

4.5. MP Form

Modification Proposal – BSCP40/03	MP No: P270 <i>(mandatory by BSCCo)</i>
Title of Modification Proposal: The Application of Line Loss Factors to GSPs that are not Transmission-interconnected	
Submission Date: 25 February 2011	
Description of Proposed Modification	
<p>All Grid Supply Points (GSPs) are treated the same under the BSC, and are not assigned Line Loss Factors (LLFs). This Modification contends that physical differences exist between conventional onshore GSPs and types of GSPs that are differently connected to the Transmission System, such as Offshore Transmission Connection Points, which mean that the BSC should distinguish between different types of GSP. This Modification proposes to:</p> <ul style="list-style-type: none"> • Distinguish between GSP types based on the nature of the interconnection between the GSP and the Transmission System; and • Make provision for the assignment of LLFs to appropriate GSP types. <p>The objective of the Proposed Modification is to recognise the physical difference (specifically with regard to losses) between a GSP that is connected to the interconnected Transmission System, and a GSP that is connected to a remote part of the Transmission System that is not interconnected directly with other parts of the Transmission System. Once this distinction is made in the relevant BSC definitions, it is further proposed that the latter category of sites should be eligible to have an LLF applied to the metered flow within the aggregation rules for the relevant GSP Group.</p> <p>The current issue this Modification seeks to address relates to Offshore Transmission Connection Points, but it is proposed that it should be worded around the nature of the interconnection between the GSP and the interconnected Transmission System to restrict its applicability to only those GSPs whose characteristics actually justify the use of LLFs. This would allow for the potential emergence of a transmission interconnected offshore grid (still incorporating GSPs) in the future, i.e. since such an offshore grid would be a flexible energy source/sink in a similar way to an onshore GSP connected to the interconnected Transmission System, it would not be suitable for an LLF.</p> <p>If not addressed, the identified issue will cause a material impact as existing offshore generators transfer to the OFTO arrangements, a process which is already ongoing. This Modification aims to retain the existing application of LLFs for such sites, reflecting the fact that there is no change to the physical losses arising on a Distribution System. It would therefore seem appropriate for the Modification, if approved, to apply from the effective date of the first Offshore Transmission Connection Point. This should be taken into account in determining its implementation approach, and retrospective application considered if necessary.</p>	
Description of Issue or Defect that Modification Proposal Seeks to Address	
BSC Section X defines Grid Supply Points as: “a Systems Connection Point at which the Transmission System is connected to a Distribution System and includes an Offshore Transmission Connection Point”.	

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<p>The issue is that the BSC does not recognise the difference between different types of GSP which exists following the introduction of the Offshore Transmission Owner (OFTO) arrangements. This means that some types of GSP are treated in a manner that is not reflective of their physical characteristics. The particular aspect of this, which is the focus of this Modification, is the assignment of Line Loss Factors.</p> <p>There is a fundamental difference between the (onshore) interconnected Transmission System, and a remote part of the Transmission System that is not interconnected directly with other parts of the Transmission System. Offshore Transmission Systems that are connected to a Distribution System are an example of the latter, and are used here to illustrate this difference. An onshore GSP has no LLF because it effectively represents an infinite energy source/sink to the DNO, where the required flows at the boundary are achieved by the addition or reduction of despatched generation from the interconnected Transmission System, as necessary. An Offshore GSP that is connected via a Distribution System effectively drives energy across a Distribution System in one direction only, either causing or reducing losses. This type of Offshore Transmission System therefore does not have the flexibility of onshore GSPs, and in this sense the operational characteristics of an offshore GSP are more similar to a Balancing Mechanism Unit (BMU). An LLF is associated with each BMU to take account of the effect of line losses between the BMU and the Transmission System Boundary. An LLF should therefore also be applied to offshore GSPs and similar connection points that are not interconnected directly with other parts of the Transmission System.</p> <p>The issue arises because it would not be consistent with the principles currently set out in BSC Section K 1.7 (Line Loss Factors) to apply LLFs to an Offshore Transmission Connection Point. The BSC outlines that the purpose of LLFs is to reflect the electrical losses between a Distribution System Boundary Point and the GSP. The BSC also includes Offshore Transmission Connection Points within the definition of GSP. This currently appears to preclude the application of LLFs to Offshore Transmission Connection Points.</p> <p>The issue has been identified in the context of an existing offshore generator, which is shortly to transfer to the new OFTO arrangements. The site is currently registered in SVA, and has an LLF which has been calculated on an interactive basis with other EHV sites connected to the same network. Because this part of the network is dominated by generation flows, the LLFs calculated for each of these sites are less than one; however the principles relating to the issue would be the same if these LLFs were greater than one.</p> <p>The transfer of the existing offshore site from SVA to CVA has no effect on the physical losses arising on the Distribution System. It would therefore be appropriate for the currently-calculated LLF to continue to be assigned to the Offshore Transmission Connection Point within the aggregation rules used for the calculation of GSP Group Take. If an LLF were not applied to this user there would be consequential distortion of the LLFs applied to other users, and potentially a direct financial impact on the DNO under the Losses Incentive (Charge Restriction Condition 7 of the DNO Licence).</p>	
Impact on Code	

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Impact on Core Industry Documents or System Operator-Transmission Owner Code	
Impact on BSC Systems and Other Relevant Systems and Processes Used by Parties	
Impact on other Configurable Items	
<p>Justification for Proposed Modification with Reference to Applicable BSC Objectives</p> <p>The key justification for this proposal is that it would remove a distortion in the way that losses are allocated to users of the Distribution System under the LLF mechanism, and that this would therefore provide more appropriate cost signals regarding the siting and operation of generators. The proposal thus better meets applicable objective c), promoting effective competition in the generation and supply of electricity.</p> <p>The proposal is to assign an LLF to the (non-interconnected) Offshore Transmission Connection Point, which effectively means that the loss effects on the Distribution System would be moved out of GSP Group Take and instead included in Transmission Losses. This removes two distortions:</p> <ul style="list-style-type: none"> i) by causing the Transmission Company to be exposed to the losses consequences of using the distribution network rather than building new transmission lines; and ii) by ensuring that an appropriate level of losses is taken into account when calculating LLFs for other users of the Distribution System; this effect being most pronounced where there are other EHV users connected to the same section of Distribution System. <p>It should be emphasised that the proposal is aimed at assigning an LLF to the (user at) the Offshore Transmission Connection Point and not to the Offshore Generators themselves. This approach is considered to be consistent with the principles set out in Ofgem’s decision letter on P242 (Treatment of Exemptable Generation Connected to Embedded Offshore Transmission Networks).</p> <p>The modification would also promote more efficient network design solutions as losses would properly be taken into account when assessing the merits of an embedded solution (using Distribution Systems) versus a Transmission-only solution for connecting otherwise remote transmission assets such as offshore networks. If the modification were not made, then the current industry arrangements allocate the losses arising from embedded solutions to Suppliers in the GSP Group (where they are not visible to the Transmission Company). This would distort the decision-making process as between embedded solutions and Transmission-only solutions. Thus, the modification would better meet applicable objective a), the efficient discharge by the Transmission Company of the obligations imposed under the Transmission Licence.</p>	

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Is there a likely material environmental impact?	
<p>The preceding justification concerns the economic efficiency of providing appropriate signals to users of the networks regarding the loss effects associated with their connection and operation. Since the financial effects of losses would be brought into decision making by this Modification, there would be a similarly beneficial environmental impact in terms of reduced network losses due to the effects of better signalling regarding the loss effects of participants' activities. However, we do not believe there is a readily quantifiable environmental impact that needs to be explicitly considered.</p>	
Urgency Recommended: Yes / No	
Justification for Urgency Recommendation	
Self-Governance Recommended: Yes / No	
Justification for Self-Governance Recommendation	
<p>Should this Modification Proposal be considered exempt from any ongoing Significant Code Reviews?</p> <p>Yes</p>	
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Attachments: Yes / No	