
Meeting name	BSC Panel
Date of meeting	10 December 2009
Paper title	Issue 38 'Potential Improvements to Credit Checking Rules to Support High Levels of Embedded Generation in North Scotland'
Purpose of paper	For Decision
Synopsis	The Panel raised Standing Issue 38 on 8 October 2009. You asked the Group to consider whether current BSC processes would continue to operate appropriately for Grid Supply Point (GSP) Groups with high levels of embedded generation. The Group has now considered this, and recommends that three Modification Proposals should be raised. The Group also recommends that Issue 38 is closed.

1 Background

- 1.1 On 08 October 2009 the BSC Panel asked the Issue 38 Group to investigate issues associated with increased levels of embedded generation. The Group met on two occasions (on 23 October and 6 November) to consider the following issues:
- **Issue 1:** Reduced accuracy of the Credit Checking Process
 - **Issue 2:** GSP Group treated as Production
 - **Issue 3:** GSP Group treated as Delivering
 - **Issue 4:** BSC description of interface from Central Data Collection Agent (CDCA) to Supplier Volume Allocation Agent (SVAA)
 - **Issue 5:** Reduced share of Supplier Charges
 - **Issue 6:** Data collection obligations
- 1.2 Five of these were referred to the Group by the Panel, and one (GSP Group treated as Delivering) was subsequently identified by the Group. The section below summarises the 6 issues. The Groups full analysis and rationale for their recommendations can be found within Attachment A – Issue 38 Group Analysis.

2 Issue 1: Reduced accuracy of Credit Checking Process

2.1 What is the issue?

- 2.1.1 The Credit Checking Process¹ relies on estimates of how much energy each Supplier has used.
- 2.1.2 There are two issues associated with the current method of estimating Supplier Metered Volumes at the Initial Settlement Run.
- 2.1.3 **Issue A** - Values can become increasingly inaccurate as the volume of embedded generation in the GSP Group increases. This is because certain types of embedded generation are unpredictable

¹ Please refer to the following link if you would like to know more about the Credit Checking Process - [Credit Checking](#)

e.g. wind generation. This means that the electricity generated or consumed 3 weeks ago² may not have any relationship with the current generation or consumption. This issue was not initially raised with the Panel, but came about as a result of the Groups analysis.

- 2.1.4 **Issue B** - The method used to estimate Metered Volumes for Supplier BM Units (in paragraph T4.2.2 of the BSC) in the Interim Information (II) Settlement Run can give rise to inaccurate estimates when the percentage change in GSP Group Take (from the equivalent day three weeks previously) is not reflective of changes in individual Suppliers' positions. This is particularly likely in situations when the previous GSP Group Take (GSPGT) value is close to zero.

2.2 **Group Recommendations**

- 2.2.1 After analysing the above issue the Group believes that a Modification should be raised to address problems associated with estimating Supplier Metered Volumes. The Group believes that this issue will become more apparent as the level of embedded generation increases within any GSP Group (as is the case in Northern Scotland).

- 2.2.2 The Group recommends that the following be considered as part of any Modification that is raised:

- ***Remove the algebra***

Remove the need for the algebra entirely by reading Half Hourly SVA Meters and running the SVAA software in time for the II Settlement Run. This would address issues associated with data estimation and ensure that actual data is being used to calculate Supplier Metered Volumes.

- ***Amend the algebra***

Amend the algebra to make it more robust to small GSPGT values. The Group believes that although this solution may provide slightly smaller errors than the current method, it would not resolve the problems associated with Credit Checking and embedded generation. The unpredictability of embedded generation (in particular wind generation) creates problems when trying to estimate today's generation based upon generation 3 weeks ago. This is an issue that would be resolved by removing the algebra (which is the Groups preferred solution).

3 **Issue 2: GSP Group treated as Production**

3.1 **What is the issue?**

- 3.1.1 If total Generation Capacity (GC) in a GSP Group exceeds total Demand Capacity (DC), all of the BM Units in a Base Trading Unit (BTU) would flip from Consumption to Production status. This would have a major impact on Parties who would need to amend their systems to cope with the change in status or face the risk of imbalance charges as a result.

3.2 **Group Recommendations**

- 3.2.1 After assessing the above issue the Group believes that a Modification should be raised in order to address issues associated with the change in status.

² The II Settlement Run uses actual Supplier Metered Volumes when estimating the current Metered Volumes. This data is obtained from Metered Volumes that have past the Final Settlement (SF) Run, this could be approximately 3 weeks prior to the II Settlement Run.

- 3.2.2 The Group believes that the risk of this issue arising is especially high in areas where there is high levels of embedded generation. With this in mind the Group recommends that the following be considered as part of any Modification that is raised.

- ***Fix the status of a BTU to Consumption***

Always treat Base Trading Units as having a Consumption status. This option would ensure that principles associated with P100³ 'Extension of Demand-side Trading Units in order to increase the competitiveness of the market for embedded benefits' are maintained.

This option will ensure that Parties will not have to continually align their Contract and Metering Volume accounts whenever the status of the BTU changes.

4 Issue 3: GSP Group treated as Delivering

4.1 What is the issue?

- 4.1.1 A sufficiently high volume of Embedded Generation could cause the entire GSP Group (i.e. all BM Units in the Base Trading Unit) to be treated as Delivering (Generating) rather than Offtaking (Consuming) electricity on a Settlement period basis.
- 4.1.2 This has already happened during a small number of Settlement Periods, and it is likely to occur more often in the future as the volume of embedded generation increases. The impact on these Settlement Periods is that embedded generators don't receive embedded benefits (such as losses and BSUoS - Balancing Services Use of System Charge), while Suppliers do receive a benefit (from being treated as delivering).

4.2 Group Recommendations

- 4.2.1 The Group recognised that this issue raised fundamental questions about who (if anyone) should receive embedded benefits in a GSP Group that has become a net exporter of electricity. On the one hand it could be argued that demand is now reducing the impact on the Transmission system, and should receive the benefit; but on the other hand some of the generation is also providing a benefit.
- 4.2.2 The issue is further complicated by the interaction with the Connection and Use of System Code (CUSC), given that delivering/offtaking status directly affects the allocation of embedded benefits (e.g. BSUOs) under that Code.
- 4.2.3 With this in mind the Group believes that this should be treated as a charging issue rather than a BSC issue. The Group recommends that any review in this area should be undertaken within that environment.

5 Issue 4: BSC description of interface from CDCA to SVAA

5.1 What is the issue?

- 5.1.1 The description of the interface between CDCA and SVAA in section R5.7.1 (b) of the 'Code' is not appropriate for a GSP Group that is Exporting. The reference to 'Magnitude' within section R5.7.1

³ [Modification Proposal P100](#)

implies that a GSP Group will always be importing, this is incorrect as GSP Groups can also Export.

- 5.1.2 The BSC Systems are capable of doing this already; but the BSC will need to be changed in order to align with the BSC systems.

5.2 Group Recommendations:

- 5.2.1 The group recommends that an efficiency Modification be raised to align the Code with the BSC Systems.

6 Issue 5: Reduced share of Supplier Charges

6.1 What is the issue?

- 6.1.1 An increase in Embedded Generation leads to a decrease in the GSP liability CAP (in relation to Supplier Charges) for the Group with the increased generation but lead to an increase for the others.

- 6.1.2 This issue relates to the GSP Group Liability CAP calculation in Section S-1 point 3.7.3

$$\text{GSP}_{\text{MC}} = \text{£1,275,000} * [\text{GSP}_A / \text{GSP}_{\text{AS}}]^4$$

- 6.1.3 As GSP_A (Supplier Group Take at a GSP Group Level) decreases the proportion of the liability CAP (£1,275,000) will increase for another GSP Group.

6.2 Group Recommendations:

- 6.2.1 The group recommends that the total annual 'Supplier Cap Take'⁵ is used rather the GSP Group Take. The Group recommends that this issue be addressed as part of the 2010 Supplier Charges review.

7 Issue 6: Data collection obligations

7.1 What is the issue?

- 7.1.1 For demand sites above 100kW, Section S2.6.1 of the BSC imposes an obligation on Suppliers to submit data prior to Initial Settlement Run. This obligation is supported by the Performance Levels and associated Supplier Charges in Annex S-1. There is however no corresponding obligation for large generation sites, (i.e. Generators could choose not to submit data to settlement until a later Reconciliation run.)
- 7.1.2 One of the reasons for the absence of any obligation to submit generation data is that there is a natural incentive to do so in order to reduce Imbalance Charges. This contrasts with the case of demand, where there is no natural incentive, and artificial incentives are therefore required.

⁴ For more information on the GSP Group Liability CAP calculation, please refer to Attachment A.

⁵ The sum of all Supplier Active Import Energy which is used to calculate the Supplier Cap, based on the Supplier share of the total Supplier Cap Take

- 7.1.3 If there was to be a significant volume of export data missing from Initial Settlement, this would potentially affect GSP Group Correction factors until such time as the data was submitted, and hence increase the volatility of imbalance charges for all Suppliers in the GSP Group.
- 7.1.4 A high level of estimated export data could lead to reduced accuracy at Initial Settlement.
- 7.2 **Group Recommendations:**
- 7.2.1 The Groups analysis highlighted that there is currently insufficient evidence that a high proportion of export has an adverse effect on GSP Group Correction Factors at early Run Types. It appears unlikely that an artificial incentive to read export meters (via, say, a performance serial) would be any stronger than the commercial incentive of customers wanting early payment for their export.
- 7.2.2 In addition the Group recommends that a new graph be added to the Trading Operations Report, showing the percentage of embedded generation settled at Initial Settlement, in order to allow monitoring of Issue 6.

8 Recommendations

- 8.1 We invite the Panel to:
- a) **NOTE** that the Issue 38 Group recommends Modification Proposals are raised to resolve issues 1, 2 and 4 (in the above table);
 - b) **NOTE** that a Modification Proposal to address issue 2 would have to be raised by a BSC Party;
 - c) **AGREE** that ELEXON investigates issues 1 and 4 further, and brings a recommendation to the next meeting on whether the Panel should raise Modification Proposals to address them;
 - d) **AGREE** that a new graph be added to the Trading Operations Report, showing the percentage of SVA registered export Metering Systems settled on actual data at Initial Settlement, in order to allow monitoring of Issue 6; and
 - e) **AGREE** that Issue 38 can be closed.

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List of attachments

Attachment A – Analysis of Issue 38