Standing Issue: Draft Solution to Identify Impacts

This document sets out the solutions options under consideration

Standing Issue 39: Processing Unrecorded Units identified by Revenue Protection Services

Standing Issue 39 has been raised to consider and develop options for the processing of unrecorded units identified by Revenue Protection Services.

High Impact:

- All options: Suppliers, Data Collectors, LDSOs
- Option dependent: NHHDA, SVAA, BSCCo/DCUSA/MRASCo/ National Revenue Protection Service

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About this document:

This document is the Draft Solution to Identify Impacts for Standing Issue 39. It summarises the solution options developed by the Volume Allocation Standing Modification Group (VASMG), and the changes - to the extent the group has been able to identify them - that will be required to participants' systems, BSC Central Systems, Code Subsidiary Documents and Configurable Items to implement the various solution options.

The purpose of this document is to facilitate assessment of the impact of implementing the various solution options.

You should assess impacts and submit responses in accordance with the Change Proposal Circular (CPC) or other covering documents supplied with this Draft Solution.

Any questions?

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1 Summary

Why Change?

Standing Issue 39 is investigating how unrecorded units identified by Revenue Protection Services should be submitted into Settlement.

What are unrecorded units?

Unrecorded units usually arise due to energy theft.

They represent energy that has not been correctly metered and entered into Settlement.

Background

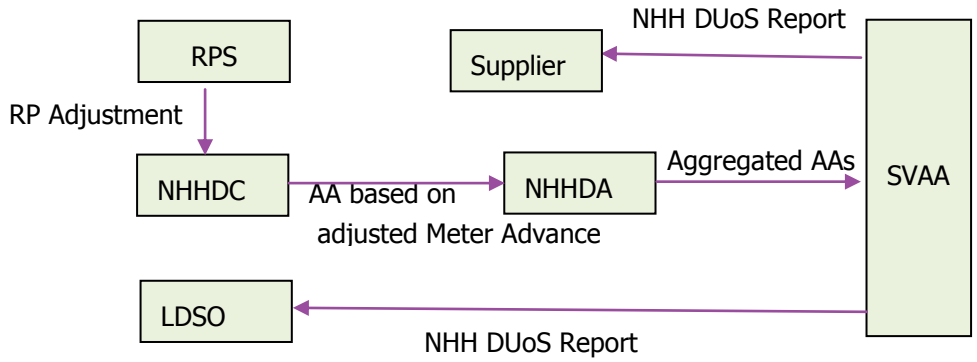
In October 2009 a party to the Distribution Connection and Use of System Agreement (DCUSA) raised Change Proposal DCP 054 'Revenue Protection/Unrecorded Units into Settlements'. The DCP 054 Working Group was set up to consider the Change Proposal. This group continues to hold regular meetings and the Change Proposal is in the 'definition' phase.

The DCP 054 Working Group has recognised that, whilst the DCUSA could include obligations relating to how unrecorded units are estimated and agreed, the requirements for how these unrecorded units are then processed in Settlement fall within the scope of the BSC. As there is no single clear solution for processing unrecorded units in Settlement, E.ON UK raised Standing Issue 39 'Processing Unrecorded Units identified by Revenue Protection Services' on behalf of the DCP 054 Working Group to allow various options to be considered.

The current process

The process for applying Non Half Hourly Revenue Protection adjustments in Settlement is defined in BSCP504 'Non Half Hourly Data Collection for SVA Metering Systems Registered in SMRS' 3.6 'Revenue Protection'. "When informed by the Revenue Protection Service that there is evidence of tampering with a SVA Metering System", the Non Half Hourly Data Collector (NHHDC) is required to "record an Adjustment to the meter advance based on the unrecorded units estimated by the Revenue Protection Service" and to "calculate a new EAC and AA based on the adjusted meter advance and send the new EAC/AA" to the NHHDA.

Figure 1: Current process for inputting Non Half Hourly Revenue Protection adjustments in Settlement



The current process is described in greater detail in Attachment A.

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Technical Assurance Checks

Between November 2009 and February 2010, ELEXON visited seven NHHDCs and five NHH Suppliers to perform Technical Assurance (TA) checks on the processing of revenue protection reads. The results were published in 'Findings from the Technical Assurance Checks on the Processing of Revenue Protection Reads' (PAB111/05).

The key findings of the TA Checks were that:

- The current BSC obligations are not defined in detail and are not being applied consistently;
- There is a lack of engagement between Suppliers, NHHDCs and Revenue Protection Services (RPS) regarding the processing of Revenue Protection units; and
- Little evidence was found that units identified by Revenue Protection Services are being processed by NHHDCs.

The impact of not processing Revenue Protection adjustments using the current BSCP504 process is that unrecorded units identified by the RPS are allocated to all Suppliers in proportion to their Non Half Hourly market share, via the GSP Group Correction process (i.e. in the same way as undetected theft is settled).

Further details about issues with the current process can be found in Attachment A.

Settlement Risk

The risk that "stolen energy notified by Revenue Protection units is not used in calculations by Suppliers and NHHDCs" (Settlement Risk SR0073) is one of the "Top Ten" risks identified in the Risk Evaluation Register (RER). The Technical Assurance Checks described above related to this Settlement Risk. No other Performance Assurance Techniques have been applied due to a lack of information about the levels of adjustments being made.

Solution Options

Three solution options have been developed by the Standing Issue 39 Group ('the Group') at its first meeting, on 2 November.

- **Solution Option 1 – address the TA Check findings by enhancing the current process**
- **Solution Option 2 – end-to-end tracking of Revenue Protection adjustments**
- **Solution Option 3 – Settlement Cost Smearing**

These solutions are detailed on pages 5 to 21.

Impacts & Costs

Costs will be established using the results of this impact assessment. We request that you assess the impact of each option on your organisation.

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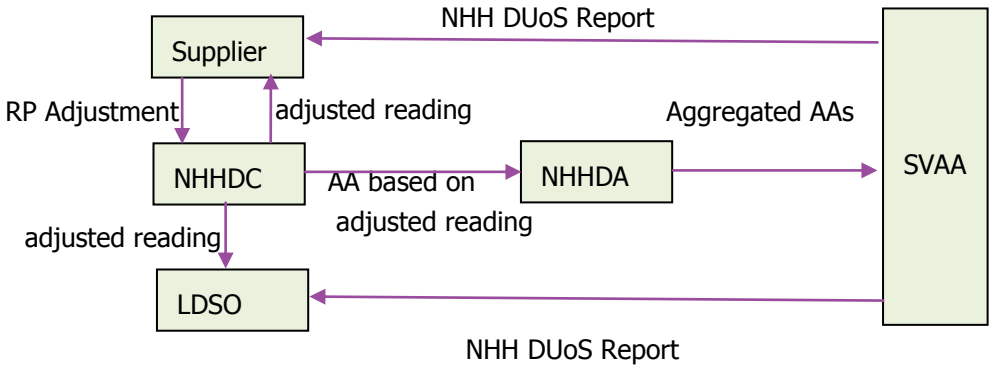
2 Solution Option 1 – address the TA Check findings by enhancing the current process

Summary

Option 1 is to enhance the current process in order to address the issues identified by the TA Checks.

- Revenue Protection adjustments will be provided to the NHHDC by the Supplier (rather than by the RPS, as currently specified);
- Revenue Protection adjustments must be applied by adjusting Meter readings and using "dummy Meter exchanges" must be used where the Meter is not replaced; and
- A Master Registration Agreement (MRA) Change Proposal will be raised to introduce a new value of Reading Type for Revenue Protection adjusted readings.



Question 1

Would Option 1 impact your organisation? If so please describe the impacts, costs and required implementation timescales (from the point of approval).

Detailed Requirements

Changes to BSC Systems

No changes to the BSC Systems would be needed.

Changes to Party and Party Agents' processes

Requirement 1.1 – Suppliers to provide Revenue Protection adjustments to the NHHDC

Suppliers will send Revenue Protection adjustments to NHHDCs. This will include the Metering System Id, the volume of unrecorded units and the start and end dates of the period of theft. The Supplier will provide the date of the meter replacement, where applicable. Where the meter has not been replaced, the Supplier will provide a reading and the date on which it was taken. It is assumed that where a Meter is not replaced after an episode of theft, that a reading will be taken.

The interface between the Supplier and the NHHDC will be manual (the Group invites your views on this - see Question 2). The contents of the flow will be defined in a new P-flow in the SVA Data Catalogue. For the purposes of this impact assessment, please assume that adjustments are sent monthly in the form of spreadsheets.

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Question 2

Do you agree that a manual interface (e.g. monthly spreadsheets sent by email) is appropriate for Suppliers to send Revenue Protection adjustments to NHHDCs, given the likely volume of data?

There will be a requirement on Suppliers to process all agreed units identified by the RPS. However, the process for agreeing Revenue Protection adjustments between the Supplier, RPS and LDSO will be under the governance of the DCUSA and so is outside the scope of this solution. The Group invites your views on this. See Question 3.

Question 3

Do you agree that a requirement on Suppliers to process all agreed Revenue Protection adjustments, together with a process under the governance of the DCUSA for agreeing these adjustments, will be sufficient to ensure that all agreed units are accounted for? If not, what additional steps can be taken to ensure that all Revenue Protection adjustments are accounted for?

The Group believes it will be relatively rare for periods of theft to span more than one Supplier Registration. Where this does occur, it is assumed that the allocation of missing units between the relevant Suppliers will be agreed between the RPS, Suppliers and LDSO as part of the above process for agreeing adjustments.

Requirement 1.2 – NHHDC to receive Revenue Protection adjustments from the Supplier and adjust the closing reading on the old meter

NHHDCs will receive Revenue Protection adjustments from Suppliers on a monthly basis. These will be stored for audit purposes. The NHHDC will determine whether the Meter was replaced as a result of the Revenue Protection incident, using the Meter replacement date provided by the Supplier and the Non Half-hourly Meter Technical Details (D0150) flow received from the Meter Operator.

If the Meter was replaced, the NHHDC will withdraw the final reading on the old Meter and replace it with a new adjusted reading. The adjusted final reading will be set to the original reading plus the estimate of unrecorded units received from the Supplier. The adjusted final reading will be sent to the Supplier and LDSO a 'Meter Readings' (D0010) dataflow using a new Reading Type. A revised AA will be calculated using the adjusted reading and sent to the NHHDA in the normal way.

What is a dummy Meter exchange?

A Meter is not replaced, but the NHHDC creates Final and Initial Readings to simulate a Meter replacement within the BSC Systems. This allows a meter reading to be adjusted to account for unrecorded units without impacting subsequent consumption for the Metering System.

Requirement 1.3 – NHHDC to carry out a "dummy Meter exchange" in the event that the Meter wasn't replaced following the intervention of the Revenue Protection Service

Where the Meter has not been replaced, the NHHDC will use a "dummy Meter exchange" – i.e. will artificially create a revised Final Reading (adjusted to take into account the estimated unrecorded units provided by the Supplier) and an Initial Reading (with the pre-adjustment value). This will ensure that the adjustment is not erased when the meter is next read.

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The readings will be sent to the Supplier and LDSO on a 'Meter Readings' (D0010) dataflow. The adjusted Final Reading will use the new Reading Type. A revised AA will be calculated using this adjusted reading and sent to the NHHDA in the normal way.

Requirement 1.4 – NHHDC to attempt to allocate energy over the correct period, so far as is practicable

The Group believes that Metering Systems that have been subject to theft will not have been read regularly, so the NHHDC will usually only need to adjust one Meter reading. However, to promote Settlement accuracy the adjustment should be spread over the maximum possible number of Meter readings across the applicable time period. A requirement will therefore be placed on NHHDCs to attempt to allocate energy over the correct period, so far as is practicable, by applying the adjustment over multiple readings, where such readings exist. Where the adjustment needs to be applied over multiple readings and the Meter is not replaced, only the last reading would need a "dummy Meter exchange".

Adjustments can only be made within the 14 month Final Reconciliation window. The Group suggests that adjustments should be made only to account for unrecorded units that fall within this window, i.e. adjustments would not be applied to readings within the 14 month window to account for energy stolen over longer timescales. Unrecorded units that fall outside the window may be addressed via the Trading Disputes process. However, the Group's view on this may be affected by information from respondents. You are therefore invited to supply views on the appropriateness of this approach and the proportion of incidents where the period between the date when theft is deemed to have started and the date when the estimated stolen units have been agreed is greater than 14 months (see Question 4).

Question 4

In what proportion of Revenue Protection incidents does the period between the date theft is deemed to have started and the date unrecorded units have been estimated and agreed exceed 14 months?

NB: quantitative data would be appreciated if available, but estimates and qualitative assessments would also be useful.

Requirement 1.5 – Suppliers to provide Revenue Protection adjustments to the HHDC

References to the Half Hourly Data Collector (HHDC) receiving data from the RPS will be amended to refer to Revenue Protection adjustments received from Suppliers. Otherwise no changes will be made to the Half Hourly arrangements.

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Impacts of Solution Option 1

The impact on ELEXON will be determined by internal impact assessment, in parallel with the industry impact assessment.

Impact on BSC Parties and Party Agents
Change to Supplier processes to send monthly spreadsheets of Revenue Protection adjustments to Data Collectors.
Change to Data Collector processes to receive and process monthly spreadsheets of Revenue Protection adjustments, adjust readings and report revised readings using new Reading Type.
Revised Supplier and LDSO processes to receive Meter Readings (D0010) flows with new Reading Type for adjusted readings.

Impact on Code Subsidiary Documents	
CSD	Potential impact
BSCP504 'Non Half Hourly Data Collection for SVA Metering Systems Registered in SMRS'	Section 3.6 to be amended to reflect changes described in requirements 1.1 to 1.4.
BSCP502 'Half Hourly Data Collection for SVA Metering Systems Registered in SMRS'	References to Revenue Protection Services in Section 4.2 to be replaced by Supplier (as per requirement 1.5).
SVA Data Catalogue	New P-flow to define manual interface between Supplier and NHHDC for Revenue Protection adjustments.

Impact on Core Industry Documents and other documents	
Document	Potential impact
Data Transfer Catalogue	New value for adjusted Revenue Protection reading in valid set for Data Item J0171 'Reading Type'.

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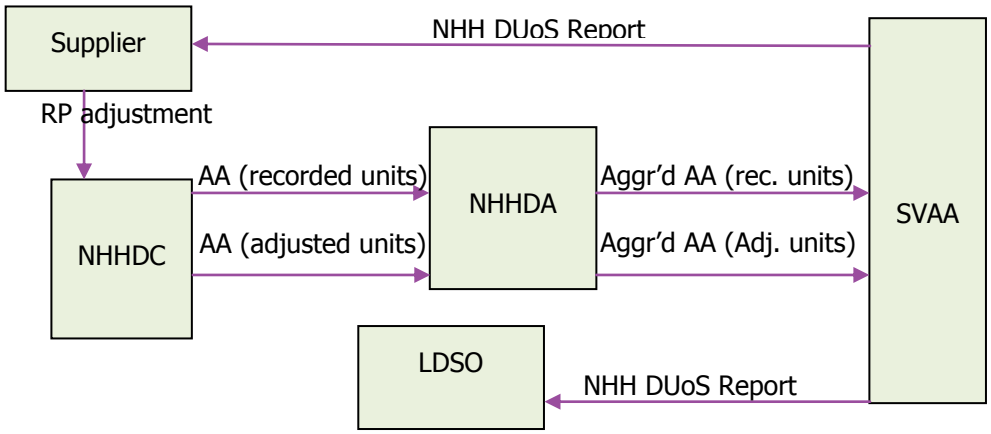
3 Solution Option 2 – end-to-end tracking of Revenue Protection adjustments

Summary

Option 2 is to amend NHHDC, NHHDA and SVAA processes such that Revenue Protection adjustments are processed as separate quantities from any recorded units.

- Revenue Protection adjustments will be provided to the NHHDC by the Supplier (rather than by RPS, as currently specified);
- These adjustments will be applied as Meter Advances and will be separately identifiable from any recorded consumption on the same Meter;
- The adjusted units will be traceable from NHHDC to SVAA via a new instruction Type Code (on the NHHDC to NHHDA interface) and a new data item on the Supplier Purchase Matrix (on the NHHDA to SVAA interface); and
- The aggregated volume of adjusted units will be reported to Suppliers and LDSOs as a separate line item on the Non Half Hourly DUoS Report (D0030) and will be allocated a distinct Consumption Component Class (CCC).



Question 5

Would Option 2 impact your organisation? If so please describe the impacts, costs and required implementation timescales (from the point of approval).

Detailed Requirements

Changes to Party and Party Agents' processes

Requirement 2.1 – Suppliers to provide Revenue Protection adjustments to the NHHDC

NB: this requirement is the same as Requirement 1.1 for Option 1.

Suppliers will send Revenue Protection Adjustments to NHHDCs. This will include the Metering System Id, the volume of unrecorded units and the start and end dates of the period of theft.

The interface between the Supplier and the NHHDC will be manual (see Question 2). The contents of the flow will be defined in a new P-flow in the SVA Data Catalogue. For the purposes of this impact assessment, please assume that adjustments are sent monthly in the form of spreadsheets.

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There will be a requirement on Suppliers to process all agreed units identified by the RPS. However, the process for agreeing Revenue Protection adjustments between the Supplier, RPS and LDSO will be under the governance of the DCUSA and so is outside the scope of this solution.

The Group believes it will be relatively rare for periods of theft to span more than one Supplier Registration. Where this does occur, it is assumed that the allocation of missing units between the relevant Suppliers will be agreed between the RPS, Suppliers and LDSO as part of the above process for agreeing adjustments.

Requirement 2.2 – NHHDC to receive, store and allocate Revenue Protection adjustments from the Supplier

NHHDCs will receive Revenue Protection adjustments from Suppliers on a monthly basis. NHHDCs will store these for audit purposes.

The Group suggests that adjustments should be made only to account for unrecorded units that fall within the Final Reconciliation window, i.e. adjustments would not be applied to Meter Advance Periods within the current 14 month window to account for energy stolen over longer timescales. Unrecorded units that fall outside the window may be addressed via the Disputes process. However, the Group's view on this may be affected by information from respondents. You are therefore invited to supply views on the appropriateness of this approach and the proportion of incidents where the period between the date when theft is deemed to have started and the date when the estimated stolen units have been agreed is greater than 14 months (see Question 4).

Requirement 2.3 – NHHDC to calculate an Annualised Advance, based on the adjustment provided by the Supplier, and store it within a new table in its database

The NHHDC will then submit the Meter Advance (representing the Revenue Protection adjustment) and the relevant settlement details for the Metering System (Profile Class, Standard Settlement Configuration (SSC) etc) to the EAC/AA calculator. The Meter Advance will not be added to any recorded units for the Metering System, but will be treated as a distinct quantity. NHHDCs will need to submit revenue protection adjustments to the EAC/AA calculator in separate batches from normal meter advances, i.e. as a separate monthly batch run.

The NHHDC will store the resultant AA for audit purposes in a distinct table within its database. There is no need to store the EAC because the Revenue Protection adjustment will be applied via the AA.

Requirement 2.4 – NHHDC to send the Annualised Advance to the NHHDA using a new Instruction Type

The NHHDC will submit the AA to the NHHDA using the existing 'Metering System EAC/AA data' (D0019) flow. Currently, all D0019 flows between the NHHDC and the NHHDA have an instruction Type Code of NH09. Revenue Protection AAs will have a new Type Code (say 'NH10').

The data items for the new Type Code will be the same as a standard 'NH09' instruction. The EAC groups 'EAH' and 'EAD' will be null (which is already supported by the D0019).

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Requirement 2.5 – Suppliers to provide Revenue Protection adjustments to the HHDC

References to the Half Hourly Data Collector (HHDC) receiving data from the RPS will be amended to refer to the HHDC receiving Revenue Protection adjustments from Suppliers. Otherwise, Option 2 does not cover theft associated with Half Hourly Meters. This would require changes to Half Hourly arrangements equivalent to those described to the Non-Half Hourly arrangements set out in this section. The Group believes that this approach is appropriate on the basis that theft in the Half Hourly sector is rare. The Group invites your views on this (see Question 6).

Question 6
Do you agree that the incidence of theft for Half Hourly Metering Systems is too low to warrant significant changes to the Half Hourly processes?

Changes to BSC Systems

Requirement 2.6 – NHHDA to receive and validate the new D0019 Instruction Type

The NHHDA will receive and validate D0019 flows with the new NH10 instruction Type Code.

There will be no cross-validation of data received in an NH10 instruction and that received in NH09 instructions in respect of the same Metering System. For example, the Meter Advance Period in the NHO9 doesn't have to correspond to an existing Meter Advance Period for the same Metering System, and the Profile Class, SSC etc need not be the same.

Any data loaded from valid NH10 instructions will however be validated against the SMRS view of the Metering System data (as described in Requirement 2.7 below).

If an EAC is included in a NH10 instruction, it will be ignored and no exception will be reported. Similarly any Settlement attributes (SSC, Profile Class etc) which end before the start date of the earliest Meter Advance Period will be ignored and no exception will be reported. Otherwise the instruction will be rejected and a Failed Instruction (D0023) flow sent, where any of the following conditions apply:

- The instruction includes a change of Supplier or SSC within a Meter Advance Period;
- The instruction includes attributes with duplicate start dates;
- Settlement attributes are missing at the start of the earliest Meter Advance Period;
- Supplier, DC or other Settlement attributes are not included in valid standing data;
- The instruction contains overlapping Meter Advance Periods;
- The instruction contains attribute values for a Supplier Registration that doesn't exist in the NHHDA database;
- AA values are missing (or duplicated) for one or more registers associated with the Metering System's SSC or are provided for registers which are not valid for the Metering System's SSC;
- The Meter Advance Period end date is earlier than the Meter Advance Period start date.

If the NH10 instruction passes validation, any existing adjustments which start after or overlap with the Significant Date in the instruction will be deleted and replaced with the contents of the new D0019.

The NHHDA will store any AAs (and associated Settlement details) received with a Type Code of NH10, that pass validation, in a separate database table.

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Requirement 2.7 – NHHDA to aggregate Revenue Protection AAs and allocate to a new field in the Supplier Purchase Matrix Data Flow (D0041)

The aggregation run will sum the values in the new database table and report them separately to the SVAA. This will require a new data item in the 'Supplier Purchase Matrix Data File' (D0041).

Where there is an inconsistency between the adjustment record and the SMRS view of the data, the following rules will apply:

- Where there is a mismatch on Supplier Id or Standard Settlement Configuration Id (SSC) the Revenue Protection adjustment AA will NOT be included in the aggregation run;
- Where the NHHDA is not appointed to the Metering System on the day in question, the Revenue Protection adjustment AA will NOT be included in the aggregation run;
- Where the NHHDC has not been appointed to the Metering System at any time within the Supplier Registration effective on the day in question, the Revenue Protection adjustment AA will NOT be included in the aggregation run;
- Where there is a mismatch on Energisation Status or Measurement Class Id, the Revenue Protection adjustment AA will be included in the aggregation run (in relation to the Measurement Class, there will not be separate categories for metered/unmetered adjustments);
- Where there is a mismatch on Profile Class Id or GSP Group Id, the Revenue Protection adjustment AA will be included in the aggregation run and will be allocated to the Profile Class/GSP Group according to the SMRS view;
- Where overlapping Revenue Protection adjustment AAs have been provided by more than one NHHDC, the value provided by the latest NHHDC appointed within the Supplier Registration will be used.

Where the above exceptions are identified as part of the 'Check Data Collector Data' function, exceptions will be reported on the Non Half Hourly Data Aggregation Exception Report (D0095).

Requirement 2.8 – SVAA to process Revenue Protection adjustment data as a separate data quantity

The SVAA will receive annualised Revenue Protection adjustments as a separate data item in the D0041. These will be profiled and adjusted for line losses in the same way as other NHH consumption. The values will be aggregated using new Consumption Component Classes (CCC) for consumption and line losses.

Requirement 2.9 – SVAA to report Revenue Protection adjustment data as a separate data quantity

The SVAA will report Revenue Protection adjustments as a separate data quantity:

- Changes will be required to the format of the Non Half Hourly DUoS Report (D0030) and Supplier Purchase Matrix Report (D0082) to include the new Revenue Protection adjustment data item;
- The Supplier Half Hourly Demand Report (D0081), GSP Group Consumption Totals Report (D0276) and Supplier BM Unit Report (D0296) will include the new data, by virtue of the new Consumption Component Classes, but will not need format changes;

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- Revenue Protection adjustments will be included in the totals that are already reported in the Supplier Deemed Take Report (D0043) and the Supplier Purchase Report (D0079), but the format of these reports will be unchanged.

Impacts of Solution Option 2

The impact on ELEXON will be determined by internal impact assessment, in parallel with the industry impact assessment.

Impact on BSC Systems and process	
BSC System/Process	Potential impact
NHHDA	• Receive and validate annualised Revenue Protection adjustments via a new instruction type on the D0019 flow; • Sum these values (by Settlement Class) and report to the SVAA as a new item(s) in the D0041 flow.
SVAA	• Receive new data item(s) for Revenue Protection adjustments in D0041 flow; • Profile aggregated AAs for Revenue Protection adjustments and calculate line losses in the same way as ordinary aggregated AAs; • Report total annualised (and/or profiled) Revenue Protection adjustments as a new data item on the D0030 and D0082 flows • Report Revenue Protection adjustments against new Consumption Component Classes on the D0081, D0276 and D0296 flows.

Impact on BSC Parties and Party Agents
Change to Supplier processes to send monthly spreadsheets of Revenue Protection adjustments to Data Collectors.
Change to Data Collector processes to receive and process monthly spreadsheets of Revenue Protection adjustments, store adjustments, submit adjustments to the EAC/AA calculator, store resultant AAs and submit to the NHHDA using a new instruction Type Code.
NHHDA impacts are described under 'Impact on BSC Systems and process' above.
Revise Supplier processes to receive D0030 and D0082 in new format and (optionally) to process new Consumption Component Class data on D0081, D0276 and D0296.
Change LDSO processes to receive D0030 in new format and process Revenue Protection adjustments for DUoS billing and Distribution Price Control purposes.

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Impact on Code	
Code section	Potential impact
Section S-2	Change to S-2 4.3 to reflect requirement on NHHDC to calculate a separate AA for Revenue Protection adjustments. Change to S-2 4.4 to reflect requirement on NHHDA to separately aggregate Revenue Protection adjustments. Potential change to 5.1.12 to 5.1.16 to include/exclude adjustments in Average Fraction of Yearly Consumption (AFYC) and GSP Group Profile Class Average Estimated Annual Consumption (GGPCAEAC) calculations.
Section X-2 Table X-6	Definition of new data items for Annualised Advance (RP Adjustment) and Total Annualised Advance (RP Adjustment)
Section X-2 Table X-8	Definition of three new Consumption Component Classes for Revenue Protection adjustments (for consumption, metering system specific losses and metering system non-specific losses).

Impact on Code Subsidiary Documents	
CSD	Potential impact
BSCP504 'Non Half Hourly Data Collection for SVA Metering Systems Registered in SMRS'	Section 3.6 to be amended to reflect changes described in requirements 2.1 to 2.4.
BSCP505 'Non Half Hourly Data Aggregation for SVA Metering Systems Registered in SMRS'	Changes to reflect requirements 2.6 and 2.7.
BSC Procedure for Supplier Volume Allocation Agent (BSCP508)	Changes to reflect requirements 2.8 and 2.9.
BSCP502 'Half Hourly Data Collection for SVA Metering Systems Registered in SMRS'	References to Revenue Protection Services in Section 4.2 to be replaced by Supplier (as per requirement 2.5).
NHH Instruction Processing Specification	Definition of requirements for processing new instruction type for Revenue Protection Adjustments.
SVA Data Catalogue	New P-flow to define manual interface between Supplier and NHHDC for Revenue Protection adjustments.

Impact on Core Industry Documents and other documents	
Document	Potential impact
Data Transfer Catalogue	New data items in Supplier Purchase Matrix Data File (D0041), Non Half Hourly DUoS Report (D0030) and Supplier Purchase Matrix Report (D0082)

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4 Solution Option 3 – Settlement Cost Smearing

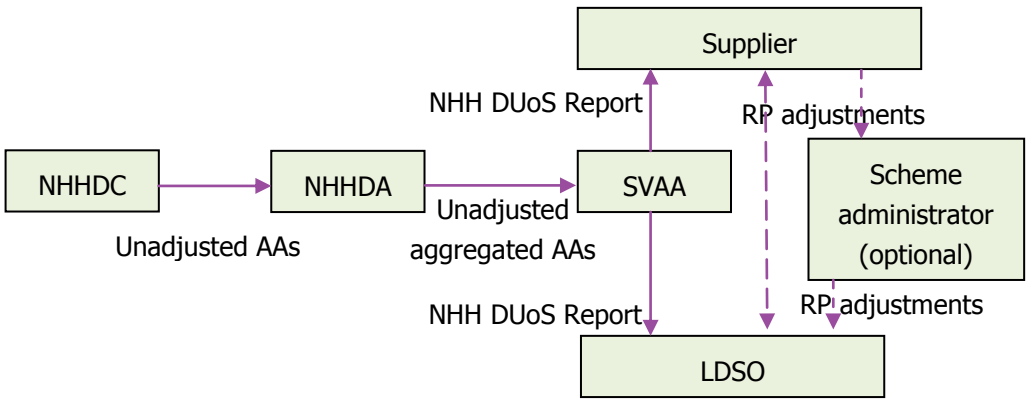
Summary

If Revenue Protection adjustments are recorded against the Metering System where theft is discovered, the Supplier for that Metering System will incur the full energy costs for the assessed unrecorded units. This acts as a disincentive on Suppliers to actively discover cases of theft, as the likelihood of fully recovering charges from the thief is very low.

Under Option 3 Revenue Protection adjustments are processed outside the NHHDC-NHHDA-SVAA systems, resulting in unrecorded units being 'smeared' across Suppliers.

- The requirements in BSCP502 and BSCP504 will be removed;
- All unrecorded units will be smeared across all Suppliers in proportion to their NHH market share (i.e. via the GSP Group Correction process);
- Revenue Protection adjustments will be agreed between RPS, Suppliers and LDSOs;
- Agreed adjustments will be utilised by LDSOs for DUoS charging and are reported to Ofgem for the purposes of the Distribution Price Control (subject to Ofgem agreeing such an approach);
- Adjusted units could be reported between RPS, Suppliers and LDSOs via a monthly reporting process, under the governance of the DCUSA;
- Alternatively, these adjustments could be collated centrally by an administrator. This could be the National Revenue Protection Service (if this is set up following consultations by the Gas Forum and Ofgem) or another central organisation, such as BSCCo, the DCUSA or MRASCo. If BSCCo were to fulfil this centralised administrative role, it would seem appropriate to introduce governance arrangements under the BSC, which would require a Modification (an equivalent change to the relevant governance arrangements would be required for another central organisation to fulfil this role).

Please note that unrecorded units are currently being allocated via GSP Group Correction to a large extent, as a result of failures to process Revenue Protection adjustments.



How does Option 3 impact the Distribution Price Control?

As part of Distribution Price Control Review number 5 (DPCR5), calculations are based exclusively on outputs from Settlement. Taking account of units reported outside the usual Settlement processes is dependent on Ofgem being willing to vary the DPCR5 methodology.

Question 7

Would Option 3 impact your organisation? If so please describe the impacts, costs and required implementation timescales (from the point of approval).

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Detailed Requirements

Changes to BSC Systems

No changes would need to be made to the BSC Systems, although a new application would need to be developed if BSCCo fulfils the role of administrator under the centrally-administered sub-option.

Changes to Party and Party Agents' processes

Requirement 3.1 – remove requirement on NHHDCs and HHDCs to process Revenue Protection adjustments

Under Option 3 the requirement on NHHDCs to process Revenue Protection adjustments in BSCP504 3.6 is removed; the requirement on HHDCs to process Revenue Protection adjustments in BSCP502 4.2 is also removed. This will have the effect that all unrecorded units are smeared across all Suppliers in proportion to their NHH market share (i.e. via the GSP Group Correction process).

Requirement 3.2 – Revenue Protection Services to report Revenue Protection adjustments to Suppliers

RPS will report identified units to Suppliers on a monthly basis. This will include all units identified within the reporting month, regardless of the period of theft. The adjustments will be reviewed by Suppliers.

Requirement 3.3 – Suppliers to report and agree Revenue Protection adjustments with LDSOs

The Group suggests there should be a cut-off point (to be defined) after which adjustments cannot be made. Suppliers will report agreed adjustments on a monthly basis to LDSOs, having excluded any units deemed to have been taken before the cut-off point.

LDSOs will have the opportunity to dispute the reported units and Suppliers will report revised values, where agreed. The monthly report from Suppliers to LDSOs will thus include both new values and revised values from previous reporting periods.

LDSOs may wish to use the reports from Suppliers (in conjunction with the Non Half Hourly DUoS Report (D0030) and data from Half Hourly Data Collectors) to calculate revised DUoS charges. There may need to be an agreed process to enable LDSOs to include reported units in their DUoS billing and to enable Suppliers to validate the adjusted bills. However, it is assumed that reporting for DUoS charging purposes and its associated governance falls under the DCUSA rather than the BSC.

Requirement 3.4 – LDSOs to report aggregated and agreed Revenue Protection adjustments to Ofgem

LDSOs will report aggregated adjustments (from the reports agreed with Suppliers) to Ofgem for the purposes of the Distribution Price Control (subject to Ofgem agreeing such an approach).

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Reporting and Governance Options

The reporting processes described above could be carried out on a multi-lateral basis between RPS, Suppliers and LDSOs (i.e. without a central administrator). The reporting process would need to be subject to governance arrangements, which would appear to best sit within the DCUSA.

Alternatively, reporting could be carried out via a central scheme administrator. This could be the National Revenue Protection Service (if this is set up following consultations by the Gas Forum and Ofgem) or another central organisation, such as BSCCo, the DCUSA or MRASCo. If BSCCo were to fulfil this centralised administrative role, it would seem appropriate to introduce governance arrangements under the BSC, which would require a Modification (an equivalent change to the relevant governance arrangements would be required for another central organisation to fulfil this role). Questions 8 and 9 seek your views on the reporting and governance under Option 3.

Question 8

Under Option 3 would you favour a centrally administered scheme for reporting Revenue Protection adjustments or multilateral reporting between Suppliers and LDSOs under the governance of the DCUSA?

Please provide details of the relative costs and benefits of these two sub-options.

Question 9

Under a central administered scheme:

- Who do you believe should perform this role (subject, of course, to their willingness to do so) - National Revenue Protection Service; BSCCo; the DCUSA; MRASCo; or another organisation (please specify)?
- How do you believe such a scheme should be funded?

Scope Options

Under the normal Supplier Volume Allocation (SVA) processes, energy can only be allocated to a Supplier via a Metering System or through the GSP Group Correction process. As such, Options 1 and 2 can only assign assessed unrecorded units to a particular Metering System. Under Option 3 there is the flexibility to report by Metering System (e.g. where the Meter has been by-passed or tampered with) or to include unrecorded units that cannot be allocated to a Supplier (e.g. theft in conveyance). The latter can be taken into account for Distribution Price Control reporting, though not for DUoS charging. The relative merit of Option 3, compared to the other options, is partly dependent on the extent to which theft in conveyance contributes to the overall volume of detected theft. The Group invites your views on this (see question 10).

Question 10

Approximately what proportion of detected theft would you estimate to be 'theft in conveyance', i.e. theft that cannot be directly allocated to a Metering System (and hence a Supplier)?

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Where unrecorded units are the result of a Settlement error (for example, Metering Systems incorrectly registered as de-energised), it is assumed that these can be corrected using existing processes, within Final Reconciliation timescales, and by means of a Trading Dispute, outside Final Reconciliation timescales (so long as the criteria for a valid Trading Dispute are met). As such, the scope of Option 3 does not extend to all unrecorded units. Rather it only includes those units identified by RPS.

An exception is the situation where a Metering System is energised without being registered to a Supplier. Under this scenario, unrecorded units cannot be allocated to an individual Supplier. However, these units are not usually identified by a RPS, so arguably fall outside the scope of this solution. Question 11 below seeks your views on this type of unrecorded energy.

Question 11

Should units taken prior to the registration of a Supplier for a new connection be included within the scope of reporting under Option 3?

If so, how should these units to fed into the reporting process, given that they are not usually identified by Revenue Protection Services?

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Impacts of Solution Option 3

The full impact on ELEXON will be determined by internal impact assessment, in parallel with the industry impact assessment.

Impact on BSC Systems and process	
BSC System/Process	Potential impact
New	New application would be required if BSCCo to fulfil central administrator role for reporting Revenue Protection adjustments.

Impact on BSC Agent/service provider contractual arrangements	
BSC Agent/service provider contract	Potential impact
New (potentially the SVAA)	New contractual arrangements for Revenue Protection adjustment reporting, in the event that BSCCo fulfils central administrator role.

Impact on BSC Parties and Party Agents
Removal of requirement on NHHDCs and HHDCs to account for assessed unrecorded units.
New reporting requirements for Suppliers (and new LDSO processes for verifying Supplier reports).
Changes to DUoS billing systems for LDSOs (and changes to Supplier systems for validating DuoS charges).
New LDSO processes for reporting aggregated Revenue Protection adjustments as part of Distribution Price Control.

Impact on ELEXON	
Area of ELEXON's business	Potential impact
BSC Operations	Contractual and operational management of new reporting function, in the event that BSCCo fulfils the central administrator role.

Impact on Code	
Code section	Potential impact
Sections S, Annex S-2 and X	New obligations on the SVAA (under Section S) and associated definitions under Section X, if BSCCo fulfils the central administrator role (and assuming that the reporting process is undertaken by the SVAA).

Impact on Code Subsidiary Documents	
CSD	Potential impact
BSCP504 'Non Half Hourly Data Collection for SVA Metering Systems Registered in	Removal of Section 3.6

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SMRS'	
BSCP502 'Half Hourly Data Collection for SVA Metering Systems Registered in SMRS'	Removal of references to Revenue Protection Services in Section 4.2
New (or BSCP508 'Supplier Volume Allocation Agent')	New reporting processes for the SVAA, if BSCCo fulfils the central administrator role (and assuming that reporting process is undertaken by the SVAA).
SVA Data Catalogue	New P-flows to define reports between SVAA, Suppliers and LDSOs, if BSCCo undertakes the central administrator role

Impact on Core Industry Documents and other documents	
Document	Potential impact
Distribution Connection and Use of System Agreement	New rules around Revenue Protection Service, Supplier and LDSO reporting of Revenue Protection adjustments

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5 Comparison of Options

Summary of Impacts

The following table highlights the key differences between the three options (and their sub-options). Question 12 asks for your views on the weight that should be given to these factors, and whether you have a preferred solution option.

	Option 1 – enhancements to current process	**Option 2 – end-to-end tracking**	**Option 3 – Settlement Cost Smearing**
Change Management			
Modification Required?	No	Yes	Yes (if BSCCo administers)
Impact on other Codes	DTC change	DTC changes	New governance around scheme administration in DCUSA, unless BSCCo administers
Scope			
Theft at meter (by-passing meter /tampering).	Yes	Yes	Yes
Theft in Conveyance.	No	No	Yes
Energised Metering Systems with no Supplier appointed.	No	No	Potentially (see Question 8)
Includes theft for Half Hourly metered Supplies	Yes	No	Yes
Incentives			
Reduces disincentive to detect theft.	No	No	Yes
Audit and Performance Assurance			
Auditable?	Only to the extent that adjusted readings can be mapped to RP cases	Yes	Yes
Supports monitoring of Settlement Risk SR0073.	No	Yes	Potentially, if reports sent to ELEXON by Suppliers/ administrator

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LDSO Requirements			
Supports Distribution Price Control reporting	Yes (but not as a separately identifiable quantity)	Yes	Yes
Supports DUoS billing	Yes (but not as a separately identifiable quantity)	Yes	Yes
Allocation of Energy			
Allocates energy to period of theft	Depends on application of process	Depends on application of process	Yes
Allocates energy to correct Half Hours/Settlement Periods	No	No	Yes (via GSP Group Correction)
Allocates energy to correct Supplier	Yes (partly depends on application of process)	Yes (partly depends on application of process)	Only for DUoS. Not for Settlement
Supports adjustments outside RF	No (Adjustments outside RF should only be made as part of an authorised Trading Dispute)	No (Adjustments outside RF should only be made as part of an authorised Trading Dispute)	Yes (not constrained by Settlement Calendar)

Question 12

Of the factors listed in the table are there any that you believe the Group should give particular weight to? (or, conversely, which you believe are not important)

What is your preferred solution option, if any?

Are there any other solution options you believe the Group should consider?

6 Further Information

More information is available in:

Attachment A: Current BSC Process for Revenue Protection Adjustments

This information includes:

- A description of the current process
- A description of issues relating to the current process.

Attachment B: Impact Assessment Response Form

All Issue 39 documentation is available on the Issue 39 page of the ELEXON website.

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