 2008/09 (all settlement runs) which affect our reported losses for 2009/10. The data is presented after correction for the 2005/06 abnormal settlement error.



- 3.6. These effects are more pronounced when the data is presented in Reporting Year format, which is relevant to our DPCR4 losses reporting methodology. Appendix B has further detail of this, with the summary graphs presented below.
- 3.7. The first graph below shows how Settlement adjustments reported in 2009/10 compare with the equivalent data in each of the previous four years, and also the four year average for each data set.



- 3.8. The second graph highlights the issue in R3 to RF (where it is understood GVC is most commonly applied). The comparison of 2009/10 data with the previous four year average is, we understand, the basis of the methodology for correction applied by CE, which is described for ENWL in Appendix D.



Information from electricity suppliers

- 3.9. In June 2010, prior to our August 2010 request, we asked a number of the ‘Big 6’ suppliers for information on what could have caused the extreme movements in settlement data. We received no satisfactory explanation as to the reasons behind such movements.
- 3.10. In January 2011 we decided to make a formal request from suppliers for information on their application of GVC. A follow up email was sent to suppliers who had not responded on 1st February 2011. We believed that this information request was in accordance with the provisions of the Distribution Connection and Use of System Agreement (DCUSA) and, in any event, the information should not be difficult to provide by suppliers, considering the audit requirements set out in the Balancing and Settlement Code, its associated procedures and guidance notes¹.
- 3.11. A summary of responses received is below:
- (i) [REDACTED] provided details of GVCs performed during 2009/10. In our GSP Group, GVCs were performed on 3,216 Time Pattern Regimes (TPRs) representing 2,385 MPANs. The corrective AA values were [REDACTED] of negative adjustments and [REDACTED] of positive adjustments.
 - (ii) Three of the “Big Six” ([REDACTED]) wrote back stating that they preferred to see a centralised and co-ordinated approach to dealing with matters such as this and that it was not appropriate to provide GVC data on a bi-lateral basis to individual distributors.

¹ In its Guidance Note on the application of GVC, Elexon state at paragraph 1.7 that an appropriate audit trail must be maintained whenever GVC is used. In addition Elexon Service Delivery and Suppliers should be notified of the MPAN, SSC, TPR, Start Date, End Date and EAC/AA Value of both the erroneous AA/EAC(s) and the compensatory AA(s). This is so that Elexon Service Delivery can exclude them from the materiality calculations associated with monitoring of the issue and so that Suppliers are aware that seemingly incorrect values are part of wider corrective action.

- (iii) [REDACTED] provided the following response: “We have never carried out or requested any GVC changes as we believe our DCs have the correct prevention techniques to prevent error entering settlements in place, as a supplier we strive to carry out any required and supposed GVC prior to RF runs within the settlement calendar and do not believe GVC should be used in situations where the error is outside of RF in GSP Groups that are only running to RF and DF where DF runs are still being made”
- (iv) A majority of the smaller suppliers only operate in the Half Hourly market so would not have cause to use GVC. [REDACTED] does however have NHH customers and they have provided GVC data. During 2009/10 they performed GVCs on 39 TPRs. The corrective AA values were 5GWh of negative adjustments and 3GWh of positive adjustments.

3.12. The detailed responses from each supplier are given in Appendix C.

Information from Elexon

- 3.13. The information request we sent to suppliers was also sent to Elexon to ascertain whether there was any information they could provide. They responded to say that they do have any records of the volume of energy attributable to the use of GVC. This is surprising considering that Elexon’s own guidance note on the application of GVC states they should be notified whenever GVC is used.
- 3.14. Some suppliers also commented that even though they could not provide the information requested they were still compliant with the BSC. Elexon confirmed that they also believed this was the case. A copy of this response is also attached in Appendix C.
- 3.15. On the 15th March 2011, Elexon responded to a request we made regarding the reasonableness of the adjustments we are proposing. Although they did not comment directly on this, they did state that “there is anecdotal evidence that some suppliers were carrying out GVC activity ahead of a rule change in February 2010”.

Alternative Analysis

- 3.16. In parallel with the analysis contained within this report we have employed Engage Consulting to consider alternative approaches to identifying and quantifying abnormal settlement adjustments. The approach developed by Engage does not differentiate between the causes of abnormal settlement adjustments (ie GVC, dummy meter exchanges, negative EACs etc) but uses statistical analysis and normalisation of settlement-date volume allocation runs in order to identify abnormal movements.
- 3.17. This output is then mapped to the regulatory year that the reconciliation runs took place (for consistency with our DPCR4 reporting methodology). Preliminary results yield volumes of potential adjustment for 2009/10 that marginally exceed the total identified by the “CE Methodology”, as set out in Section 4. The methodology also suggests adjustments in respect of 2008/09 and also an ongoing effect into DPCR5.

Analysis Summary

- 3.18. It is clear from the above that even though substantial adjustments have been made to settlement data in 2009/10, neither the suppliers nor Elexon can provide detailed analysis or justification for the data adjustments that have occurred. We intend to submit BSC Modifications and Change Proposals as appropriate in order to address

specific weaknesses in the settlement process as they are identified. The immediate implication is that our approach to deriving a methodology for the restatement of data is driven by the lack of visibility of detailed data from within the settlement system.

Proposed Methodology for Restating Data

- 3.19. As a consequence of the detailed analysis provided in Section 3, it is clear that neither electricity suppliers nor Elexon can substantiate the 2009/10 settlement data at the present. It is therefore appropriate to use an approach to remove the effect of GVC in the absence of more robust data. This should ensure that 2009/10 reported losses are determined using a methodology and data that is more consistent with that used to determine the DPCR4 losses target.
- 3.20. Our approach to sales reporting is, we believe, very similar to that used by CE Electric. In correcting for GVC, it is therefore appropriate that the method approved for CE Electric is also applied for the correction of our data.
- 3.21. We note in Ofgem's letter of 21 March 2011 that some suppliers have had reservations about this approach. However, it is clear that the adjustments made by suppliers (primarily for their own benefit) have clearly not been subject to sufficient audit scrutiny either internally within the supplier, by Elexon or by ourselves. It would therefore be totally inappropriate to use a different approach at this stage.
- 3.22. We do recognise that further work will be required to produce the fully auditable data required as part of the Losses Rolling Retention Mechanism Close Out process and that Ofgem may be compelled to force disclosure of information from suppliers who do not co-operate. Any information received must also be provided to ourselves for verification and analysis.
- 3.23. There are three issues which have affected previously reported numbers for units distributed for relevant year 2009/10:
- (i) a recently identified period where a technical change in the sourcing of input data led to a mismatch between 2009/10 and previous years' reporting. This led to DF data being included where previously it had not been.
 - (ii) GVC adjustments to settlements data by suppliers in the ENWL distribution services areas (DSA).
 - (iii) negative Estimated Annual Consumption ('EAC') values arising in settlements data for the ENWL DSA.

Reporting Correction

- 3.24. As stated previously, our 2009-10 calculation of losses included Dispute Final Reconciliations for the first time, which was not consistent with the 2002/03 methodology; furthermore, DFs were excluded for the purpose of setting the DPCR4 losses target. We therefore propose that these are removed from the 2009-10 restatement. This results in 2009/10 units distributed being increased by (and losses therefore being reduced) by 36.1GWh. We note that this has the same effect as the methodology already approved for CE Electric, in that DF values have been eliminated.

Gross Volume Correction

- 3.25. We propose an approach to correct for the undue impact of GVC in 2009/10 based on adjustments to reconciliation levels attributable to settlement runs after the initial (SF) settlement run as follows:

- (i) Reconciliation levels for runs 1, 2 and 3 to be 'normalised' to the average reconciliation level for the period from 2005-06 to 2008-09.
 - (ii) Reconciliation levels for the Final (RF) runs to be set to zero.
- 3.26. This approach is intended to neutralise the abnormal GVC effect in 2009/10 whilst recognising that a background level of volatility exists in settlement data in any case, to which a 'normal' level of GVC could be expected to be a contributory factor.
- 3.27. The impact of the GVC Adjustments and the Reporting Correction are summarised below. The detailed supporting calculations are provided in Appendix D.

Volume Allocation Run	2009/10 Total	Adj 1 Normalise R1 to R3	Adj 2 Set RF & DF to zero	Adjusted 2009/10
Initial Settlement (SF)	10524.6	0.0	0.0	10524.6
First Reconciliation (R1)	-16.3	11.0	0.0	-5.3
Second Reconciliation (R2)	-51.4	52.7	0.0	1.4
Third Reconciliation (R3)	-62.0	58.2	0.0	-3.8
Final Reconciliation (RF)	-106.2	0.0	106.2	0.0
Dispute Final (DF)	-36.1	0.0	36.1	0.0
Prior Period adj	-53.0	0.0	0.0	-53.0
Year End accrual	1453.3	0.0	0.0	1453.3
Total Reported	11653.0	121.9	142.3	11917.2
Total Adjustment				264.2

Negative EAC values

- 3.28. As also observed by CE Electric, we have seen in our analysis significant number of incidents where meter points have erroneously been ascribed a negative estimate of annual consumption (EAC). We also believe that the high incidence of GVC adjustments in 2009/10 will have driven up the level of negative EACs. We believe that the negative EACs have caused further material reductions in the number of units distributed under normal reporting methodologies.
- 3.29. We have received details of EACs used as at 1 February 2011 from data aggregators. We do not have data prior to that date². The February 2011 data allows for the extrapolation of the level of negatives EACs used in 2009/10, however the value obtained is likely to be an underestimate as settlement processes have been amended to reduce the number of negative EACs entering settlements.
- 3.30. In summary, we propose to use the same approach as approved for CE Electric in that the negative EAC values in 2009/10 settlements data should be replaced with profile average values for the MPAN class concerned and we note that this is broadly consistent with the approach that will be used in the settlements system itself going forward. Our analysis of the total effect of the negative MPANs is shown in the table below. We propose to make adjustments to units distributed in respect of PC1-4 only as during 2009/10 the PC5-8 were billed by our site-specific billing suite which would not have used EAC data. The detailed methodology and analysis is provided in Appendix E.

² With the exception of ██████████, who also provided information for November 2010.

	Number of MSIDs	Total Negative Consumption at PC/TPR Level (GWh)	Total Average EAC for MSID Count (GWh)	Total EAC to be Recovered for MSID Count (GWh)
Total (PC1-8)	5203	22.4	35.0	57.5
Total (PC1-4)	5138	21.7	30.6	52.3

3.31. We will monitor the MPANs impacted by the methodological adjustments for negative EACs to ensure that the units are not 'double counted' in future, keeping appropriate records and advising Ofgem of any difficulties in achieving this. Specifically, we will undertake the analysis again based on the P222 information we will receive in May 2011 and identify those MPANs that no longer have a negative EAC. We will then identify any potential over reporting of units using this approach. We propose that any units identified that need to be "unwound" will be taken into account when calculating the Losses Rolling Retention Mechanism Close Out.

4. Impact

Effect on 2009/10 Allowed Revenue

- 4.1. Our current forecast cost information published on the DCUSA website is summarised in the table below. This shows that suppliers are benefiting significantly in 2011/12 with forecast demand revenues well below the base demand revenues set out in the DPCR5 Final Proposals. It is for Ofgem to determine whether these benefits have in fact been passed onto customers.

Description	2009 /10	2010 /11	2011 /12	2012 /13	2013 /14	2014 /15
Base Demand Revenue Forecast	267	338	376	410	457	508
Total Pass-Through Forecast	8	(3)	(3)	(4)	(4)	(5)
Incentives and Adjustments	(13)	5	10	5	17	18
Correction Factor Forecast	(9)	(17)	(30)	0	0	0
Final Allowed Demand Revenue Forecast	253	323	353	411	470	521
Final Collected Revenue Forecast	270	352	353	411	470	521
Forecast Over/(Under) Recovery	17	29	0	0	0	0

- 4.2. The effect on our revenue reporting for 2009/10 is expected to be as set out in Appendix F. The effect of the adjustments is to turn the £17 million over-recovery in 2009/10 to a £4.5million under recovery. Had this adjustment been made prior to setting 2011/12 use of system charges then projected revenues would be in line with the Base Demand Revenue Forecast. Revenues are currently projected to increase by approximately 16% in 2012/13 and this would increase to approximately 22%
- 4.3. We do not propose to reflect these adjustments in an October 2011 price increase.

Effect on DPCR4 Closeout and DPCR5 Target

- 4.4. Each DNO will be required to provide updated losses information for the DPCR4 period in due course to facilitate the calculation of Losses Rolling Retention Mechanism and Allowed Loss Percentage values for DPCR5. We accept that more detailed analysis of DPCR4 losses performance is necessary to properly close DPCR4. However it is clear that there are significant anomalies in 2009/10 data which neither suppliers nor Elexon can properly explain. It is therefore clearly appropriate to allow a restatement of the 2009/10 revenue return in advance of the DPCR4 closure process.

5. Conclusion

- 5.1. This report provides evidence of abnormal data contributing to the calculation of Distributed Units in 2009/10. It is clear that there are significant anomalies in 2009/10 data which neither suppliers nor Elexon can properly explain.
- 5.2. The report proposes methodologies for recalculating the 2009/10 data that are based on:
 - (i) Consistency between the methodologies used for performance monitoring and the setting of targets;
 - (ii) Increased accuracy of data; and
 - (iii) Consistency of approach with that applied to other DNOs.
- 5.3. We have calculated the effects on Distributed Units and Allowed Revenue. In summary we propose adjustments to Distributed Units as follows:
 - (i) Reporting Correction of 36.1GWh; plus
 - (ii) GVC Adjustment of 228.2GWh; plus
 - (iii) Negative EAC Adjustment of 52.3GWh.
 - (iv) A total of 316.6GWh
- 5.4. The effect of the adjustments is to turn the £17 million over-recovery in 2009/10 to a £4.5million under recovery.
- 5.5. We have proposed an approach for the ongoing monitoring of MPANs with negative EACs. This anticipates further potential adjustments to 2009/10 (and other years') data in the calculation of the DPCR4 Losses Rolling Retention Mechanism. We accept that more detailed analysis of DPCR4 losses performance is necessary to properly close DPCR4. We note for instance that we have an outstanding Trading Dispute raised on 21 April 2008 with Elexon, concerning a total of 5638 MPANs, which we would expect to be included in the final closeout calculation.
- 5.6. This report constitutes a formal request, under paragraph 9 of Licence Special Condition C1, for agreement to restate numbers of units distributed for the 2009/10 regulatory reporting year on a different basis of calculation from that used in our July 2010 regulatory return.
- 5.7. Our independent auditor has been engaged to carry out the relevant "Agreed upon Audit Procedures" to ensure the 2009/10 regulatory revenue return has been restated appropriately. Their report will follow this submission.

6. Appendices

Appendix A. Further Detail on DPCR4 Losses Reporting Methodology



090312 Calculation of distribution losses.

Appendix B. Supporting Data – 2009/10 Reporting

Attached Spreadsheet “ATT1 Units Distributed Summary”

This spreadsheet shows the reported Distributed Units in each of the DPCR4 years, broken down into Supercustomer, DADS billing and EHV customers. The table also shows the Year End and Prior Period accounting adjustments, allowing the actual reported data to be identified. The investigation into NHH volume movements is focused on the Supercustomer data.

The starting point was to look at how Units Entering and HH consumption volumes had moved over the DPCR4 years. Subtracting HH volume from Units Entering gives an estimate of NHH consumption. If the estimate of the movement in NHH consumption is less than the movement between reconciliation runs then it could be assumed that some “corrective activity” such as GVC had occurred. The table below details that analysis over the period 2005 to 2010:

GWh	2005/06	2006/07	2007/08	2008/09	2009/10
Units Entering	27857	27038	26946	26539	25656
Less HH consumption	14004	13587	13400	13009	12390
Estimate of NHH consumption	13853	13451	13546	13529	13266
NHH % movement		-2.91%	0.71%	-0.12%	-1.95%

By comparison, the movement in total reported Supercustomer units distributed from 2008/09 to 2009/10 is -5.37%. If this were substituted by the -1.95% movement identified in the above table, ie applying -1.95% to the 2008/09 reported SCD units (12314GWh) this would suggest a figure of 12074GWh for 2009/10. This is an increase of 421GWh over the actual reported figure of 11653GWh. Thus our initial estimate of the scale of the GVC issue is 421GWh.

The spreadsheet “ATT3 SCD Unit Data_Revenue Reports”, discussed below, contains analysis of the % movement between SF and DF for each of the DPCR4 years, and this is set out in the second table, below.

It can be seen that the % movement between SF and DF during 2009/10 exceeded the estimated movement in NHH consumption (cells highlighted in blue). The cells highlighted in red show a significant negative movement between R3 and RF when compared to earlier years. This is strong evidence of some “corrective activity” having taken place, as opposed to a general movement in demand.

Units distributed - % movements between runs	2005/06	2006/07	2007/08	2008/09	2009/10
SF to R1	-0.10%	-0.10%	0.08%	-0.06%	-0.15%
SF to R2	0.13%	-0.31%	0.42%	-0.38%	-0.64%
SF to R3	0.23%	-0.42%	0.47%	-0.57%	-1.23%
SF to RF	0.24%	-0.42%	0.49%	-0.75%	-2.24%
SF to DF	0.24%	-0.42%	0.49%	-0.75%	-2.58%

Attached Spreadsheets “ATT2 SCD Unit Data_Sett Date” and “ATT3 SCD Unit Data_Revenue Reports”

For further analysis we have analysed Supercustomer settlements flows in two formats:

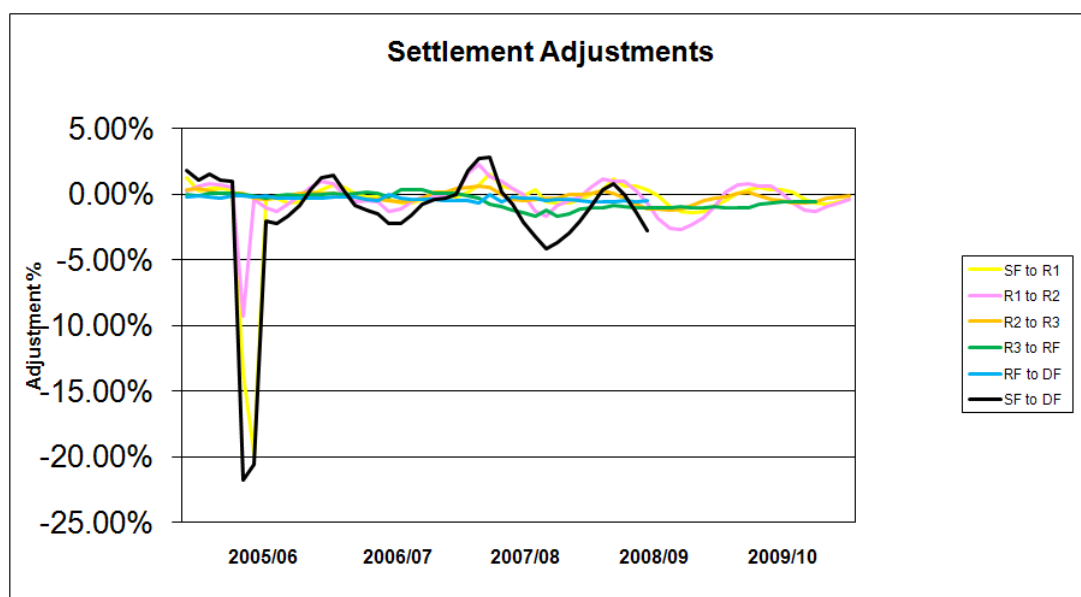
- Settlement runs by Settlement Date (ie showing the build up of flows for each Settlement Date, irrespective of when the report is delivered); Spreadsheet “ATT2 SCD Unit Data_Sett Date” and
- Settlement runs as reported within a defined period (consistent with our DPCR4 losses reporting methodology); spreadsheet “ATT3 SCD Unit Data_Revenue Reports”.

Spreadsheet “ATT2 SCD Unit Data_Sett Date”

This spreadsheet shows the monthly and annual summaries of volume allocation runs for the DPCR4 period. A reminder of the basis of the individual runs is set out below.

Volume Allocation Run	Working Days	Approx calendar days	Approx calendar months
Initial Settlement (SF)		22	0.7
First Reconciliation (R1)	plus 39	55	1.8
Second Reconciliation (R2)	plus 84	118	3.9
Third Reconciliation (R3)	plus 154	216	7.2
Final Reconciliation (RF)	plus 292	409	13.6
Dispute Final (DF)	up to 28 mths after SF	840	28

A simple graph of the raw data (below) shows abnormal spikes in the SF to R1 and R1to R2 data sets for 2005/06. This is caused by a known settlement error that occurred in September/October 2005, described below.

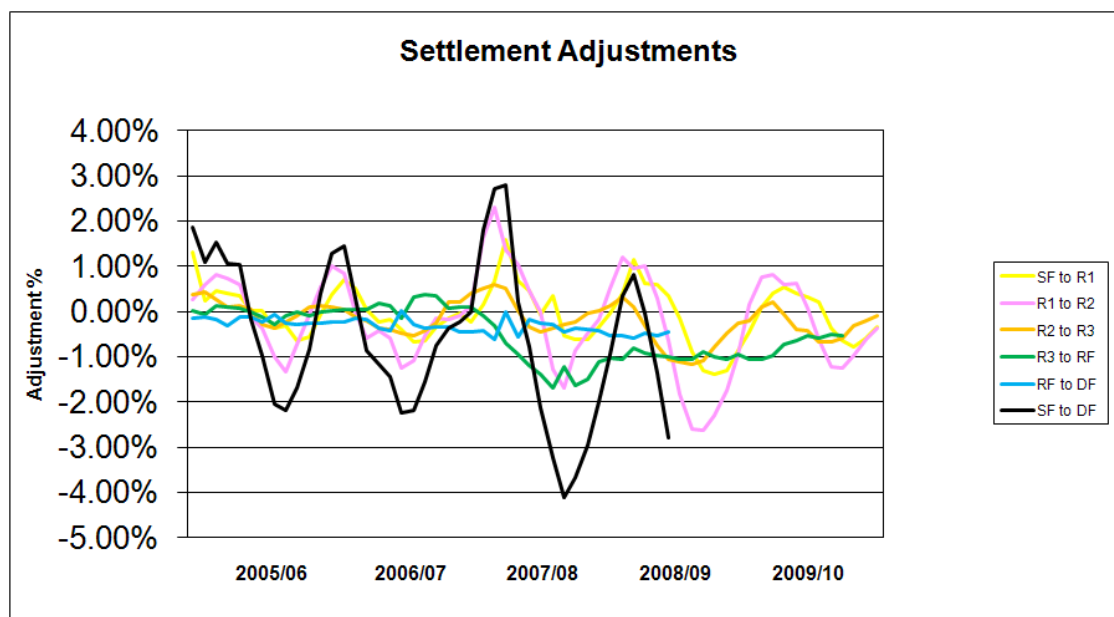


2005/06 Abnormal Supercustomer Data Error

During a period of 10 days, end of September into the beginning of October 2005, an unusually large erroneous meter reading was entered against one of our Domestic Restricted tariffs within Supercustomer. This originated from the data collector working on behalf of [REDACTED].

The error was related to a single MPAN and significantly overstated consumption at the SF reconciliation run. This was subsequently unwound in the two subsequent reconciliation runs: R1 in October 2005 and R2 in December 2005.

In order to amend the 2005/06 R1 and R2 movements to be reflective of a “normal year” the average movements for the rest of 2005/06 (excluding the outliers) was calculated and applied back to the September and October R2 and R1 data in order to estimate what the SF run would have been if the abnormal error had not occurred. This causes September and October SF to be reduced by 236GWh and 252GWh respectively; an adjustment is also made to the September R1 (-86GWh) to give the effect of 150GWh of the September adjustment being unwound in SF-R1 and 86GWh being unwound in R1-R2. The whole of the October SF adjustment is unwound at R1. The previous graph is repeated below with these adjustments made.



The graph shows the increasing trend in the magnitude of negative settlement adjustments over time, particularly for 2007/08 (R3-RF) and 2008/09 (all settlement runs) which affect our reported losses for 2009/10. The data is presented after correction for the 2005/06 abnormal settlement error.

These effects are more pronounced when the data is presented in Reporting Year format, which reflects the basis of our DPCR4 losses reporting methodology.

Spreadsheet “ATT3 SCD Unit Data_Revenue Reports”

This spreadsheet presents Supercustomer settlements flows as reported by month and by year. The data is that used for our DPCR4 losses reporting methodology and therefore shows the accounting accruals in respect of March data; the overall totals match the SCD totals in the Spreadsheet “ATT1 Units Distributed Summary”.

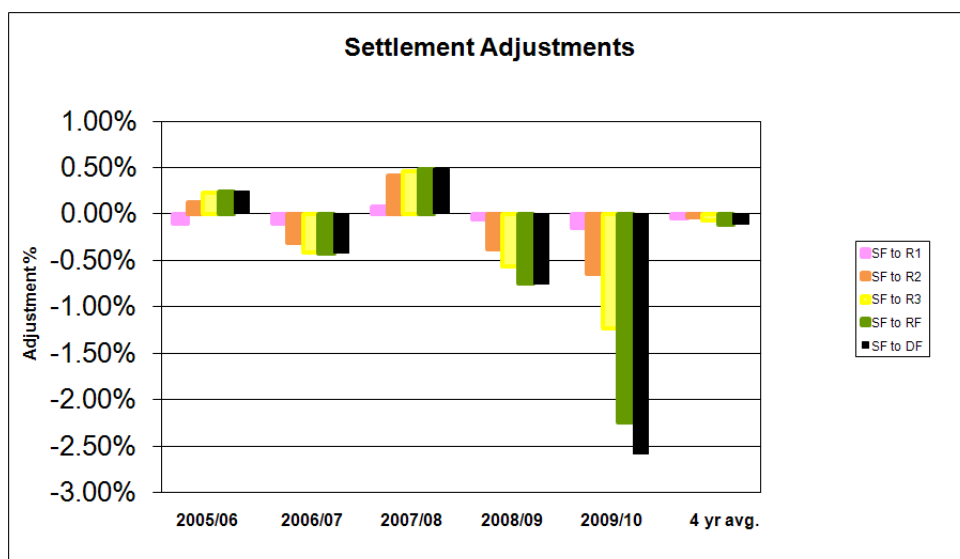
Analysis of the Settlement Date data identified adjustments of 236GWh at September SF, 252GWh at October SF, and a further adjustment of 86GWh to the September R1 to reflect that the September SF adjustment was unwound in two stages. However, it was a constraint of the report used at the time that where an SF and an R1 came through for the same month in the same report period the report netted off the values and showed just the one value. In this case the days in October effectively self-correct within SF in the reported data; consequently no adjustment is needed for these in the reported data.

In the Reported data file we have therefore reverted to the estimate of the effect that was carried out at the time of the error:

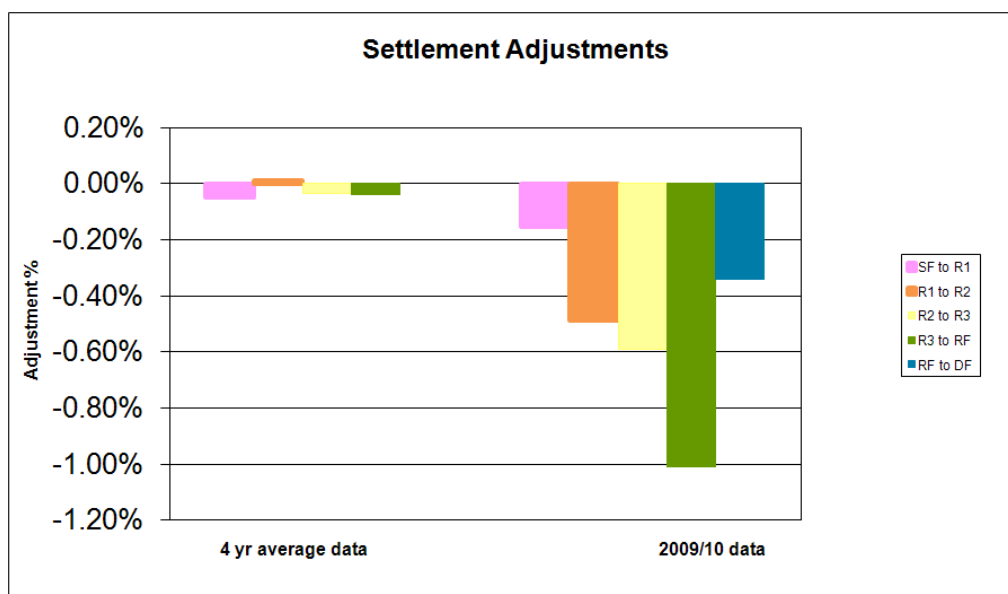
- In October 2005 total consumption reported through settlement was a negative value of 126GWh as a result of the R1 correction. An average month’s consumption was forecast to be 7GWh. In order to amend the 2005/06 R1 movements to be reflective of a “normal year” it is necessary to apply a total adjustment of 133GWh to the raw data.
- A similar adjustment was calculated for the December 2005 R2 movement. The settlement value of minus 77GWh was replaced by a more realistic monthly average of plus 11GWh, resulting in an overall adjustment of 88GWh.

In summary the adjustments to reports are 133GWh (September R1, reported in October 2005) and 88GWh (September R2, reported in December 2005). This is a total of 221GWh at SF compared with the 236GWh for September identified by the Settlement date analysis.

The first graph below shows how Settlement adjustments reported in 2009/10 compare with the equivalent data in each of the previous four years, and also the four year average for each data set. This shows that settlements adjustments reported in 2009/10, particularly at the RF level, are significantly higher than in any previous year.



The second graph highlights the issue in R3 to RF (where it is understood GVC is most commonly applied). The comparison of 2009/10 data with the previous four year average is, we understand, the basis of the methodology for correction applied by CE, which is described for ENWL in Appendix D.



Further detail of data sources for “ATT3 SCD Unit Data_Revenue Reports”

Data was sourced from the Supercustomer DUoS billing system for Non Half Hourly customers in Profile classes 1 to 4. Customers in all other profile classes ie 5 to 8 and 0 were not included.

The daily dataflow D0030s from the Supplier Volume Allocation Agent (SVAA) were collected. Volumes were summed for each settlement day in the reporting period and reported on the “Supercustomer Monthly Sales Report”. This is an ENWL customised report detailing total units distributed (MWh) by settlement class category and by volume allocation run (SF to RF). This particular report was used for the regulatory years 2005/06 to 2008/09. For 2009/10 the report was amended to reflect the current settlement class structure, with greater transparency of data at a voltage level. In addition volumes were adjusted for the first time as a result of Dispute Final (DF) reconciliations.

Consumption per reconciliation run is reported as it is billed, not by its earlier settlement date, so for each reporting month SFs to RFs were summated for the regulatory years 2005/06 to 2008/09. As mentioned above, Dispute Finals (DFs) were included for the first time in 2009/10.

Each reporting month equates to an ENWL standard accounting month which is based on a 4 week month/4 week month/5 week month per quarter year, with March’s monthly consumption taken up to the 31st in order for it to align to ENWL’s financial year.

As units distributed summated from the billing systems do not align with the regulatory reporting period an accrual estimate has to be made for the unbilled period. The accrual is performed at voltage basket level (eg LV1) and is calculated on a daily usage rate, taking into account historic monthly movements. The accrual value is detailed in the row headed "Accounting adjustment – Year End Accrual".

The row headed "Accounting Adjustment - Prior Period Accrual Adjustment" relates to the under or over estimate of GWh from the previous year's accrual.

Appendix C. Information from Electricity Suppliers

January 18th Information Request



Letter to
Suppliers_GVC.pdf

Suppliers who provided a quantitative response

[Redacted]

[Redacted]

[Redacted]

Suppliers who responded that they did not perform GVCs during 2009/10

[Redacted]

Suppliers who responded that they were not willing to answer our questions on a bi-lateral basis, instead preferring a centralised and co-ordinated approach facilitated by Ofgem

[Redacted]

Suppliers who responded, but who only operate in the Half Hourly Market

[Redacted]

Elexon Responses

[Redacted]

Appendix D. Supporting Data – GVC adjustments

Contained within the spreadsheet “ATT3 SCD Unit Data_Revenue Reports”

The data used for calculating the GVC adjustment is first adjusted to accounting for the abnormal settlement error (██████████) experienced in September/October 2005. Details of this adjustment are set out in Appendix B.

The GVC adjustment is calculated on the Proposed GVC Adjustment Tab. The column titled “Adj 1 Normalise R1 to R3” replicates the calculation to normalise 2009/10 reconciliation runs R1 to R3 to their respective averages for the period 2005/06 to 2008/09 (*Ofgem letter dated 17th December section 9(i) refers*). This has the effect of increasing 2009/10 units distributed by 122GWh.

The column titled “Adj 2 Set RF and DF to zero” replicates the adjustment to set 2009/10 reported RF and DF reconciliation values to zero (*Ofgem letter dated 17th December section 9(ii) refers*). This has the effect of increasing 2009/10 units distributed by 142GWh.

The combined effect of these two adjustments increases 2009/10 Supercustomer units distributed to 11,917GWh, an increase of 264GWh from that previously reported in the regulatory revenue return.

Appendix E. Supporting Data – Negative EAC adjustments

Data

In December 2010 we wrote out to all Supplier Contract Managers and requested the quarterly P222 reports from their appointed Non Half Hourly Data Aggregators (NHHDA).

The P222 reports were received with data as at 1st February 2011. The data contained within the P222 report is as follows:

- MPAN
- Energisation Status (ES)
- GSP Group ID
- Distributor ID
- Line Loss Factor Class (LLF)
- Profile Class (PC)
- Standard Settlement Configuration (SSC)
- EAC Default Indicator
- Time Pattern Regime (TPR)
- Estimated Annual Consumption (EAC)

We analysed the data within the files and identified that negative EACs were still being sent by NHHDA. This analysis is summarised in the attached file “ATT4Negative EAC Analysis”

Analysis

Table 1 and 1a

- Identifies the total number of MPANs received in P222 reports split by each NHHDA.
- Identifies the total number of MPANs with a negative EAC by each NHHDA.
- Totals the negative consumption per NHHDA.
- Calculates the percentage of MPANs with a negative EAC against the total number of MPANs by each NHHDA.
- Calculates the average negative consumption for the number of MPANs with a negative EAC by each NHHDA.

Table 2

- Calculates the total negative EACs at TPR level (TPR 1, TPR 2 and TPR 3)
- Calculates the total number of MSIDs at TPR level³
- Calculates the average negative consumption at each TPR level.

³ MSID is count at TPR level not MPAN level, there may be multiple MSIDs against one MPAN.

Table 3

- Identifies the 'Total Average EAC' for each Profile Class (PC) from Market Domain Data (MDD). For the PCs with more than one TPR the percentage split is also identified.
- Calculates the average EAC at TPR level.
- Identifies all the MSIDs with a negative EAC at TPR level by filtering on the PC
- Totals the negative consumption.
- Calculates the 'Total Average EAC' consumption by multiplying the number of MSIDs at PC/TPR level by the 'Total Average EAC'.
- Calculates the total EAC to be recovered by adding the total average EAC at TPR level and the total negative EACs at TPR level identified in P222 reports.

Our analysis of the total effect of the negative MPANs is shown in the table below. We propose to make adjustments to units distributed in respect of PC1-4 only as during 2009/10 the PC5-8 were billed by our site-specific billing suite which would not have used EAC data.

	Number of MSIDs	Total Negative Consumption at PC/TPR Level (GWh)	Total Average EAC for MSID Count (GWh)	Total EAC to be Recovered for MSID Count (GWh)
Total (PC1-8)	5203	22.4	35.0	57.5
Total (PC1-4)	5138	21.7	30.6	52.3

Appendix F. Revised Revenue Return

The attached spreadsheet “ATT5 Revised Data for Revenue Return” shows the input data for Units Distributed in the revenue return, both before and after the application of the proposed adjustments.

A draft revised revenue return is attached in “ATT6 ENW Revenue Return 2009_10_29072010 restated March 2011”.

Our independent auditor has been engaged to carry out the relevant “Agreed upon Audit Procedures” to ensure the 2009/10 regulatory revenue return has been restated appropriately. Their report will follow this submission.