

What stage is this document in the process?

01 Initial Written Assessment

02 Definition Procedure

03 Assessment Procedure

04 Report Phase

Stage 03: Assessment Consultation

Consultation deadline: 12 September 2012

P274: Cessation of Compensatory Adjustments

Data for Settlement periods that have been subject to the Final Reconciliation Run cannot be changed. However, if an error is identified, it can be compensated for in a later period that has not yet been subject to the RF run by using Gross Volume Correction.

This Modification proposes to restrict the use of such techniques, as it means Settlement Periods may not be reflective of the actual energy supplied during that period.



The Workgroup Group initially recommends:

Approval of P274 Alternative Solution



High Impact:
LDSOs, Suppliers



Medium Impact:
NHHDCs



Low Impact:
ELEXON

P274
Assessment Consultation

21 August 2012

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About this document:

The purpose of this Assessment Consultation is to obtain views or further evidence from BSC Parties and other interested parties on matters discussed in this document. The P274 Modification Group will then discuss the consultation responses before making its recommendations to the Panel on 11 October 2012.

This document provides details of the solution, impacts, costs, benefits and implementation associated with this change. It also provides an overview of the Workgroups discussions.

In addition, you will find discussions on alternative solutions which were not progressed in Attachment A, the Proposed Legal text in Attachment B, Alternative Legal Text in Attachment C, and the Assessment Consultation Question Form in Attachment D.

Why Change?

Energy volumes that have undergone a Final Reconciliation run may not be changed. However, the BSC permits Suppliers to use Gross Volume Correction (GVC) to compensate for errors relating to periods that have been subject to RF by adjusting energy volumes in periods not yet subject to RF. This ensures that the total gross volume of energy is correct, albeit allocated to the wrong Settlement period.

P274 contends that in extreme cases this can result in large volumes of energy being moved around which means that Settlement is no longer reflective of the energy flows that took place in the relevant period. The Proposer contends this can have a number of adverse implications under the Code which inhibits efficiency and effective competition.

Proposed Solution

The P274 Proposed solution places an obligation on Suppliers to use an alternative technique of “re-initialising” rather than GVC where erroneous volumes meet an ‘excessive criteria’. It also places a restraint such that GVC may not be applied to volumes more than 28 months after the Settlement Day in which they occurred. The Proposed solution introduces detailed audit requirements for both Re-initialisation and GVC.

Alternative Solution

The P274 Alternative solution is to continue to allow the use of GVC under the existing rules governing the process but to limit the period for which error can be compensated, to five years prior to the latest RF Run at the time GVC is performed. The Alternative solution introduces detailed audit requirements for GVC.

Impacts & Costs

Code changes would be required with BSCP changes to clarify the arrangements around the use of error correction techniques. Affected Suppliers and Agents would be required to make significant systems changes. No central system impact has been identified. No cost impact to LDSOs has been identified.

Implementation

P274 Proposed solution would be implemented as part of the next suitable BSC Release at least **12** months from the date of approval.

P274 Alternative solution would be implemented as part of the next suitable BSC Release at least **3** months from the date of approval.

The Case for Change

The majority of the Workgroup believes the Alternative solution provides additional control and (via the introduction of detailed audit requirements) transparency around GVC and confidence in GVC application, whilst removing unreasonable GVC usage.

Background

Non Half Hourly Settlement

Settlement is based on a series of Half Hourly Settlement Periods. For sites that are Half Hourly (HH) metered, data is collected every half hour and feeds directly into the Settlement Calculations.

For sites that have Non Half Hourly (NHH) meters (i.e. those that are read less frequently than every half hour) a value for each half hour is still needed for the Settlement Calculations. In order to work out the volume of energy consumed in a half hour period the consumption for a whole year is first calculated.

Where actual Meter data is available, an Annualised Advance (AA) is calculated to reflect a year's worth of consumption. Where there have been no meter reads an Estimated Annual Consumption (EAC) is used. The AA or EAC is then put into a Profile Class in order to split the years' worth of data (estimated or otherwise) into half hour Settlement Periods.

Reconciliation Runs

As time passes, actual meter readings from NHH meters become available and replace the estimated data. This takes place in Reconciliation Runs. There is an Interim Information (II) Settlement run and a Settlement Final (SF) run, followed by four Reconciliation Runs (R1, R2, R3 and RF) which are designed to provide a more accurate picture of Settlement at each successive run.

Volumes that have undergone Final Reconciliation (RF) are said to be "crystallised" and cannot be amended unless a Trading Dispute has been authorised by the Trading Disputes Committee. If a Trading Dispute has been authorised then another run, called a Post-Settlement Run (DF) can be carried out when the corrected data has been received.

Gross Volume Correction

As noted above, once a Settlement Day has been subject to the Final Reconciliation (RF) Run, Suppliers and their agents shouldn't change any data for that day unless the Metering System in question is subject to an upheld Trading Dispute and the DF Run has been authorised.

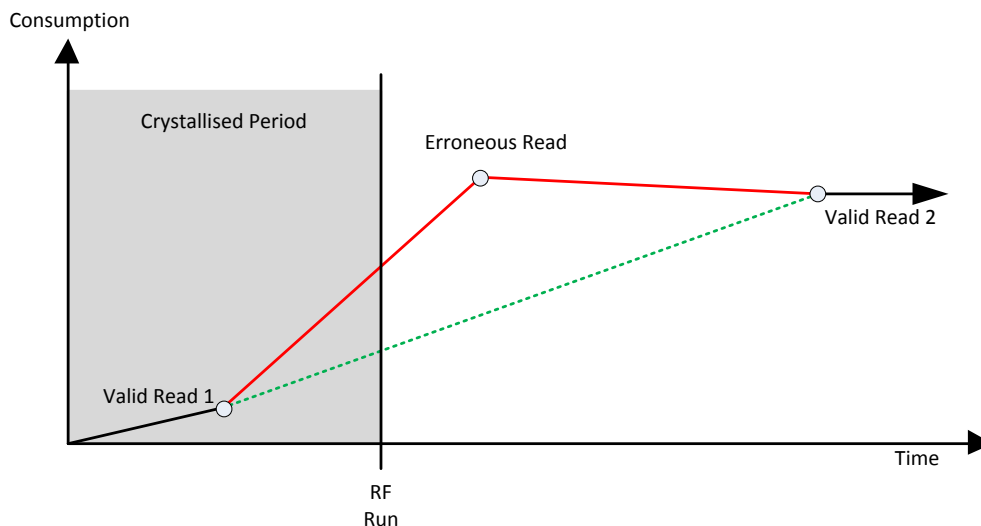
However, Suppliers can apply an error correction technique called Gross Volume Correction (GVC). GVC can be used to correct errors where Meter Advance Periods (the period between the latest Meter read and the previous Meter read) span Settlement Dates which have already been subject to the RF Run. Whilst the data post RF cannot be changed, GVC reallocates the lost or gained energy volume to a range of Settlement Dates for which RF Runs have not yet taken place. This process ensures that the total gross volume of energy over a Meter Advance Period is correct without changing the volume of energy that has already been subject to RF Runs, but it allocates the volumes to the wrong Settlement Days.

GVC works by using 'Deeming'. Deeming is a process by which a Meter reading can be calculated where one does not currently exist. A Supplier can apply GVC to correct the

error by creating a Deemed Meter Advance (DMA) for the Meter Advance Period between the last valid Meter reading and a date before the erroneous Meter read.

In the example below (Figure 1), an erroneous meter reading has been treated as valid, but a subsequent reading has shown that it was invalid. The correct rate of consumption is illustrated by the green dashed line. You cannot withdraw the erroneous reading because the Meter Advance Period of associated AA includes dates for which RF Runs have taken place. In order to withdraw the invalid reading, you need to apply GVC.

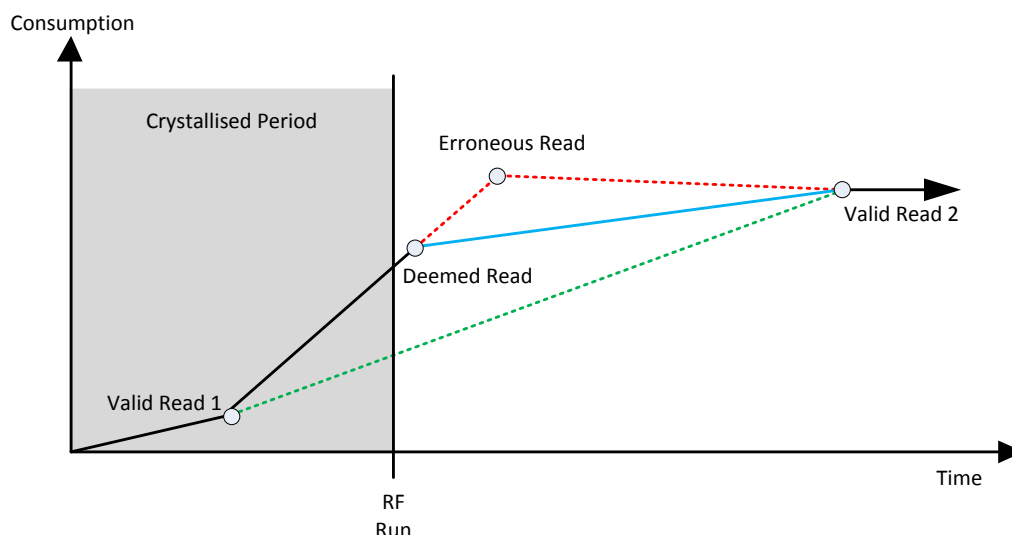
Figure 1



Please note that all diagrams in this document illustrate erroneous readings that are too high, with a subsequent correction that compensates for the over-allocation of energy. This convention has been adopted because a majority of GVC applications correct erroneously high readings. This, in turn, is because such errors are more likely to be identified by Non Half Hourly Data Collectors (NHHDC) validation and customer billing queries. It should be noted that errors (and correction) can occur in either direction.

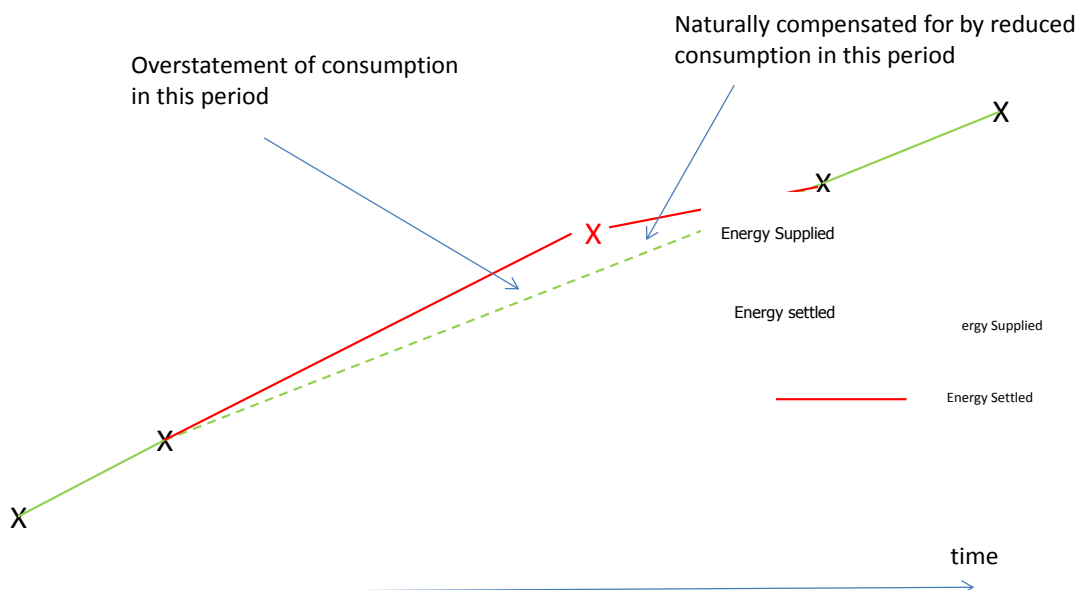
Figure 2 below shows how GVC would be applied and that after deeming a meter read what the new compensatory AA would be (the dashed red line shows how the error has reduced).

Figure 2NHH

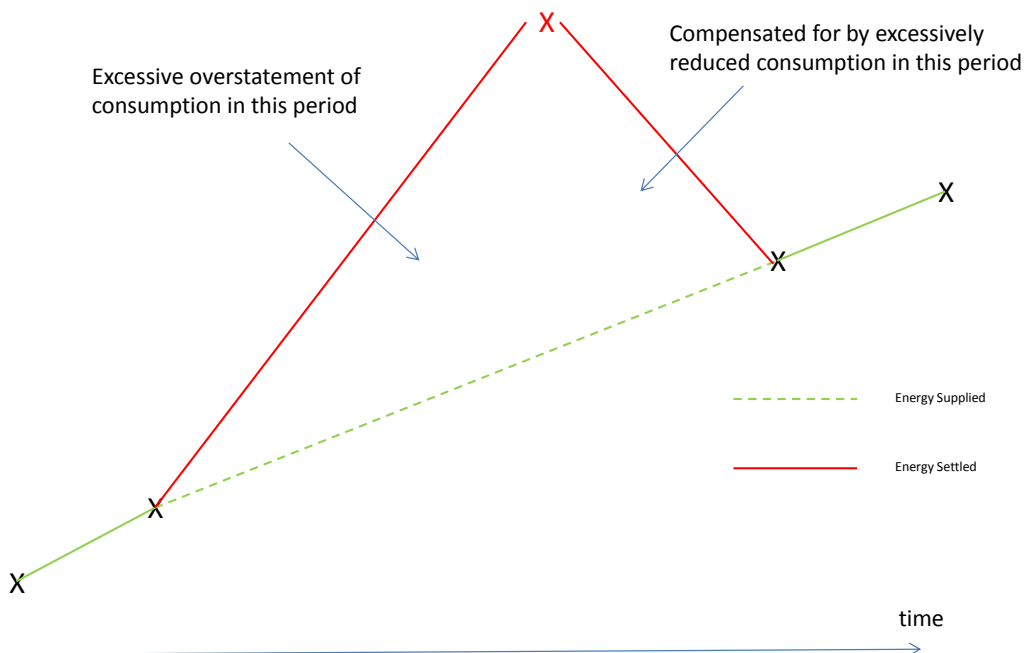


The Issue

Non Half Hourly (NHH) Settlement is such that any period of overstated consumption between two correct readings is naturally compensated for by a period of understated consumption between the same two readings. This is shown in the diagram below.



The Proposer of P274 acknowledges that GVC is an acceptable feature of Settlement, and allows for slight 'overs' and 'unders' to be compensated for. However, they believe in extreme cases, GVC can result in large volumes of energy being moved around; meaning Settlement is no longer reflective of the energy supplied on any given Settlement Day. This is shown in the diagram below.



For the Supplier applying GVC, the energy settled will be incorrect both in the period of the error and the period which compensation is applied. However, the gross volume of energy settled across the two periods will be correct. Other NHH Suppliers active in the relevant GSP Group will also be impacted via GSP Group Correction. Their energy volumes will be reduced during the period which energy was over-stated and will increase during the

period which energy was under-stated. An example would be a Supplier being compensated this year for an overpayment last year. The other NHH Suppliers benefited last year because their consumption was less than it should have been, but this year will have their consumption increased to make up for the compensatory underpayment by the Supplier applying GVC.

Additionally, there is an issue with the prices (market and Settlement cash-out) paid in the error period vs. prices paid in the compensation period. When prices are lower in the error period and a Supplier has overpaid during that period (i.e. paid for more energy than their customers consumed), GVC will result in the Supplier being compensated at a higher price than was applicable when the energy was consumed. So the Supplier will enjoy a net benefit. The opposite will apply where a "positive GVC" has been carried out. This means that the equal-and-opposite drawback / gain is experienced collectively by other NHH Suppliers in the same GSP Group through the application of GSP Group Correction.

Equally, when prices are lower in the compensation period and a Supplier has overpaid, the Supplier using GVC does not benefit because the compensated energy is accounted for at lower prices than those applied when the energy was consumed with the opposite being the case where negative GVC has been carried out. This means that equal-and-opposite benefit / drawback is experienced collectively by other NHH Suppliers in the same GSP Group through the application of GSP Group Correction.

Error Period	Compensation Period	Prices	Supplier applying GVC	Other NHH Suppliers in the same GSP Group
Over-payment	Under-payment	Higher in Compensation Period	Benefit	Detriment
Under-payment	Over-payment	Higher in Compensation Period	Detriment	Benefit
Over-payment	Under-payment	Lower in Compensation Period	Detriment	Benefit
Under-payment	Over-payment	Lower in Compensation Period	Benefit	Detriment

The Proposer argues that there could also be issues with the use of GVC in relation to Smart Metering. Smart Meters should ultimately provide a more accurate Settlement with fewer errors. However, looking back at previous experiences with rollouts in other countries, it has been suggested that the introduction of Smart Meters would result in the identification of previously undetected errors. If such errors were addressed using GVC, the issues described would be exacerbated.

As such the Proposer argues that GVC has a number of adverse implications under the BSC including:

- New entrants having volumes attributed to them that relate to periods before they started trading (through the effect of Grid Supply Point (GSP) Group Correction Factor on the compensatory error volume). This may act as a deterrent for new entrants and inhibit effective competition;
- Suppliers (both large and small) having volumes attributed to them that relate to periods of cheaper or more expensive wholesale energy prices (through the effect of

GSP Group Correction Factor on the compensatory error volume). This inhibits effective competition; and

- Licensed Distribution System Operators (LDSOs) being unable to produce suitable forward looking Line Loss Factors for use in Settlement, as these are based on historical Settlement data. This impacts the accuracy of Settlements and inhibits effective competition.

The Workgroup's consideration of the Proposer's arguments and the counterarguments that exist are set out in Section 7 of this document.

Summary

As noted above volumes that have been through the RF are referred to as crystallised and the time between a meter read and the latest RF is the 'crystallised period'. Equally volumes that have not yet been through RF are referred to as fluid, and the time between the latest RF and current date is called the 'fluid period'.

P274 Proposed solution would introduce the term 'Compensatory Volume', which is the volume that would be compensated for in the Fluid Period as a result of an incorrect volume in the Crystallised Period.

The P274 Proposed solution would also introduce criteria for identifying "excessive" Compensatory Volumes and a "Re-initialisation" process to deal with them. Furthermore, P274 Proposed introduces a time constraint for using GVC when addressing Compensatory Volumes which are not deemed to be "excessive".

'Excessive' Compensatory Volumes

A Compensatory Volume is considered "excessive" if the absolute Compensatory Volume, yet to be subject to Final Reconciliation for the Metering System¹ is:

- a) Greater than twice the Profile Class Average Estimated Annual Consumption(EAC); or
- b) Greater than a Compensatory Volume Threshold at the point of assessment.

Compensatory Volumes which are determined to be "excessive" must be addressed by using the non-compensatory correction technique called "Re-initialisation" (based on the existing 'dummy meter exchange' process).

In the case where none of the error has been subject to RF, or if the Compensatory Volumes do not meet the "excessive" criteria, the existing processes in place would be used to address erroneous meter readings (including GVC in the case of crystallised error).

GVC Time Limit

P274 would also introduce a time limit for when GVC can be applied.

Currently any DF Run must be performed within 28 months of the relevant Settlement Day(s). The P274 Proposed solution would introduce a requirement that any part of the error for an MPAN, which is older than the DF Run cut off (currently set at 28 months), may not be compensated for.

¹Across all Settlement Registers.

Detailed Solution

Compensatory Volumes

The P274 Proposed solution does not propose any change to the methods Suppliers and NHHDCs use to identify errors². It does propose that upon confirmation of an error the Compensatory Volume be determined for the MPAN.

A Compensatory Volume is the volume that would be compensated for in the Fluid Period as a result of an incorrect volume in the Crystallised Period.

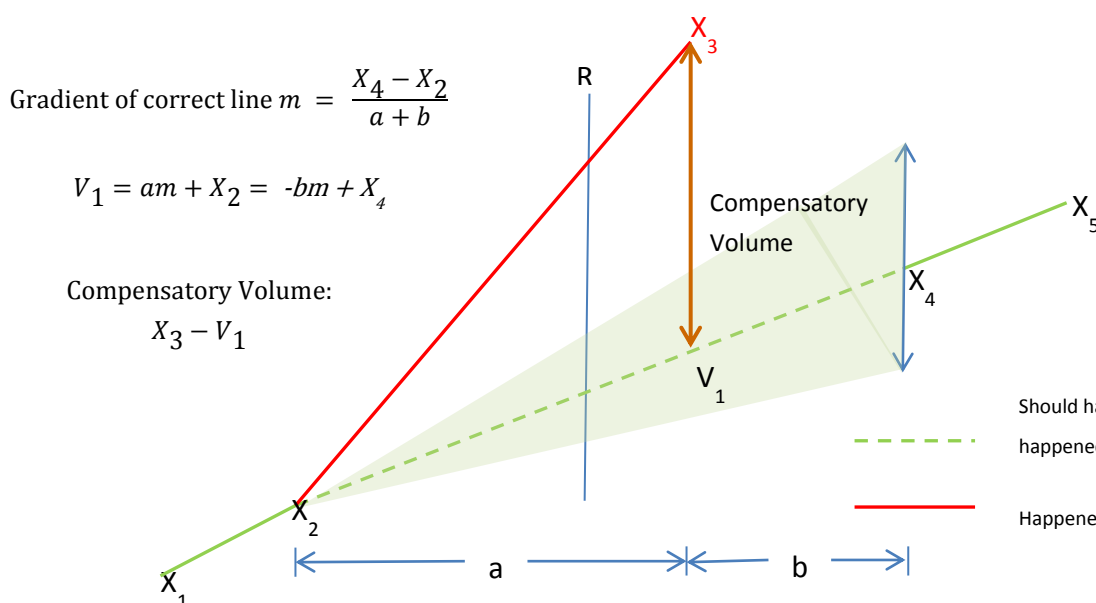
There are three situations to consider when calculating the Compensatory Volume, these being where the error reading is:

- 1) inside the fluid period, but the previous reading isn't;
- 2) the error reading is in the crystallised period and the next reading is more than 14 months later;
- 3) the error reading is in the crystallised period and the next reading is less than 14 months later.

It should be noted that in accordance with the existing rules, "14 month deeming" has to take place in situation 2) in order to convert the EAC settled at RF into an AA. This has the effect of pushing the error reading into the fluid period and makes the resulting error equivalent to situation 1).

The calculation of the Compensatory Volume is illustrated below for each of the three scenarios. Please note that expected readings V_1 and V_2 in the examples below can either be deemed using the BSC defined Deemed Meter Advance calculation or be estimated using the maximum difference in the fluid period between an expected/actual reading with the error in place and an expected/actual reading without the error in place. In determining these expected readings, as well as deeming readings, a straight line approximation between two other readings would suffice.

Scenario 1: The error reading is inside the fluid period, but the previous reading isn't.



² Noting that this includes assessing all cases where the reading is not within 0 and twice the expected advance; and that this includes all negative advances.

Scenario 2: The error reading is in the crystallised period and the next reading is more than 14 months later.

Example requiring “14 month deeming” (in accordance with current rules) as X_4 is more than 14 months after X_3 . X_d is this deemed reading.

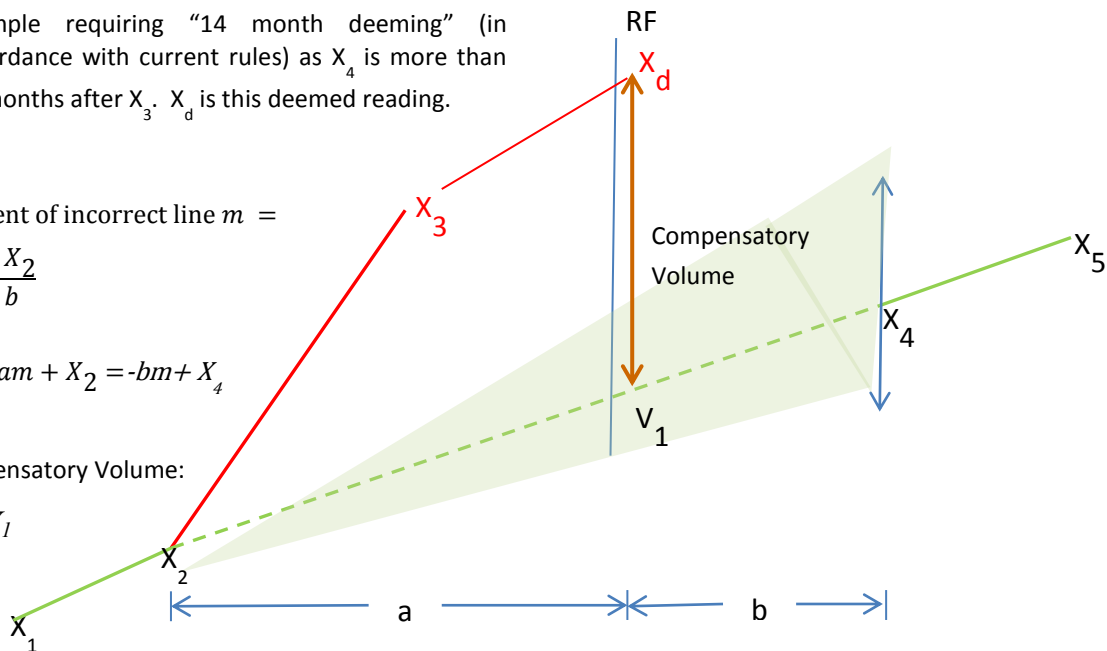
Gradient of incorrect line $m =$

$$\frac{X_4 - X_2}{a + b}$$

$$V_1 = am + X_2 = -bm + X_4$$

Compensatory Volume:

$$X_d - V_1$$



Scenario 3: The error reading is in the crystallised period and the next reading is less than 14 months later.

Example that does not require “14 month deeming”, as X_4 is less than 14 months after X_3 .

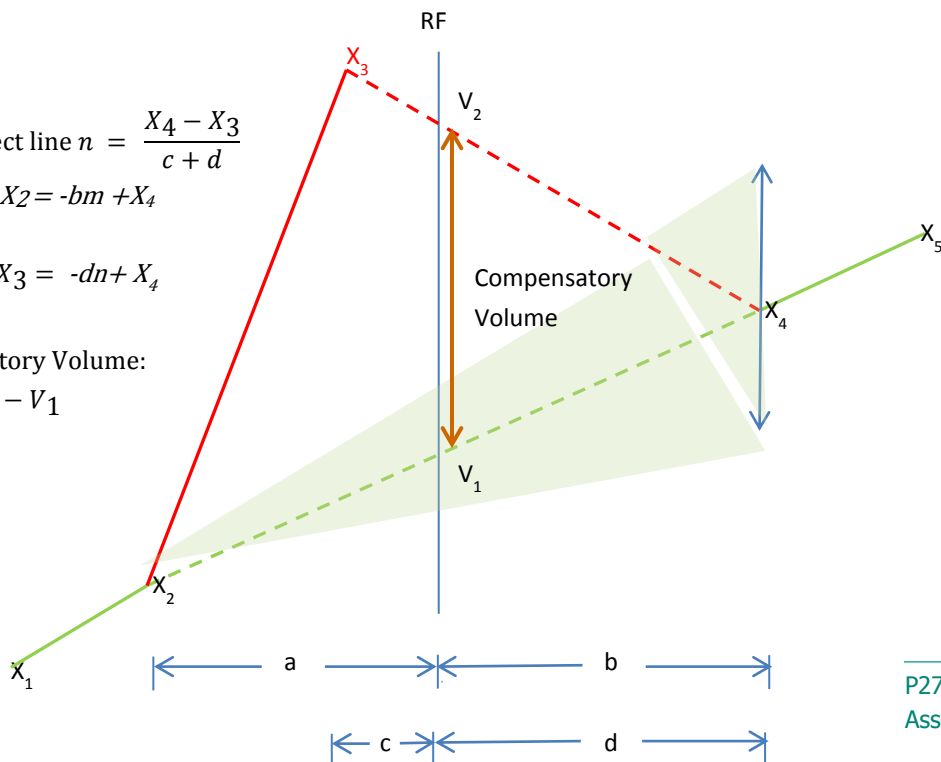
$$\text{Gradient of incorrect line } n = \frac{X_4 - X_3}{c + d}$$

$$V_1 = am + X_2 = -bm + X_4$$

$$V_2 = cn + X_3 = -dn + X_4$$

Compensatory Volume:

$$V_2 - V_1$$



'Excessive' Compensatory Volumes

A Compensatory Volume is considered "excessive" if the absolute Compensatory Volume yet to be subject to Final Reconciliation for the Metering System is:

- a) Greater than twice the Profile Class Average Estimated Annual Consumption(EAC); or
- b) Greater than the Compensatory Volume Threshold at the point of assessment.

The Compensatory Volume Threshold will be determined by the Supplier Volume Allocation Group (SVG), and reviewed periodically. It is intended to be a volume broadly equivalent to the disputes threshold. For example, this could be set to disputes threshold / Credit Assessment Price, currently £3,000/£46MWh-1 \approx 65MWh (although it would not be expected to change with every change of the Credit Assessment Price).

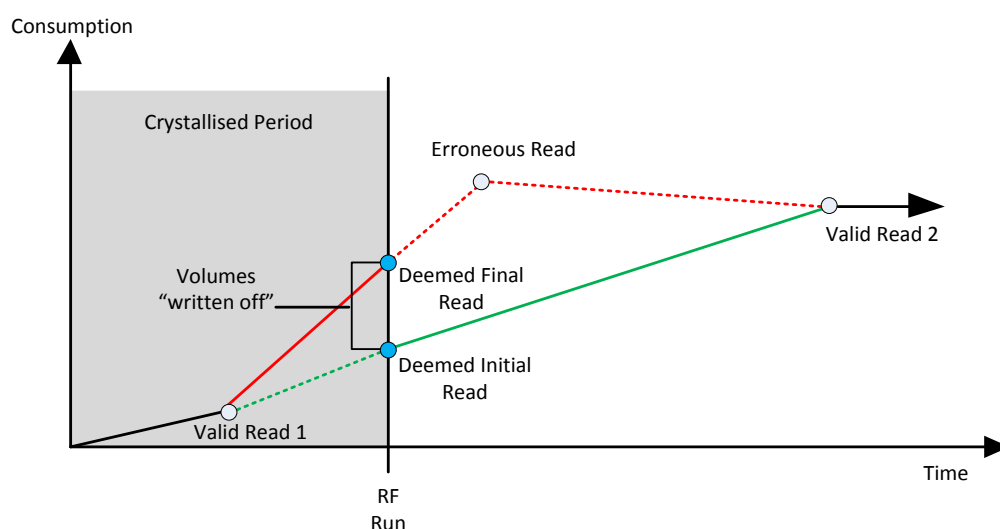
Compensatory Volumes which are determined to be "excessive" must be addressed by using the non-compensatory correction technique called "Re-initialisation" (see below).

Where the Compensatory Volume does not meet the Excessive Compensatory Volume criteria for the mandatory application of Re-initialisation; Re-initialisation may still be applied if the Supplier should choose to do so. For example where there is insufficient reading history to apply GVC or the application of GVC would introduce further error.

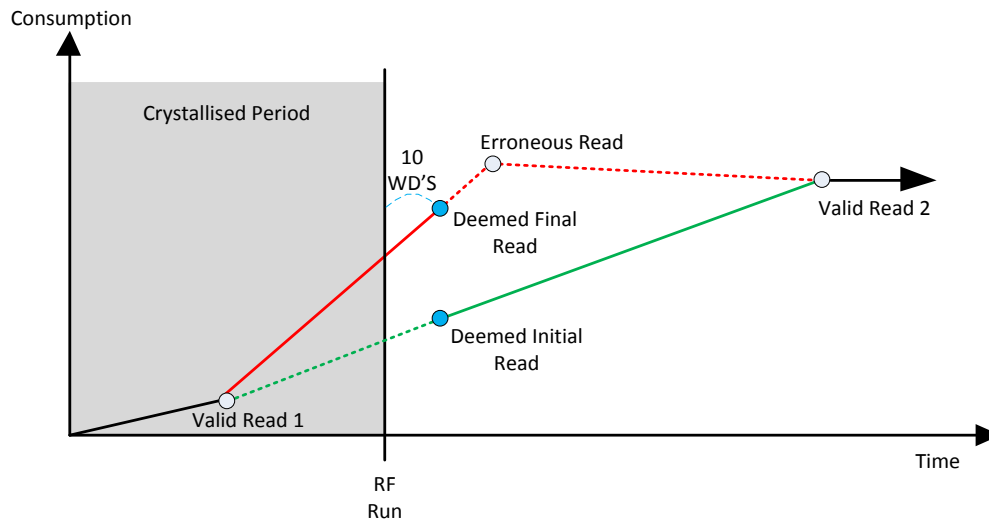
Re-Initialisation

Re-initialisation comprises of deeming a final "erroneous" reading and then creating an initial "valid" reading on the same date. This is done using the same processes employed to affect a meter exchange, a correction method already undertaken in some form by most, if not all, NHHDCs and referred to as a "dummy meter exchange".

A "dummy meter exchange" (DMX) is currently used when there is insufficient reading history to apply GVC, or where compensation will introduce further error. It addresses errors going forwards, without compensating for past errors. In effect it "writes off" historic error meaning any monies owing to / owed by a Supplier / LDSO because of under / over payment cannot be recouped, but ensures that the error does not continue. To complete a DMX the NHHDC deems a final read and initial read at RF. The difference between the final and initial read at RF is then "written off". The NHHDC then calculates consumption from the latest valid read back to the deemed initial read at RF.



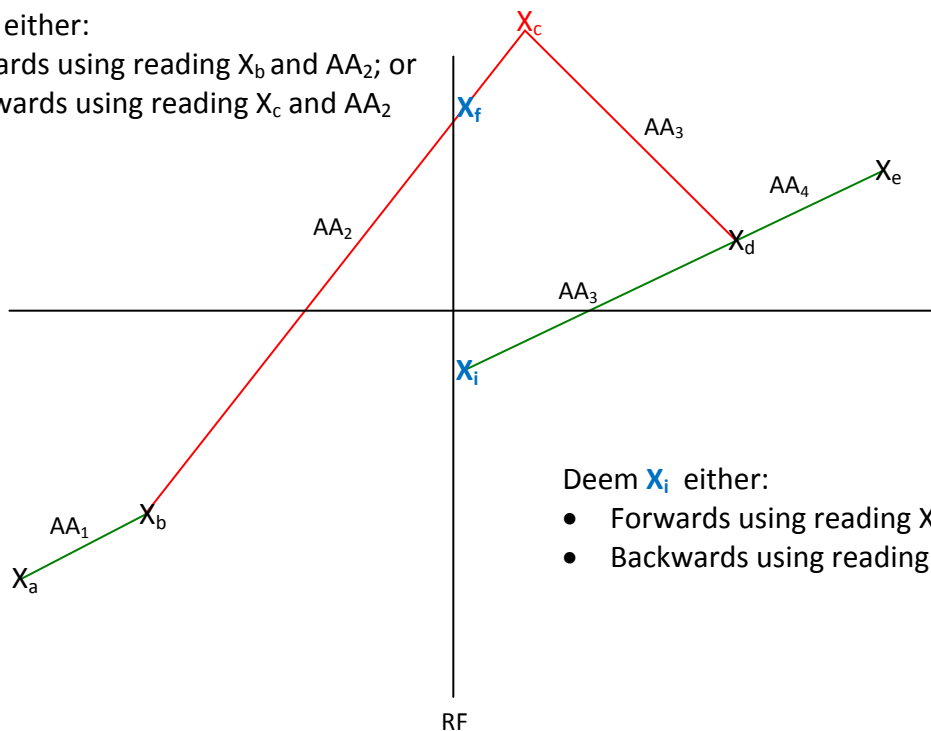
Re-initialisation works in a similar way to the DMX process and is undertaken at RF to maximise correction within the fluid period. NHHDCs would deem a “final reading” 10 working days after the date of the latest RF Run. They do this using the erroneous EAC / AA in place on this date and either the meter reading at the start of this advance (if deeming forwards) or the end of this advance (if deeming backwards). They would then deem an “initial reading” 10 working days after the latest Final Reconciliation date, using a correct reading and correct annualised consumption.



To complete the Re-initialisation, the NHHDC should calculate the relevant Annualised Consumptions (AAs and EACs), using a Profile Class average or MPAN/TPR specific “initial EAC” to accompany the “initial reading”, if required.

Deem X_f either:

- Forwards using reading X_b and AA_2 ; or
- Backwards using reading X_c and AA_2



Deem X_i either:

- Forwards using reading X_b and AA_1 ; or
- Backwards using reading X_d and AA_4

Upon undertaking this technique, NHHDCs would be required to maintain an audit trail comprising the following data items:

- MSID;
- SSC, Profile Class, GSP Group and Energisation Status;
- Date Re-initialisation applied;
- For each Settlement Register:
 - Time Pattern Regime;
 - Final Meter Reading; and
 - Initial Meter Reading;
- Effective Date(s); and
- Rationale for change.

Where there is an interaction with the relevant requirements for disputing and correcting Change of Supplier readings, the requirements for disputing and correcting change of Supplier readings would prevail.

Gross Volume Correction for Non excessive volumes

28 Month time limit

If the Compensatory Volume is less than the defined Excessive Compensatory Volume criteria the Supplier/NHHDC may apply GVC. However, P274 places a time limit on the volumes on which GVC may be applied.

The 'boundary' or cut-off date for a dispute to run a DF is 28 months following the Settlement Day in dispute. Under P274 Proposed solution, volumes that are outside of this 28 month disputes boundary may not have GVC applied to them.

Therefore, a Supplier / NHHDC may only apply GVC where the volume of error:

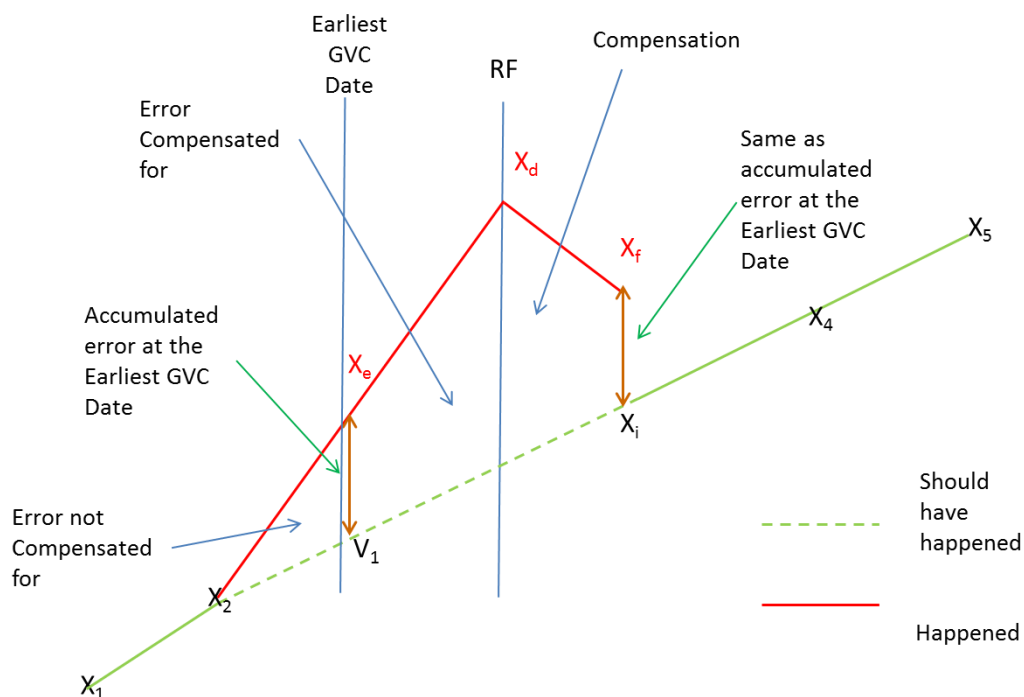
1. Does not meet the excessive criteria; and
2. Is not outside the Disputes boundary (i.e. did not occur more than 28 months ago)

The NHHDC will be required to maintain an audit trail when GVC is applied.

Pre-Disputes Boundary Error

Since P274 would no longer allow GVC to be applied to volumes outside the 28 month disputes boundary, should a Supplier choose to apply GVC and part of the error volume pre-dates the disputes boundary of 28 months following the Settlement Day in Dispute, a Pre-Disputes Boundary Error should be determined.

A Pre-Disputes Boundary Error is the difference between an estimate of what the erroneous reading would have been on the disputes boundary (Settlement Date), and an estimate of what the reading should have been on the disputes boundary. When estimating, in addition to deeming a reading, a straight line approximation between two other readings is acceptable by using the same principles described above (for quantifying the Compensatory Volume).



Reading X_i should be deemed, either forwards (using readings X_1 and X_2) or backwards (using readings X_4 and X_5) and used as an Initial Reading. A Final Reading (X_f) should be determined by adding the Pre-Disputes Boundary Error to reading X_i . This will result in only the error after the Disputes Boundary being compensated for.

Legal text

The proposed redlined changes to the BSC to deliver the P274 solution can be found in Attachment B.

A new paragraph would be inserted into paragraph 2.5 of Section U: Provisions Relating to Settlement of the BSC Code. This paragraph would stipulate that the NHHDC may only apply GVC in accordance with and subject to the relevant criteria specified in BSCP504. Gross Volume Correction and Re-Initialisation would be added as new terms and definitions to Annex X-2: Technical Glossary of the BSC Code.

BSCP504 would be amended to reflect the relevant criteria and processes for applying GVC and Re-initialisation.

Question 1

Would the P274 Proposed legal text deliver the Proposed solution?

Alternative Solution

The Alternative solution proposed by the P274 Modification Group, is to continue to allow the use of GVC as per the current arrangements, but to limit the period for which error can be compensated to 5 years prior to the latest RF Run at the time GVC is performed.

A period of 5 years has been chosen to align with the period of Ofgem's Distribution Losses Incentive Mechanism.

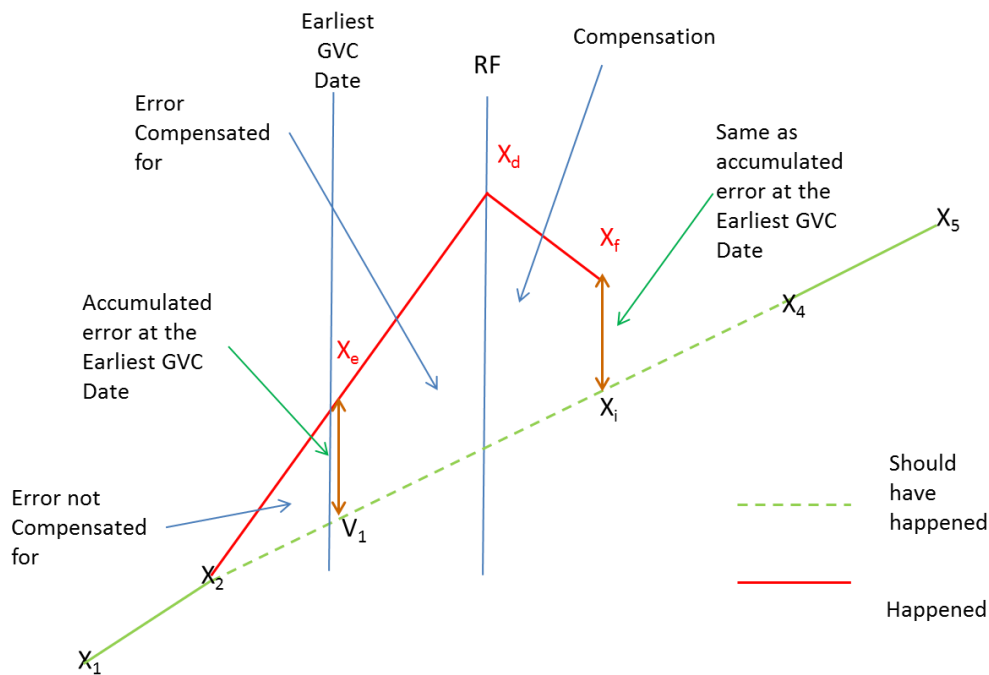
Under the Alternative solution, error volumes can only be compensated for if they occurred on or after the Earliest GVC Date, defined as:

'the date five years prior to the date of the latest Reconciliation Final (RF) Run at the time that a GVC is performed, and before which error may not be compensated for'.

Where an error has occurred over a period which includes dates earlier than the Earliest GVC Date, the NHHDC shall determine how much of the crystallised error occurred before the Earliest GVC Date and how much occurred on or after. The NHHDC shall make the determination using a deemed reading or by a 'straight line' interpolation of the error (i.e. number of days in error period on or after Earliest GVC Date, divided by total number of days in the error period, multiplied by the total error volume during the period).

The NHHDC shall only compensate for the error volume occurring on or after the Earliest GVC Date. This shall be achieved by creating a 'dummy' final reading within the fluid period to take account of the allowable compensation and using a valid initial reading (or an initial reading deemed using recent valid readings). See diagram below for graphical representation.

This process is identical to the process for calculating 'pre-disputes boundary error' as described under the Proposed solution above. The only difference is that rather than having a boundary of 28 months, the boundary is 5 years.



Reading X_i should be deemed, either forwards (using readings X_1 and X_2) or backwards (using readings X_4 and X_5) and used as an Initial Reading. A Final Reading (X_f) should be determined by adding the Pre-Disputes Boundary Error to reading X_i . This will result in only the error after the Earliest GVC Date being compensated for.

Legal text

The proposed redlined changes to the BSC to deliver the P274 Alternative solution can be found in Attachment C.

A new paragraph would be inserted into Section 4.3 of Annex S-2: Supplier Volume Allocation Rules of the BSC Code. This paragraph would stipulate that the NHHDC may only apply GVC in accordance with and subject to the relevant criteria specified in BSCP504. Gross Volume Correction would be added as a new term and definition to Annex X-2: Technical Glossary of the BSC Code.

BSCP504 would be amended to reflect the process for applying GVC.

Question 2

Would the Alternative legal text deliver the Alternative solution?

5 Implementation Impacts

Central Impacts of Proposed and Alternative

Implementation of either the P274 Proposed or Alternative Modification would have a minimal impact on ELEXON. The ELEXON impacts identified are the implementation of mandatory changes to the BSC and consequential updating of guidance documentation and GVC training.

The effort associated with these activities is estimated to be five Man Days, with an associated cost of approximately £1,200.

Assessment of P274 has not identified any impact on central systems as a result of either the P274 Proposed or Alternative Modifications, so there is no Service Provider cost associated with the impact of either solution. Both the Proposed and Alternative solutions place restrictions on the application of GVC, and in the case of the Proposed, introduce requirements around Re-initialisation which impact Suppliers and NHHDCs.

Documentation Impacts

Proposed Modification

Impact on Code	
Section	Potential impact
Section U	Insert new section in 2.5 to the effect that, for NHH Metering Systems, where the reading history for a Metering System is manifestly incorrect and above a threshold specified in accordance with BSCP504, the NHHDC is required to re-initialise the reading history in accordance with BSCP504 and where GVC is applied it shall be limited subject to the criteria specified in BSCP504.
Section X-2	Definition of GVC and Re-Initialisation added to Glossary.

Impact on Code Subsidiary Documents	
CSD	Potential impact
BSCP504	<p>Amend Section 4.5.2 to add:</p> <ul style="list-style-type: none">• A description of the Re-Initialisation process.• Requirements about the use of an 'initial' EAC to begin re-processing of the initialised history.• Criteria around GVC application including time restriction (28 months).• A requirement that the NHHDC shall keep the following as an audit trail (in a standard format, to be defined):<ul style="list-style-type: none">• MSID;• SSC, Profile Class, GSP Group and Energisation Status;• Date Re-initialisation applied;• For each Settlement Register:<ul style="list-style-type: none">• Time Pattern Regime;• Final Meter Reading;• Initial Meter Reading;

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Impact on Code Subsidiary Documents

- Effective Date(s); and
- Rationale for change.

Alternative Modification

Impact on Code

Section	Potential impact
Section S-2	New paragraph in Section S-2 to the effect that where GVC is applied it shall be limited subject to the criteria specified in BSCP504.
Section X-2	Definition of GVC added to Glossary.

Impact on Code Subsidiary Documents

CSD	Potential impact
BSCP504	<p>Amend Section 4.5.2 to add:</p> <ul style="list-style-type: none">• Criteria around GVC application including time restriction (5 years after the RF Run).• A requirement that the NHHDC shall keep the following as an audit trail (in a standard format, to be defined):<ul style="list-style-type: none">• MSID;• SSC, Profile Class, GSP Group and Energisation Status;• For each Settlement Register:<ul style="list-style-type: none">• Time Pattern Regime;• Final Meter Reading;• Initial Meter Reading; and• Effective Date(s).• Rationale for change.

Industry Impact Assessment

The P274 Proposed and Alternative Modifications were issued for impact assessment by industry participants in April 2012. Six responses were received to the P274 industry impact assessment. Four respondents operate as both Suppliers and Party Agents, one acts in a range of Party Agent capacities (including NHHDC) and one is an LDSO.

Some respondents submitted financial figures relating to the impacts and costs of the Proposed and Alternative solutions which they indicated should be treated as confidential. As such these figures are not reflected in this document, but the Workgroup has considered the magnitude of the impacts identified and confidential information submitted by respondents will be sent to Ofgem so they can make an informed decision.

Non-confidential impact assessment responses are available on the [P274 page](#) of the ELEXON website.

Impacts of Proposed Modification

Impact on BSC Parties and Party Agents

Potential impact

There will be significant impacts and costs associated with amending existing **Supplier** and **NHHDC** processes:

- Impacts and changes required to documentation relating to the adjustment of Settlement data.
 - Significant impacts and one-off costs associated with Supplier and NHHDC system changes.
 - Significant on-going annual costs in additional resource to manage the process.
 - There will be significant impacts to GVC activities that would require staff training.
- 12 month** lead time required for implementation.

In addition to the impacts associated directly with implementation, respondents noted that the Proposed solution could significantly limit the ability to correct and accurately re-calculate Settlement volumes.

Question 3

Would implementation of the P274 Proposed solution impact your organisation?

Impacts of Alternative Modification

Impact on BSC Parties and Party Agents

Potential impact

There will be minor impacts and costs associated with amending existing **Supplier** and **NHHDC** processes:

- Impacts and changes required to documentation relating to the adjustment of Settlement data.
 - Minor impacts and one-off costs associated with Supplier and NHHDC system changes.
 - Little on-going annual cost in additional resource to manage the process.
 - Limited impact to GVC activities that would require staff training.
- 3 months** lead time required for implementation.

In addition to the impacts associated directly with implementation, respondents noted that the Alternative solution could limit the ability to correct and accurately re-calculate Settlement volumes.

Question 4

Would implementation of the P274 Alternative solution impact your organisation?

6 Implementation

Proposed Solution Implementation Approach

If approved, the Implementation Date of the P274 Proposed Modification would be:

- The next suitable BSC Release at least **12** months from the date of approval.

Changes to the Code, subsidiary documents and required system changes would take effect from the Implementation Date.

The changes to BSCP504 will accompany the P274 Modification Report for consideration and approval along with the BSC legal drafting. BSC and BSCP504 changes will be publicised following approval so participants can familiarise themselves with the new requirements prior to implementation.

Question 5

Do you agree with the proposed P274 implementation approach for the Proposed solution?

Alternative Solution Implementation Approach

If approved, the Implementation Date of the P274 Proposed Modification would be:

- The next suitable BSC Release at least **3** months from the date of approval.

Changes to the Code, subsidiary documents and required system changes would take effect from the Implementation Date.

The changes to BSCP504 will accompany the P274 Modification Report for consideration and approval along with the BSC legal drafting. BSC and BSCP504 changes will be publicised following approval so participants can familiarise themselves with the new requirements prior to implementation.

Question 6

Do you agree with the proposed P274 implementation approach for the Alternative solution?

Summary

The majority of the Workgroup do not believe that a defect exists within the BSC in relation to Gross Volume Correction and therefore believe that the Proposed Modification is not better than the current arrangements. However, the majority of the Group believe that Alternative Modification adds control to the GVC process and is an improvement on the baseline and the Proposed Modification.

Therefore the Group's initial recommendation is that the P274 Alternative Modification should be approved.

The Workgroup believe the Alternative has benefits against Objective (c), around additional GVC control and (via the introduction of an audit trail) transparency, and Objective (d), due to addressing unreasonable use of GVC and use of a flexible approach.

Request for Information

The Workgroup issued a request for information to help it assess the contentions made by P274, the materiality of the defect identified and the potential benefits and drawbacks. The request for information asked industry participants:

- How often they used compensatory techniques;
- Whether they anticipate their usage to increase in the future;
- Whether they would use 'dummy meter exchanges' more often if compensatory techniques were prohibited;
- What impact the removal of compensatory techniques would have on Trading Disputes;
- What clarification you would need to ensure a consistent approach to the removal of compensatory techniques is adopted by NHHDCs; and
- What systems changes NHHDCs would need to make as a result of the removal of compensatory techniques.

These questions do not all directly relate to the P274 Proposed or Alternative solutions because the information request was issued prior to the solutions being finalised. For instance, participants were asked what the effect would be on how they choose to use 'dummy meter exchanges' whereas the Proposed solution mandates Re-initialisation in specified circumstances.

Impact of removing compensatory corrective techniques

All respondents expected an increase in the use of other non-compensatory corrective techniques if GVC was removed. The majority of respondents believed that the number of disputes would increase if GVC was removed, though one felt the trading disputes process would not be impacted due to the application of alternative corrective techniques. It was also noted that the increase in time and resources to view cases and investigate sites could negate the benefit of correcting error.

Changing NHHDC systems to apply 'dummy meter exchanges' instead of GVC would require a fairly significant amount of work because the current processes are manual and more frequent application of 'dummy meter exchanges' would require automation.

Issues raised by respondents

Respondents also noted concerns around identifying and preventing the compensatory advances for under-settlement from taking place automatically. The Workgroup considered the issues raised as part of its development of the P274 Proposed solution.

A respondent suggested that the removal of compensatory correction techniques would degrade the accuracy of Settlement data because known errors in the volume of energy entered into the Settlement process would not be addressed. Another respondent contended that prohibiting compensatory correction techniques without mandating alternative arrangements would introduce further error due to biased use of the dummy meter exchange process (i.e. application biased toward over-Settlement, leading to degradation in the accuracy of Settlement data).

A respondent also contended that the use of a dummy meter exchange can introduce inaccurate data into the NHHDC system (i.e. as a result of mismatches between initial/final readings and the Meter Technical Details) and there were concerns regarding the resulting data discrepancies that would exist between the NHHDC and other parties.

Another concern was the impact that the resulting reads may have on Supplier Licence Condition 12, where, without additional controls such as audit trails, the dummy meter exchange could imply that a visual inspection of the metering system has been carried out by the meter operator when no such inspection has actually taken place.

Analysis of data received

The analysis of data provided by respondents is set out in the table below.

Compensatory advances	Instances	per cent	volume (MWh)	£
increase (i.e. correcting understated energy)	589	22%	15,749	881,944
Decrease (i.e. correcting overstated energy)	2,109	78%	- 47,485	2,659,160
Total	2,698			
Gross Volume			63,234	3,541,104
Net volume			- 31,736	1,777,216

This is based on detailed data for 2,698 instances of GVC that were carried out between August and October 2011. 4,027 instances were reported for this period by Suppliers and NHHDCs with an aggregate 38.5% share of the market.

A number of Workgroup members questioned whether the sample was sufficiently representative, but acknowledged that the restriction on the size of the sample was due to the responses received to the Workgroup's request for information.

Workgroup discussions

Defect Identified in the Modification Proposal

The Workgroup discussed whether the defect identified by the Modification Proposal was a valid defect in the BSC. The majority of the Workgroup felt that as GVC is a permitted correction technique under the Code, use of it did not constitute a defect. Workgroup members felt the Proposal had been raised because of the impact GVC has had on the Distribution Losses Incentive Mechanism (DLIM), which is not governed by the BSC and which they did not believe was relevant to establishing a defect in the BSC.

The Proposer clarified that impact on DLIM and Distribution Price Control Regime (DPCR) was important but should be considered background from a BSC perspective. The identified BSC defect is that excessive adjustment of energy volumes in periods not yet subjected to RF in order to compensate for errors relating to periods that have been subject to RF means Settlement does not accurately reflect the energy flows that took place in the relevant period. This leads to the issues set out in the Modification Proposal.

The Workgroup accepted that this was a valid contention for consideration via an Assessment Procedure, although several members were doubtful that Assessment would ultimately demonstrate a BSC defect. Some Workgroup members believed that if the GVC process was causing issues for Suppliers (small or large) then a Supplier would have raised a Modification.

P274 also argued that the attribution of volumes to new entrants that relate to periods before they began trading may act as a deterrent for new entrants (which are likely to be small Suppliers), thereby inhibiting competition. However, Workgroup members contended that GVC is a comfort for new entrants, who know that any exceptions that are identified once the relevant data is crystallised can be corrected and any monies overpaid can be recouped.

Settlement accuracy

The Proposer believed that removing or limiting GVC would provide an additional incentive to Suppliers to ensure that volumes are correct before RF. However, some of the Workgroup believed that it was not always possible to obtain accurate data in time, even if there was greater incentive to do so (i.e. no GVC) and that this was the reason for GVC. These members argued that error does not exist just because GVC is available to correct it, but that some error is unavoidable despite the best endeavours of Suppliers. They contended that GVC is a sensible and pragmatic means of taking this error into account and promoting overall Settlement accuracy.

The Workgroup also noted that Settlement performance was the highest it had ever been. Some members argued that this meant the negative effects contended by P274 (moving energy volumes between Settlement (periods) would have a negligible impact in practice.

Trading disputes

The Workgroup considered that removing GVC would be likely to cause more trading disputes to be raised as a result of Suppliers using the trading disputes process to address errors they would no longer be able to correct using GVC.

The request for information included a question on participant's views on the impact on the number of trading disputes raised. As noted above, the majority of respondents believed that the number of disputes would increase if GVC was removed. The Workgroup considered that substantiated its initial view.

A Workgroup member believed that effectively moving the process of making corrections from GVC into the disputes process was an inefficient way to address error. The Workgroup considered that GVC was initially introduced on the grounds of efficiency, and in particular to reduce the need for Trading Disputes to deal with errors post RF.

Alternatively, to mitigate the consequential impact on the disputes process of removing, or limiting, GVC the disputes threshold could be raised to restrict the number of disputes raised and manage the resource needed to administrate the disputes process.

Short term impact on GVC use

CP1310, 'Clarifications to Gross Volume Correction Process' was implemented in February 2010 with the aim of placing restrictions on the use of GVC. The Workgroup considered that the introduction of CP1310 resulted in an increase in the application of GVC before the restrictions took effect. Because CP1310 was implemented in February 2010 it was too early to determine the long term impact but there was likely to be a reduction in the use of GVC compared to the period prior to CP1310 implementation (2009 - 2010).

The Workgroup considered whether the P274 Proposed solution would result in a similar spike in GVC use prior to its implementation. The Workgroup suggested that implementation of the Proposed Modification could cause a short term increase in GVC use prior to its introduction, but were unable to quantify how this might compare with the increase caused by the implementation of CP1310. The Workgroup considered that the roll out of smart meters was likely to cause an increase in GVC (due to identification of errors on the traditional meters being replaced).

Impact of 'writing off' error

Application of Re-initialisation under P274 Proposed 'writes off' part of the error for the Supplier concerned but the overall Settlement volume will be correct due to the application of GSP Group Correction Factor. In the case where a Supplier has to 'write off' overstated units (i.e. accept the error), the other Suppliers in the GSP Group would be attributed with understated units (collectively summing to the overstated units), balancing Settlement overall.

While noting that consumers are outside the scope of the BSC Modification Process, the Workgroup considered the effect of writing off errors upon Suppliers. The Proposer argued that while a Supplier that had to write off overstated units might contend that their costs had increased (meaning they would have to either absorb the additional cost or pass it on via increased prices) other Suppliers would have reduced costs (which they could choose to pass on via reduced prices). Thus Suppliers that address errors more effectively would benefit (and consequently their customers may benefit) and Suppliers that are less effective would not benefit (and potentially their customers could experience a negative impact). The Proposer argued that this would promote competition between Suppliers.

Writing off error through Re-initialisation would not prevent any Supplier (large or small) exercising the existing Disputes Process to address the written off error. Re-initialisation

does not preclude use of the defined Disputes Process so any excessive errors post Final Reconciliation that could have a major financial impact for a Supplier (large or small) can still be addressed. The counterview is that the consequence of this would be increased use of the Disputes process, as considered by the Workgroup.

Development of P274 Alternative

The majority of the Workgroup believed the Proposed solution was overly complex and would place excessively onerous obligations on Suppliers and Agents. They argued that as the Proposer believed a major issue for GVC was that it can compensate backwards for a significantly long period, an alternative approach would be to place limits around how far back GVC can be applied. They contended that this approach would be far less complex and onerous and would utilise processes already in place, requiring only minor changes to implement.

The Workgroup felt that restricting the use of GVC to just over six years (five years plus RF³) will capture the majority of “unreasonable” GVCs and add a new measure of control to the process, providing greater financial certainty to all industry parties. At the same time, GVCs that would be captured by this control would still be sufficiently infrequent that the application of the Alternative Solution could be easily “ring-fenced” within Supplier/DC systems and processes. These arguments formed the basis for the development of the P274 Alternative solution set out in Section 4.

Implementation Approach – Proposed Solution

Lead Time:

The group discussed what they thought was a reasonable lead time for implementation of the proposed solution and thought a minimum of twelve months would be required. This was based on the Industry Impact Assessment responses where respondents indicated they needed anywhere from 3 months to 18 months. The group discussed the different lead times and agreed they were likely to be driven by the type of organisation responding e.g. the company saying 3 months was a Supplier only company, whereas the companies quoting 12-18 months were Supplier/Party Agents. Lead time also varied depending on existing IT commitments.

Other matters attributing to the work groups decision for the minimum 12 month lead time, included the automating of systems to detect instances requiring Re-initialisation, deal with the anticipated volumes and the need to consider BSC Audit issues/requirements.

Re-qualification:

The issue of re-qualification was raised by a group member. They reasoned that the systems changes required could be perceived as significant and therefore could trigger re-qualification. This would therefore add a minimum of 3 months to any agreed implementation time. The group felt that further discussion was required around re-qualification following a recent PAB meeting where the topic was discussed. The argument was that re-qualification may not be sufficiently robust for major systems changes. ELEXON was asked to investigate this claim further. ELEXON have found no precedents, where all relevant impacted market participants have undergone requalification as a result of a Modification or Change Proposal. A requirement for market

³ RF occurs approximately 14 months after the Settlement Day.

participants to re-qualify under these circumstances would represent a major departure from the current Qualification processes, which are reliant on self-assessment. This is a wider issue than Modification Proposal P274.

Increase of GVC prior to rules change:

Given the minimum 12 month lead time suggested for implementation (not including potential re-qualification), the Proposer raised concerns about the possibility of an increased use of GVC leading up to any more restricted use of it as a correction technique. Similar to what happened with CP1311. If Suppliers were aware that GVC would be changed in the following year it might be an incentive to undertake another data cleansing exercise that could result in an increase in the use of GVC. The group discussed the merits of introducing a two-step implementation of the proposed solution. Whereby the use of GVC changes would be implemented immediately following approval but the Re-initialisation process could be implemented 12 months later. The group felt that this approach may not be permissible under the governance requirements for the Modification process and was likely to introduce administrative complications. The proposer and the Workgroup decided that it would be best left alone.

These arguments formed the basis for the P274 Proposed solution implementation approach solution set out in Section 6.

Implementation Approach – Alternative Solution

The majority of those who responded to the Industry Impact Assessment indicated that they would only require one month lead time for implementation on the basis that only minor changes would be required to existing processes.

This formed the basis for the P274 Alternative solution implementation approach solution set out in Section 6.

Proposed vs. current arrangements:

The **majority** of the Workgroup believe that the Proposed Modification **would not** better facilitate the achievement of the Applicable BSC Objectives overall compared with the existing baseline.

They believed that P274 Proposed would have a detrimental impact on Objectives (c) and (d) for the following reasons:

Objective (c):

- Restriction of the use of GVC (and because redress via the Trading Disputes process would be unfeasible due to the cost of raising a dispute exceeding the compensation that would be received) would decrease the accuracy of the reflection in Settlement of the gross volume of energy supplied by each individual Supplier, which would reduce the degree to which Settlement reflects Suppliers' actual activities, which would tend to have a detrimental impact on competition;
- Creates a barrier to entry as new Suppliers (particularly small Suppliers that have less resource) are likely to have difficulty managing data and addressing issues and restricting use of GVC takes away a straightforward means of correction.

Objective (d):

- Introduces significant additional complexity and cost to the BSC arrangements;
- The arrangements are excessively onerous on Suppliers and Supplier Agents;
- There is no defect in the BSC so changes are unnecessary and would therefore negatively impact the efficiency and effectiveness of the BSC arrangements;
- The issues identified by P274 arose due to the implementation of CP1310 and are unlikely to recur, so the proposed changes are unnecessary and would therefore negatively impact the efficiency and effectiveness of the BSC arrangements;
- Audit controls around GVC are sufficient and no BSC Audit issues have been raised around GVC use, whereas the Proposed solution would add complexity that could create BSC Audit issues;
- Under the baseline, energy volumes are reconciled but under the Proposed solution energy volumes would be written off (which is counter to the general approach of the BSC arrangements) and writing off energy in this way would mean Settlement would less accurately reflect the gross volume of energy supplied by each Supplier.

A **minority** of the Work group believed that P274 Proposed **would** better facilitate Objectives (c) and (d) for the following reasons:

Objective (c):

- Reduces the possibility that new entrants would have energy volumes attributed to them that relate to periods before they began trading (through the effect of GSP Group Correction Factor on the compensatory error volume), which removes a potential deterrent for new entrants and therefore promotes competition;
- Reduces the extent to which Suppliers (large and small) may have energy volumes attributed to them that relate to periods with different wholesale energy prices (through the effect of GSP Group Correction Factor on the compensatory error volume), which would tend to promote effective competition;



Recommendation

The Workgroup initially recommends approval of the P274 Alternative

- Improve LDSOs' ability to produce suitable forward looking Line Loss Factors (based on historical Settlement data) for use in Settlement, increasing Settlement accuracy which would tend to promote effective competition;
- Addresses unreasonable GVC usage (i.e. application of GVC over excessively long periods).

Objective (d):

- Provides an additional incentive to settle the correct volume of energy within the 14-month reconciliation window;
- Review of threshold is possible so introduces flexibility into the arrangements which promotes efficiency.

Question 7

Would Proposed Modification P274 help to achieve the Applicable BSC Objectives compared to the current baseline?

Alternative vs. current arrangements:

The **majority** of the Workgroup believed that the Alternative Modification solution **would** better facilitate the achievement of the Applicable BSC (c) and (d) for the following reasons:

Objective (c):

- Provides additional control and transparency around GVC and confidence in GVC application, which should be generally beneficial for competition;
- Addresses unreasonable GVC usage (i.e. application of GVC over excessively long periods);

Objective (d):

- Review of threshold is possible so introduces flexibility into the arrangements which promotes efficiency.

A **minority** of the Workgroup believed that P274 Alternative would have no impact on Objective (c) and would have no impact or a slight detrimental impact on Objective (d) for the following reasons:

- Adequate audit trail and reporting exist under the current arrangements (and, though not part of the existing baseline, CP1360 'Inclusion of Audit Records for Gross Volume Correction and Dummy Meter Exchanges' will, if approved, do more to improve this area than the Alternative solution would);
- It has not been demonstrated that a change is required.

Question 8

Would Alternative Modification P274 help to achieve the Applicable BSC Objectives compared to the current baseline?

Proposed vs. Alternative:

The **majority** of the Workgroup believed the **Alternative** Modification would better facilitate the achievement of the Applicable BSC Objectives overall compared with the Proposed Modification.

The majority of the Workgroup believed that P274 Alternative would have a positive impact on Objectives (c) and (d) compared with the Proposed for the following reasons:

Objective (c):

- Introduces reasonable controls around GVC use while retaining GVC as a sensible means of correcting errors.

Objective (d):

- Introduces much less additional complexity to the GVC process than the Proposed.

A **minority** of the Workgroup believed that P274 **Proposed** would better facilitate the achievement of Objectives (c) and (d) compared with the Alternative for the following reasons:

- Limits the extent to which energy is settled in periods other than those in which it was consumed by both volume and time (as opposed to the Alternative which only limits the use of GVC by time);
- The Alternative would have no significant practical impact.

Question 9

Would Alternative Modification P274 better help to achieve the Applicable BSC Objectives compared to the Proposed Modification?

9 Further Information

More information is available in

Attachment **A**: Other Alternative Solutions Discussed

Attachment **B**: Legal Text Proposed

Attachment **C**: Legal Text Alternative

Attachment **D**: Assessment Consultation Question Form

A complete version of the consultation and impact assessment responses received are available on the [P274](#) page of the ELEXON website.