4.3 CP Form

Change Proposal – BSCP40/02	CP No: CP1369 *Version No: v.1.0* *(mandatory by BSCCo)*

Title *(mandatory by originator):*

Increased Flexibility in BSCP550 Data Splitting Algorithms

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

Discussions with one of the Half Hourly Data Collectors (HHDCs) using BSC Procedure (BSCP) 550[1] have revealed a number of areas in which the Data Splitting algorithms in BSCP550 are overly prescriptive. This unnecessarily limits the options available to Suppliers and generators.

Issue 1 – Requirements Introduced at NETA Go-Live Unintentionally Removed the Option of Data Splitting Using Non-Settlement Sub-Meters

One of the requirements introduced into BSCP550 at NETA Go-Live was that the Allocation Schedule must be agreed prior to Gate Closure. This requirement is necessary to maintain the general prohibition on *ex post* trading of imbalances under the NETA arrangements. Unfortunately, the way the requirement was introduced into the BSCP was unnecessarily prescriptive, and prevents the use of meter readings from non-settlement sub-meters to determine the split of generation between Suppliers.

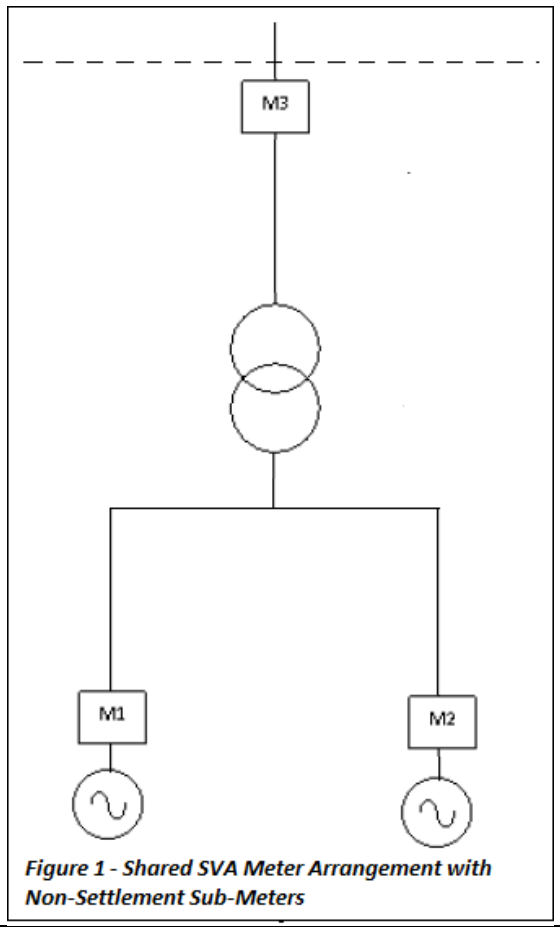

Figure 1 - Shared SVA Meter Arrangement with Non-Settlement Sub-Meters

This type of Shared SVA Meter Arrangement has been in use at certain sites since at least the year 2000. It uses a Percentage Method, but with the percentage split between two (or more) Suppliers determined using the readings from non-settlement sub-meters. This is illustrated in figure 1 (with the non-settlement meters shown as M1 and M2).

In the diagram, meters M1 and M2 are settlement-standard meters (i.e. compliant with the relevant Code of Practice), but are non-settlement meters (in the sense that they are not directly associated with any settlement Metering System). There are two Metering Systems registered for the site, but these are Shared SVA Metering Systems, each associated with the single settlement meter M3.

The non-settlement meters M1 and M2 are used to determine the allocation of energy between the two Shared SVA Metering Systems:

Meter Reading for Supplier 1 = M3 x M1 / (M1+M2)

[1] 'Shared SVA Meter Arrangement of Half Hourly Import and Export Active Energy'.

Meter Reading for Supplier 2 = M3 x M2 / (M1+M2)

This approach can also be generalised to more than two Suppliers. If the settlement meter reading is M_{sett} and the non-settlement meter readings are M_1, M_2 … M_n, the energy allocated to each Supplier would be:

Meter Reading for Supplier j = M_{sett} x M_j / $\sum M_i$

This calculation ensures that the total energy for the Suppliers matches that metered at the boundary meter M_{sett}; and that on-site losses are allocated between the Suppliers in proportion to their energy generated.

The advantage of this type of arrangement is that it allows more than one generator to share a single connection to the Distribution System, lowering the cost of access to the market for small embedded generators.

We believe this method was originally introduced following discussion with the Electricity Pool of England and Wales, and was consistent with the Agreed Procedure (AP550) in force at the time. The Allocation Schedule (as defined in AP550 and BSCP550) was considered to be the result of the calculation described above i.e. the sub-meter readings were used to construct the Allocation Schedule. Because AP550 left it up to the Suppliers to determine how the Allocation Schedule was constructed this was consistent with the procedure, and did not need to be explicitly described in the AP.

Unfortunately, this approach is not consistent with the requirement (introduced at NETA Go-Live) for the Allocation Schedule to be determined prior to Gate Closure. The team who drafted the BSCP550 changes for NETA Go-Live appears not to have been aware of this issue.

We do not believe that there is any fundamental inconsistency between this type of Shared SVA Metering Arrangement and the NETA requirement to agree an Allocation Schedule prior to Gate Closure. Had the drafting team been aware that this type of arrangement was in use, they could have written the requirements in a way that supported it, while still maintaining the principle that the Allocation Schedule must be agreed before Gate Closure (in accordance with the general prohibition on *ex post* trading of Energy Imbalances).

Issue 2 – Certain Data Splitting Algorithms Supported by BSCP550 Are Arbitrarily Restricted to Two Suppliers

Modification Proposal P67[2] amended the BSC to allow Shared SVA Metering Arrangements involving more than two Suppliers. It also introduced a 'Multiple Fixed Block' method to take advantage of this flexibility. However, the existing 'Percentage' and 'Capped Block' methods are still restricted to two Suppliers. Removing this artificial constraint would allow more flexibility for Suppliers and generators e.g. it would allow meter splitting using non-settlement sub-meters (as described above) with more than two generators.

Issue 3 – Requirement to Round Primary Supplier's Allocation to Nearest kWh

The description of the Percentage Method in Appendix 4.2.1 of BSCP550 requires that the energy allocated to the Primary Supplier is rounded to the nearest kWh "to prevent non-integer values of

[2] 'Facilitation of Further Consolidation Options for Licence Exempt Generators (DTI Consolidator Working Group Option 4)'.

energy being processed by Settlements". For example, if the Suppliers had agreed a 50/50 split and the physical meter reading was 50.7 kWh, the Primary Supplier would be allocated 25 kWh and the Secondary Supplier the remaining 25.7 kWh.

Given that the settlement data flows allow one decimal place for consumption values, this is unnecessarily inaccurate. It would be better to permit rounding to one decimal place i.e. Primary Supplier is allocated 25.4 kWh, and Secondary Supplier is allocated 25.3 kWh.

Proposed Solution *(mandatory by originator)*

It is proposed to amend BSCP550 to address the above issues as follows.

N.B. It is <u>not</u> intended that all BSCP550-compliant HHDCs should have to implement these specialised methods of data splitting. The BSCP will specify that these methods are available where supported by the HHDC. This Change Proposal should therefore have no impact on Suppliers and HHDCs who do not wish to take advantage of the flexibility that it offers.

1. <u>Data Splitting Using Non-Settlement Sub-Meters</u>

BSCP550 will be amended to allow the use of meter readings from non-settlement sub-meters to allocate Active Energy between Metering Systems. The Allocation Schedule (supplied by the Primary Supplier) will specify which sub-meter corresponds to which virtual Metering System. The actual period-by-period split between Suppliers (based on the sub-meter readings) will not now be considered part of the Allocation Schedule. This ensures consistency with the BSC requirement that the Allocation Schedule must be provided by the Primary Supplier prior to Gate Closure.

The Allocation Schedule must also specify the split to be used if sub-meter data is unavailable (e.g. due to a metering fault). Because these are non-settlement meters they will not have Meter Operator Agents appointed, and it is up to the Suppliers involved to ensure that metering faults are fixed. The default Allocation Schedule ensures that any such metering fault does not impact the broader settlement arrangements.

<u>Combining Splitting by Non-Settlement Sub-Meters with Other Techniques</u>

The BSCP wording will also allow the method of percentage splitting using sub-meters to be combined with other techniques (e.g. the 'capped block' method). In this case the sub-meter splitting would be applied first, to split the meter reading at the boundary between two (or more) virtual Metering Systems. A second round of splitting (using one of the other methods) would then be applied to each virtual Metering System.

<u>BSC Drafting to be Non-Prescriptive about Details of Allocation</u>

All the examples of this form of data splitting that we currently know about relate to Export Metering Systems, each of which is associated with a non-settlement sub-meter, and with losses shared between the Metering Systems in proportion to their generation. However, the proposed BSCP550 wording is not intended to be prescriptive on this, and would (where agreed by the Suppliers and supported by the HHDC) also allow:

- Use of the technique for Import Metering Systems; and
- Other pre-agreed methods for sharing of on-site losses between the virtual Metering Systems

(provided of course that the total energy allocated to the virtual Metering Systems always equals the boundary meter reading).

For example, this technique of data splitting using non-settlement sub-meters could potentially be used where a customer embedded within a private network has a Supply contract with a licensed Supplier. The meter reading from his non-settlement meter M1 would be allocated to a virtual Metering System, with the remainder allocated to the other virtual Metering System:

Meter reading for customer's Supplier = M_1 * (pre-agreed adjustment factor for on-site losses)
Meter reading for landlord's Supplier = M_{sett} - M_1 * (pre-agreed adjustment factor for on-site losses)

This would in effect be using a Shared SVA Metering System as an alternative to the difference metering approach described in section 8.4.3 of BSCP514[3].

2. Percentage and Capped Block Methods With More Than Two Suppliers

BSCP550 will be amended to allow the Percentage and Fixed Block methods to be used with more than two Suppliers (where HHDC systems support this).

3. Rounding Rules

The rounding rules in Appendix 4.2.1 of BSCP550 will be amended to allow rounding to the nearest tenth of a kWh (where supported by HHDC systems and agreed with the Suppliers).

4. Other Minor Clarifications

The redlined text also includes a clarification of the statement in section 1.1 of BSCP550 that "the requirements for allocating the Reactive Energy between two or more Suppliers are outside the scope of this document". This statement is not intended to preclude the use of Data Splitting for Reactive Energy where agreed between Suppliers and HHDCs.

Justification for Change *(mandatory by originator)*

The justifications for the proposed changes are as follows.

1. Data Splitting Using Non-Settlement Sub-Meters

BSCP550 should be amended to support this type of meter splitting (where agreed by Suppliers and HHDC). This will avoid the significant cost and disruption that would be incurred by generators at these existing sites if they were no longer able to use the arrangements that they have been successfully operating for the last ten years or more. It will also open up the possibility of other generators (or customers) gaining the benefits of using such arrangements.

This change will facilitate effective competition in the generation and sale of electricity, by permitting more than one generator to share a single connection to the Distribution System and sell their output to different Suppliers. If this arrangement was not permitted, generators sharing the connection would be

[3] 'SVA Meter Operations for Metering Systems registered in SMRS'.

forced to sell their output to a single Supplier (and implement the meter splitting arrangements outside the scope of the settlement system, through bilateral or multilateral agreements), which would not facilitate competition in the generation of electricity.

2. Percentage and Capped Block Methods With More Than Two Suppliers

The current restriction of these methods to only two Suppliers constrains the trading options open to Suppliers and their customers, while bringing no benefit to settlement. Removing the constraint (on an optional basis, where Suppliers and HHDCs agree to do so) removes 'red tape' from the BSC arrangements, and facilitates competition in the supply and generation of electricity.

3. Rounding Rules

The requirement to round to the nearest kWh appears to be an anomaly, given that the settlement data flows (e.g. the D0036) support consumption values to the nearest tenth of a kWh. Allowing HHDCs the option of rounding to the nearest tenth of a kWh will allow the Allocation Schedules agreed between Suppliers to be more accurately reflected in settlement.

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 section relates to and is consistent with the current provisions of Section K2.5 ('Shared SVA Meter Arrangement').

Estimated Implementation Costs *(mandatory by BSCCo)*

Approx. £360 (1.5 man days) in ELEXON effort in making the relevant updates to BSCP550.

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

BSCP550 'Shared SVA Meter Arrangement of Half Hourly Import and Export Active Energy' (redlining in Attachment A)

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

None.

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

None.

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

1 November 2012 as part of the November 2012 Release

Reason:

November 2012 is the next available Release.

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

We raised Version 1.0 of this CP on 2 March 2012

Originator's Details:

BCA Name: John Lucas

Organisation: ELEXON

Email Address: ccc@elexon.co.uk

Telephone Number: 020 7380 4345

Date: 2 March 2012

Attachments: Yes

Attachment A: BSCP550 redlining (6 pages)