Change Proposal – BSCP40/02	CP No: 1311 *Version No: v1.0* *(mandatory by BSCCo)*

Title *(mandatory by originator)*

Replacing Erroneous Forward Looking EACs

Description of Problem/Issue *(mandatory by originator)*

We have raised this CP from DCP0042.

What is Gross Volume Correction?

Gross Volume Correction (GVC) is a technique used to correct errors relating to Meter Advance Periods during which some Settlement Dates have already been subject to a last Reconciliation Run (whether a Final Reconciliation or Post Final Settlement Run) – i.e. where part of the error has 'crystallised' in Settlement.

GVC applies the principle that the total gross volume of energy for a given Metering System should be correct. Where energy has been misallocated to a range of Settlement Dates within a Meter Advance Period which have passed through the last Reconciliation Run, GVC can be applied to reallocate the lost or gained energy volume to a range of Settlement Dates which have not yet been subject to a last Reconciliation Run – termed the 'fluid' period.

This process ensures that the total gross volume of energy is correct, although allocated to the wrong Settlement Dates/Settlement Periods.

GVC was originally introduced as a way of addressing errors due to erroneous large Estimated Annual Consumption (EAC) and Annualised Advance (AA) values in Settlement, although its use has become broader over time. You can find further information about the purpose of GVC in related CP1310 'Clarifications to Gross Volume Correction Process'.

What issues with GVC does this CP identify?

Negative AAs can arise from the application of GVC to compensate for an earlier, excessively large AA.

A negative AA can also arise as a consequence of an earlier deemed reading in the circumstances described in Section 4.5.2 of BSCP504 'Non Half Hourly Data Collection for SVA Metering Systems Registered in SMRS'. These circumstances include deeming on a Change of Supplier (4.5.2(a)) or deeming at Final Reconciliation (RF) because a Meter Advance Period is greater than 14 months (4.5.2(e)).

Depending on the size of the negative AA and the duration of the Meter Advance Period, the associated forward-looking EAC can also be negative or much lower than the likely rate of consumption for a Metering System.

Conversely, though less frequently, an AA can be too high, as a result of compensating for an earlier negative AA. This can result in a forward EAC that is too high.

The use of the deeming process (whether through GVC or otherwise) can therefore result in unrepresentative AA values. These ensure that the gross volume of energy settled is correct, without changing any consumption data that has already 'crystallised' through a RF or Disputes Final (DF) run.

However, the forward EAC serves no useful purpose in terms of compensating for error (because it has already

been compensated for through the AA). Instead, an unrepresentative forward EAC creates problems for Non Half Hourly Data Collectors (NHHDCs), because it can result in subsequent valid readings failing validation.[1]

An unrepresentative forward EAC also causes problems for Suppliers, Licensed Distribution System Operators (LDSOs) and the Transmission Company, because it creates inaccuracies in Settlement, Distribution Use of System (DUoS) and Transmission Network Use of System (TNUoS) charging. This is both as a result of the EAC itself being inherently wrong and from subsequent valid data not being processed.

There is an existing process in the Code (S-2 4.3.17) and in BSCP504 (4.14.4.6) that allows an EAC to be replaced by a representative value, but there are 3 problems with this process. We describe each of these problems below.

What are the 3 problems with the existing EAC-replacement process?

1) Potential for inconsistent application of requirement

Section S-2 4.3.17 of the Code states that, where an EAC is unrepresentative, the NHHDC:

"shall apply a value of Estimated Annual Consumption which is representative of the most likely rate of generation or demand for that Metering System or, where that is not available, a value of initial Estimated Annual Consumption (EAC)".

While the use of "shall" suggests that replacement is mandatory, the requirement is qualified by *"in the circumstances set out in BSCP504"*.

Section 4.1.4.46 of BSCP504 describes EAC replacement as optional, but states that it should be carried out:

"if necessary (i.e. the deeming process has created a forward EAC that is inconsistent with normal generation or demand for that Metering System)".

It is not clear whether EAC replacement is optional in the 'conditional mandatory' sense (i.e. that replacement will not be necessary in all cases, but should be applied where necessary) or truly optional (i.e. in the sense that unrepresentative EACs do not have to be replaced). It is also part of a process, GVC, which is itself optional.

2) Applicability of EAC replacement

The EAC replacement process applies only in the case of GVC.

An unrepresentative forward EAC could also arise from the application of the process for deeming at RF (as described in BSCP504 4.5.2(e)). It could therefore be argued that EAC replacement should also be allowable under this process.

A negative AA can result where an actual reading is lower than the previous reading, because the previous reading was deemed using an EAC (or AA) that overstated the consumption on the Meter. This negative AA will compensate for the erroneously large EAC (or AA) such that the gross volume of energy will be correct. However, if the negative AA is of sufficient magnitude and or duration, it can result in a negative forward EAC. This negative EAC serves no benefit in terms of compensating for error, may cause subsequent validation failures and is clearly not representative of consumption on the Meter. There is a strong argument, therefore, for replacing negative EACs under all circumstances, not just when they arise from the use of GVC.

[1] Meter readings (or rather the associated Meter Advances) are validated against expected consumption, which in turn is usually derived from the latest EAC (or AA). If the latest AA or EAC is out of line with new readings, it will cause these readings to fail validation. GVC brings the latest EAC 'back into line' with actual consumption, allowing the readings to be validated.

3) Manual process

EAC replacement is a largely manual process, and there is no prescription in BSCP504 about how it should be achieved. Given the arguments for replacing all negative EACs, irrespective of the circumstances under which they arise, such replacement lends itself to automation.

Proposed Solution *(mandatory by originator)*

The solution which this CP proposes is to mandate the replacement of all negative EACs with a class average EAC (or a more representative EAC, if available), leaving the replacement of positive EACs as an optional process.

The EAC/AA calculator will be amended to automatically replace a negative EAC with a class average EAC. The NHHDC will be able to choose not to use the class average EAC generated by the calculator, if it has a more representative EAC which it can send to the Non Half Hourly Data Aggregator (this is consistent with the NHHDC's existing ability to submit a representative value under Section S-2 4.3.17 of the Code).

The replacement of positive EACs has been left as an optional process because identifying what is an unrepresentative ('too large', 'too small') positive EAC could be subjective. In contrast, identifying a negative EAC is clear-cut and lends itself to automation.

The replacement of unrepresentative positive EACs would apply under both the GVC and RF deeming processes, while the replacement of negative EACs would apply under all circumstances.

Changes to BSCP504 will be required to support this solution.

BSCP504 will also be clarified to state that an unrepresentative positive EAC should only be replaced where no readings exist that would allow for the calculation of a further AA that would bring the EAC 'back into line'.

This CP therefore addresses the 3 issues with the current EAC replacement process by:

1) Ensuring consistent treatment of negative EACs;
2) Applying to all instances of negative EACs and extending the optional replacement of unrepresentative positive EACs to the RF deeming process; and
3) Automating the replacement of negative EACs.

Justification for Change *(mandatory by originator)*

Forward EAC values which are not representative of actual consumption can result in subsequent valid readings failing validation. This in turn perpetuates the use of the 'unrealistic' EAC, because it is not superseded by a valid AA.

Where a concurrent Change of Supplier and NHHDC takes places, the unrealistic EAC can be the only consumption that the new NHHDC holds, preventing any further AAs from being processed. Change of Supplier readings deemed from unrepresentative EACs will be inaccurate and potentially incur the costs of applying the disputed Change of Supplier reading process.

If negative (or reduced) EAC values are not replaced by AAs by the time of the RF run, this can:

- Create a misallocation of energy between Suppliers;
- Lead to loss of income for LDSOs and the Transmission Company; and/or
- Artificially inflate Supplier performance against Serial SP08a (NHH Energy on Actual Advances at each Volume Allocation Run).

Lack of clarity about the circumstances in which EACs can be replaced can also lead to inconsistency in the application of the process.

To which section of the Code does the CP relate, and does the CP facilitate the current provisions of the Code? *(mandatory by originator)*

This CP will facilitate Section 4.3.17 of Annex S-2 of the Code, by ensuring that the EAC is representative of the most likely rate of generation or demand for a Metering System.

Estimated Implementation Costs *(mandatory by BSCCo)*

The total implementation costs for this CP are £30.8k, comprising:

- Logica costs of £18.7k to deliver the EAC/AA software and related system documentation changes; and
- 55 man days (£12.1k) of our effort to manage and test/review Logica's changes, and to amend BSCP504 and our GVC Guidance Note.

There will be some effort savings for us if this CP is implemented alongside related CPs 1310 and 1312 (as all 3 CPs impact the same documents).

Note that Logica's costs have reduced from the £46.2k originally estimated for DCP0042. This is as a result of combining with other changes, and of our discussions with Logica about cheaper mechanisms for delivering change (which do not materially affect risk).

Configurable Items Affected by Proposed Solution(s) *(mandatory by originator)*

This CP will impact BSCP504 'Non Half Hourly Data Collection for SVA Metering Systems Registered in SMRS'. Our proposed redlined changes to this document are provided as Attachment A to this CP.

If the SVG approves the CP, we will also update our GVC Guidance Note to reflect that NHHDCs must replace all negative EACs with a class average EAC (or a more representative EAC, if available).

Impact on Core Industry Documents or System Operator-Transmission Owner Code *(mandatory by originator)*

None.

Related Changes and/or Projects *(mandatory by BSCCo)*

We have raised this CP from DCP0042, which contained various potential solution options. The DCP arose from the discussions of the GVC Working Group, which was established by the Supplier Volume Allocation Group.

The Working Group agreed that a change was required, but had no clear preference between the solution options presented in the DCP. Further details of the Group's discussions can be found in paper SVG99/04.

Although we received differing views from the DCP impact assessment responses on which option to take forward, all respondents supported the overall intention of the CP or were neutral. There was also significant majority support for the solution presented here (see responses to CPC00662). We have therefore raised this CP to progress a change in line with the majority preference.

We have also raised 2 other CPs for changes which were discussed by the GVC Working Group:

- CP1310 'Clarifications to Gross Volume Correction Process' (raised from DCP0041); and
- CP1312 'Use of Gross Volume Correction in Post Final Settlement Runs' (raised from DCP0043).

Subject to the SVG's approval, we propose that all 3 CPs are progressed and implemented in parallel.

Requested Implementation Date ***(mandatory by originator)***

February 2010 Release.

Reason:

Next available release.

Version History ***(mandatory by BSCCo)***

We issued Version 1.0 of this CP on 4 September 2009 for industry impact assessment.

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Attachments: Y
Attachment A – BSCP504 redlined v0.4 (11 pages)