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| Modification Proposal – BSCP40/03 | MP No: P266 <i>(mandatory by BSCCo)</i> |
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| Title of Modification Proposal <i>(mandatory by originator):</i> Improving the allocation of Reactive Power flows between Import and Export Metering Systems | |
| Submission Date <i>(mandatory by originator):</i> 01 October 2010 | |
| Description of Proposed Modification <i>(mandatory by originator)</i> <p>Where a customer has an on-site Generating Plant (and Import/Export metering to measure flows of electricity from that generating plant onto the Distribution System) their Supplier is required to register separate Metering Systems for Import and Export. Industry systems and agreements (including in particular the Master Registration Agreement) do not allow a single SVA Metering System to be used for both Import and Export.</p> <p>This constraint in industry systems and agreements creates a requirement for the customer's Reactive Power flows to be allocated to either the Import Metering System or the Export Metering System for purposes of reporting and billing. The method used to do this can significantly impact the customer's Distribution Use of System (DUoS) charges, because the methodology for calculating DUoS charges specifies charges for each Metering System (MPAN), not for each customer. Industry practice on how to allocate Reactive Power between Metering Systems, can therefore have a significant impact on the appropriateness of the DUoS charges levied on customers with on-site Generating Plant.</p> <p>Current industry practice is to assign all Reactive Power flows to the Import Metering System (and none to the Export Metering System). In our experience this approach leads to disproportionately large flows of Reactive Power being allocated to some Import Metering Systems (e.g. those at wind farms where the installed generating capacity is large in comparison to the on-site demand). This leads to spurious charges for 'excess' Reactive Power and 'excess' Capacity being levied on those customers, even though they have stayed within their agreed capacities and power factors. These charges do not reflect the customer's actual behaviour, and arise purely because the Reactive Power flows have been allocated to a different Metering System to the associated Active Power flows.</p> <p>Our proposed solution to this issue is the one that was previously recommended to Ofgem in the P224 Modification Report, that is:</p> <ul style="list-style-type: none"> • Flows of Reactive Power to or from the Distribution System should normally be allocated to the same Metering System as the associated flow of Active Power (i.e. the Import Metering System if there is Active Import, or the Export Metering System if there is Active Export). • This would normally require the Metering Equipment to have four separate Registers for Reactive Power: two for Reactive Power associated with Active Import (which will be allocated to the Import MPAN); and two for Reactive Power associated with Active Export (which will be allocated to the Export MPAN). • Because this change impacts the Metering requirements, it will not be applied retrospectively. The requirement to comply with new requirements will only apply to existing sites when a material change is made to the metering on that site. | |

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- In order to minimise impact on industry systems, no changes would be required to the Measurement Quantity Ids used to report Reactive Power. Lagging Reactive Power associated with Active Import and Leading Reactive Power associated with Active Export will continue to be reported as Measurement Quantity ‘RI’ (Reactive Import); while Leading Reactive Power associated with Active Import and Lagging Reactive Power associated with Active Export will continue to be reported as Measurement Quantity ‘RE’ (Reactive Export).

Please see the [P224 Modification Report](#) for full details of the proposed solution.

We understand from the work done previously on P224 that the BSC changes required to achieve this are as follows:

- Amend paragraph K1.1.4 of the BSC to clarify that an ‘Import’ or ‘Export’ of electricity includes both the flow of Active Energy; and any flow of Reactive Energy at that Boundary Point at that instant. This ensures that Reactive Power flows are not separated (for purposes of reporting and billing) from the associated flows of Active Power.
- New Section K requirement to meter Reactive Power at times of Active Import (‘Active Import Related Reactive Energy’) separately from that at times of Active Export (‘Active Export Related Reactive Energy’). This requirement may need to be subject to appropriate exceptions (e.g. existing sites that do not have the appropriate Metering Equipment, Non Half Hourly Metering Systems)

We are aware that Modification Proposal P224 was rejected by the Authority. However, we understand from the decision letter (and subsequent discussions between Ofgem, ELEXON and industry parties) that this was because the evidence presented to the Authority was insufficient for them to establish whether the proposal would, as a whole, better facilitate the Applicable Objectives compared to the existing arrangements. We further understand that ELEXON has obtained additional data from Distributors that would now allow further analysis to be performed. We therefore believe that it is appropriate for a new Modification Group to consider the issue, and provide the Authority with the analysis required to make a judgement on this issue.

While our intention in re-raising this issue is to progress the solution previously considered by the P224 Modification Group, it is not our intention to preclude the new Modification Group from making any changes to the detail of the solution that may appear necessary following their further analysis.

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| <p>Description of Issue or Defect that Modification Proposal Seeks to Address <i>(mandatory by originator)</i></p> <p>The current BSC provisions do not allow Reactive Power flows associated with Active Export to be assigned to the Export Metering System¹. The BSC therefore forces Parties to assign Reactive Power flows caused by generating plant to a different Metering System to the Active Power generated, leading to spurious DUoS charges for the affected customers.</p> <p>We have delayed raising this Modification Proposal to see if the new rules for Reactive Power charges and Capacity Charges in the Common Distribution Charging Methodology (introduced in April 2010) satisfactorily mitigate the impact of this BSC defect. However, it appears that this is not the case, and we continue to receive invoices for spurious DUoS charges.</p> <p>We believe that this proposed new method for allocating Reactive Power flows to Metering Systems will, on the whole, lead to more cost-reflective DUoS charges for sites with Licence Exempt Generating Plant. However, given Ofgem’s stated concern that the P224 analysis did not demonstrate this adequately, we would expect the Modification Group to assess the impact on charges under the CDCM for a variety of different types of generator, in order to verify that this is indeed the case.</p> | |
| <p>Impact on Code <i>(optional by originator)</i></p> <p>Subject to any changes in the detail of the solution that may emerge from the Modification Group’s analysis, we believe that the required BSC changes will be as specified in the legal text for Proposed Modification P224.</p> | |

¹ The problem arises because the BSC currently treats each flow of Reactive Energy as an ‘Import’ or ‘Export’ in its own right, independent of the associated flows of Active Energy. These flows are then allocated to Parties (and hence the Metering Systems registered by those Parties) in accordance with the rules in K1.2.2, which do not always allow the Reactive Power to be allocated to the same Metering System as the associated Active Power.

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| <p>Impact on Core Industry Documents or System Operator-Transmission Owner Code <i>(optional by originator)</i></p> <p>No impact identified on Core Industry Documents.</p> <p>The industry rules for assigning Reactive Power data to Metering Systems are documented in the rules for completion of D0268 data flows in Annex C of the MRA Data Transfer Catalogue. These would require updating.</p> | |
| <p>Impact on BSC Systems and Other Relevant Systems and Processes Used by Parties <i>(optional by originator)</i></p> <p>There would be an impact on the processes of Half Hourly Meter Operator Agents and Half Hourly Data Collectors. However the P224 Assessment Report indicates that this would be relatively small.</p> | |
| <p>Impact on other Configurable Items <i>(optional by originator)</i></p> | |
| <p>Justification for Proposed Modification with Reference to Applicable BSC Objectives <i>(mandatory by originator)</i></p> <p>The current defect in the BSC leads to spurious Reactive Power and Capacity charges for those Suppliers whose customers have generating plant (and, ultimately, given that the total pot of DUoS income is regulated, lower charges for other Suppliers). Eliminating this distortion in charging will facilitate effective competition in the supply and generation of electricity i.e. Applicable BSC Objective (c).</p> <p>It will also facilitate Applicable BSC Objective (b) (i.e. efficient and economic operation of the Transmission System) by ensuring that embedded generators receive appropriate and cost-reflective price signals.</p> | |
| <p>Urgency Recommended: No <i>(delete as appropriate) (optional by originator)</i></p> | |

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| Justification for Urgency Recommendation (<i>mandatory by originator if recommending progression as an Urgent Modification Proposal</i>) | |
| Details of Proposer: <i>Name – Martin Brandt</i> <i>Organisation – Scottish and Southern Energy</i> <i>Telephone Number – 01256 304304</i> <i>Email Address – martin.brandt@sse.com</i> | |
| Details of Proposer’s Representative: <i>Name – Martin Brandt</i> <i>Organisation – Scottish and Southern Energy</i> <i>Telephone Number – 01256 304304</i> <i>Email address – martin.brandt@sse.com</i> | |
| Details of Representative’s Alternate: <i>Name – Claire Hemmens</i> <i>Organisation – Scottish and Southern Energy</i> <i>Telephone Number – 07747 559286</i> <i>Email address – Claire.hemmens@sse.com</i> | |

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| Attachments: Yes / No <i>(delete as appropriate) (mandatory by originator)</i> If Yes, Title and No. of Pages of Each Attachment: | |