

What stage is this document in the process?

01 Initial Written Assessment

02 Definition Procedure

03 Assessment Procedure

04 Report Phase

Stage 01: Initial Written Assessment

P278 'Treatment of Transmission Losses for Interconnector Users'

P278 proposes to apply a fixed Transmission Loss Multiplier (TLM) of 1 to Interconnector BM Units, so that the BSC does not adjust their Metered Volumes for transmission losses.

The Proposer argues that, under European regulations, Britain is already compensated for transmission losses occurring on cross-border flows and that it is anomalous to additionally 'charge' Interconnector Users for these losses under the BSC.



ELEXON recommends:

A 5-month Assessment Procedure by a Workgroup (including a proposed 15WD consultation period of 13/01/12 – 03/02/12)



High Impact:

Interconnector Users and Settlement Administration Agent (SAA)



Medium Impact:

Lead Parties of non-Interconnector BM Units, as the transmission losses which are not allocated to Interconnector BM Units would be allocated across all other BM Units

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About This Document:

This document is an Initial Written Assessment (IWA), which ELEXON will present to the BSC Panel on 13 October 2011. The Panel will consider the recommendations and will agree how to progress P278.

You can also find further information in:

- Attachment A – P278 Modification Proposal.



Any questions?

Contact:

David Kemp



david.kemp@elexon.co.uk



020 7380 4303

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Existing treatment of transmission losses in Great Britain

As energy is transported across the Transmission System, some of it is lost (for example, through heat caused by the current flowing through overhead lines). The total metered energy which can be drawn from the Transmission System to meet demand will therefore always be less than that delivered onto the Transmission System by generation. The difference between total metered generation and total metered demand in a Settlement Period is therefore referred to as 'transmission losses'. The BSC adjusts the Metered Volumes of all BM Units through the application of Transmission Loss Multipliers (TLMs) to ensure that the total (adjusted) generation matches the total (adjusted) demand in any given Settlement Period. In doing so, it effectively allocates a share of the total transmission losses in that Settlement Period to every BM Unit (and thereby to BSC Trading Parties through their Trading Charges).¹

Under the current BSC arrangements, 45% of the total transmission losses in a Settlement Period are allocated to 'generation' BM Units, and the remaining 55% to 'demand' BM Units. Within this split, the 'lost' energy is distributed evenly across all BM Units in proportion to their Metered Volumes.² This is often referred to as a 'uniform' allocation of losses.

For each Settlement Period, the Settlement Administration Agent (SAA) calculates two TLMs in accordance with Section T2 of the Code: the 'delivery' TLM and the 'offtake' TLM. An individual BM Unit's Metered Volume is multiplied by either the 'delivery' TLM or 'offtake' TLM for that Settlement Period as follows.

- The **'delivery' TLM** (which is less than 1) is applied to all BM Units that are part of 'delivering' (exporting) Trading Units in that Settlement Period. This scales down the BM Units' Metered Volumes to account for transmission losses, meaning that their Lead Parties must generate more to meet their contracted positions.
- The **'offtake' TLM** (which is greater than 1) is applied to all BM Units that are part of 'offtaking' (importing) Trading Units in that Settlement Period. This scales up the BM Units' Metered Volumes to account for transmission losses, meaning that their Lead Parties must contract more to meet expected demand.

European regulations for the treatment of cross-border flows

National Grid, as the Transmission System Operator (TSO), participates in the mandatory European Inter-TSO Compensation (ITC) scheme on behalf of Great Britain (GB). The intention of this scheme is to compensate TSOs for cross-border flows across Interconnectors, to remove the need for individual national charges. Specifically, within this scheme, there is a mechanism that is intended to compensate the GB market for the transmission losses arising from hosting cross-border flows. This scheme is part of the wider European Commission (EC) objectives of creating a single market in electricity, and thus facilitating greater competition and benefits for consumers.

What is the issue?

The BSC currently adjusts the Metered Volumes of Interconnector BM Units for transmission losses. This could be seen as anomalous in light of recently introduced European regulations on cross-border flows.



What are Trading Units?

A Trading Unit is a collection of one or more BM Units.

If the sum of the Metered Volumes across all of the BM Units in a Trading Unit is greater than zero for a given Settlement Period, the Trading Unit is a **'delivering' Trading Unit**.

If the sum of the Metered Volumes across all of the BM Units in a Trading Unit is less than or equal to zero for a given Settlement Period, the Trading Unit is an **'offtaking' Trading Unit**.

For more information, please see BSC Section T2.1.

¹ Losses on Distribution Systems are separately accounted for through the application of Line Loss Factors (LLFs).

² In practice, this split is designed to be equivalent to a 50:50 allocation, but with allowance for the fact that metering for most generation connections is on the high-voltage side of the supergrid transformer, whereas that for demand is on the low-voltage side. The 45:55 allocation of transmission losses is intended to allow for supergrid transformer losses for demand connections which are in addition to the metered flow.

EC Regulation 838/2010³ establishes guidelines under which countries are compensated for the costs of losses that are incurred on their national transmission systems as a result of cross-border flows. Article 14 (Charges for access to networks) of EC Regulation 714/2009⁴ requires that ITC payments and receipts are taken into account when setting network charges. These regulations came into force on 3 March 2011, and are mandatory for all EU Member States.

National Grid made adjustments to its Transmission Network Use of System (TNUoS) charges for Interconnector flows during 2010. They consider that this has fully taken the ITC payments into account as per the requirements of EU Regulation 714/2009.

The issue – Applying TLMs to Interconnector BM Units

Under the recent European regulations, GB is compensated for transmission losses caused by flows across the Interconnectors, which National Grid has accounted for in the TNUoS charges for Interconnector Users. However, under the current BSC arrangements, a 'charge' for losses manifests itself as an adjustment to Metered Volumes, in the form of TLMs. TLMs are currently applied equally across all BM Units, including Interconnector BM Units.

The Proposer argues that, as GB is already compensated for transmission losses occurring on flows across Interconnectors under EU regulations, it is anomalous to additionally 'charge' Interconnector Users for these losses under the BSC. They believe the BSC should be amended to remove any apparent anomalous treatment of losses in the context of the requirements of EC Regulations and the changes already made to TNUoS charging.

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³ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:250:0005:0011:EN:PDF>

⁴ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0015:0035:EN:PDF>

Proposed solution

P278 proposes to remove the tariff adjustment from all Interconnector metered flows on the Transmission System. The Proposer suggests that, to achieve this, the BSC should be amended to apply a fixed TLM of 1 to all Interconnector BM Units. This would mean that Interconnector BM Units' Metered Volumes would no longer be adjusted by the TLM, and the BSC would therefore no longer allocate transmission losses to any Interconnector BM Units.

The transmission losses which are no longer allocated to Interconnector BM Units would instead be allocated across all other BM Units (proportional to their Metered Volumes and the overall 45:55 split between 'delivery' and 'offtake'). This would involve adjusting the equations for calculating the 'delivery' Transmission Losses Adjustment (TLMO+) and the 'offtake' Transmission Losses Adjustment (TLMO-) used in the calculation of the 'delivery' and 'offtake' TLMs.

Applicable BSC Objectives

The Proposer believes that P278 will better facilitate the achievement of:

- **Applicable BSC Objective (a)**, as applying a zero transmission loss adjustment to Interconnector BM Units will ensure the charges for those Parties are more transparently aligned with European regulations; and
- **Applicable BSC Objective (c)**, as it would treat Interconnector BM Units consistently with equivalent arrangements in Europe.



What is the solution?

The TLM applied to Interconnector BM Units would be fixed as 1. The BSC would therefore no longer allocate transmission losses to any Interconnector BM Units.



What are the Applicable BSC Objectives?

(a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence

(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System

(c) Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity

(d) Promoting efficiency in the implementation of the balancing and settlement arrangements

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3 Things to Consider

In this section we highlight areas which we believe the Panel should consider when making its decision on how to progress this Modification Proposal. If P278 goes into the Assessment Procedure, then we recommend that the areas below form the basis of the Workgroup's Terms of Reference.

Should the BSC still 'charge' Interconnector BM Units for transmission losses?

The historic principle behind allocating transmission losses to every BM Unit has been that all BM Units give rise to these losses. However, if European regulations now separately compensate GB for transmission losses caused by Interconnector flows, it could be seen as double-counting to additionally 'charge' Interconnector Users for transmission losses under the BSC.

Consideration should therefore be given as to whether this is the case. This may require further examination of the relevant European regulations and the precedent of National Grid's recent TNUoS charging changes.

What changes are required to support the proposed solution?

P278 is likely to impact the BSC, Code Subsidiary Documents, central SAA systems and Trading Parties' own systems (e.g. the systems which Parties use to monitor their Trading Charges).

The specific changes required will need to be identified through an impact assessment, along with any associated implementation costs and lead times.

What is the appropriate Implementation Date for P278?

For previous Modification Proposals relating to transmission losses, Parties have expressed a preference for tying implementation to their contract rounds (i.e. an Implementation Date of either 1 April or 1 October) so that they can price their contracts accordingly.

The same argument may apply to P278. Alternatively, as these other Modification Proposals had a different scope in that they proposed a locational losses scheme, it may be appropriate to implement P278 in a standard BSC Release (i.e. in either February, June or November).

What are the benefits to the Applicable BSC Objectives?

The primary benefit cited by the Proposer is alignment/consistency with European legislation.

As this is not yet a specific Applicable BSC Objective, consideration will need be given to whether there are consequential benefits to the existing Objectives – e.g. to Objectives (a) and (c) as the Proposer suggests.

**What is the proposed progression?**

P278 should be progressed to the Assessment Procedure.

Next steps**ELEXON recommends that a Workgroup carries out further assessment of P277.**

The proposed solution is well-defined; therefore we are not recommending a Definition Procedure. However, we believe the proposal would benefit from further assessment by a Workgroup in order to consider the areas outlined in Section 3.

The Proposer is not requesting that P278 is progressed as a Self-Governance Modification Proposal. We agree that P278 does not meet the criteria for Self-Governance because of its potential impact on Parties' Trading Charges, and therefore on competition. It also raises benefits which are potentially wider than the Applicable BSC Objective (such as consistency with European legislation), and which may therefore require consideration by Ofgem as part of its wider statutory duties.

We agree with the Proposer that P278 has no interaction with any ongoing Significant Code Reviews (SCRs), as Ofgem has explicitly ruled transmission losses out of the scope of Project TransmiT.

Terms of Reference

We recommend that membership of the P278 Workgroup is drawn from members of the Settlement Standing Modification Group (SSMG), supplemented with any other relevant experts and interested parties.

We recommend that the Workgroup considers the following areas:

P278 Terms of Reference	
1	Should the BSC still 'charge' Interconnector Users for transmission losses?
2	What changes to BSC documentation, systems and processes are required to support P278?
3	What is the appropriate Implementation Date for P278?
4	What are the benefits to the Applicable BSC Objectives?

Interaction with P277

We recommend that P278 is progressed in parallel with separate Modification Proposal P277 'Allow Interconnector BM Units to choose their P/C Status'.

Both Modifications will draw their Workgroup members from the SSMG, so holding Workgroup meetings on the same day or consecutive days will be more efficient and will help to reduce costs/workload.

In addition, both Modifications relate to how the BSC's rules for Interconnectors interact with the principle of a single European energy market. Although we do not anticipate any direct interaction between the two proposals, using the same Workgroup for both will allow the group to identify and consider any common principles.

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Timetable

We recommend that P278 undergoes a 5-month Assessment Procedure.

We believe that the Workgroup will need to undertake the activities shown in the table below. These include undertaking a 15 Working Day (15WD) industry impact assessment followed by a 15WD industry consultation.

In isolation of any other changes, we believe that the Group could complete these activities in 4 months. However, given the number of other Modification Proposals in progress, we believe that a 5-month assessment for P278 is more appropriate to help the industry manage its workload and to avoid issuing a consultation over the Christmas period.

The BSC allows the Panel to set an Assessment Procedure timetable which is longer than 3 months where the Panel believes this is justified by "the particular circumstances of the Modification Proposal (taking due account of its complexity, importance and urgency)" (F2.2.9), and provided the Authority does not issue a contrary direction.

Proposed progression timetable for P278	
Assessment activity	Date
Present IWA to Panel	Thursday 13 October 2011
Workgroup Meeting 1	Tuesday 25 October 2011 (following the Imbalance Settlement Group)
Workgroup Meeting 2 (if required – joint meeting with P277)	Wednesday 2 November 2011
Issue P278 for a 15WD Impact Assessment	Monday 14 November 2011
Workgroup Meeting 3 (joint meeting with P277)	Thursday 8 December 2011
Issue P278 for a 15WD Industry Consultation	Friday 13 January 2012
Workgroup Meeting 4 (joint meeting with P277)	Tuesday 14 February 2012
Present Assessment Report to Panel	Thursday 8 March 2012
Issue P278 for a 15WD Report Phase Consultation	Friday 9 March 2012
Present Modification Report to Panel	Thursday 12 April 2012



Estimated progression costs

The following tables contain our estimates of the costs involved in progressing P278 through the Modification Procedures.

Estimated progression costs based on proposed 5-month Assessment Procedure timetable	
Meeting costs (including Workgroup member expenses)	£1,500 (based on four meetings, three of which to be held on the same days as P277 meetings)
Non-ELEXON legal and expert costs	£0
ELEXON resource	50 man days, equating to approx. £12k

Estimate of total industry assessment costs					
Workgroup support	Est #mtgs	Est #att	Est effort	Est rate	Sub-total
	4	6	1.5	£605	£21,780
Consultation response support	Est #con	Est #resp	Est effort	Est rate	Sub-total
	2	6	2.5	£605	£18,150
Total costs					£39,930

Industry Assessment Costs

Industry Workgroup support and consultation response costs represent an approximation of industry time and effort in attending Workgroup meetings and responding to consultations.

The calculation is based upon an estimate of how many attendees we expect to attend each meeting and how many responses we expect to receive to each consultation.

It assumes that each attendee will require 1.5 man days of effort per meeting and each response will take 2.5 man days of effort, multiplied by a standard rate of £605 per man day.

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5 Likely Impacts

Impact on BSC Systems and process

BSC System/Process	Potential impact
SAA	Changes will be required to amend how the SAA systems calculate and allocate TLMs.

Impact on BSC Parties and Party Agents

The Metered Volumes of Interconnector Users would no longer be adjusted for transmission losses through the TLM. The Metered Volumes of other BM Units will therefore be scaled by a greater amount (increasing their Trading Charges) in order to still allocate the total amount of transmission losses in a Settlement Period.

Impact on Transmission Company

None anticipated.

Impact on ELEXON

Area of ELEXON	Potential impact
Release Management	ELEXON will manage the implementation project.

Impact on Code

Code Section	Potential impact
Section T	Changes will be required to implement the solution.

Impact on Code Subsidiary Documents

CSD	Potential impact
SAA Service Description	Changes will be required to implement the solution.

Impact on other Configurable Items

Configurable Item	Potential impact
SAA Systems Docs	The impacts will be confirmed during Assessment Procedure.

Other Impacts

Item impacted	Potential impact
ELEXON Information Sheets	Changes will be required to the Transmission Losses Information Sheet to reflect the new rules.

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6 Recommendations



On the basis of this IWA, ELEXON invites the Panel to:

- **DETERMINE** that Modification Proposal P278 progresses to the Assessment Procedure;
- **AGREE** the Assessment Procedure timetable such that an Assessment Report should be completed and submitted to the Panel at its meeting on 8 March 2012;
- **DETERMINE** that the P278 Workgroup should be formed from members of the Settlement Standing Modification Group (SSMG), supplemented with any other relevant experts and interested parties;
- **AGREE** the Workgroup's Terms of Reference;
- **AGREE** that P278 has no interaction with any ongoing SCRs; and
- **AGREE** that P278 does not meet the Self-Governance Criteria.

Assessment Procedure

ELEXON recommends a 5-month Assessment Procedure for P278.

7 Further Information

You can find more information in:

Attachment A – P278 Modification Proposal.

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4.5. MP Form

Modification Proposal – BSCP40/03	MP No: P278 <i>(mandatory by BSCCo)</i>
Title of Modification Proposal <i>(mandatory by originator)</i> : Treatment of Transmission Losses for Interconnector Users.	
Submission Date <i>(mandatory by originator)</i> : 30 September 2011	
Description of Proposed Modification <i>(mandatory by originator)</i>	
<p>National Grid, as GBSO, participates in the mandatory European Inter-TSO Compensation (ITC) scheme on behalf of GB. The intention of this scheme is to compensate TSO's for cross-border flows on Interconnectors to remove the need for individual National charges. This scheme is part of wider EC objectives of creating a single market in electricity and thus facilitating greater competition and benefits for consumers.</p> <p>Specifically, within the scheme, there is a mechanism that is intended to compensate the GB for transmission losses arising from hosting cross-border flows.</p> <p>EC Regulation 714/2009¹ requires that ITC scheme payments are taken into account when setting national tariffs. National Grid considers that it has fully taken account of these payments by the adjustment made to its TNUoS charges during 2010 to remove TNUoS charges for interconnector flows. However, within the GB regime a charge for losses manifests itself as an adjustment to metered amounts in the BSC and this might be seen to be anomalous in the context of the ITC scheme and the adjustments already made to TNUoS charging. The intent of this proposal is to deal with this apparent anomaly by removing the tariff adjustment from all Interconnector metered flows on the GB transmission system. We propose that this could be given effect by revising the Transmission Loss adjustment mechanism such that TLMij is set to 1.0 for all Interconnector BM Units (with the equations for TLMO+j and TLMO-j changed to ensure that the correct amount of losses is still recovered from other BM Units).</p>	
Description of Issue or Defect that Modification Proposal Seeks to Address <i>(mandatory by originator)</i>	
<p>Commission Regulation 838/2010² establishes the guidelines under which GB is compensated for the cost of losses incurred on the national transmission systems as a result of hosting cross-border flows.</p> <p>Article 14 (Charges for access to networks) of Regulation 714/2009 requires that ITC payments and receipts are taken into account when setting network access charges. These regulations came into force on 3rd March 2011 and are mandatory across all EU member states.</p> <p>Within the current BSC rules, all BMU metered volumes (including interconnector BMU deemed metered volumes) are adjusted for Transmission Losses, 45% for generation and 55% for demand.</p>	

¹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0015:0035:EN:PDF>

² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:250:0005:0011:EN:PDF>

Modification Proposal – BSCP40/03	MP No: P278 <i>(mandatory by BSCCo)</i>
<p>The BSC mechanism should therefore be adjusted to remove any apparent anomalous treatment of losses in the context of the requirements of EC Regulations in that no adjustment should be made for GB transmission losses on any Interconnector BM Units.</p>	
<p>Impact on Code <i>(optional by originator)</i></p> <p>Section T, Section 2.0:(Allocation of Transmission Losses)</p> <p>Other sections may also be impacted.</p>	
<p>Impact on Core Industry Documents or System Operator-Transmission Owner Code <i>(optional by originator)</i></p> <p>None anticipated.</p>	
<p>Impact on BSC Systems and Other Relevant Systems and Processes Used by Parties <i>(optional by originator)</i></p> <p>Changes will be required to BSC systems in order to apply zero loss adjustment to Interconnector BM Units.</p>	
<p>Impact on other Configurable Items <i>(optional by originator)</i></p> <p>None anticipated.</p>	
<p>Justification for Proposed Modification with Reference to Applicable BSC Objectives <i>(mandatory by originator)</i></p> <p>(a) the efficient discharge by the licensee of the obligations imposed upon it by this licence</p> <p>By applying a zero transmission loss adjustment to Interconnector BM Units, this modification proposal, will ensure that GB charges for those parties are more transparently aligned with EC Regulations and better facilitate Applicable BSC Objective (a).</p> <p>(c) promoting effective competition in the generation of supply of electricity</p> <p>By treating GB Balancing Mechanism Units consistent with equivalent arrangements in Europe, this modification proposal, better facilitates, Applicable BSC Objective (c).</p>	
<p>Is there a likely material environmental impact? <i>(mandatory by originator)</i></p> <p>None identified.</p>	
<p>Urgency Recommended: Yes / No <i>(delete as appropriate) (optional by originator)</i></p>	

Modification Proposal – BSCP40/03	MP No: P278 <i>(mandatory by BSCCo)</i>
Justification for Urgency Recommendation <i>(mandatory by originator if recommending progression as an Urgent Modification Proposal)</i>	
Self-Governance Recommended: Yes / No <i>(delete as appropriate) (mandatory by originator)</i>	
Justification for Self-Governance Recommendation <i>(mandatory by originator if recommending progression as Self-Governance Modification Proposal)</i>	
Should this Modification Proposal be considered exempt from any ongoing Significant Code Reviews? <i>(mandatory by originator in order to assist the Panel decide whether a Modification Proposal should undergo a SCR Suitability Assessment)</i>	
Yes: As per Ofgem's letter 7 th July, BSC changes are not within the scope of the TransmiT SCR.	
Details of Proposer:	
<i>Name.....Iain Pielage.....</i>	
<i>Organisation...National Grid</i>	
<i>Telephone Number....01926 656 360.....</i>	
<i>Email Address..... iain.pielage@uk.ngrid.com.....</i>	
Details of Proposer's Representative:	
<i>Name.....Iain Pielage.....</i>	
<i>Organisation...National Grid.....</i>	
<i>Telephone Number...01926 656 360</i>	
<i>Email address.....iain.pielage@uk.ngrid.com.....</i>	

Modification Proposal – BSCP40/03	MP No: P278 (mandatory by BSCCo)
Details of Representative's Alternate: <i>Name...Patrick Hynes</i> <i>Organisation...National Grid.....</i> <i>Telephone Number...01926 656 319</i> <i>Email address...Patrick.Hynes@uk.ngrid.com.....</i>	
Attachments: No (<i>delete as appropriate</i>) (<i>mandatory by originator</i>) If Yes, Title and No. of Pages of Each Attachment:	