

Change Proposal – BSCP40/02

CP No: 1280

Version No: 1.0
(mandatory by BSCCo)

Title (mandatory by originator):

SVAA to provide LDSOs with aggregated consumption data for embedded Distribution Systems

Description of Problem/Issue (mandatory by originator)

Section L5.2 of the BSC requires the Supplier Volume Allocation Agent (SVAA) to provide Distribution System Operators with metering data, in accordance with BSCP508, for purposes of operating and charging for use of their Distribution Systems:

5.2.4 *The Registrant of each Metering System (or, as the case may be and as provided for elsewhere in the Code, the SVAA or the CDCA) shall without charge provide relevant metering data to, and authorises the use of such data by:*

(a) *the relevant Distribution System Operator for the purposes only of the operation of the relevant Distribution System and the calculation of charges for use of and connection to such Distribution System;*

...

5.2.5 *For the purposes of paragraph 5.2.4, "relevant metering data" means:*

(a) *in the case of SVA Metering Systems, the metering data specified in BSCP508 and BSCP520;*

Currently, the arrangements in BSCP508 only cover metering data for Non Half Hourly (NHH) Metering Systems directly connected to the network of the Licensed Distribution System Operator (LDSO) receiving the data. They do not include:

- Data for Half Hourly (HH) Metering Systems. This is sent to LDSOs directly by the Half Hourly Data Collector (HHDC) reading the meter; or
- Data for Metering Systems connected to other LDSOs' Distribution Systems (e.g. IDNO networks) embedded within the LDSO's network. Currently the LDSO receives consumption data for such embedded networks via non-settlement boundary metering.

However, the Distribution Connection Use of System Agreement (DCUSA) provisions for relationships between Distributors¹ acknowledge that boundary metering is not necessarily required in all cases, and that an 'Alternative Solution' will be appropriate in some cases.

The primary concern with requiring boundary metering for all embedded networks is that the cost per meter is high. For small embedded networks this cost can also be disproportionate to the use of system charges. The costs are due to:

- The need to find or build an appropriate shelter for the meter;
- The cost to the Distributors of installing the meter (particularly where the Distributors in question do not have associated metering businesses);
- The cost of arranging for the meter to be read;

¹ Section 2B of the DCUSA, 'Distributor to Distributor Relationships', was introduced by DCUSA Change Proposal DCP012, which was implemented on 1 April 2008.

- The cost of dealing with missing or invalid meter data. While settlement Data Collectors have processes for validating and estimating data (to meet the requirements in BSCP502 and BSCP504), these processes will not necessarily apply to non-settlement meter data collected outside the BSC.

As the number of IDNO and 'out of area' networks increases, the total cost associated with metering the boundaries between networks will increase. See justification for change.

Proposed Solution (mandatory by originator)

In order to avoid the cost to industry of metering at the boundaries between networks, it is proposed that SVAA should (where the LDSOs concerned have so agreed in accordance with clause 42.3 of the DCUSA) provide each LDSO with aggregated consumption data for customers on licensed networks embedded within that LDSO's network.

For example, suppose that LDSO X (who could be a DNO or an IDNO) is operating Distribution Systems embedded within the Distribution System of LDSO A. It is proposed that LDSO A should receive reports of aggregated metering data for all customers on LDSO X's networks (excluding any networks that still have legacy boundary metering arrangements). As noted above, the use of these new arrangements would be subject to agreement of the Distributors in accordance with the existing DCUSA provisions (noting that these provisions allow the matter to be determined by Ofgem if agreement cannot be reached).

The current boundary metering arrangements would continue to be used where the use of settlement data cannot be agreed. In particular, we acknowledge that some DNOs may have concerns about using settlement data in place of boundary metering for High Voltage (HV) and Extra High Voltage (EHV) sites, and therefore (at least in the short term) this solution is most likely to be used at Low Voltage (LV) sites. However, as explained below, there is a strong business case even for LV sites only.

Further details of the proposed solution are as follows.

Solution for Non Half Hourly Metering Data

Currently, SVAA produces a Non Half Hourly DUoS (D0030) report for each LDSO, containing aggregated profiled metering data by Supplier, Settlement Class² and Settlement Period. It is proposed that a new section of this report³ should contain aggregated profiled metering data by LDSO, Settlement Class and Settlement Period for all LDSOs operating embedded Distribution Systems without boundary metering.

In order to provide this new data, SVAA will need to know which Settlement Classes need to be reported to additional LDSOs. It is therefore proposed that LDSOs operating embedded networks without boundary metering should inform SVAA which Line Loss Factor Classes relate to such networks. For instance, LDSO X (in the above example) might inform SVAA that Line Loss Factor Class 131 is used on networks embedded within the Distribution System of LDSO A. This would

² A Settlement Class is a unique combination of Profile Class, Line Loss Factor Class, Time Pattern Regime and Standard Settlement Configuration.

³ The IDNO data could either form a separate section of the same physical D0030 file, or a second D0030 file for that LDSO. ELEXON and SVAA should investigate which option is most cost-effective to deliver as part of the impact assessment for this CP.

trigger SVAA to provide LDSO A with profiled data (aggregated across all Suppliers) for all those NHH Metering Systems allocated to LLFC 131 by LDSO X. A new DTC data flow ('the Mapping File') would be created for Distributors to pass this standing data to SVAA.

Solution for Half Hourly Metering Data

Currently Distributors receive metering data for HH Metering Systems from HHDCs (in the form of D0036 or D0275 data flows). However, it would not be efficient for HHDCs to pass these flows to other Distributors who need them, for the following reasons:

- It would require changes to all HHDC systems (to identify all the Distributors who have an interest in consumption data for a customer on an embedded network);
- Distributors would receive HH metering data for embedded networks split across a number of D0036 files (at least one per HHDC).

To overcome these problems, it is proposed that SVAA should perform a central role of receiving HH D0036/D0275 flows from those LDSOs who operate embedded networks, and passing aggregated data to the relevant Distributors. For instance (to continue the example above) if the embedded networks of LDSO X had a number of Half Hourly Metering Systems connected to them, the process would be as follows:

- LDSO X would notify SVAA (via the Mapping File) of the relevant HH MPANs, and the Market Participant Id of LDSO A (to whose network they are indirectly connected);
- LDSO X would arrange for D0036/D0275 files for those Metering Systems to be copied to SVAA. This could be done using the 'flow duplicator' mechanism in the DTC, or any other mechanism agreeable to Distributors.
- The SVAA software will be amended to aggregate D0036/D0275 data for the MPANs listed in the Mapping File, and provide LDSO A with a single aggregated D0036 file showing total metered data for Half Hourly Metering Systems on LDSO X's embedded networks.

Summary of SVAA Changes

In summary, the changes required to the SVAA system to support this additional DUoS charging are as follows:

- New interface required for SVAA to receive a 'Mapping File' from LDSOs;
- New interface required for SVAA to receive copies of relevant D0036 / D0275 data files;
- Settlement run process to be amended to include additional data in D0030 flow (as described above); and
- Settlement run process to be amended to extract HH data for relevant MPANs from the files received, and produce files of aggregated HH data in D0036 format (as described above)

A DTC change will be required to allow SVAA to send and receive D0036 files, and receive the new 'Mapping Data' file.

Funding Model

Ultimately (as explained in the business case below) this change will reduce the overall cost of the arrangements by which LDSOs receive the metering data required to operate their networks, which will benefit Suppliers and customers.

We acknowledge that the most direct and immediate benefits of the Change Proposal will be to LDSOs, and we would not object in principle to a model in which some or all of the initial cost of upgrading the SVAA service to meet this new requirement was paid for by LDSOs, rather than recovered using the usual mechanism for funding the SVA arrangements. However this would appear to be inconsistent with the L5.2 requirement that SVAA provide data to DSOs for the purposes of network operation and charging “without charge”. Any such separate charging mechanism would therefore require a separate Modification Proposal, which would delay the implementation of the new arrangements into 2010, and for that reason we propose that the usual SVA funding arrangements should apply to the initial development.

We understand from ELEXON that ongoing operational costs for the new arrangements are anticipated to be low, due to its automated nature. However, if it were to emerge subsequently that there are ongoing operational costs relating to these new arrangements, a BSC Modification Proposal could be raised to allow Distributors to pay for these.

Justification for Change (*mandatory by originator*)

The primary justification for this change is that the cost of boundary metering between networks will become prohibitively high as the number of IDNO connections increases.

Our analysis of the period from January 2005 to March 2008 indicates that, on average, there were 4900 LV developments per annum which were open to competition between Distributors. If we assume that 35% of these will go to Distributors other than the local incumbent, once artificial barriers to competition have been removed (e.g. by agreement on appropriate tariffs), this equates to 1,700 new developments per annum. If we further assume that the total annualised cost of boundary metering for each such development is £250, this equates to £425k in year 1, £850k in year 2, and so on. Table 1 below illustrates an estimate of the build up of LV boundary metering costs.

Table 1. Estimate of the build up of LV boundary metering costs.

Estimated Cumulative LV Boundary Metering Costs	
Year 1 Boundary Metering Costs	£429,382 p.a.
Year 2 Boundary Metering Costs	£858,764 p.a.
Year 3 Boundary Metering Costs	£1,288,145 p.a.
Year 4 Boundary Metering Costs	£1,717,527 p.a.
Year 5 Boundary Metering Costs	£2,146,909 p.a.
Year 6 Boundary Metering Costs	£2,576,291 p.a.
Year 7 Boundary Metering Costs	£3,005,673 p.a.
Year 8 Boundary Metering Costs	£3,435,055 p.a.
Year 9 Boundary Metering Costs	£3,864,436 p.a.
Year 10 Boundary Metering Costs	£4,293,818 p.a.

The estimates in table 1 are based on 35% of annual new sites under 100 plots requiring boundary meters at a cost of £250p.a. Site analysis is based on annualised estimates of GB based market opportunities between January 2005 and March 2008.

These costs will quickly exceed the cost of a solution based on settlement data from SVAA. It is therefore in the interests of all concerned (Suppliers, Distributors and customers) that a solution is implemented that does not require boundary metering for LV connections.

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 relates to section L5.2 of the BSC (see above), which requires SVAA to provide LDSOs with metering data needed for “the operation of the relevant Distribution System and the calculation of charges for use of and connection to such Distribution System”.

This CP allows SVAA to continue meeting its L5.2 obligations even when the metering data required by LDSOs for these purposes relates to customers on other LDSOs’ networks.

Estimated Implementation Costs *(mandatory by BSCCo)*

The ELEXON implementation cost is 58 Man Days, which approximately equates to £13,000.

The maximum estimated Service Provider (Demand Led) cost is £261,000, if implemented in the targeted November 2009 Release). ELEXON is in negotiations to reduce these costs further.

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

This change will affect BSCP508 (which will require amendment to describe the new SVAA process), and the SVAA software.

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

None anticipated. The DCUSA already allows for alternatives to metering at the boundaries between networks.

Note that, as described above, a DTC change will be required (under MRA governance) to allow SVAA to send and receive D0036 files, and receive the new ‘Mapping Data’ file.

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

None

Requested Implementation Date *(mandatory by originator)*

As soon as possible, and certainly no later than the scheduled release in November 2009.

Reason:

This reporting change is linked to the introduction of new DUoS tariffs for IDNO connections, which we anticipate coming into effect on 1 October 2009 (and possibly before).

In the event that system changes cannot be implemented in time for the introduction of the new tariff, we would look to all concerned to implement appropriate workarounds e.g. calculating DUoS charges on historical estimates at SF and then catching up when settlement data becomes available at the First Reconciliation.

Version History (*mandatory by BSCCo*)

Version 1.0 for impact assessment

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Attachments: Yes

Attachment A – BSCP508 v16.0 redlined v0.2 (20 pages)