ofgem

DPCR4 Losses Incentive Closeout

Follow-up assurance of data submitted by DNOs

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Contents

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1 Introduction

1.1 Scope

Ofgem has requested ESP Consulting (ESP) to provide a review and assurance of the data submitted by distribution network operators (DNOs) for use in the calculation of the final incentive payments for DNOs under the losses incentive mechanism for the fourth distribution price control review (DPCR4). There are in effect two principal components to the works:

- That the data submitted by each DNO is consistent with the DNO's historical reporting methodology; and
- That the data should be consistent with fully reconciled settlements data and any discrepancies in DNO provided data are adequately explained and justified.

There are therefore in effect two processes to the close out of the losses incentive:

- Where DNOs have requested a restatement of 2009/10 data, that the data provided reconciles with the audited data provided annually by DNOs over the DPCR4 period. Where there are differences, each difference should represent a valid change in line with the company's reported methodology (provided in response to a data request issued by Ofgem in 2009). In discussions with Ofgem, we have not been asked to check the validity of the annual audited reported data and whether it was provided consistent with the DNO stated methodology.
- That the data provided by DNOs for 2009/10 is on a fully reconciled basis in accordance with the DPCR5 Final Proposals and therefore that such data reconciles with settlement data. Where there are differences, we have sought to obtain assurance from the DNO as to the accuracy and validity of the difference in line with their stated methodology and the DPCR5 Final Proposals and agreed back to source records.

ESP initially reviewed the data submitted in response to Ofgem's data request of July 2012, providing Ofgem with conclusions that were published on 26th July 2013. This review focused on 2009/10 data and the report highlighted a number of errors in the data that would need to be corrected and also several policy decisions that were required of Ofgem before the losses incentive could be concluded. Where these errors or policy issues required amendment, these were flagged as requiring correction to the relevant periods.

Ofgem published a document on 12th July 2013 and requested that DNOs re-submit their data for restatement and close-out, updated in line with the document, by 2nd August 2013.

ESP has now been asked to review the data resubmitted by DNOs to ensure that it has been corrected for errors identified and is in line with Ofgem's decisions in the 12 July 2013 document. This also includes a review of the data to be used for the annual incentive where it differs, or would be expected to differ, from that reported historically. This report should therefore be read as an addendum to the original ESP report published by Ofgem on 26th July 2013.

2 Discussion by company

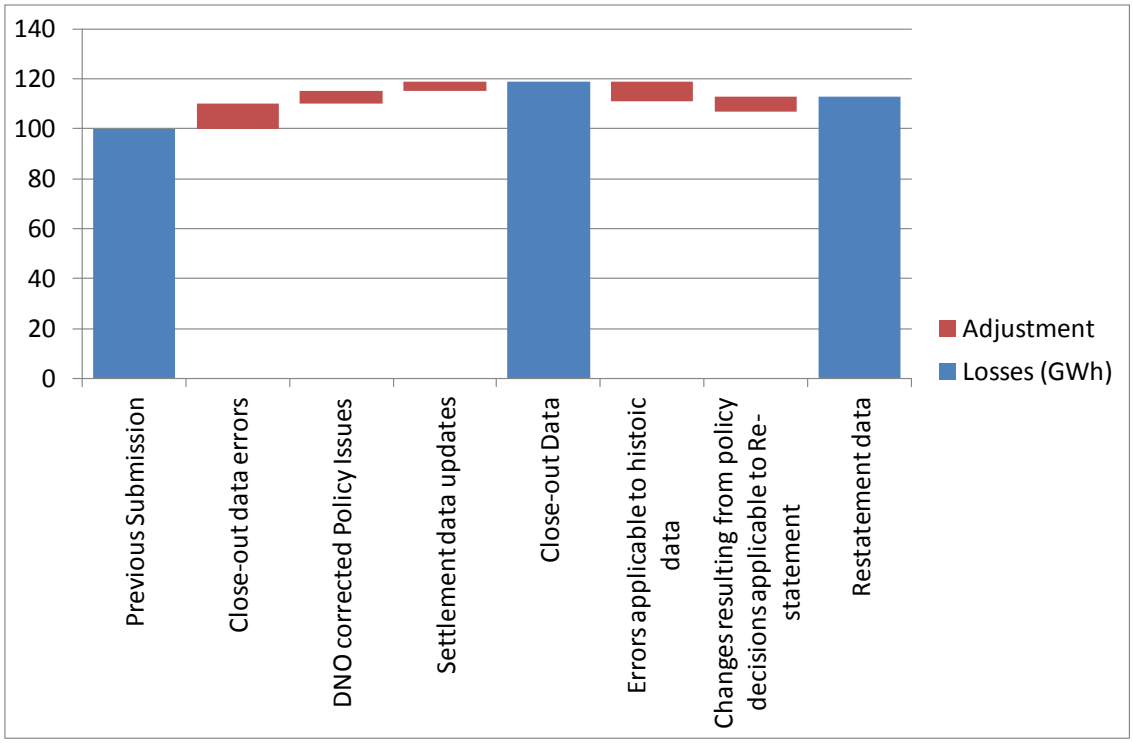
The following sub-sections set out the changes each of the companies has made in re-submitting its DPCR4 Losses data in response to Ofgem's document of 12th July 2013. In each case, this considers three sets of data as submitted by the DNOs:

- **Close out Data:** This is data used for the final losses calculation and submitted on a "fully reconciled" basis – incorporating the latest version of Settlement data as taken from the Elexon feeds that were used for the relevant DNO's billing and losses reporting. In general, movements to this data should reflect a combination of the errors and issues as highlighted in our previous report as well as subsequent movements to settlement data.

- **Restatement Data:** This data is used to identify historical abnormal movements in the losses data reported over the DPCR4 period and submitted in line with the relevant DNO's losses reporting methodology. It typically represents data for units that were reported in companies' annual returns to Ofgem and billed at the time. In general, changes to this data (since the previous submission) should reflect errors and issues as identified above where these changes are relevant to the data reported and billed throughout DPCR4.

- **Annual Losses incentive data:** The data reported annually by each DNO had a number of uses within the DPCR4 settlement, including the growth term and the losses incentive within the price control formula. In response to Ofgem's July 2013 document, DNOs were able to apply for restatement of 2009-10 data for the annual incentive. DNOs were also requested to resubmit annual reporting data for all years of DPCR4 where this had changed following the initial data audit. This could have a consequential impact on DNO revenues through the growth term.

A simplified representation of the explanation of the differences between the first two of these data sets is shown below:



The following sub-sections therefore discuss the re-submissions from each DNO in more detail. In each case, this discussion is organised as follows:

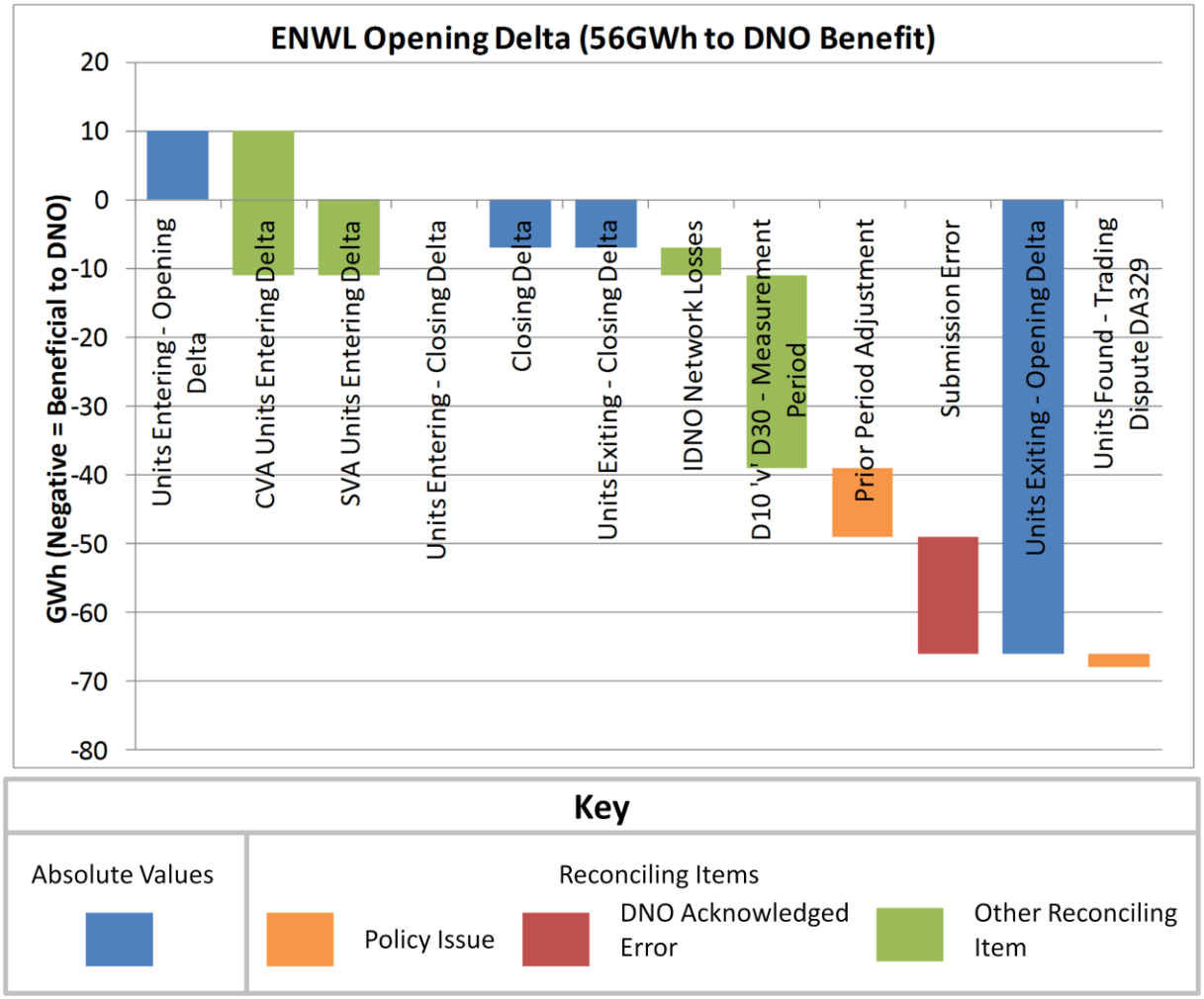
- **Analysis from our previous report:** We first show the adjustments identified from our earlier report, reconciling each DNOs previous close-out data with Settlement Data. This highlights in a graphical form the errors and policy issues that we would expect to explain the differences between that and the current re-statement data;
- **Current Close-out Data**: This provides a discussion of the latest close out data as submitted by the relevant DNO, along with a discussion for how this has changed from previous submissions given the above errors and policy decisions;
- **Current restatement Data:** This provides a discussion of the latest restatement data as submitted by the relevant DNO, and the extent to which changes in this data meet our expectations; and
- **Annual Reporting Data**: This provides a discussion of the latest view of annual incentive data reported historically given any of the above changes relevant to this data.

2.1 Electricity North West Limited (ENWL)

Electricity North West Limited has the Distribution Licence for the legacy "NORWEB" area, covering Manchester and the North West of England. At the start of this process, there was an un-reconciled difference of 56GWh between the losses apparent from 2009/10 data submitted by ENWL and the apparent losses derived from Settlement data, with this difference being made up as follows:

- **Units Entering ENWL's network:** ENWL data showed 10GWh more energy entering its network than the Settlement data; and
- **Units Exiting ENWL's network:** ENWL data showed 66GWh more energy exiting its network than the Settlement data.

Further investigation reduced this un-reconciled difference to 7GWh as illustrated below.



2.1.1 Data Resubmission

ENWL had originally, in providing restatement data for approach C, not been able break down the non-half-hourly (NHH) reported data into calendar months, as revenue had originally been calculated based upon accounting weeks and not calendar days. ENWL did however have records of the daily NHH data by settlement day and by reconciliation run. ENWL therefore utilised the same data for both restatement and close-out albeit time-shifted

to reflect the billing month when the data would have been received, or settlement day to calculate close-out on a fully reconciled basis. This approach and the underlying data have not changed.

In the close-out data resubmitted on 2nd August 2013, ENWL has though made the following adjustments:

Year	Deltas GWh (Positive change increases losses)		Explanation
	Units Entering	Units Exiting	
2005-06	-0.1	0	
2006-07	-0.1	1	Remove units inserted as a result of Trading Dispute DA329
2007-08	0	2.2	Remove units inserted as a result of DA329
2008-09	-0.5	5.5	Remove DA329 impact and correct for the submission error which started in Feb 2009 (2 months only)
2009-10	0	28.4	Remove the impact from DA329 (2GWh); correcting the submission error (17GWh) and removing the HH unbilled provision (10GWh)

All errors and policy decisions have therefore been correctly reflected in the resubmitted close-out data. In the case of the restatement data, this wasn't impacted by the submission error which was relevant to post 2009/10 and therefore any adjustment was unnecessary in this regard.

From the detail provided in the resubmission, data has only been updated (with current settlement data used) in some elements of the calculation i.e. CVA data (July 2013) and NHH data (March 2013 – 3 years after the end of DPCR4 and hence including all settlement runs).

However, SVA units entering (April 2012) and SVA HH units exiting (12 months after the year end) do not reflect current data. As observed in the case of other DNOs, this data is still being updated through the receipt of D0036 flows and hence has been challenged by ESP. ENWL were therefore requested to examine the potential impact of current data on their losses performance.

Subsequently, ENWL have reviewed their half-hourly (HH) data. Their billing of HH data ceases 12 months after the settlement date and hence any changes received subsequent to that date would not be reflected. Within the prior audit, a difference existed between HH billed and settlement data and this would be a significant and contributing factor to that difference.

ENWL, having rerun their HH data, have identified the following changes:

2009/10 +4GWh
2008/9 +10GWh
2007/8 +4GWh
2006/7 -2GWh
2005/6 N/A - ENWL have not been able to establish the possible updated data for 2005/6 since the original billing was run on a previous system.

As required by Ofgem, the losses incentive should be closed out using current data and ENWL have now resubmitted their application based upon this revised and updated data.

2.1.1.1 Annual Incentive Data

The data resubmitted by ENWL is as per their original annual reporting.

This is to be expected in respect of the above adjustments for the following reasons:

- Trading Dispute DA329 was a manual adjustment to the data as part of the close-out, subsequent to the provision of the annual returns
- The error which duplicated profile class 1-4 unmetered units was made as a result of a software change in April 2010 (albeit therefore impacting settlement data going back 14 months) and hence didn't impact the 2009/10 annual report
- The unbilled provision was part of ENWL's methodology and hence shouldn't be amended in the annual report. The adjustment should only be made in considering the close-out position for 2009/10 on a fully reconciled basis.

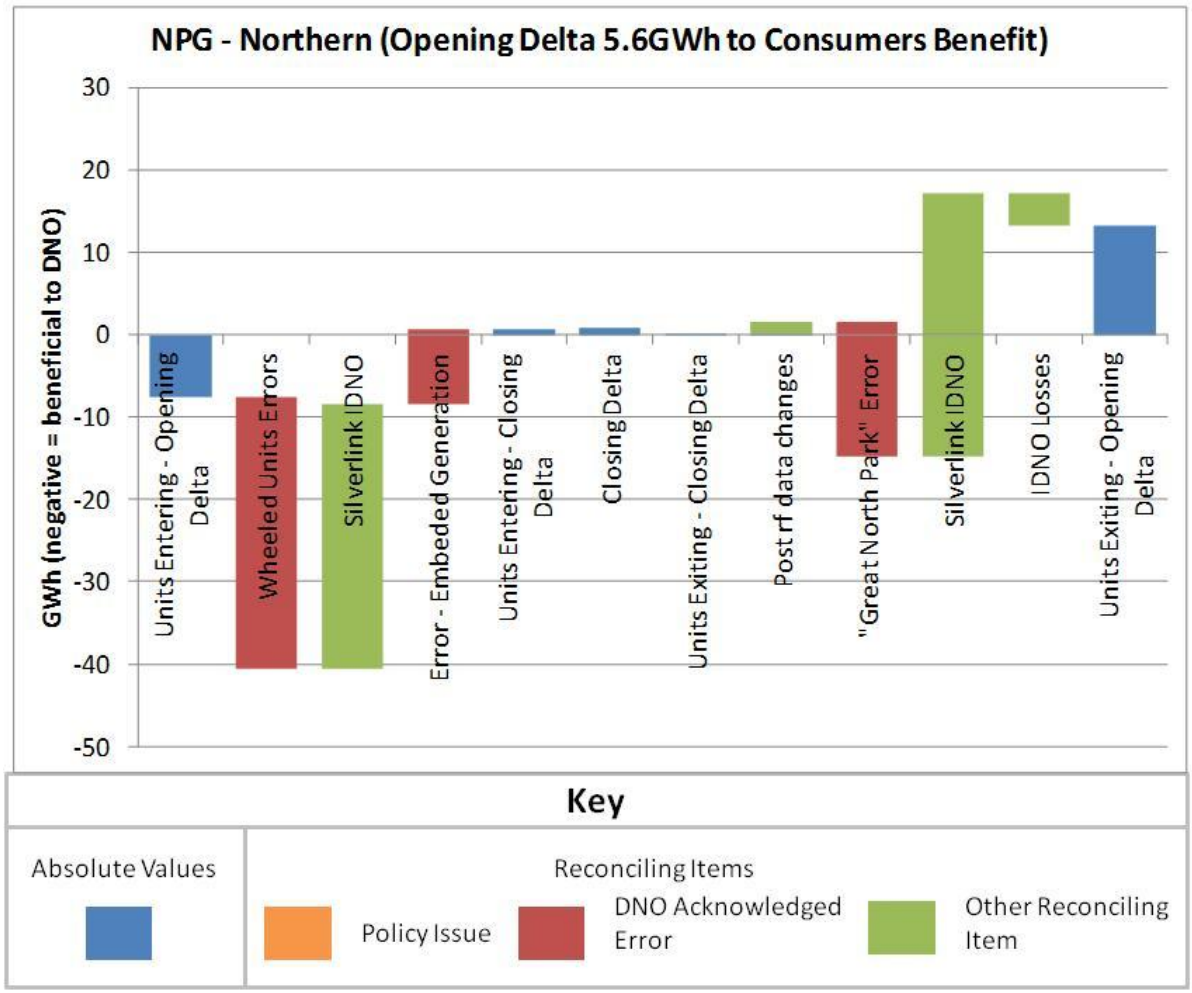
2.2 Northern Powergrid – Northern (NPgN)

Northern Power Grid (NPg) operates two distribution licences covering the North East of England. These cover the licensed areas that were operated by Northern Electric and Yorkshire Electric when the industry was privatised. The following paragraphs discuss the data submitted and resubmitted for the legacy Northern Electric network.

At the start of this process, there was an un-reconciled difference of 5.6GWh between the losses apparent from 2009/10 data submitted by NPg and the apparent losses derived from Settlement data, with this difference being made up as follows:

- **Units Entering NPg's Northern network:** NPG data showed 7.6GWh less energy entering its Northern network than the Settlement data; and
- **Units Exiting NPg's Northern network:** NPG data showed 13.2GWh less energy exiting its network than the Settlement data.

Further investigation reduced this un-reconciled difference to 0.76GWh to the benefit of the Consumer as illustrated below:



2.2.1 Data Resubmission

NPg had originally applied for restatement using its reported data and provided close out data on a fully reconciled settlement basis.

2.2.1.1 Close-out data

From the spreadsheets submitted, the difference between the fully reconciled data previously and currently submitted is:

Positive numbers increase losses (GWh)	Units Entering	Units Exiting
2005-06	- 24.8	14.6
2006-07	- 11.9	14.6
2007-08	- 28.5	15.1
2008-09	- 5.5	11.7
2009-10	- 22.9	15.6

NPg have provided a complete reconciliation of the difference between the two datasets:

Units Entering (GWh)	2005/6	2006/7	2007/8	2008/9	2009/10
Wheeled Unit Error	-26.0	-29.5	-33.0	-31.4	-32.9
Embedded Generation Error	1.1	7.0	4.5	25.9	9.1
Updated GSP data		10.6			1.0
Total	-24.8	-11.9	-28.5	-5.5	-22.9

Units Exiting (GWh)	2005/6	2006/7	2007/8	2008/9	2009/10
Great Nth Park Error	14.5	14.9	15.4	15.7	16.4
Updated IDNO estimates				-4.0	-2.8
Receipt of subsequent DF runs					2.0
Total	14.5	14.9	15.4	11.7	15.6

Other small updates in data have also been received but are immaterial in the above reconciliation.

The above changes appropriately reflect the errors identified previously but also update the data for further adjustments:

- In the case of the wheeled unit error, our initial report incorrectly stated that this error commenced in 2003 whereas in fact it resulted from the change in data provision to Ofgem in 2005/6 where wheeled units were no longer separately analysed.
- Updated grid supply point (GSP) data for Ferrybridge and Osbaldwick and Spadeadam – In their initial data submissions NPg incorrectly assumed that the data for units entering would not have changed from that reported annually. In reality, having changed the date stamp for the current submission (in July 2013), this gave rise to a number of updates to the previously reported data.
- Updated IDNO estimates (which reduces losses) – Whilst IDNO estimates were included in the annually reported data from 2008 onwards, NPg omitted to make the adjustment in submitting the close out data in 2012. They have now corrected this oversight and included the IDNO estimates of units exiting. That said, in submitting 2008/9 annually reported data, NPg included units from 2007/8 which were not reported in that year and this has be corrected in a resubmission of the data.
- Receipt of dispute final (DF) reconciliation runs subsequent to the previous submission reflects the DF runs since the provision of the initial data submission.

2.2.1.2 Restatement data

From the updated workbook submitted by NPg, the difference between the data originally submitted for restatement and that now resubmitted for restatement fully reflects the above errors relevant to restatement data i.e.

Positive numbers increase losses (GWh)	Units Entering (Wheeled unit error plus Embedded Generation error)	Units Exiting (Gt North Park Error)
2005-06	- 24.8	14.5
2006-07	- 22.5	14.9
2007-08	- 28.5	15.4
2008-09	- 5.5	15.7
2009-10	- 23.9	16.4

NPg have provided a reconciliation that reflects this as follows for units entering (units exiting are simply a correction of the Gt North Park error):

(GWh)	2005/6	2006/7	2007/8	2008/9	2009/10
Embedded generation update	1.1	7.0	4.5	25.9	9.1
Wheeled units	-26.0	-29.5	-33.0	-31.4	-32.9
Total	-24.8	-22.5	-28.5	-5.5	-23.9

2.2.1.3 Annual Incentive Data

Annual incentive data had been updated for NPg to correct for errors as necessary with the exception of the Great North Park error. NPg believed that since this energy was billed, it should remain within the annual reported units as adopted by their methodology.

However, following discussions with Ofgem and due to the specific nature of the Great North Park error, NPg have now corrected for this error in its data resubmission. They have not amended the IDNO units reported in 2008/9 since this was the year in which those units (2007/8 and 2008/9 units) were billed.

2.3 Northern Powergrid - Yorkshire

Northern Powergrid operate two distribution licences covering the North East of England. These cover the licensed areas that were operated by Northern Electric and Yorkshire Electric when the industry was privatised. The following paragraphs discuss the data submitted and resubmitted for the legacy Yorkshire Electric network (NPgY).

At the start of this process, there was an un-reconciled difference of 2.1GWh between the losses apparent from 2009/10 data submitted by NPg and the apparent losses derived from Settlement data. Given the small size of this reconciling item, it was felt that no further reconciliation was required. Whilst this view was supported by the industry representatives including the representative of British Gas at an industry workshop to discuss the reconciliation of DNO losses submissions with Settlement data, NPg also provided some justification of the reasons for the difference between the two datasets e.g. Import energy on an export meter; (central volume allocation (CVA) losses at Brigg; and IDNO units. No specific errors or policy issues were identified for NPgY.

2.3.1 Data Resubmission

NPg had originally applied for restatement using its reported data and provided close out data on a fully reconciled settlement basis.

2.3.1.1 Close-out data

In respect of fully reconciled data, the following differences are reflected in the data resubmitted:

Positive numbers increase losses (GWh)	Units Entering	Units Exiting
2005-06	-0.8	-12.0
2006-07	1.8	0.7
2007-08	4.9	-
2008-09	30.4	0.2
2009-10	-1.9	4.5

NPgY have provided a comprehensive reconciliation of the differences with the material items being:

Units Entering (GWh)	2005/6	2006/7	2007/8	2008/9	2009/10
Embedded generation update	-0.8	10.7	5.0	28.4	7.0
Brigg - CVA BMU		0.8		2.0	
West Melton - GSP		0.9			
Ferrybridge - GSP/DSCP		-10.6			
Thurcroft - GSP					-9.0
Total	-0.8	1.8	5.0	30.4	-2.0

Units Exiting (GWh)	2005/6	2006/7	2007/8	2008/9	2009/10
HH data changes	-12.0	0.7			3.6
Receipt of subsequent DF runs					0.9
Total	-12.0	0.7			4.5

Small updates in data have also been received but are immaterial in the above reconciliation

In addition to the known adjustments during the previous review, the following adjustments have now been made:

- Brigg CVA adjustment – In their initial data submissions NPg incorrectly assumed that the data for units entering would not have changed from that reported annually. In reality, having changed the date stamp for the current submission (in July 2013), this gave rise to a number of updates to the that previously reported data, including data in respect of Brigg power station.
- Updated GSP data – As above, changing the date stamp of settlement data has given rise to a number of unexpected changes to units entering the network. Ferrybridge is effectively an interconnector between NPgN and NPgY and hence the adjustment is the reverse of the change made in NPgN. Also, NPg's previous submission included an estimate of the impact relating to a meter multiplier error at Thurcroft GSP (Elexon informed them of the issue prior to the data being corrected) - the estimate was 36GWh but the subsequent actual variance was 45GWh hence the change of 9GWh between the previous submission and this submission.
- HH data changes - 12GWh increase in units exiting in 2005/6 as a result of an ad hoc invoice where units were omitted from their billing systems and from NPgY original data submission. We have been provided with an internal memo from 1/2/2006 that highlights the issue. On further investigation, these units are thought to relate to DPCR3 period and hence have been removed for the restatement and close out data in a resubmission. Other changes have resulted from current data having been received from settlements.
- Receipt of DF subsequent to previous submission reflects the DF runs since the provision of the initial data submission.
- In their submission, NPg failed to include units distributed to IDNOs and metered at the boundary in their close out calculations. The data was included in their annually reported data although 2007/8 units were not reported until 2008/09. In a subsequent resubmission, NPg have now included the additional units in the close-out calculation and amended the units in the restatement calculation for 2007/8 and 2008/9 from those originally reported.

2.3.1.2 Restatement data

In applying for restatement, the data has appropriately changed as follows (the majority of the above changes only being relevant to close-out data):

Positive numbers increase losses (GWh)	Units Entering	Units Exiting
2005-06	- 0.8	-
2006-07	10.7	-
2007-08	5.0	-
2008-09	28.4	-
2009-10	7.0	-

This change relates to the same error identified in NPgN whereby the data scripts used to compile the data for the annual returns have now been found to have excluded any units exported by embedded generators during the year in which they were then subsequently disconnected before the year end. This was flagged at the same time as the NPgN error but, given the scale of the difference in NPgY, was not reflected in our report. This correction does increase reported losses to the benefit of customers.

In our initial report, the variance in units in comparison to Settlements data for NPgY was 2.1 GWh in 2009/10 with a number of potential issues explaining that difference. No further review was therefore performed in respect of NPgY. The identification and correction of this error has increased the unreconciled difference with settlements data to 8GWh but in consumers' favour.

2.3.1.3 Annual Incentive Data

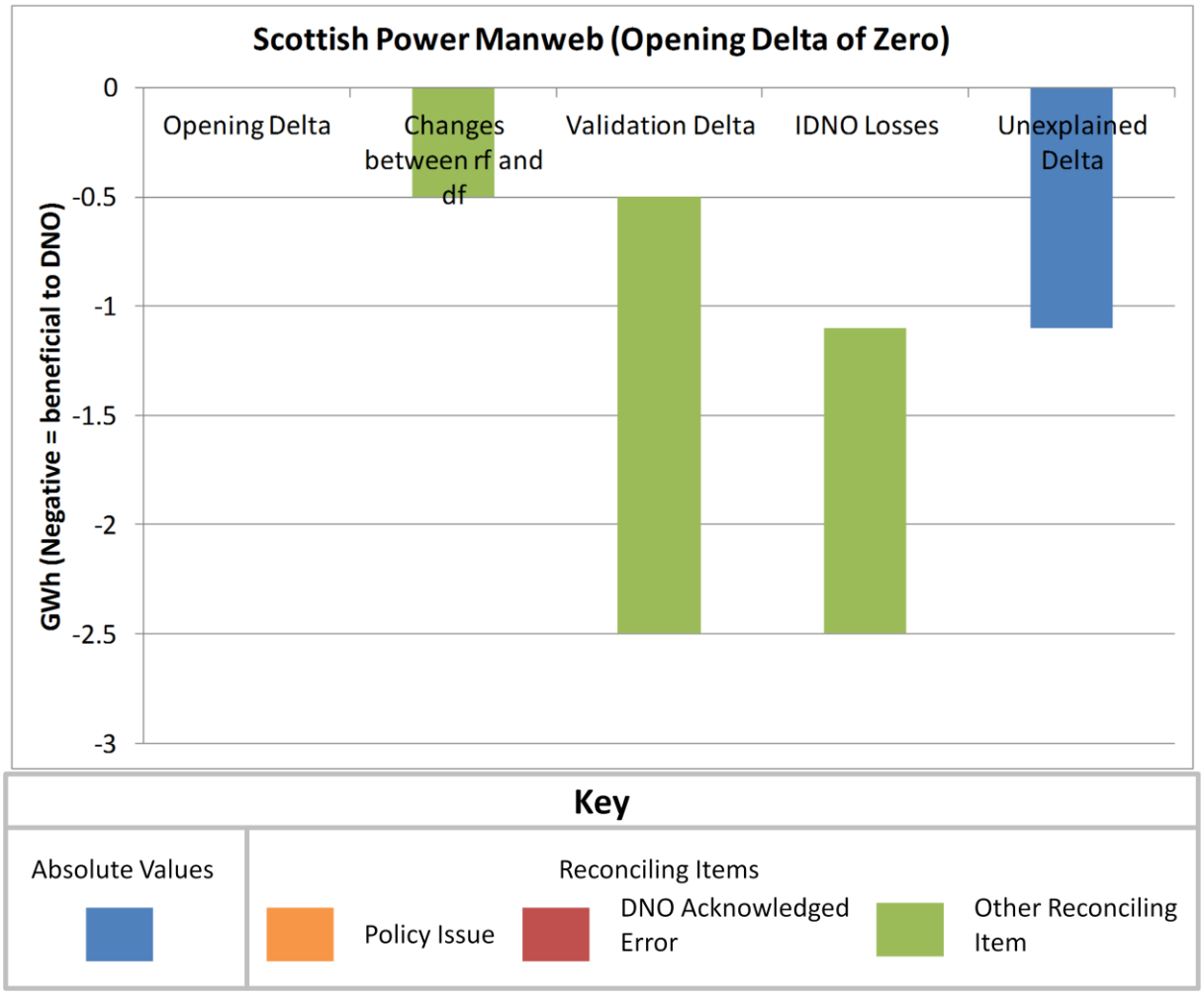
Annual incentive data has been updated for NPg to correct for the script error in respect of embedded generation. However, the annual incentive data has not been updated to reflect the billing issues that were identified in the initial report in 2005/6 and 2006/7. NPg believe this would be inappropriate and contrary to their methodology which calculates losses on the basis of billed data. The issue was caused by the need to withhold DF runs in 2005/6 due to a conflict with their billing software and the billing was amended in 2006/7 to subsequently reflect those DF runs.

For similar reasons, IDNO units for 2007/8 were reported and billed in 2008/9 but no adjustment has also been made to the annual incentive data

2.4 Scottish Power – Manweb (SPMW)

Scottish Power operate two distribution licences covering the South of Scotland as well as Merseyside and North Wales. These cover the licensed areas that were operated by Scottish Power and MANWEB when the industry was privatised. The following paragraphs discuss the data submitted and resubmitted for the legacy MANWEB network.

At the start of this process, the losses apparent from Scottish Power's submitted data for the MANWEB area completely reconciled with that derived directly from settlement data. Scottish Power subsequently investigated their submissions, and validated the data against that in settlement. This reconciliation is shown below, and led to an un-reconciled difference of 1.1GWh in favour of Scottish Power.



2.4.1 Data Resubmission

SP's methodology means that the data it provides for restatement under Approach C and close out is the same. SP's method of using fully reconciled data in their losses calculation is implied within their methodology. Their methodology makes an estimate of unbilled units which is then corrected via restatement of prior years as existed in 2005/6 and 2006/7 returns.

In the case of SPMW, there were no errors or policy issues to correct and hence the data has remained the same.

However, in providing a reconciliation of losses data to settlement data for our original report, SP did highlight small changes in their data used for their original losses calculation which were not ordinarily reflected in settlement data provided by Elexon in August 2012. Further small changes in the data might therefore be expected since June 2012 but SP have confirmed this is not the case in respect of SPMW.

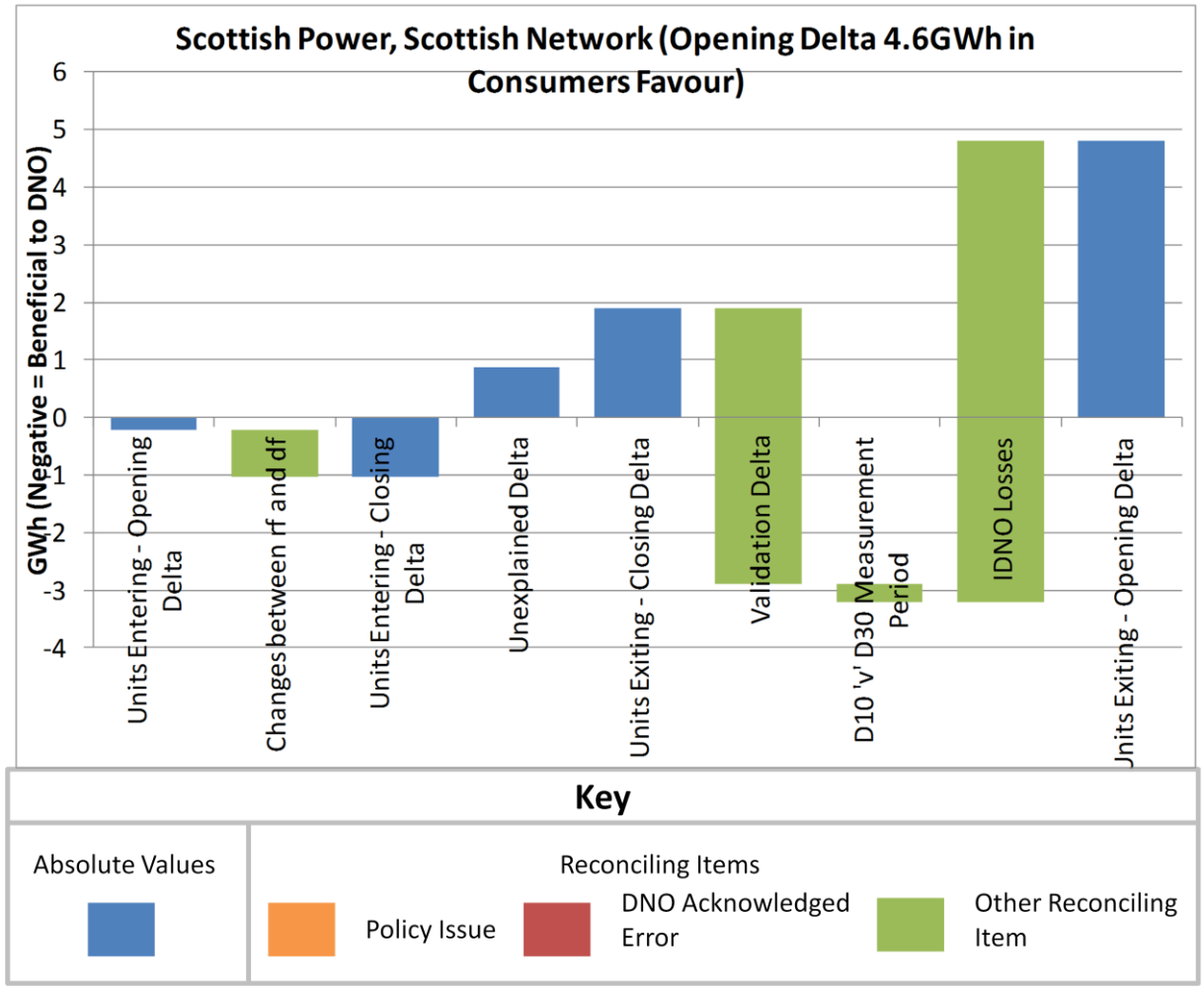
2.4.1.1 Annual Incentive Data

SPMW has resubmitted reported data for previous years, replacing provisions with fully-reconciled data in line with its historical reporting methodology.

2.5 Scottish Power – Southern Scotland (SPD)

Scottish Power operates two distribution licences covering the South of Scotland as well as Merseyside and North Wales. These cover the licensed areas that were operated by Scottish Power and MANWEB when the industry was privatised. The following paragraphs discuss the data submitted and resubmitted for the legacy Scottish Power network.

At the start of this process, the losses apparent from Scottish Power's submitted data for the Southern Scotland area completely reconciled with those derived directly from settlement data. Scottish Power subsequently investigated their submissions, and validated the data against that in settlement. This reconciliation is shown below, and led to an un-reconciled difference of 0.8 GWh in favour of the consumer.



2.5.1 Data Resubmission

SP's methodology means that the data it provides for restatement and close out is the same. SP's method of fully reconciled data in their losses calculation is implied within their methodology. Their methodology makes an estimate of unbilled units which is then corrected via restatement of prior years as existed in 2005/6 and 2006/7 returns.

In the case of SPD, there were no errors or policy issues to correct and hence the data has remained principally the same. The only change is the result of new HH data received for sales via D0036 flows subsequent to the original data being provided in July 2012:

Year	Deltas (Positive change increases losses) (GWh)	
	Units Entering	Units Exiting
2005-06	0	0
2006-07	0	0
2007-08	0	-1.089
2008-09	0	-4.611
2009-10	0	-5.044

In providing a reconciliation of losses data to settlement data for our original report, SP did highlight such data changes (being data they received that wasn't incorporated into future settlement runs) between their original losses calculation and that data provided by Elexon in August 2012. SP confirmed that additional data was received in September 2012 in respect of 2007/8, 2008/9 and 2009/10 as above.

2.5.1.1 Annual Incentive Data

SPD has resubmitted reported data for previous years, replacing provisions with fully-reconciled data in line with its historic reporting methodology.

2.6 Scottish and Southern Energy - Hydro

Scottish and Southern Energy operate two distribution licences covering the North of Scotland and the South of England. These cover the licensed areas that were operated by Hydro Electric and Southern Electric when the industry was privatised. The following paragraphs discuss the reconciliation of the legacy Hydro Electric network.

At the start of this process, there was an un-reconciled difference of 0.9GWh between the losses apparent from 2009/10 data submitted by SSE for the Hydro Electric network (SSEH) and the apparent losses derived from Settlement data. Given the small size of this reconciling item, it was felt that no further reconciliation was required. This view was supported by industry representatives and the representative of BG at an industry workshop to discuss the reconciliation of DNO losses submissions with Settlement data.

2.6.1 Data Resubmission

SSEH has not applied for restatement and has not therefore submitted data under approach C.

In resubmitting its data for close out, there were no errors to correct and SSEH has made no updates in its recent resubmission and hence its losses calculation remains at 7.71%

SSE have stated that, both now and during the previous review, their data has been compiled using D0275 data flows. These flows were also the source of their billing and the annual returns for units distributed during DPCR4. They have stated that HH data flows are only used up to 14 days after the event and therefore no further updates are adopted. To prove that the latest data has been used, SSE have also rerun extracts for 2009/10 to include any D0275 data flows beyond 14 days and have confirmed that the fully updated HH metered volumes for this period remain unchanged. Whilst other DNOs have adopted D0036 data flows for billing, SSE has continued to utilise D0275 data flows as part of their methodology and hence it appears reasonable for it to continue to do so for the close-out calculation.

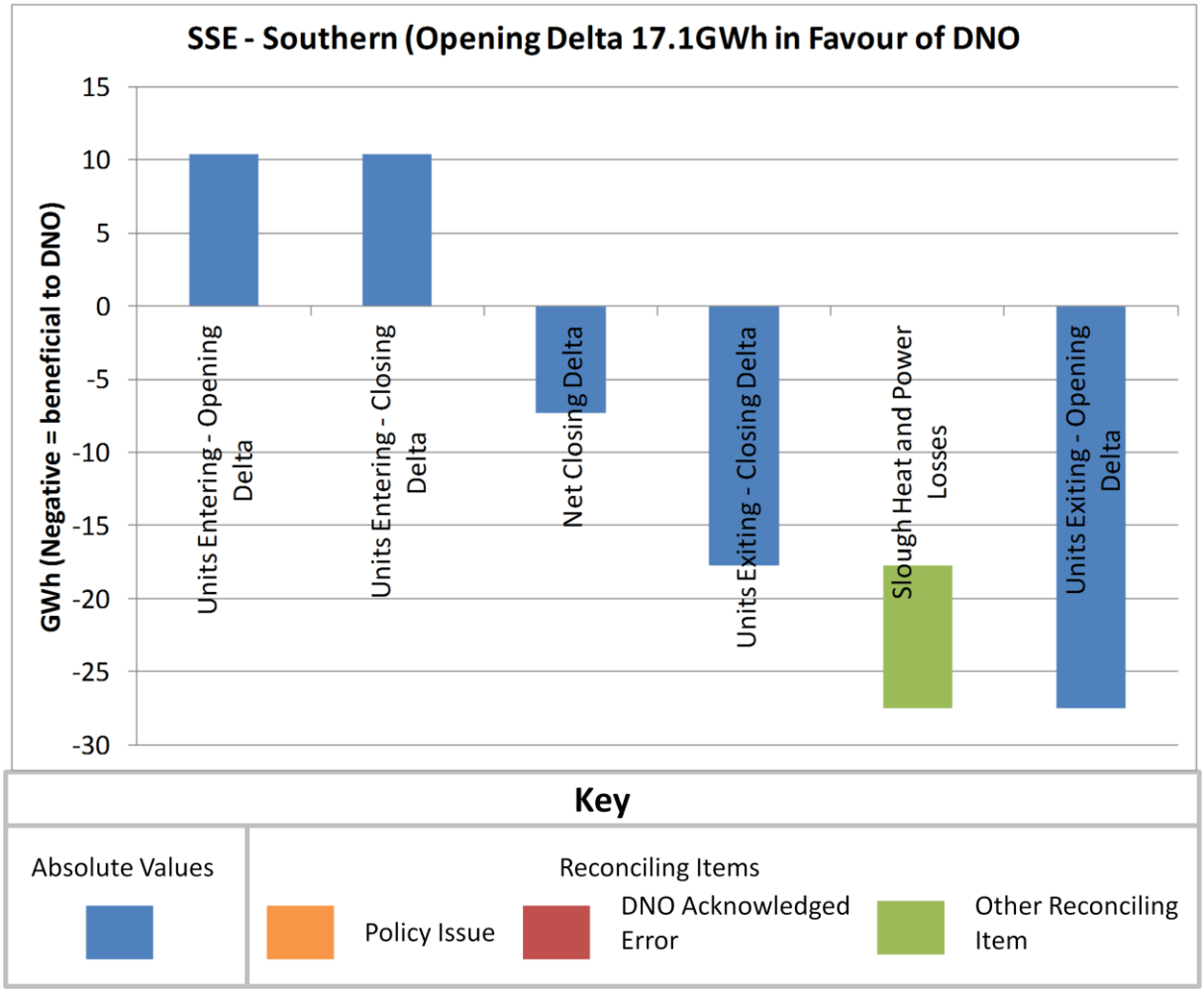
2.7 Scottish and Southern Energy – Southern

Scottish and Southern Energy operate two distribution licences covering the North of Scotland and the South of England. These cover the licensed areas that were operated by Hydro Electric and Southern Electric when the industry was privatised. The following paragraphs discuss the reconciliation of the legacy Hydro Electric network.

At the start of this process, there was an un-reconciled difference of 17.1 GWh between the losses apparent from 2009/10 data submitted by SSE for the Southern network and the apparent losses derived from Settlement data, with this difference being made up as follows:

- **Units Entering SSE's Southern network:** SSE data showed 10.5GWh more energy entering its Southern network than the Settlement data; and
- **Units Exiting SSE's Southern network:** SSE data showed 27GWh more energy exiting its Southern network than the Settlement data.

Further investigation reduced this un-reconciled difference to 5.6GWh as illustrated below:



2.7.1 Data Resubmission

SSES has not applied for restatement and has not therefore submitted data under approach C.

In resubmitting its data for close out, there were no errors to correct and SSES has made no updates and hence its losses calculation remains at 5.96%.

SSE have stated that, both now and during the previous review, their data has been compiled using D0275 data flows. These flows were also the source of their billing and the annual returns for units distributed during DPCR4. They have stated that HH data flows are only used up to 14 days after the event and therefore no further updates are adopted. To prove that the latest data has been used, SSE have also rerun extracts for 2009/10 to include any D0275 data flows beyond 14 days and have confirmed that the fully updated HH metered volumes for this period remain unchanged. Whilst other DNOs have adopted D0036 data flows for billing, SSE has continued to utilise D0275 data flows as part of their methodology and hence it appears reasonable for it to continue to do so for the close-out calculation.

In their letter to Ofgem dated 5th February 2013, SSE set out a number of approaches on which it could calculate its losses % as follows:

Southern losses in 2009/10			Target 6.68%	
	Entering	Exiting	Losses	Loss %
DPCR5 methodology confirmed by Ofgem	34,603,180	32,655,798	1,947,382	5.96%
Elexon only data	34,429,507	32,465,161	1,964,346	6.05%
DPCR4 fully reconciled SSE data	35,862,249	33,922,659	1,939,589	5.72%
DPCR4 fully reconciled Elexon SVAA	35,862,249	33,895,127	1,967,122	5.80%

The approach taken in its current submission remains the 'DPCR5 methodology confirmed by Ofgem'

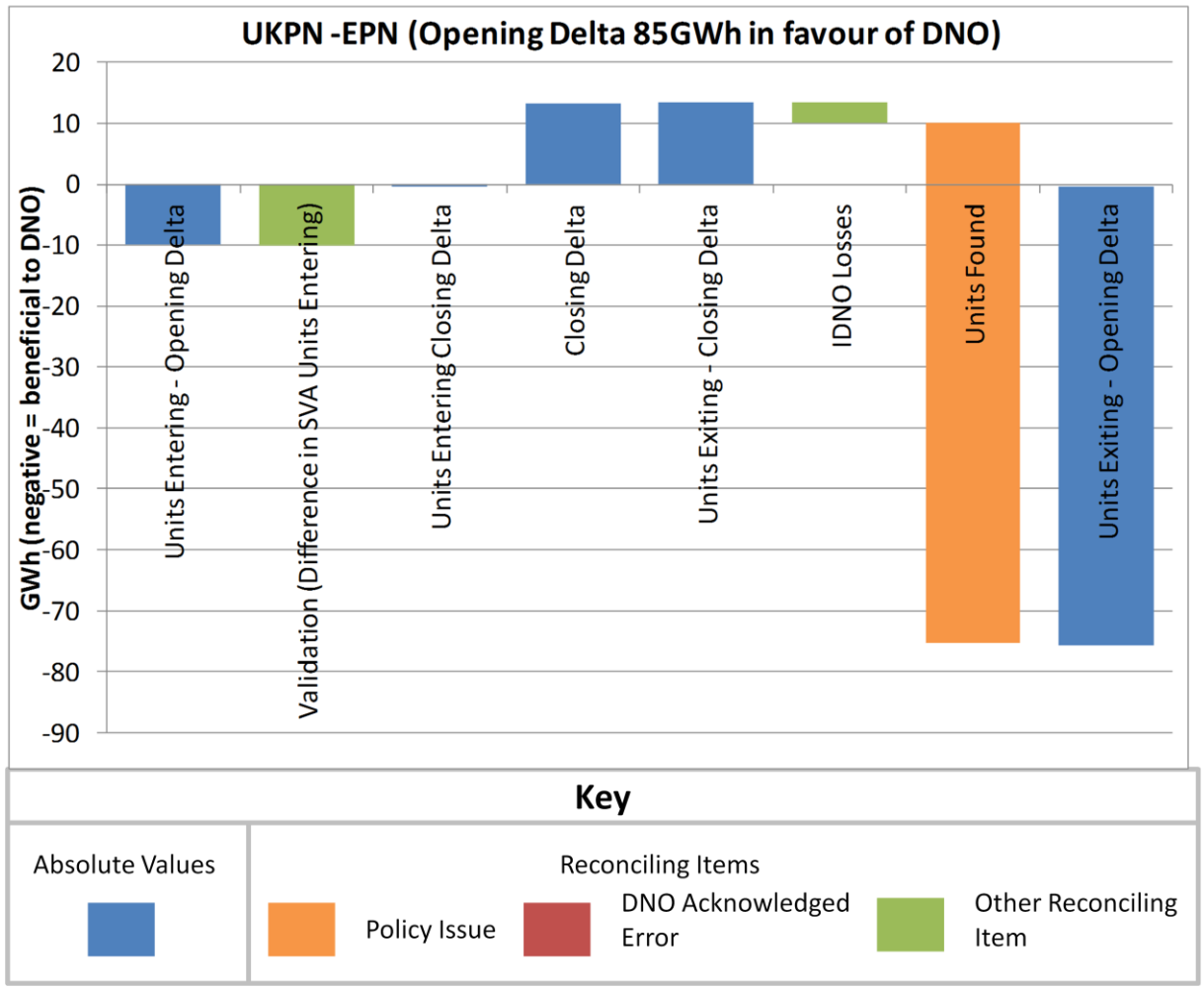
2.8 UK Power Networks – Eastern (UKPN - EPN)

UK Power Networks operate three distribution licences covering the South East of England. These cover the licensed areas that were operated by Eastern Electricity, London Electricity and SEEBOARD when the industry was privatised. The following paragraphs discuss the reconciliation of the legacy Eastern Electricity network.

At the start of this process, there was an un-reconciled difference of 85GWh between the losses apparent from 2009/10 data submitted by UKPN EPN and the apparent losses derived from Settlement data, with this difference being made up as follows:

- **Units Entering UK Power Networks Eastern Network:** UK Power Networks data showed 9.8 GWh less energy entering its Eastern network than the Settlement data; and
- **Units Exiting UK Power Networks Eastern Network:** UK Power Networks data showed 75.3GWh more energy exiting its network than the Settlement data.

Further investigation reduced this un-reconciled difference to 13.21GWh in favour of consumers and is illustrated below:



2.8.1 Data resubmission

EPN have resubmitted data both in respect of their restatement and their close out.

2.8.1.1 Close-out Data

In resubmitting data for close out in line with Ofgem's instructions of 12th July 2013, UKPN initially submitted the following changes from that audited previously:

	Deltas (Positive change increases losses) (GWh)		DNO Explanation
	Units Entering	Units Exiting	
2005-06	-	-3.2	The variances represent the differences between originally reported Data Management units and the revised values re-allocated to the period during which the energy actually flowed.
2006-07	-	9.7	
2007-08	-	-32.7	
2008-09	-	-24..7	
2009-10	-	14.1	

The following reflects the disaggregation of the changes made to close out data:

	2005/6	2006/7	2007/8	2008/9	2009/10
Reversal of previous data management units	29	46	21	35	86
New allocation of DMU	-31	-37	-54	-60	-71
Removal of unreconciled difference >10GWh	-1	0	0	0	0
Total change	-3	9	-33	-25	15

From the initial audit, it was found that the inclusion of data management units of 85GWh was based upon units found in that year (relating back over several years) and didn't reflect the energy that flowed in the relevant year. Ofgem's July 2013 document therefore requested that UKPN only include units that were delivered in the settlement period in question. In providing a revised submission, UKPN initially removed their initial estimate of DMU found; they have now revised the calculation of units found (including units found subsequent to the end of the DPCR4 period but related to the DPCR4 period) as expanded upon below.

In its initial resubmission, UKPN removed any unidentified losses when assessed against settlement data, over and above a 10GWh limit that was deemed to be an acceptable level of tolerance. Following discussions with Ofgem and UKPN, this adjustment has now been removed.

In assessing the DMU to be applied to the relevant settlement period, UKPN made a number of separate calculations for EPN:

GWh	2005/6	2006/7	2007/8	2008/9	2009/10
Reprofiling of units reported in DPCR4	20	22	34	27	12
Units identified by Revenue protection not in settlements	5	7	9	14	27
Units forecast to be identified over the remainder of DPCR5 but relating to DPCR4	1	2	2	3	4
Units identified as being used by energised customers but with a de-energised status	1	2	3	8	19
Units forecast to be found in the remainder of DPCR5 for energised customers with a de-energised status	0	0	0	0	1
Units not in settlements for individual investigation of larger sites	4	4	5	8	8
Total	31	37	53	60	71

The basis for these calculations is as follows:

- **Reprofiling of units reported in DPCR4** – UKPN have reprofiled the units found in DPCR4 on the basis of the settlement periods to which they relate. This has resulted in 86% of units previously reported in 2009/10 now being reprofiled into other periods including a significant proportion into DPCR3 years.
- **Units identified by Revenue Protection (RP)** – UKPN have analysed the RP cases identified between April 2010 and June 2013 and reprofiled these units to the settlement periods to which they relate and we have referenced these values back to summary spreadsheets that reflect data provided by field operatives. The scale and period of the adjustment reflects the assessment made by RP officers by reference to historic data and the specifics of the customer i.e. an assessment of electrical equipment on site. In each case these estimated have been provided to the supplier to be taken up with the customer. In their resubmission, UKPN have updated their assessment for cases identified up to 19th August 2013.
- **Projection of RP units over the remaining DPCR5 period** – UKPN, using current data available (the detail of historic cases 2009/10 – 2012/13), have assessed the level of theft identified and the profile over which the thefts relate. In some cases such thefts can continue over many years and this assessment reflects cases yet to be uncovered but which related to DPCR4 periods. Given the protracted period, thefts in RIIO-ED1 could also relate to previous years which could amount to 36GWh across UKPN's networks based upon their recent experiences (2009/10 to present day); UKPN have not taken credit for this extended period That said, this adjustment (12GWh for EPN) still reflects units which are yet to be found, albeit an estimate of the next 18 months' activity only.

  The original estimate (of future theft detection that would impact units delivered in DPCR4) as submitted by UKPN was based upon a straight average of historic detection rates. This approach is likely to be generous to UKPN, given the declining nature of the cases found, even though UKPN have restricted the extrapolation to DPCR5 only. In their revised resubmission, UKPN have reduced the estimated benefit in 2013/14 by 25% and by 50% for 2014/15.
- **Customers with a de-energised status** – This represents the value of units found by UKPN's programme of inspection of customers whose settlement status is de-energised. The calculation is based upon the energy calculated as having been consumed by the customer where the site is found to be energised. The calculation assesses the energy over the period from when the site was de-energised to when it is energised by the supplier with reference to either its current consumption as a HH site or to the average consumption for the profile class where it is a NHH site. Since it can't be ascertained whether that site was ever physically de-energised (or if it was, at which point in time it was re-energised), UKPN has used

an assumption that, on average, sites were energised for 50% of the period. UKPN consider this a prudent assumption owing to the time taken by suppliers to change the status once UKPN has identified the incorrect status (from analysis of records 12 months ago, it has taken suppliers an average of 4-6 months to change a customer's status).

- **Projection of future site visits of de-energised customers –** UKPN, similar to the approach taken for theft, had also estimated the energy omitted from DPCR4 from future site visits of de-energised supplies. 8.5% of EPN de-energised sites were found to be energised historically. They had, however, ignored the opportunity from missing units of the 113 HH sites still to be investigated due to their specific and therefore unpredictable consumption. Whilst these sites are likely to be inspected in the next 2 years as a result of statutory safety (ESQCR) regulations, the adjustment still reflects an estimate of units yet to be found. In their resubmission, in consultation with Ofgem, UKPN has now removed all estimates of future site visits of de-energised customers from their close out calculation (24GWh in aggregate across the three networks).
- **Units missing from larger sites –** This adjustment reflects errors identified from consumption patterns where Current Transformers attached to the meter (to step down the current going through the meter by a specified factor) may have failed or the details are incorrect within settlements leading to an under-recording of units consumed. No inclusion has been made of estimated future cases which could be found over the remainder of DPCR5 (~20GWh).

In the above cases we have reviewed the models and spreadsheets used to calculate units found, taking individual records of units found compiled by operatives, and aggregating them over the period to which the error relates. We have also reviewed the appropriateness of any modelling adjustments made in reaching the final calculations. In reviewing the data prior to sending it to us, UKPN found an error which increases the calculated units found by 0.5GWh over the 3 DNOs over the 5 years but does have a greater impact on the profile of those units. This error has now been corrected in a subsequent resubmission.

Also as part of the submission, UKPN have updated their HH data received from meter operators received via D0036 flows in respect of DPCR4 periods but billed when received as part of DPCR5.

2.8.1.2 Restatement data

	Deltas (Positive change increases losses) (GWh)		DNO Explanation
	Units Enter	Units Exit	
2005-06	-	0.4	
2006-07	7.33	-	Correction of previously reported data per audit report
2007-08	-	-	
2008-09	-	-0.1	
2009-10	-	-	
2010-11	-	-0.5	
2011-12	-	0	
2012-13	26.1	-23.5	Data not previously provided

From the initial audit, the following issues were identified:

- There was a small difference between reported units and restatement data which differed by 7GWh in 2006/7. Given the focus of that review of 2009/10 data and the materiality of this, it wasn't reviewed in detail in the initial work but on resubmission UKPN found a compilation error in the data submitted and have now corrected this such that the data now submitted for restatement agrees with that reported historically.

- In the initial submission for restatement and the annual return for 2009/10, UKPN released all of their opening billing provisions, including 241GWh (year-end 2009/10 provision would be 284GWh on the same basis) in respect of Eastern. This treatment of releasing this provisions in the 2009/10 returns , based upon their interpretation of the DPCR5 final proposals, in our view amounted to a change in their methodology from earlier DPCR4 years and was not as intended by Ofgem's approach. UKPN have now resubmitted their data and reinserted their provisions within their annual incentive data.

In resubmitting their data for restatement, UKPN have now followed the methodology adopted by some other DNOs rather than use historically reported data. They have therefore used settlement data time-shifted to align with when those units would have been billed. This was because, similar to other DNOs, their methodology utilised a number of estimates and provisions that would have otherwise distorted the volatility seen in settlement data.

2.8.1.3 Annual Incentive Data

As discussed above, EPN initially made no change in their recent August 2013 submissions to their original annual reported SLC47 data. There were no errors to adjust for and the data management unit reprofiling is relevant for close out only. However, following discussions with Ofgem, UKPN have now included 284GWh of provisions re-instated for EPN in line with their past methodology.

2.8.2 Policy decisions

- UKPN have reduced their estimated units to be found by RP in 2013/14 by 25% and by 50% in 2014/15 to provide a more prudent assessment of future cases to be identified. That said, this still incorporates 7GWh of units to be found that relate to DPCR4 timescales. We would highlight that to provide credit for such units now does not guarantee future work will be carried out or the units will indeed be found.

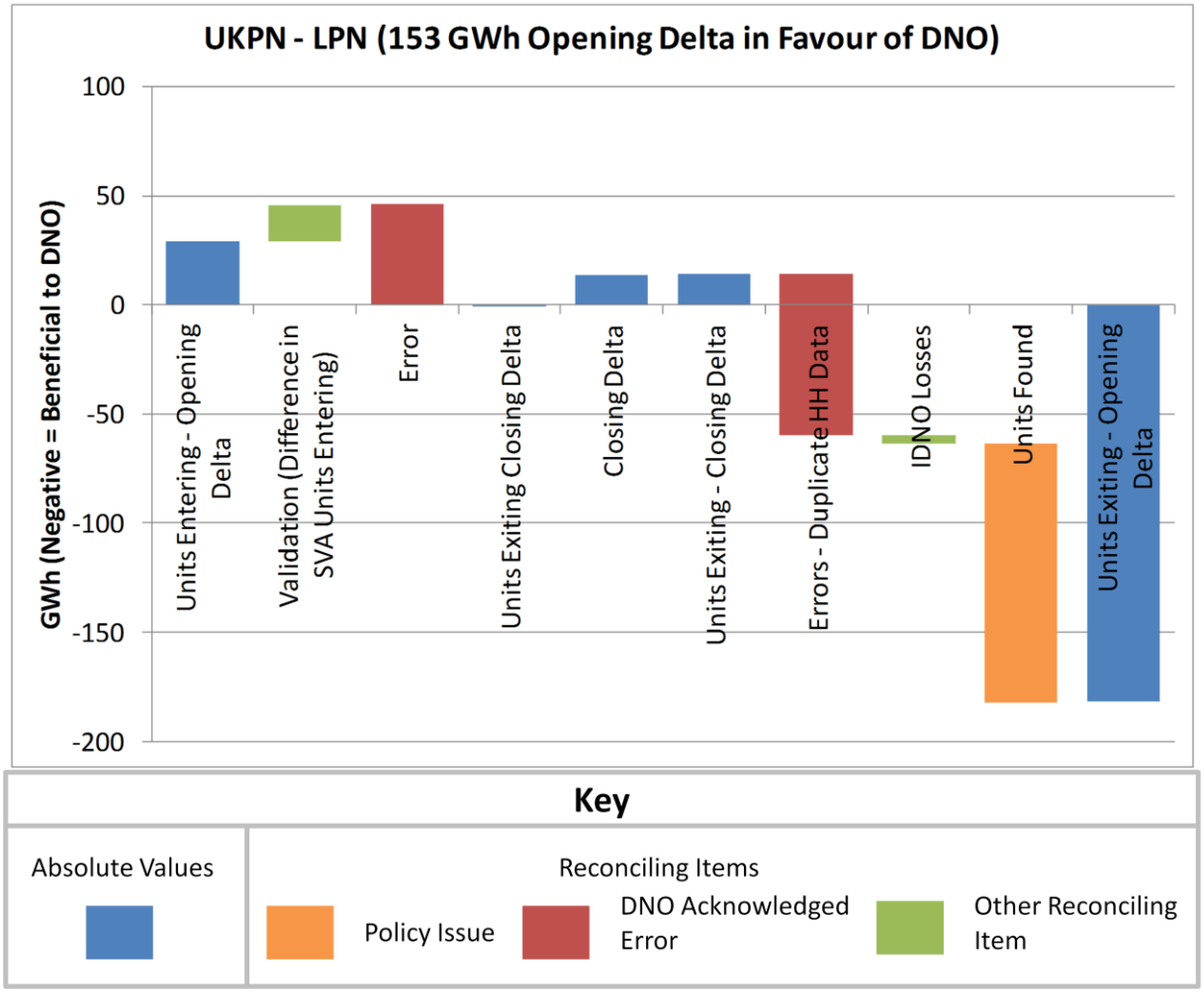
2.9 UK Power Networks – London (UKPN – LPN)

UK Power Networks operate three distribution licences covering the South East of England. These cover the licensed areas that were operated by Eastern Electricity, London Electricity and SEEBOARD when the industry was privatised. The following paragraphs discuss the reconciliation of the legacy Eastern Electricity network.

At the start of this process, there was an un-reconciled difference of 153GWh between the losses apparent from 2009/10 data submitted by UK Power Networks and the apparent losses derived from Settlement data, with this difference being made up as follows:

- **Units Entering UK Power Networks London Network:** UK Power Networks data showed 29 GWh more energy entering its London network than the Settlement data; and
- **Units Exiting UK Power Networks Eastern Network:** UK Power Networks data showed 182 GWh more energy exiting its network than the Settlement data.

Further investigation reduced this un-reconciled difference to 13.5 GWh in favour of the DNO as illustrated below:



2.9.1 Data resubmission

Following Ofgem's decision of 12th July, UKPN have now submitted data for restatement and resubmitted data for close out.

2.9.1.1 Close-out data

For close out, the following changes were made to their initial data submission:

	Deltas (Positive change increases losses)		DNO Explanation
	Units Entering	Units Exiting	
2005-06	-44.4	14.5	Changes are corrections to errors in previously submitted data as outlined to ESP consulting. Secondary changes relate to data from moving data management units from a reported to a settlement basis
2006-07	-43.8	32.9	
2007-08	-44.4	12.7	
2008-09	-44.6	-110.9	
2009-10	-45.7	109.8	

From the initial audit, the following errors and issues were identified:

- The inclusion of data management units of 118GWh
- The duplication of the units flowing to the Acton Lane (London Underground) site (46GWh in 2009/10)
- Duplication in the compilation of HH data for the close out calculation (28GWh in 2009/10)

The following reflects the changes made to close out data to correct for the above issues:

- For units entering, the change made reflects the removal of one side of the duplication of the units flowing to Acton Lane (46GWh in 2009/10)
- For units exiting, the disaggregation of the above change is as follows:

(GWh)	2005/6	2006/7	2007/8	2008/9	2009/10
Delete duplicate data in compiling data	26	4	41	24	74
Reversal of previous data management units	29	130	41	4	119
New allocation of DMU	-40	-39	-57	-79	-83
Removal of unreconciled difference >10GWh	0	-62	-12	-60	0
Total change	15	33	-13	-111	110

From the initial audit, the flows to the TFL Acton substation were added to both entering and exiting but, for units entering, this duplicated the CVA registered Balancing Mechanism Unit (BMU). For units exiting the duplication was restricted to 2009/10 in the compilation of the close-out data and was corrected within the 'duplicate HH data in compiling data' adjustment above (28GWh + 46GWh). The issue of the TFL Acton Lane substation arose in 2004 with the introduction of common systems and hence wouldn't impact targets which used data up to and including 2003/4.

From the initial audit, it was found that the inclusion of data management units of 118GWh was based upon units found in that year (relating back over several years) and didn't reflect the energy that flowed in the relevant year.

Ofgem's July 2013 document therefore requested that UKPN only include units that were delivered in the settlement period in question. In providing a revised submission, UKPN have removed their initial estimate of DMU found but have redone the calculation of units found (including units found subsequent to the end of the DPCR4 period but related to the DPCR4 period) which is expanded upon below.

In its initial resubmission, UKPN had removed any unidentified losses when assessed against settlement data, over and above a 10GWh limit that was deemed to be an acceptable level. In almost all cases such an adjustment was to the benefit of UKPN in reducing their losses calculated. Following discussions with Ofgem and UKPN, this adjustment has now been removed.

In assessing the DMU to be applied to the relevant settlement period, UKPN made a number of separate calculations for LPN:

(GWh)	2005/6	2006/7	2007/8	2008/9	2009/10
Reprofiling of units reported in DPCR4	25	17	29	41	19
Units identified by Revenue protection not in settlements	5	8	11	14	21
Units forecast to be identified over the remainder of DPCR5 but relating to DPCR4	1	2	2	3	4
Units identified as being used by energised customers but with a de-energised status	7	8	10	14	31
Units forecast to be found in the remainder of DPCR5 for energised customers with a de-energised status	1	3	4	6	7
Units not in settlements for individual investigation of larger sites	0	0	1	2	1
Total	39	38	57	80	83

The basis for these calculations is as follows:

- **Reprofiling of units reported in DPCR4** – UKPN have reprofiled the units found in DPCR4 on the basis of the settlement periods to which they relate. This has resulted in 86% of units previously reported in 2009/10 now being reprofiled into other periods including a significant proportion into DPCR3 years.
- **Units identified by Revenue Protection** – UKPN have analysed the RP cases identified between April 2010 and June 2013 and reprofiled these units to the settlement periods to which they relate and we have referenced these values back to summary spreadsheets that reflect data provided by field operatives. The scale and period of the adjustment reflects the assessment made by RP officers by reference to historic data and the specifics of the customer i.e. an assessment of electrical equipment on site. In each case these estimates have been provided to the supplier to be taken up with the customer. In their resubmission, UKPN have updated their assessment for cases identified up to 19th August 2013.
- **Projection of RP units over the remaining DPCR5 period** – UKPN, using current data available (the detail of historic cases 2009/10 – 2012/13), have assessed the level of theft identified and the profile over which the thefts relate. In some cases such thefts can continue over many years and this assessment reflects cases yet to be uncovered but which related to DPCR4 periods. Given the protracted period, thefts in RIIO-ED1 could also relate to previous years which could amount to 36GWh across UKPN's networks based upon their recent experiences (2009/10 to present day); UKPN have not taken credit for this extended period That said, this adjustment (12GWh for LPN) still reflects units which are yet to be found, albeit an estimate of the next 18 months' activity.

  The original estimate (of future theft detection that would impact units delivers in DPCR4) was based upon a straight average of historic detection rates. This approach is likely to be generous to UKPN given the declining nature of the cases found, although UKPN have restricted the extrapolation to DPCR5 only.

In their revised resubmission, UKPN have reduced the estimated benefit in 2013/14 by 25% and by 50% for 2014/15.

- **Customers with a de-energised status** – This represents the value of units found by UKPN's programme of inspection of customers whose settlement status is de-energised. The calculation is based upon the energy calculated as having been consumed by the customer where the site is found to be energised. The calculation assesses the energy over the period from when the site was de-energised to when it is energised by the supplier with reference to either its current consumption as a HH site or to the average consumption for the profile class where it is a NHH site. Since it can't be ascertained whether that site was ever physically de-energised (or if it was, at which point in time it was re-energised), UKPN has used an assumption that, on average, sites were energised for 50% of the period. UKPN consider this a prudent assumption owing to the time taken by suppliers to change the status once UKPN has identified the incorrect status (from analysis of records 12 months ago, it has taken suppliers an average of 4-6 months to change a customer's status).
- **Projection of future site visits of de-energised customers –** UKPN, similar to the approach taken for theft, also estimated the energy omitted from DPCR4 from future site visits of de-energised supplies. They have however ignored the opportunity from missing units of the 113 HH sites still to be investigated due to their specific and therefore unpredictable consumption. Whilst these sites are likely to be inspected in the next 2 years as a result of ESQCR obligations, the adjustment still reflects an estimate of units yet to be found (28GWh). In their resubmission, in consultation with Ofgem, UKPN has now removed all estimates of future site visits of de-energised customers from their close out calculation (now 24GWh in aggregate across the three networks)
- **Units missing from larger sites –** This adjustment reflects errors identified from consumption patterns where Current Transformers attached to the meter (to step down the current going through the meter by a specified factor) may have failed or the details are incorrect within settlements leading to an under-recording of units consumed. No inclusion has been made of estimated future cases which could be found over the remainder of DPCR5 (~20GWh).

In the above cases we have reviewed the models and spreadsheets used to calculate units found, taking individual records of units found compiled by operatives, and aggregating them over the period to which the error relates. We have also reviewed the appropriateness of any modelling adjustments made in reaching the final calculations. In reviewing the data prior to sending it to us, UKPN found an error which increases the calculated units found by 0.5GWh over the 3 DNOs over the 5 years but does have a greater impact on the profile of those units. This error has now been corrected in a subsequent resubmission.

Also as part of the submission, UKPN have updated their HH data received from meter operators received via D0036 flows in respect of DPCR4 periods but billed when received as part of DPCR5.

2.9.1.2 Restatement data

LPN did not originally apply for restatement in the 2012 process. In its first submission in response to the July 2013 data request LPN initially duplicated the inclusion of NHH data within their restatement units within the relevant tab of the spreadsheet. This has now been corrected.

In resubmitting their restatement data, UKPN have now followed the methodology adopted by some other DNOs rather than use historically reported data. They have therefore used settlement data time-shifted to align with when those units would have been billed. This was because, similar to other DNOs, their methodology utilised a number of estimates and provisions that would have otherwise distorted the volatility seen in settlement data.

2.9.1.3 Annual Incentive Data

LPN initially made no change to their original annual reported SLC47 data. Data management unit reprofiling is relevant for close out only as are the compilation errors and removal of any excessive unreconciled differences.

The Acton Lane duplication only impacts units entering (exiting having been corrected) and this is not part of the annually reported performance.

An issue identified in the initial audit was that in the annual return for 2009/10, UKPN released all of their billing provisions, including an opening 2009/10 provision of 33GWh (but now estimated as 62GWh at the year end 2009/10) in respect of LPN. This treatment of releasing provisions in the 2009/10 returns , based upon their interpretation of the DPCR5 final proposals, in our view amounts to a change in their methodology from prior DPCR4 years and was not as intended by Ofgem's approach. Following discussions with Ofgem, UKPN have now included 62GWh of provisions in their resubmitted annual incentive data line with their past methodology.

2.9.2 Policy issues

UKPN have reduced their estimated units to be found by RP in 2013/14 by 25% and by 50% in 2014/15 to provide a more prudent assessment of future cases to be identified. That said, this still incorporates 7GWh of units to be found that relate to DPCR4 timescales. We would highlight that to provide credit for such units now does not guarantee future work will be carried out or the units will indeed be found.

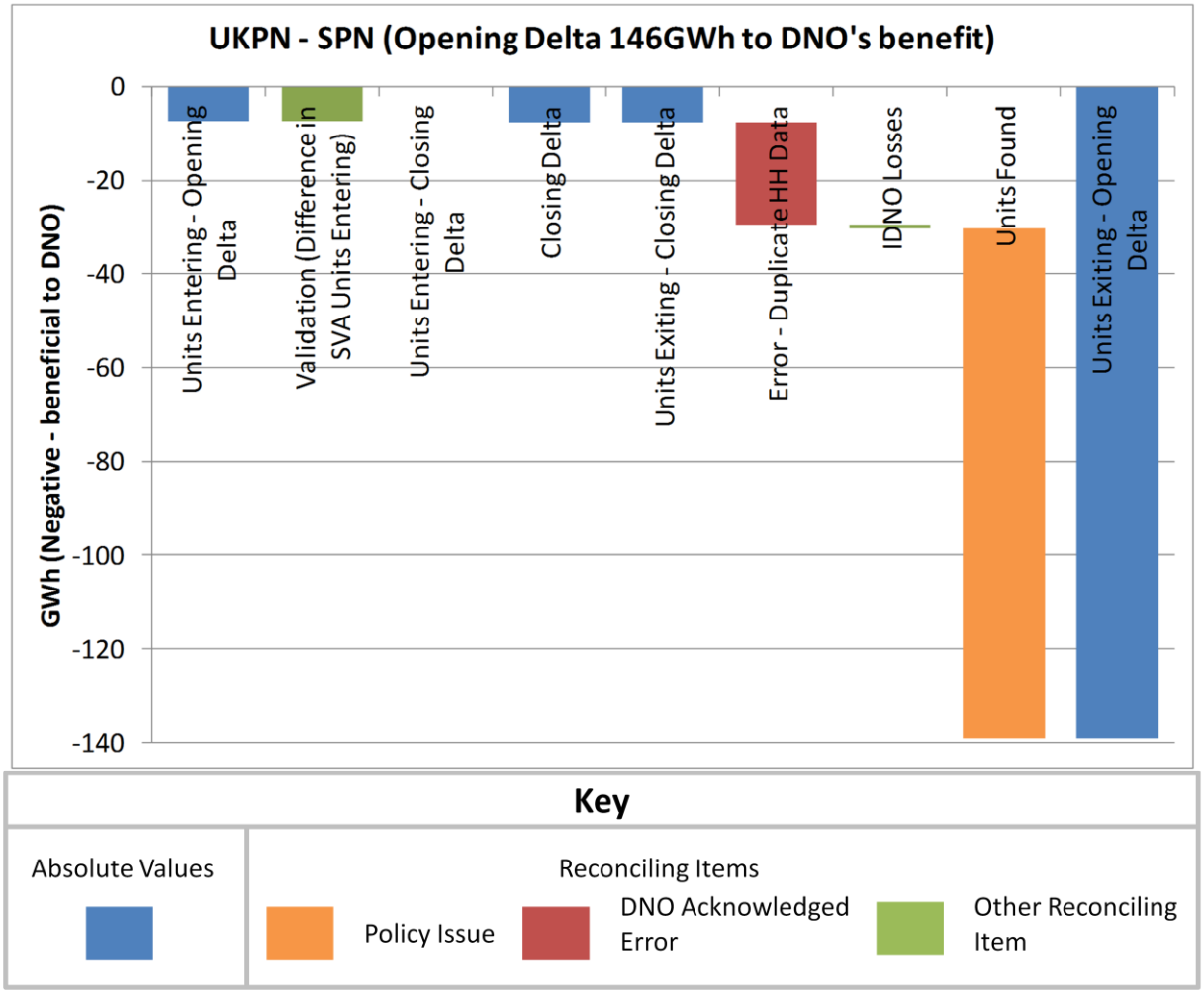
2.10 UK Power Networks – South East (UKPN – SPN)

UK Power Networks operate three distribution licences covering the South East of England. These cover the licensed areas that were operated by Eastern Electricity, London Electricity and SEEBOARD when the industry was privatised. The following paragraphs discuss the reconciliation of the legacy SEEBOARD network.

At the start of this process, there was an un-reconciled difference of 146GWh between the losses apparent from 2009/10 data submitted by UK Power Networks and the apparent losses derived from Settlement data, with this difference being made up as follows:

- **Units Entering UK Power Networks South Eastern Network:** UK Power Networks data showed 7.3 GWh less energy entering its South Eastern network than the Settlement data; and
- **Units Exiting UK Power Networks South Eastern Network:** UK Power Networks data showed 139 GWh more energy exiting its network than the Settlement data.

Further investigation reduced this un-reconciled difference to 7.6 GWh in favour of the DNO as illustrated below:



2.10.1 Data resubmission

Following Ofgem's decision of 12th July, UKPN have now submitted data for SPN for restatement, and resubmitted data for close out.

2.10.1.1 Close-out data

For close out, the following changes were made to their initial data submission:

	Deltas (Positive change increases losses) (GWh)		DNO Explanation
	Units Entering	Units Exiting	
2005-06	-	50.2	Changes are corrections to errors in previously submitted data as outlined to ESP consulting. Secondary changes relate to data from moving data management units from a reported to a settlement basis
2006-07	-	-3.2	
2007-08	-	-142.3	
2008-09	-	0.4	
2009-10	-	73.7	

From the initial audit, the following errors and issues were identified:

- The inclusion of data management units of 109GWh
- A consolidation error in their 2007/8 data of 102GWh
- Duplication in the compilation of HH data for the close out calculation in 2005/6 (57GWh) and 2009/10 (22GWh) only

The following reflects the changes made to close out data for the above errors:

	2005/6	2006/7	2007/8	2008/9	2009/10
Correction of consolidation error			-102		
Delete duplicate data in compiling data	57				22
Reversal of previous data management units	21	27	11	67	109
New allocation of DMU	-31	-30	-51	-67	-57
Removal of unreconciled difference >10GWh	4				
Total change	51	-3	62	0	74

From the initial audit, it was found that the inclusion of data management units of 109GWh was based upon units found in that year (relating back over several years) and didn't reflect the energy that flowed in the relevant year. Ofgem's July 2013 document therefore requested that UKPN only include units that were delivered in the settlement period in question. In providing a revised submission, UKPN have removed their initial estimate of DMU found but have revised the calculation of units found (including units found subsequent to the end of the DPCR4 period but related to the DPCR4 period) as expanded upon below.

Additionally, UKPN had removed any unidentified losses when assessed against settlement data, over and above a 10GWh limit that was deemed to be an acceptable level. In almost all cases such an adjustment was to the benefit of UKPN in reducing their losses calculated with the exception of the above SPN adjustment. Following discussions with Ofgem and UKPN, this adjustment has now been removed.

In assessing the DMU to be applied to the relevant settlement period, UKPN have made a number of separate calculations for SPN:

	2005/6	2006/7	2007/8	2008/9	2009/10
Reprofiling of units reported in DPCR4	25	22	37	44	13
Units identified by Revenue protection not in settlements	4	5	7	9	19
Units forecast to be identified over the remainder of DPCR5 but relating to DPCR4	1	1	1	2	3
Units identified as being used by energised customers but with a de-energised status	1	2	4	8	19
Units forecast to be found in the remainder of DPCR5 for energised customers with a de-energised status	0	0	0	1	1
Units not in settlements for individual investigation of larger sites	0	0	1	2	2
Total	31	30	50	66	57

The basis for these calculations is as follows:

- **Reprofiling of units reported in DPCR4** – UKPN has reprofiled the units found in DPCR4 on the basis of the settlement periods to which they relate. This has resulted in 86% of units previously reported in 2009/10 now being reprofiled into other periods including a significant proportion into DPCR3 years.
- **Units identified by Revenue Protection** – UKPN have analysed the RP cases identified between April 2010 and June 2013 and reprofiled these units to the settlement periods to which they relate and we have referenced these values back to summary spreadsheets that reflect data provided by field operatives. The scale and period of the adjustment reflects the assessment made by RP officers by reference to historic data and the specifics of the customer i.e. an assessment of electrical equipment on site. In each case these estimated have been provided to the supplier to be taken up with the customer. In their resubmission, UKPN have updated their assessment for cases identified up to 19th August 2013.
- **Projection of RP units over the remaining DPCR5 period** – UKPN, using current data available (the detail of historic cases 2009/10 – 2012/13), have assessed the level of theft identified and the profile over which the thefts relate. In some cases such thefts can continue over many years and this assessment reflects cases yet to be uncovered but which related to DPCR4 periods. Given the protracted period, thefts in RIIO-ED1 could also relate to previous years could amount to 36GWh across UKPN's networks based upon their recent experiences (2009/10 to present day); UKPN have not taken credit for this extended period That said, this adjustment (8GWh for SPN) still reflects units which are yet to be found, albeit an estimate of the next 18 months' activity only.

  The original estimate (of future theft detection that would impact units delivered in DPCR4) as submitted by UKPN was based upon a straight average of historic detection rates. This approach is likely to be generous to UKPN given the declining nature of the cases found, even though UKPN have restricted the extrapolation to DPCR5 only. In their resubmission, UKPN have reduced the estimated benefit in 2013/14 by 25% and by 50% for 2014/15.
- **Customers with a de-energised status** – This represents the value of units found by UKPN's programme of inspection of customers whose settlement status is de-energised. The calculation is based upon the energy calculated as having been consumed by the customer where the site is found to be energised. The calculation assesses the energy over the period from when the site was de-energised to when it is energised by the supplier with reference to either its current consumption as a HH site or to the average consumption for the profile class where it is a NHH site. Since it can't be ascertained whether that site was ever physically de-energised (or if it was, at which point in time it was re-energised), UKPN has used

an assumption that, on average, sites were energised for 50% of the period. UKPN consider this a prudent assumption owing to the time taken by suppliers to change the status once UKPN has identified the incorrect status (from analysis of records 12 months ago, it has taken suppliers an average of 4-6 months to change a customer's status)

- **Projection of future site visits of de-energised customers –** UKPN, similar to the approach taken for theft, also estimated the energy omitted from DPCR4 from future site visits of de-energised supplies. They have however ignored the opportunity from missing units of the 113 HH sites still to be investigated due to their specific and therefore unpredictable consumption. Whilst these sites are likely to be inspected in the next 2 years as a result of ESQCR obligations, the adjustment still reflects an estimate of units yet to be found (28GWh). In their resubmission, in consultation with Ofgem, UKPN has now removed all estimates of future site visits of de-energised customers from their close out calculation (24GWh in aggregate across the three networks)
- **Units missing from larger sites –** This adjustment reflects errors identified from consumption patterns where CTs may have failed or the details are incorrect within settlements leading to an under-recording of units consumed. No inclusion has been made of estimated future cases which could be found over the remainder of DPCR5 (~20GWh).

In the above cases we have reviewed the models and spreadsheets used to calculate units found, taking individual records of units found compiled by operatives, and aggregating them over the period to which the error relates. We have also reviewed the appropriateness of any modelling adjustments made in reaching the final calculations. In reviewing the data prior to sending it to us, UKPN found an error which increases the calculated units found by 0.5GWh over the 3 DNOs over the 5 years but does have a greater impact on the profile of those units. This error has now been corrected in a subsequent resubmission.

Also as part of the submission, UKPN have updated their HH data received from meter operators received via D0036 flows in respect of DPCR4 periods but billed when received as part of DPCR5.

2.10.1.2 Restatement Data

SPN did not originally apply for restatement in the 2012 process.

In now resubmitting their data for restatement, UKPN have now followed the methodology adopted by some other DNOs rather than use historically reported data. They have therefore used settlement data time-shifted to align with when those units would have been billed. This was because, similar to other DNOs, their methodology utilised a number of estimates and provisions that would have otherwise distorted the volatility seen in settlement data.

2.10.1.3 Annual Incentive Data

SPN initially made no change to their original annual reported SLC47 data. Data management unit reprofiling is relevant for close out only and errors relate to the compilation of the close out data only.

In the annual return for 2009/10, UKPN released all of their billing provisions, including an initial estimate of134GWh in respect of SPN (but now estimated as 26GWh at the year end 2009/10) in respect of SPN. This treatment of releasing this provisions in the 2009/10 returns , based upon their interpretation of the DPCR5 final proposals, in our view amounts to a change in their methodology from prior DPCR4 years and was not as intended by Ofgem's approach. Following discussions with Ofgem, UKPN have now included 26GWh of provisions in line with their past methodology.

2.10.2 Policy issues

- UKPN have reduced their estimated units to be found by RP in 2013/14 by 25% and by 50% in 2014/15 to provide a more prudent assessment of future cases to be identified. That said, this still incorporates 4GWh of units to be found that relate to DPCR4 timescales. We would highlight that to provide credit for such units now does not guarantee future work will be carried out or the units will indeed be found.

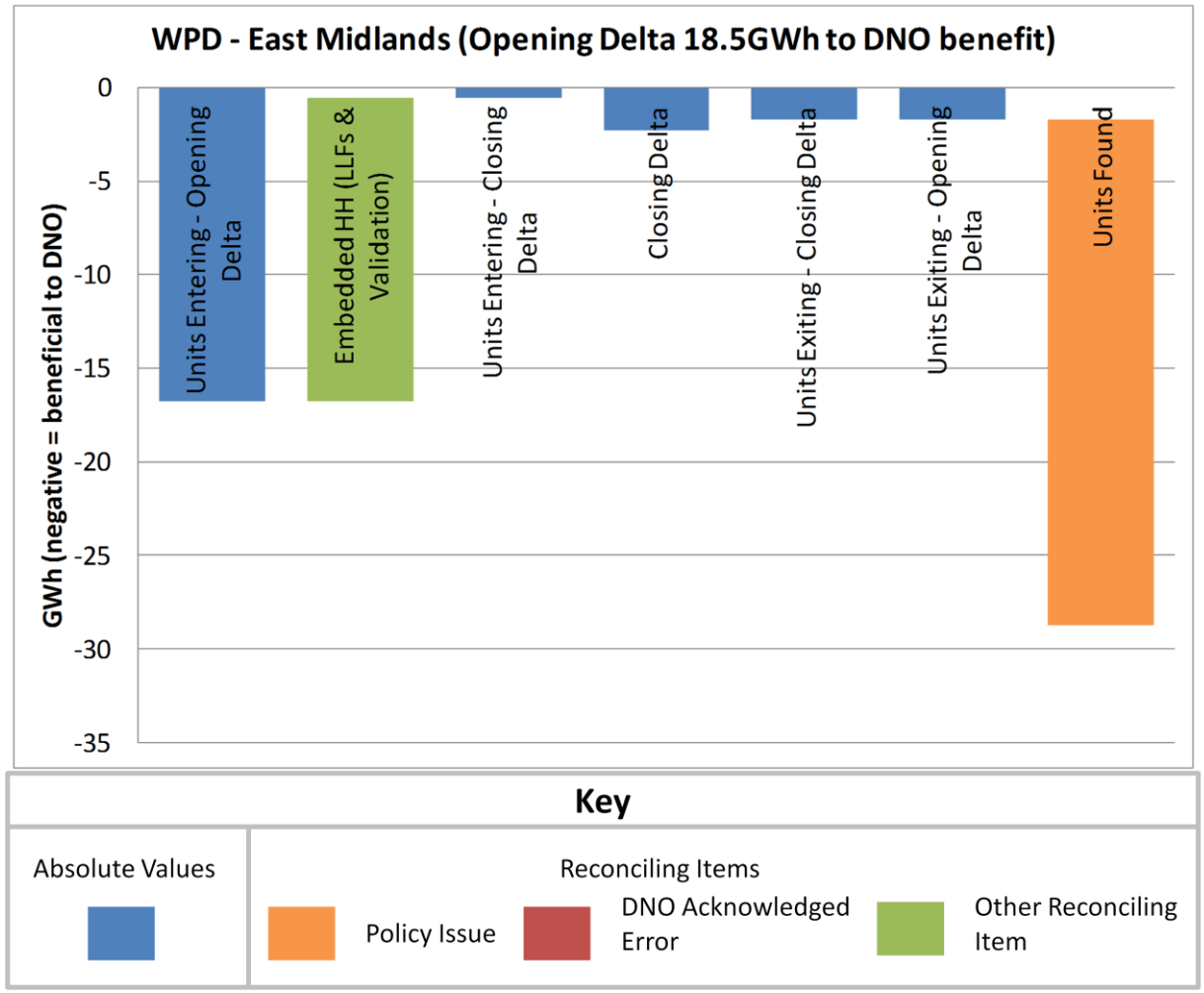
2.11 Western Power Distribution (WPD) - East Midlands

Western Power Distribution operates four distribution licences covering the South West and Midlands of England and the South of Wales. These cover the licensed areas that were operated by SWEB, MEB, EMEB and SWALEC when the industry was privatised. The following paragraphs discuss the data submitted and resubmitted for the legacy EMEB network.

At the start of this process, there was an un-reconciled difference of 18.5GWh between the losses apparent from 2009/10 data submitted by WPD and the apparent losses derived from Settlement data, with this difference being made up as follows:

- **Units Entering WPD's East Midlands network:** WPD data showed 16.8 GWh less energy entering its Northern network than the Settlement data; and
- **Units Exiting WPD's East Midlands Networks:** WPD data showed 1.7GWh more energy exiting its network than the Settlement data.

Further investigation reduced this un-reconciled difference to 2.3GWh and the reconciling items are illustrated below:



2.11.1 Data resubmission

In providing data to Ofgem for restatement of prior losses performance, WPD have provided data which was created using the fully reconciled data with subsequent reconciliations 'time-shifted' to move the units to when they would have been billed. In providing this data, WPD have used fully reconciled HH data.

The approach does not align directly with WPD's historic reporting methodology reported under SLC47 which was as follows:

- For S Wales and S West, WPD left open the year end to include reconciliations in subsequent months up to June billing each year.
- For East and West Midlands, their methodology initially accounted for NHH units on a corrected basis i.e. after application of the GSP Group Correction Factor and used provisions to defer the recognition of differences between corrected and uncorrected NHH units. These provisions were released after 4 years (East Midlands) and 3 years (West Midlands) respectively.

WPD have provided a full explanation to Ofgem and ESP as to their rationale for providing data as outlined above, contrary to their historic methodology.

WPD has provided resubmitted data for both the restatement and close out of the losses incentive. In both cases the adjustments are the same – removing the units found as a result of their losses project (CT adjustments and unmetered supplies (UMS)) in line with Ofgem's decision of July 2013.

WPD reran their billing data as part of the audit (March 2013) and have provided us with the updated HH billing data at an MPAN level. WPD have also now found a subsequent error in their submissions whereby they failed to also include units billed subsequently through their Durabill system (8.75GWh) introduced into the old Central Networks regions. WPD have now provided us with a new data set for close out that includes both these updates (10.67GWh increase less 26.68GWh of losses project units discounted) and they have confirmed that no further changes have been received since this data was extracted.

WPD have, for the purposes of the restatement test, now extended their data to the present day on the same basis as their original submission. The reconciliation to settlements data has however only be performed up to and including 2009/10 data. In providing that data they have made adjustment for the DG losses and removed the benefit of the losses project. We have been informed by WPD that the data for the HH exiting and units entering, which is where these adjustments are made, are not included in the restatement calculation past 2009/10:

- The HH units exiting and units entering are only included in the SF normalisation part of the GVC calculation which replaces the SF losses % in 2008/09 and 2009/10 with the SF losses % in the normal period.
- The abnormal variation part of the calculation part of the calculation which can use data from 2009/10, 2010/11, 2011/12 and 2012/13 only uses NHH data. Of this they just used billed data with no adjustments.

2.11.1.1 Annual Incentive Data

The annual incentive data provided by WPD for EMID remains unchanged from their original data submission and in line with their annually reported data historically.

2.12 Western Power Distribution (WPD) – South Wales

Western Power Distribution operates four distribution licences covering the South West and Midlands of England and the South of Wales. These cover the licensed areas that were operated by SWEB, MEB, EMEB and SWALEC when the industry was privatised. The following paragraphs discuss the data submitted and resubmitted for the legacy SWALEC network.

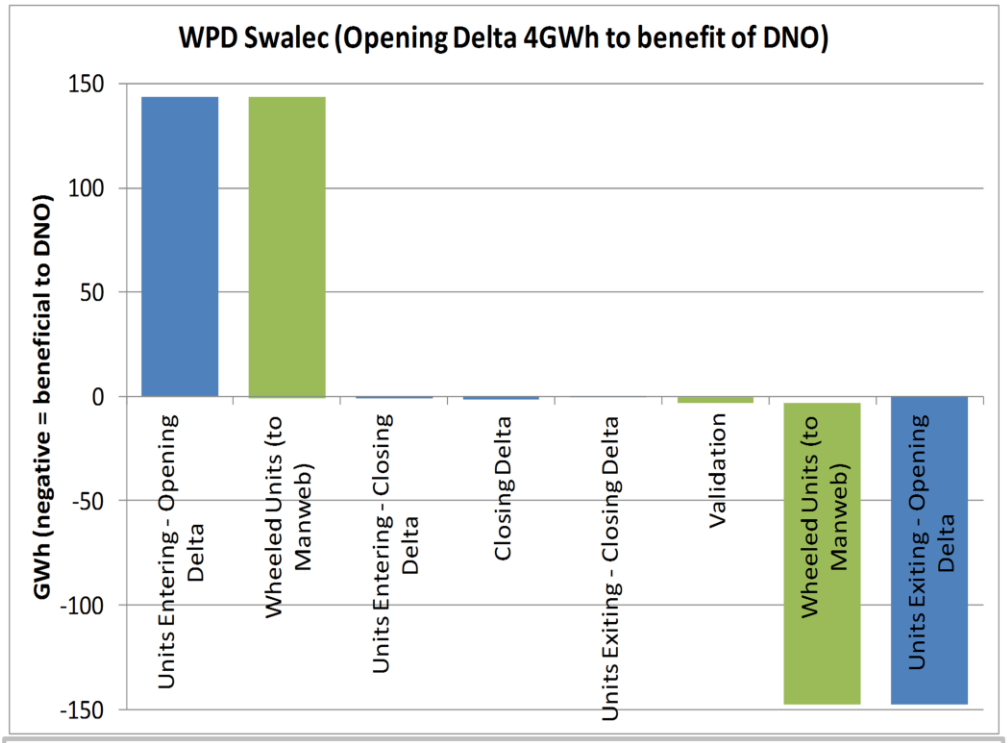
At the start of this process, there was an un-reconciled difference of 4GWh between the losses apparent from 2009/10 data submitted by WPD and the apparent losses derived from Settlement data, with this difference being made up as follows:

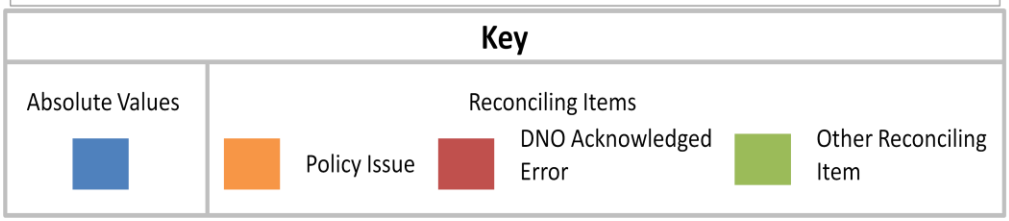
- **Units Entering WPD's South Wales network:** WPD data showed 144 GWh more energy entering its South Wales network than the Settlement data; and
- **Units Exiting WPD's South Wales Networks:** WPD data showed 148 GWh more energy exiting its network than the Settlement data.

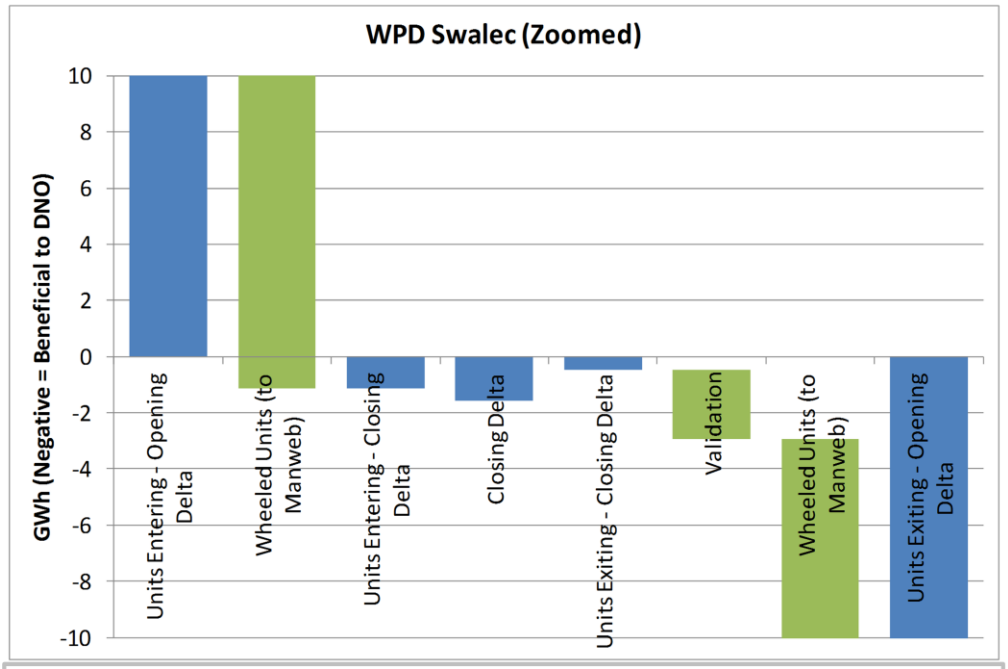
Further investigation reduced this un-reconciled difference to 1.6 GWh which could easily be explained by errors in the Settlement consumption data for customers connected to IDNO networks.

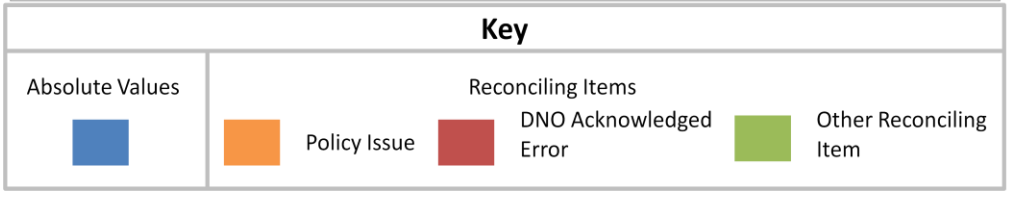
The reconciling items are illustrated below. This reconciliation is dominated by the "wheeling" of power across the SWALEC network for use in Manweb's network. For this reason, we have shown two graphs:

- The first shows the full reconciliation;
- The second has zoomed in the "y" axis to give a better view of the remaining reconciling items.


WPD Swalec (Opening Delta 4GWh to benefit of DNO)
GWh (negative = beneficial to DNO)
150
100
50
0
-50
-100
-150
Units Entering - Opening Delta
Wheeled Units (to Manweb)
Units Entering - Closing Delta
Closing Delta
Units Exiting - Closing Delta
Validation
Wheeled Units (to Manweb)
Units Exiting - Opening Delta


Key
Absolute Values
Reconciling Items
Policy Issue
DNO Acknowledged Error
Other Reconciling Item


WPD Swalec (Zoomed)
GWh (Negative = Beneficial to DNO)
10
8
6
4
2
0
-2
-4
-6
-8
-10
Units Entering - Opening Delta
Wheeled Units (to Manweb)
Units Entering - Closing Delta
Closing Delta
Units Exiting - Closing Delta
Validation
Wheeled Units (to Manweb)
Units Exiting - Opening Delta


Key
Absolute Values
Reconciling Items
Policy Issue
DNO Acknowledged Error
Other Reconciling Item

2.12.1 Data resubmission

WPD has provided resubmitted data for the close out of the losses incentive and is no longer applying for restatement.

There were no errors identified in the original review and following discussions with Ofgem, the decision was made to allow WPD SWales to adjust for units found through their UMS units and losses projects. In its close-out submissions, WPD made a number of adjustments in the years 2005/6 to 2009/10 in relation to errors found in UMS inventories and CT metering at larger sites. The data reported in these years reflects the profile of the units found over the duration of the error, the units found being reported in their 2009/10 annual return. Whilst their methodology is silent on such adjustments, their annual return for 2009/10 was subject to third party audit prior to its submission to Ofgem in June 2010. No disputes or challenges have been raised with the data in the intervening period.

WPD reran their billing data in November 2012 in order to compare settlements data with their own billing data and identified a reduction of 2.481GWh of HH data that was disclosed to us at the close of our audit. Having asked the question re most up to date information, WPD have now also provided us with a resubmitted file that includes this increase in losses (as well as the billing data that relates to the resubmitted data once convenience customer units are adjusted) and have also confirmed from their billing records that no further changes have been received.

2.12.1.1 Annual Incentive Data

The annual incentive data provided by WPD for SWales has been amended to remove the additional losses incurred by embedded generation where the LLF is greater than 0.997. These adjustments are around 1GWh per year and align with that disclosed at the time of our original visit. Other than that adjustment, the data remains as per submitted historically via the annual revenue return. This oversight was identified by WPD subsequent to our previous review and has now been amended in the annual incentive data now submitted in the workbook. This correction only affects units entering and therefore has no impact on the calculation of the growth term.

2.13 Western Power Distribution (WPD) – South West

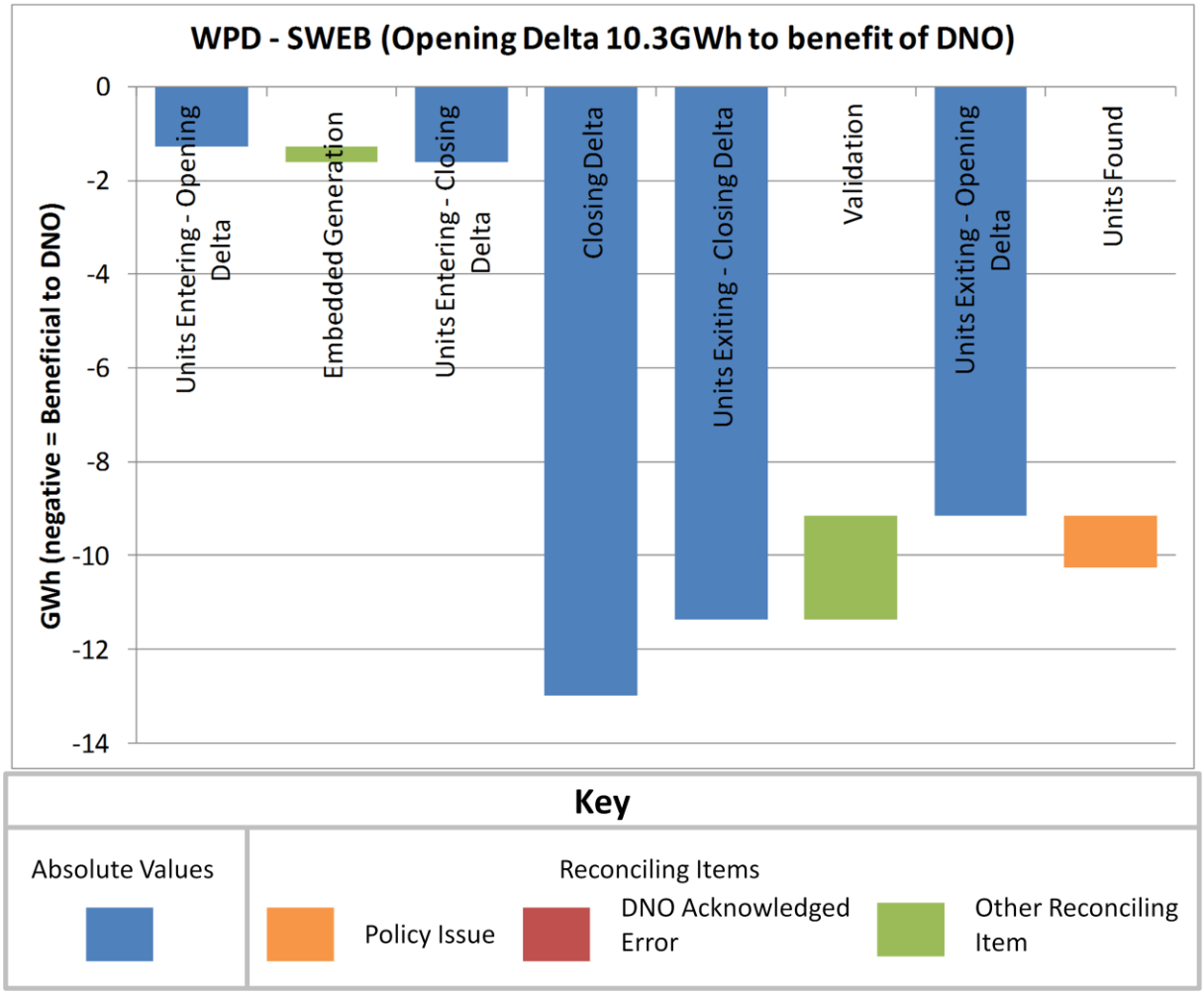
Western Power Distribution operates four distribution licences covering the South West and Midlands of England and the South of Wales. These cover the licensed areas that were operated by SWEB, MEB, EMEB and SWALEC when the industry was privatised. The following paragraphs discuss the data submitted and resubmitted for the legacy SWEB network.

At the start of this process, there was an un-reconciled difference of 10.3GWh between the losses apparent from 2009/10 data submitted by WPD and the apparent losses derived from Settlement data, with this difference being made up as follows:

- **Units Entering WPD's South West network:** WPD data showed 1.3 GWh less energy entering its South West network than the Settlement data; and
- **Units Exiting WPD's South West Network:** WPD data showed 9 GWh more energy exiting its network than the Settlement data.

Further investigation changed this un-reconciled difference to 13 GWh which could easily be explained by errors in the Settlement consumption data for customers connected to IDNO networks.

The reconciling items are illustrated below:



2.13.1 Data re submission

In providing data to Ofgem for restatement of prior losses performance, WPD have provided data based upon billed data which was created using the fully reconciled data with subsequent reconciliations 'time-shifted' to move the units to when they would have been billed. In providing this data, WPD have used fully reconciled HH data for both approaches above.

This approach does not align directly with the historic methodology reported under SLC47 which was as follows:

- For S Wales and S West, WPD left open the year end to include reconciliations in subsequent months up to June billing each year.
- For East and West Midlands, their methodology initially accounted for NHH units on a corrected basis i.e. after application of the GSP Group Correction Factor and used provisions to defer the recognition of differences between corrected and uncorrected NHH units. These provisions were released after 4 years (East Midlands) and 3 years (West Midlands) respectively.

WPD have provided a full explanation to Ofgem and ESP as to their rationale for providing data as outlined above, contrary to their historic methodology.

WPD has provided resubmitted data for both the restatement and close out of the losses incentive.

There were no errors identified in the original review and, following discussions with Ofgem, the decision was made to allow WPD SWest to continue to adjust for units found through its UMS units and losses projects. In their close-out submissions, WPD made a number of adjustments in the years 2005/6 to 2009/10 in relation to errors found in UMS inventories and CT metering at larger sites. The data reported in these years reflects the profile of the units found over the duration of the error, the units found being reported in their 2009/10 annual return. Whilst their methodology is silent on such adjustments, their annual return for 2009/10 was subject to third party audit prior to its submission to Ofgem in June 2010. No disputes or challenges have been raised with the data in the intervening period.

WPD reran their billing data in November 2012 in order to compare settlements data with their own billing data and identified no change in the billed data received. Having asked the question re most up to date information, WPD have now provided us with that file that aligns with the recently resubmitted data. They have also confirmed from their billing records that no further changes have been received.

In addition to that initial submission, WPD have now, for the purposes of the restatement test, extended their data to the present day on the same basis as their original submission, although the reconciliation to settlements has only be performed up to and including 2009/10 data. In providing that data they have made adjustment for the DG losses. We have been informed by WPD that the data for the HH exiting and units entering, which is where the adjustments are made, are not included in the restatement calculation past 2009/10:

- The HH units exiting and units entering are only included in the SF normalisation part of the GVC calculation which replaces the SF losses % in 2008/09 and 2009/10 with the SF losses % in the normal period.
- The abnormal variation part of the calculation part of the calculation which can use data from 2009/10, 2010/11, 2011/12 and 2012/13 only uses NHH data. Of this they just used billed data with no adjustments.

2.13.1.1 Annual Incentive Data

The annual incentive data provided by WPD for SWest remains unchanged from their original data submission and in line with their annually reported data historically.

2.14 Western Power Distribution (WPD) - West Midlands

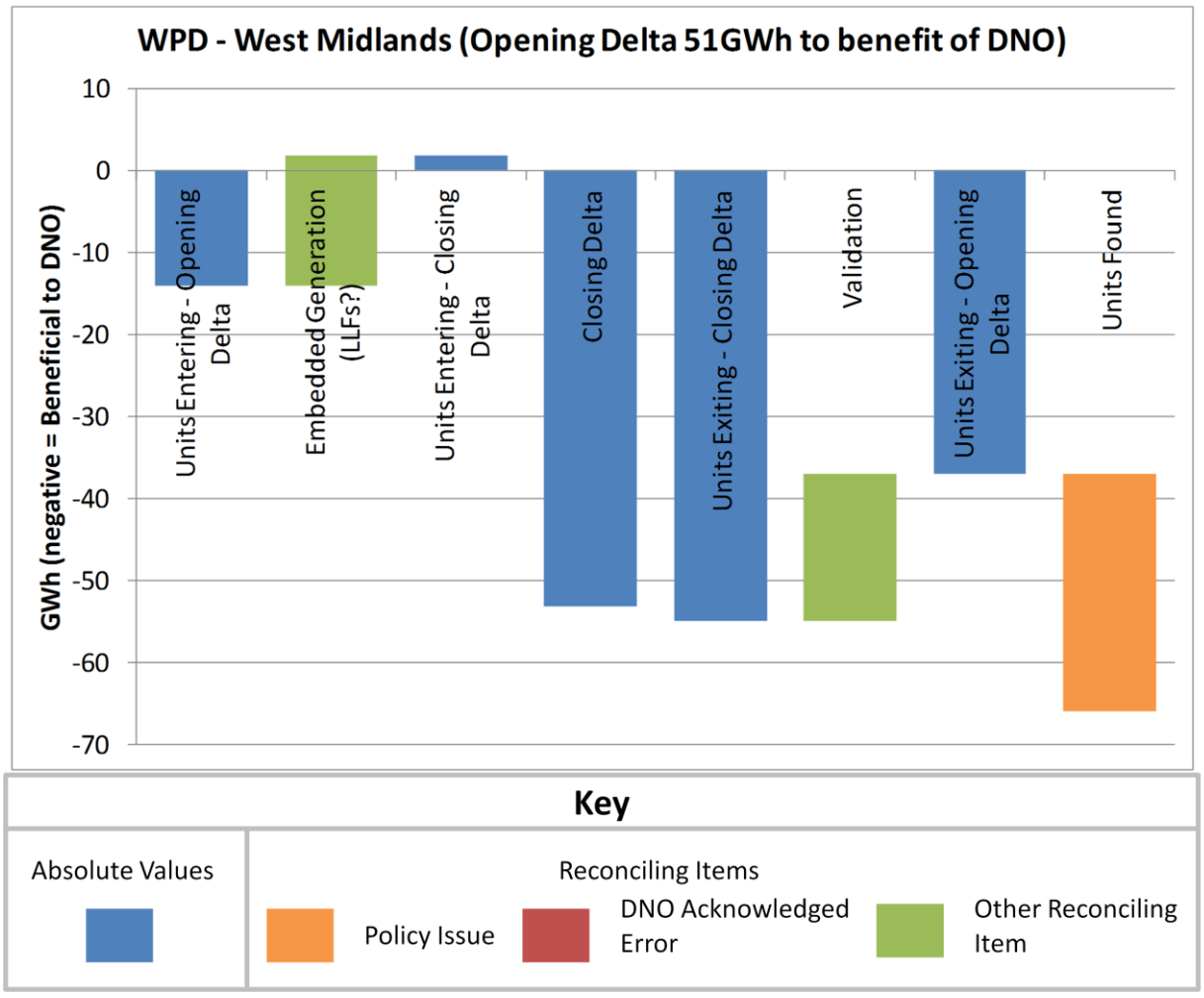
Western Power Distribution operates four distribution licences covering the South West and Midlands of England and the South of Wales. These cover the licensed areas that were operated by SWEB, MEB, EMEB and SWALEC when the industry was privatised. The following paragraphs discuss the data submitted and resubmitted for the legacy MEB network.

At the start of this process, there was an un-reconciled difference of 51GWh between the losses apparent from 2009/10 data submitted by WPD and the apparent losses derived from Settlement data, with this difference being made up as follows:

- **Units Entering WPD's West Midlands network:** WPD data showed 14 GWh less energy entering its Northern network than the Settlement data; and
- **Units Exiting WPD's West Midlands Networks:** WPD data showed 37GWh more energy exiting its network than the Settlement data.

Further investigation increased this un-reconciled difference to 53GWh which can potentially largely be explained by errors in the Settlement metering of consumption within IDNO networks.

The reconciling items are illustrated below:



2.14.1 Data resubmission

In providing data to Ofgem for restatement of prior losses performance, WPD have provided data based upon billed data which was created using the fully reconciled data with subsequent reconciliations 'time-shifted' to move the units to when they would have been billed. In providing both sets of data, WPD have used fully reconciled HH data for both approaches above.

This approach does not align directly with the historic methodology reported under SLC47 which was as follows:

- For S Wales and S West, WPD left open the year end to include reconciliations in subsequent months up to June billing each year.
- For East and West Midlands, their methodology initially accounted for NHH units on a corrected basis i.e. after application of the GSP Group Correction Factor and used provisions to defer the recognition of differences between corrected and uncorrected NHH units. These provisions were released after 4 years (East Midlands) and 3 years (West Midlands) respectively.

WPD have provided a full explanation to Ofgem and ESP as to their rationale for providing data as outlined above, contrary to their historic methodology.

WPD has provided resubmitted data for both the restatement and close out of the losses incentive. In both cases the adjustments are the same – removing the units found as a result of their losses project (CT adjustments and UMS).

The one exception was to 2009/10 close-out data when a positive adjustment was made to units exiting of 8.1GWh to reflect changes in HH data since the original data submission was made. This was disclosed to us previously at the conclusion of our audit as a reconciling item between settlements and their previously provided losses data and WPD have now provided us with the output of their HH billing file on an MPAN basis that corresponds to the resubmitted tables.

In addition to that initial submission WPD have now, for the purposes of the restatement test, extended their data to the present day on the same basis as their original submission; however, the reconciliation to settlements has only be performed up to and including 2009/10 data. In providing that data they have made adjustment for the DG losses and removed the benefit of the losses project. We have been informed by WPD that the data for the HH exiting and units entering, which is where these adjustments are made, are not included in the restatement calculation past 2009/10:

- The HH units exiting and units entering are only included in the SF normalisation part of the GVC calculation which replaces the SF losses % in 2008/09 and 2009/10 with the SF losses % in the normal period.
- The abnormal variation part of the calculation part of the calculation which can use data from 2009/10, 2010/11, 2011/12 and 2012/13 only uses NHH data. Of this they just used billed data with no adjustments.

2.14.1.1 Annual Incentive Data

The annual incentive data provided by WPD for WMID remains unchanged from their original data submission and in line with their annually reported data historically.

3 Appendix – Other issues

Following our initial report which was published by Ofgem on 26th July, Ofgem received some comments from stakeholders. Most of these have been addressed within the body of this report where they are relevant to the content. There were, however, two comments specifically that covered comments not addressed above and hence these are dealt with as part of a separate appendix.

The scale of the IDNO units for WPD West Midlands

Following that stakeholder feedback, we have been asked to recheck the IDNO data provided by WPD West Midlands as the potential error is significantly higher than other DNOs and has been identified as the possible cause of a large unexplained difference, when comparing settlement to billed data.

In response to this question, WPD have provided a disaggregated analysis on an MPAN by MPAN basis of IDNO sites within the West Midlands on a monthly basis where the total units agrees with WPD's losses calculation. We then chose a sample of 5 MPANs which accounted for over 70% of the units recorded as having been billed to an IDNO via boundary metering and requested site details and metering data. We were provided with a daily analysis of units on a half hourly basis for each site that we understand has come directly from their Half Hourly Data Collector (HHDC) either as a spreadsheet, via a dial up process or via D0275 data flows depending upon the process agreed with the HHDC throughout the DPCR4 period.

Having chosen 5 boundary meters with IDNOs, three being the largest connections but also two smaller sites where the data was truncated, and which together represent 70% of the IDNO consumption, we have verified the aggregate data for these sites back to half hourly readings provided by WPD in spreadsheet form. We have also (verbally and in written form) confirmed the source of these files with WPD as being from the HHDC. From the sample selected, the units reported for IDNO connections would appear reasonable based upon the data having been provided to us accurately reflecting the HH consumption at the boundary. As a result, we remain comfortable with the value we attributed to this error in the previous report.

Half Hourly (HH) SVA units

Our initial report classified the residual HH SVA Units Delta as a 'reconciling item', rather than an 'unexplained difference'.

In looking at the overall difference between settlement data provided by Elexon and that reported by DNOs, DNOs were able to isolate an element of that difference to a delta in HH metered data. Without a site by site comparison of the two data sets and given the difficulties of obtaining this historic data from Elexon at this disaggregated level, further analysis of the difference was not possible within the scope and timescales of the audit. However, over the complete timescales of the audit and the conclusions some DNOs have been able to draw given data requested historically for other purposes, we have been able to take some assurance from the fact that:

- The data has been received from a single source i.e. via D0036 or D0275 from HHDCs into both DNO and Settlement systems
- By their very nature, these are large sites and therefore the billing would be subject to additional industry scrutiny
- HHDCs have continued to provide updates to HH data, some of which will not have been reflected in settlements either because a DF run was not required on the days covered by the updates or because the updates post date the final settlement runs
- The scale of the differences are of the same magnitude overall, across the DNOs.

Without the level of assurance that would be gained from a site by site comparison, we are satisfied that there are legitimate reasons for the differences between Settlement and DNO billing data and that, across the DNOs, the scale of the differences would appear of a reasonable magnitude.