

## Stage 03: Assessment Consultation

# P277 'Allow Interconnector BM Units to choose their P/C Status'

P277 proposes that Interconnector Users and Interconnector Error Administrators (IEAs) should have one Interconnector BM Unit per relevant Interconnector. The Lead Party would be required to elect whether this Interconnector BM Unit's P/C Status is Production or Consumption. These rules would be mandatory for all existing and future Interconnector Users and IEAs from the P277 Implementation Date.

This would replace the existing requirement to have two Interconnector BM Units per relevant Interconnector (one BM Unit with a fixed P/C Status of Production and one with a fixed P/C Status of Consumption).

This Assessment Procedure Consultation for P277 closes:

**5pm on Friday 3 February 2012**

The Workgroup may not be able to consider late responses.



The Workgroup:

- Initially recommends **rejection** of P277



High Impact:

- Interconnector Users
- Interconnector Administrators
- Interconnector Error Administrators



Medium Impact:

- Central Registration Agent
- Settlement Administration Agent
- Transmission Company



Low Impact:

- ELEXON

What stage is this document in the process?

01 Initial Written Assessment

02 Definition Procedure

03 Assessment Procedure

04 Report Phase

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## About this Document

The purpose of this P277 Assessment Consultation is to invite BSC Parties' and other interested parties' views on the merits of P277. The P277 Workgroup will then discuss the consultation responses, before making a recommendation to the Panel on 8 March 2012 on whether to approve P277.

There are 4 parts to this document:

- This is the main consultation document. It provides details of the solution, impacts, costs, benefits/drawbacks and proposed implementation approach. It also summarises the Workgroup's key views on the areas set by the Panel in its Terms of Reference.
- Attachment A contains more information on the Workgroup's analysis and assessment. It includes an overview of Interconnectors and the related Parties, as well as worked examples of the current and proposed arrangements. It also contains details of the Workgroup's membership and full Terms of Reference.
- Attachment B contains the draft redlined changes to the BSC for P277.
- Attachment C contains the specific questions on which the Workgroup seeks your views. Please use this form to provide your response to these questions, and to record any further views/comments you wish the Group to consider.

The Workgroup is issuing P277 for a parallel consultation with [P278 'Treatment of Transmission Losses for Interconnector BM Units'](#). P278 will also impact Interconnector Users, although the two solutions are independent of one another. For more information about P278, please refer to the separate P278 Assessment Consultation Document.

## Further Information

More information is available in:

Attachment **A**: Detailed Assessment

Attachment **B**: Draft Legal Text

Attachment **C**: Assessment Consultation Questions

A complete version of the (non-confidential) impact assessment responses received are available on the [P277](#) page of the ELEXON website.



### Any questions?

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Assessment Consultation

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## Why Change?

Each Interconnector User is currently allocated a pair of Interconnector BM Units per Interconnector that they trade over. Energy that the Interconnector User brings into GB is considered to be an Export onto the GB Transmission System and is allocated to their Production Energy Account via their Production BM Unit. Energy that they take out of GB is considered to be an Import from the GB Transmission System and is allocated to their Consumption Account via their Consumption BM Unit.

This can lead to imbalance in both of a Party's Energy Accounts, even if the Party's Export and Import flows across Interconnectors are actually balanced (i.e. are equal and opposite). A Party can set up an Energy Contract Volume Notification (ECVN) between its two Energy Accounts to avoid this imbalance, but this is an additional administrative burden and can be subject to human error.

## Solution

Each Interconnector User would only be allocated one Interconnector BM Unit per Interconnector that they trade over (so if they trade over all three of the existing GB Interconnectors, they will have three Interconnector BM Units – one for each Interconnector).<sup>1</sup> They would be required to choose the P/C Status of each BM Unit (i.e. whether it is a Production or Consumption BM Unit). This would allow them to avoid imbalance by netting all their Export and Import flows over Interconnectors in one Energy Account.

These rules would also apply to Interconnector Error Administrators, and would be mandatory for all existing and future Interconnector Users and IEAs from the P277 Implementation Date.

## Impacts & Costs

P277 impacts the BSC, BSC Procedures (BSCPs) 15 & 31, the Central Registration Agent (CRA) Service Descriptions, and other CRA and Settlement Administration Agent (SAA) documents. It impacts all Interconnector Users, Interconnector Administrators and IEAs. It also impacts the Transmission Company, the CRA and SAA, and ELEXON.

The central implementation cost of P277 is £62k, comprising £50k in CRA and SAA costs and £12k in ELEXON effort. Party costs range from up to £35k for Interconnector Users to up to £100k for Interconnector Administrators/IEAs.

## Implementation

The proposed Implementation Dates for P277 are 28 February 2013 (February 2013 BSC Systems Release) or 27 June 2013 (June 2013 BSC Systems Release), depending on when Ofgem's decision is received.

<sup>1</sup> The GB-France (IFA), GB-Northern Ireland (Moyle) and GB-Netherlands (BritNed) Interconnectors.

## The Case for Change

The Proposer believes that P277 would better facilitate Applicable BSC Objectives (c), (d) and (e). The majority of the Workgroup do not believe that P277 better facilitates the Applicable BSC Objectives. The Workgroup therefore initially recommends by majority that P277 is rejected.

## 2 Why Change?

This section describes the issue identified by the Proposer. For an explanation of how Interconnectors work, including the roles of the Interconnector Administrator, Interconnector Error Administrator and Interconnector Users, please see Attachment A.

### How are Interconnector BM Units currently configured?

When a BSC Party, in the role of an Interconnector User, signs up to trade over an Interconnector, they are assigned two BM Units by the Central Registration Agent (CRA) for that Interconnector in accordance with Sections K5.5 and K3.5 of the BSC.

The CRA assigns these BM Units in fixed pairs per Interconnector and Interconnector User as follows:

- A Production BM Unit for energy entering Great Britain over the Interconnector (a positive Export flow); and
- A Consumption BM Unit for energy leaving Great Britain over the Interconnector (a negative Import flow).

The Production/Consumption (P/C) Status of these BM Units is fixed and cannot be changed.

### What is a P/C Status?

Every BM Unit has a P/C Status. This P/C Status is used to determine which of the Lead Party's Energy Accounts the BM Unit's net Metered Volume is allocated to:

- A **Production** Status will result in Metered Volumes being allocated to the Production Energy Account; and
- A **Consumption** Status will result in Metered Volumes being allocated to the Consumption Energy Account.

If a Party's net Metered Volumes and Energy Contract Volume Notifications (ECVNs) are not aligned to the same Account, the Party will be exposed to imbalance charges on both Accounts.

In the case of Interconnector BM Units, this means that Export energy from a Production BM Unit (i.e. energy entering Great Britain) is assigned to the Lead Party's Production Energy Account, while Import energy from a Consumption BM Unit (i.e. energy leaving Great Britain) is assigned to their Consumption Energy Account. As an Interconnector BM Unit's P/C Status is fixed, this cannot be changed.

### What is wrong with the current rules?

If a Party imports energy into Great Britain via one Interconnector with the intent of exporting the same energy out again via another Interconnector, the current rules mean they face a situation where they may end up in imbalance. This is because each of the two trades would end up in separate Energy Accounts. Without additional contracts, the current arrangements would leave both Energy Accounts in imbalance, leaving the Party



#### What is the issue?

Energy entering Great Britain over an Interconnector is assigned to a different Energy Account to energy leaving Great Britain. This can cause an Interconnector User to be in imbalance in both their Accounts, unless they notify an additional contract to balance their position.

open to being charged the System Buy Price/System Sell Price (SBP/SSP) spread over the whole amount.

Consider, for example, a Party buying energy in France and transporting it to Northern Ireland via Great Britain. The energy entering Britain over the GB-France (IFA) Interconnector would be allocated to the Party's Production Account, while the energy leaving Britain over the GB-Northern Ireland (Moyle) Interconnector would be assigned to their Consumption Account.

In this scenario, the Party would be 'long' (Exports exceeding Imports) in their Production Account and would be paid SSP for this amount. They would also be 'short' (Imports exceeding Exports) by an equal amount in their Consumption Account (not accounting for transmission losses), and would be charged SBP on that amount. As SBP is always greater than or equal to SSP, the Party would be charged more than they were paid, leaving them with a net imbalance charge. However, as the two energy volumes are actually equal and opposite, they would have netted to zero (not accounting for transmission losses) if they were allowed to be in the same Energy Account, meaning the Party would have been perfectly balanced.

This issue can be resolved by setting up an ECVN between the two Accounts,<sup>2</sup> but this is an additional administrative burden and potentially prone to human error by the Party (for example, a small error over a minus sign could result in their imbalance being doubled).

This issue is not limited just to Parties who wish to transport energy through Great Britain. For example, it would also affect the following:

- A GB generator who wishes to sell energy to another country; or
- A non-physical trader who wishes to either:
  - Buy energy from a GB generator to sell in another country; or
  - Buy energy from another country to sell in GB.

Further worked examples can be found in Attachment A, including an explanation of how scaling for transmission losses affects Interconnector Users' Metered Volumes.

As well as Interconnector Users, each Interconnector Error Administrator (IEA) is automatically assigned a pair of fixed Production/Consumption Interconnector BM Units for the relevant Interconnector, to which the residual error volumes are allocated (see Attachment A for a more detailed explanation of the role of the IEA). IEAs therefore have the same imbalance risk as Interconnector Users, although the residual error volumes may be so small that IEAs may choose to make a business decision not to self-balance through an ECVN.

The imbalance risk is the same regardless of whether the Interconnector operates 'explicit auctions' (in which the energy flows across the Interconnector are allocated to Interconnector Users' BM Units and Energy Accounts) or 'implicit auctions' (in which all flows are allocated to the Interconnector operator's BM Units and Energy Accounts). The only difference is whether Interconnector Users or the Interconnector operator is exposed to this risk.



### Further Examples

For a worked example of the scenario where a generator wishes to sell their energy outside of GB, please see Attachment A.

Attachment A also includes more detail of how transmission losses would affect the BM Unit Metered Volumes.

<sup>2</sup> A Metered Volume Reallocation Notification (MVRN) cannot be used because BSC Section P3 only allows MVRNs from one Production Account to another or from one Consumption Account to another, and not from Production to Consumption or vice versa.



### What is the proposed solution?

Interconnector Users would only be assigned one BM Unit per Interconnector, and they would be required to elect this BM Unit's P/C Flag to determine whether the BM Unit's net Metered Volume is allocated to their Production or Consumption Account.

This section summarises the P277 Proposed Modification, which is the solution put forward by the Proposer.

The Proposer has developed the solution with the Workgroup's assistance. While the majority of the Workgroup does not believe that the solution better facilitates the Applicable BSC Objectives when compared with the existing BSC arrangements, the Workgroup has not identified any Alternative Modification within the scope of P277 which it believes would better facilitate these Objectives than the Proposer's solution. This section describes the other solutions which the Workgroup has considered but dismissed on these grounds.

### What is the proposed solution?

P277 proposes to allocate each Interconnector User one Interconnector BM Unit per Interconnector that they trade over, rather than the existing pair of Production and Consumption BM Units per Interconnector. The Lead Party would be required to choose the BM Unit's P/C Status by electing a P/C Flag of either Production or Consumption.<sup>3</sup> This P/C Status would not change (regardless of whether the actual flow direction is positive or negative) unless the Lead Party subsequently elects to change its P/C Flag from Production to Consumption, or vice versa.

This means that both Export (positive) and Import (negative) volumes for the Interconnector User over that Interconnector would be associated with the same Interconnector BM Unit, and the Lead Party (by choosing its P/C Flag) would elect which of its Energy Accounts the BM Unit's resulting net Metered Volume is allocated to. In the situation described above, where a Party is importing energy over one Interconnector and exporting the same energy out over another, these volumes would be netted in the Party's elected Energy Account – removing any imbalance except for a small residual imbalance due to transmission losses (see worked examples in Attachment A).

The above P277 rules would also apply to each Interconnector Error Administrator, such that both positive and negative error volumes would be allocated to a single IEA BM Unit for the Interconnector and thereby to either the IEA's Production Account only or Consumption Account only (as elected by the IEA through its P/C Flag).

P277 does not impact the Isle of Man Distribution Interconnector. This is because it has a derogation from the Panel under BSC Section K5.2 such that it is not treated as an Interconnector (i.e. it does not have Interconnector BM Units or an Interconnector Error Administrator). Any other future Distribution Interconnector with such a derogation would also not be impacted. However, any future Distribution Interconnectors without such a derogation would be treated the same as a Transmission Interconnector, and so would be impacted by P277.

Attachment A provides further details of the P277 solution requirements, and gives worked examples of the effect on Interconnector Users' imbalance charges. These worked examples include an explanation of how curtailment of an Interconnector would affect Interconnector Users' imbalance charges under both the current and P277 rules. Attachment A also explains how the reduction in the number of Interconnector BM Units under P277 would have a minor effect on BSCCo Charges.

<sup>3</sup> The P/C Flag is the mechanism which CRA systems use to fix a BM Unit's P/C Status as Production or Consumption.



## Legal text

The proposed redlined changes to the BSC to deliver the P277 solution can be found in Attachment B.

### Assessment Consultation Question

Do you agree with the Workgroup that the legal text delivers the intention of P277?

The Workgroup invites you to give your views using the response form in Attachment C

## How does P277 interact with P278?

P277 is being progressed in parallel with P278 'Treatment of Transmission Losses for Interconnector Users', as they both relate to Interconnectors. P278 proposes that the Metered Volumes of Interconnector BM Units are no longer scaled for transmission losses through the application of Transmission Loss Multipliers (TLMs). The two Modifications have independent solutions which will work separately or together. However, if both are approved, simultaneous implementation would offer a reduction in the combined central implementation costs (see Section 4).

The worked examples in Attachment A explain the interaction between the P277 and P278 solutions. They include an explanation of how scaling Interconnector Users' Metered Volumes for transmission losses would work under:

- The current BSC rules;
- The proposed P277 rules in isolation of P278; and
- The P277 rules if P278 is also implemented.

## Why should the proposed solution be mandatory?

The P277 solution would be mandatory for all existing and future Interconnector Users and IEAs from the P277 Implementation Date. This would make the rules easier to implement, and would avoid any issues or extra costs involved with having two systems in operation simultaneously as explained below.

If the solution was to be made optional, then Interconnector Users and IEAs would be given a choice between keeping their current BM Unit pairs and using the current rules, or switching to a single BM Unit per Interconnector and using the P277 rules. If this were the case, Interconnector Administrators (IAs) would be required to manage two separate sets of rules simultaneously, and would need to be able to identify which set of rules each Interconnector User was using at any given point in time in order to allocate Metered Volumes to the correct Interconnector BM Units. This would add costs and complexity to IA systems, and would be likely to therefore extend their implementation lead times. Central BSC Systems (CRA and SAA) would also need to be configured to manage both sets of rules, which would increase the central implementation costs and lead times.



If both sets of rules were available, there would be some question about who would choose which set of rules to use in certain cases. For example, it could be possible that an IA could stipulate that they will only accept only one of the two sets of rules on their Interconnector. If an IA does make such a decision, this could prevent a Party from taking advantage of the new rules. It may also mean that Parties could end up using different rules on different Interconnectors, if some IAs elect to use the proposed rules while others elect to keep the current rules.

If both sets of rules were available for a particular Interconnector, then new Users on that Interconnector would need to declare which set of rules they would be using for an Interconnector. This could increase the potential for confusion and misunderstanding at the time of registration.

Parties may subsequently decide they wish to switch from one set of rules to the other. It may be that Parties would only be allowed to switch from the current rules to the proposed rules and could not switch back. However, this still allows the possibility for issues around the time when the pair of BM Units is deregistered and the single BM Unit is registered, especially as this could happen at ad-hoc intervals. IAs and central BSC Agents (CRA and SAA) would need to put processes in place to manage this sort of switch-over beyond the P277 Implementation Date, instead of as a one-off activity.

By having only a single set of rules, the issues highlighted above would not present themselves. There would be a single switch-over on the P277 Implementation Date, and then a single set of rules would be in force from that point onwards.

In addition, the P277 solution is intended to benefit Parties who are trading over Interconnectors. As the effect on Interconnector Users' imbalance charges would be beneficial, the Workgroup has not identified any reason why an Interconnector User would not wish to adopt this solution if P277 is approved.

For these reasons, the Workgroup agrees with the Proposer that the P277 solution should be mandatory. It has therefore not explored the additional impacts, costs and lead times of an optional solution further.

#### Assessment Consultation Question

Do you agree with the Workgroup that, if approved, the P277 solution should be mandatory from the P277 Implementation Date?

The Workgroup invites you to give your views using the response form in Attachment C

## Interconnector BM Units, Trading Units and 'embedded benefits'

BSC Sections K4 and K5.7 and BSCP31 allow an Interconnector BM Unit to form part of a 'Class 5' Trading Unit with:

- Other Interconnector BM Units associated with the same Interconnector; and/or
- Other BM Units connected to the same Boundary Point as the Interconnector by Dedicated Assets or Contiguous Assets,

except where an Interconnector BM Unit is associated with an Interconnector that has Boundary Points at more than one Site (in which case the Interconnector BM Unit may only be a Sole Trading Unit on its own).

In practice, no Parties have ever registered a Class 5 Trading Unit although it is possible that some may wish to do so in the future as new Interconnectors are built.

This section summarises the Workgroup's discussion of the interaction between Trading Units and the P277 solution, and the reasons why the Group agrees that forming Trading Units would not address the issue identified by P277.

### Normal effects of belonging to a Trading Unit

Forming a Trading Unit of two or more BM Units normally has the following effects:

- **P/C Status is determined at Trading Unit level:** The P/C Status of each BM Unit in a Trading Unit is determined dynamically at the Trading Unit level (and can change at any time) according to the sum of the GC/DC values of all BM Units in the Trading Unit. Exempt Export BM Units associated with Exemptable Generating Plant are an exception to this rule, and fix their P/C Status independently of their Trading Unit.<sup>4</sup> This allows Exempt Export BM Units which are embedded (i.e. connected to a Distribution System rather than the Transmission System) to realise 'embedded benefits' by joining a Base Trading Unit which comprises Supplier BM Units, as explained below.
- **Embedded benefits:** Exempt Export BM Units can realise embedded benefits by being 'delivery within offtake'. By being a 'delivering' (exporting) BM Unit, but joining a Base Trading Unit comprising Supplier BM Units with an overall offtaking (importing) status, embedded Exempt Export BM Units can get the following embedded benefits:
  - **Transmission losses:** It is a Trading Unit's overall delivering or offtaking status in a Settlement Period which determines which of the two Transmission Loss Multipliers (delivering TLM or offtaking TLM) is applied to scale its BM Units' Metered Volumes for transmission losses. Delivering embedded Exempt Export BM Units in offtaking Base Trading Units can therefore benefit from receiving the offtaking TLM, regardless of the Exempt Export BM Unit's or Trading Unit's P/C Status. This results in the embedded Exempt Export BM Unit being credited with additional energy (its Export Metered Volume is scaled up). Effectively, the embedded Exempt Export BM Unit is credited with the losses it is deemed to have



#### What is...

##### A BM Unit?

A unit of trade in the Balancing Mechanism, such as a generating unit or a collection of consumption meters.

##### A Trading Unit?

A combination of BM Units, which may have the same or different Lead Parties.

##### A Base Trading Unit?

The BSC divides Great Britain into 14 geographic areas of electricity demand, called Grid Supply Point Groups. Each has a Base Trading Unit containing all Supplier BM Units within the GSP Group.

##### A Lead Party?

The Party who registers a BM Unit and is responsible for its generation or demand.

##### A GC or DC value?

The Lead Party's estimate of a BM Unit's maximum generation or demand.

##### An Exempt Export BM Unit?

A BM Unit comprising Exemptable Generating Plant (a Generating Plant which does not by itself require a generation licence – e.g. a small wind farm). The person generating electricity at that Plant can elect either itself or another Party to be the Lead Party for the BM Unit.

*These terms are all defined in BSC Annex X-1.*

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<sup>4</sup> This is currently an optional ability, but will be mandatory once Approved Modification [P268](#) 'Clarify the P/C status process for exempt BM Units' is implemented on 23 February 2012.

saved as a result of its generation offsetting demand within the Trading Unit.<sup>5</sup>

- **BSUoS:** Under the Connection and Use of System Code (CUSC), the Transmission Company currently charges Balancing Services Use of System (BSUoS) charges to BM Units on a net Trading Unit basis. Delivering embedded Exempt Export BM Units in offtaking Trading Units can therefore benefit from being paid the BSUoS charge, regardless of the Exempt Export BM Unit's or Trading Unit's P/C Status.
- **TNUoS:** Under the CUSC, certain Exemptable generators are not currently liable for generation Transmission Network Use of System (TNUoS) charges, and are instead paid demand TNUoS charges if their average half-hourly Metered Volume over a Triad Period is an Export.

Note that, with the exception of TNUoS, these embedded benefits arise from being a delivering (exporting) BM Unit in an offtaking (importing) Trading Unit, and are unrelated to the Exempt Export BM Unit's choice of P/C Status.<sup>6</sup> The ability to elect its P/C Status simply allows the Lead Party to choose which of its two Energy Accounts the Exempt Export BM Unit's Metered Volume is allocated to. This gives the Lead Party a netting benefit whereby the Exempt Export BM Unit's Metered Volumes can be netted in the Lead Party's elected Energy Account with the Metered Volumes of any other BM Units registered to that Lead Party. For example, if the Lead Party is a Supplier and it elects a Consumption P/C Status for the Exempt Export BM Unit, then it can net the Exempt Export BM Unit's positive Export volumes against the negative Import volumes of its other Supplier BM Units in its Consumption Energy Account for the same Settlement Period. There is no within-BM Unit netting benefit, as the Exempt Export BM Unit can only be flowing in one direction (either exporting or importing) in any given Settlement Period.

## Effects of Trading Unit membership on Interconnector BM Units

Forming a Class 5 Trading Unit would have the following effects:

- **P/C Status:** As the P/C Status of Interconnector BM Units is fixed and cannot change under the existing BSC rules, changing its GC/DC values or joining a Trading Unit has no effect on an Interconnector BM Unit's P/C Status. This would also continue to be the case under the P277 solution, as the Interconnector BM Unit's P/C Status would be fixed as either Production or Consumption as elected by the Lead Party. It would be a mandatory step in the P277 Interconnector BM Unit registration process for the Lead Party to elect the BM Unit's P/C Status, and this P/C Status would not subsequently change (regardless of its GC/DC values or those of other BM Units in its Trading Unit) unless the Lead Party explicitly elects to change it. Under both the current and proposed P277 rules, there is therefore no risk of an Interconnector BM Unit's P/C Status being set or changing without the Lead Party's knowledge (i.e. the issue identified in Approved Modification P268 cannot arise).

<sup>5</sup> You can find a more detailed explanation of how the BSC currently allocates transmission losses in the P278 Assessment Consultation Document.

<sup>6</sup> Whether a Trading Unit is considered to be 'delivering' or 'offtaking' is determined according to the sum of its BM Units' actual Metered Volumes in a given Settlement Period (see BSC Section T2.1). This is therefore separate to a BM Unit's P/C Status, which is determined according to the sum of the GC/DC values of all BM Units in its Trading Unit (with the exception of Exempt Export BM Units which have explicitly elected their P/C Status).

- **Transmission losses:** BM Units in Class 5 Trading Units (whether purely Interconnector BM Units or a mixture of Interconnector and other BM Units) would obtain a netting benefit in the application of TLMs. This is because it is the Trading Unit's net Metered Volume in a given Settlement Period which would receive either the delivering or offtaking TLM according to whether it is net delivery (Export) or offtake (Import). Although an Interconnector can only physically flow in one direction during a Settlement Period, this is the net flow after taking account of all the individual Interconnector BM Unit flows (which can be a mixture of Exports and Imports in a given Settlement Period).<sup>7</sup> BM Units in Class 5 Trading Units would therefore be able to have TLMs applied to the Trading Unit's overall net flow, and would obtain a benefit if the individual Metered Volumes of the different BM Units in that Trading Unit were a mix of Exports and Imports in a given Settlement Period. This is the case under the existing BSC rules, and would continue to be true under P277.<sup>8</sup>
- **BSUoS:** BSUoS charges are applied on a net Trading Unit basis. BM Units in Class 5 Trading Units (whether purely Interconnector BM Units or a mixture of Interconnector and other BM Units) would obtain a netting benefit in BSUoS charges, if the individual Metered Volumes of the different BM Units in that Trading Unit were a mix of Exports and Imports in a given Settlement Period. This is the case under the existing BSC/BSUoS rules, and would continue to be true under P277.<sup>9</sup>
- **TNUoS:** There would be no TNUoS benefit for BM Units in Class 5 Trading Units. This is the case under the existing BSC/TNUoS rules, and would be unaffected by P277.

P277 would allow an Interconnector User, by electing the P/C Status of its Interconnector BM Unit, to choose which of its two Energy Accounts the Interconnector BM Unit's Metered Volume is allocated to. This would give the Interconnector User a netting benefit whereby the Interconnector BM Unit's Metered Volumes could be netted in its elected Energy Account with the Metered Volumes of any other BM Units (including any other Interconnector BM Units) for which it is the Lead Party. There would be no within-BM Unit netting benefit under P277, as an Interconnector BM Unit can only be flowing in one direction (i.e. either exporting or importing) in any given Settlement Period. The treatment of Interconnector BM Units under P277 can therefore be viewed as similar to the existing BSC arrangements for Exempt Export BM Units.

<sup>7</sup> This is known as 'superposition'. If the net traded position across all Interconnector Users can be met within the physical capacity of the Interconnector then superposition would allow these trades to occur. Superposition is across different Parties trading on the same Interconnector, as individual Interconnector BM Units can only flow in one direction in any Settlement Period. P277 therefore has no effect on superposition.

<sup>8</sup> You can find details of the potential materiality of this benefit in the separate P278 Assessment Consultation Document.

<sup>9</sup> Note, however, that National Grid has recently raised [CUSC Modification Proposals](#) 201 and 202 to remove BSUoS charges from generators and Interconnector Users respectively. CMP201 and CMP202 may therefore affect this benefit, but the effect would be the same regardless of whether P277 is approved. CMP202 interacts with (though is not dependant on) P278, and you can find more details in the separate P278 Assessment Consultation Document.

## Why don't Trading Units solve the P277 issue?

If all the current Interconnector BM Units formed Class 5 Trading Units, this would not resolve the imbalance issue highlighted by P277. This is because Interconnector BM Units would still be allocated in fixed Production/Consumption pairs, such that Export and Import volumes would continue to be allocated separately to a Party's Production and Consumption Energy Accounts.

The Workgroup notes that another possible approach could be to allow Interconnector BM Units to form a more aggregated Trading Unit across all Interconnectors, rather than per Interconnector as currently. However, this would still require a move to a single Interconnector BM Unit with an electable P/C Status (either one BM Unit per User and Interconnector, or a single Interconnector BM Unit per User across all Interconnectors) in order to resolve the imbalance issue highlighted by P277. The Group considers that the only extra benefit of this solution, compared with that put forward by the Proposer, is that it would allow additional Metered Volume netting with associated transmission losses and BSUoS benefits. The Group notes that there are separate proposed changes under the BSC and the CUSC to remove transmission losses (P278) and BSUoS (CMP202) charges from Interconnector Users. The Group has therefore concluded that this alternative approach is best considered under P278, and you can find more information in the P278 Assessment Consultation Document.

### Estimated central implementation costs of P277

The total central implementation cost for P277 is approximately £62k. This comprises:

- Approximately £50k in CRA and SAA costs; and
- Approximately £12k (50 man days) in ELEXON effort.

These are one-off implementation costs, and there would be no additional ongoing operational costs.

The CRA and SAA costs include making the relevant SAA system changes to allocate the error volumes to the single IEA BM Units and manual process changes around the deregistering and re-registering of Interconnector BM Units (including a one-off exercise to re-register all existing Interconnector BM Units as explained in Attachment A).

The ELEXON costs include managing the implementation project and updating the relevant BSC Sections, Code Subsidiary Documents and other documentation.

If P277 is implemented at the same time as P278 'Treatment of Transmission Losses for Interconnector Users', a cost-saving of 25-30% can be made on their combined separate costs. Note, however, that the timing of Ofgem's decisions on P277 and P278 will determine whether the two Modifications are implemented in parallel. P277 has a longer implementation lead time than P278. As P278 is required to ensure GB's compliance with European legislation, it may be that Ofgem determines that P278 should be implemented earlier than P277. The Group's proposed Implementation Dates for P278 give Ofgem the flexibility to approve both changes for the same BSC Release or separate Releases as appropriate. See the P278 Assessment Consultation Document for more information.

### Indicative Industry costs of P277

The costs for Interconnector Administrators and Interconnector Error Administrators of implementing P277 would be in the order of £100k per affected IA/IEA. Interconnector Users would incur costs of up to £35k per affected Party. Note that some Parties provided confidential cost and impact information, which has not been seen by the Workgroup or published on the ELEXON website but will be provided to Ofgem. The confidential information provided is, however, broadly consistent with the non-confidential information given by other Parties.

These costs would mainly be one-off costs to make the relevant amendments to systems, deregister/register the necessary Interconnector BM Units, elect P/C Flags for the new BM Units, submit other necessary BM Unit registration data and amend any existing ECVNs/MVRNs. See Attachment A for a more detailed description of the solution requirements and their impact on Parties.

Parties have not identified any material ongoing cost-savings as a result of P277, although some noted a reduction in trading risk. Some members of the Workgroup questioned the benefits of P277 if there would be no significant administrative savings. The Proposer noted that P277 is primarily about risk-management, and there would only be significant savings if they were regularly getting their ECVNs wrong. However, that does not mean that having to manage this imbalance risk is appropriate.

Parties have stated minimal cost-savings if P277 is implemented at the same time as P278.



#### Industry Impact Assessment

The full non-confidential responses made by Parties to the Industry Impact Assessment can be found on the [P277](#) page of the ELEXON website.

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## Time zones and manual workarounds

A possible issue relating to different time zones has been raised during the industry impact assessment. Both the IFA and BritNed IA/IEA systems work to Central European Time (CET), whereas BSC Central Systems work to UK time.

From the perspective of the BSC arrangements, P277 will be implemented on a Settlement Day basis – i.e. from the start of the first Settlement Period on the P277 Implementation Date. However, the central BSC Agents may need to operate a temporary workaround with IFA and BritNed for a few hours on the Implementation Date in order to manage the necessary Interconnector BM Unit deregistrations and registrations for P277 under CET. This is another reason to favour a simpler mandatory solution over a more complex optional one.

ELEXON is investigating how this cut-over can be managed in a way that has least impact on Parties, and ensures that Parties are able to correctly register and use their Interconnector BM Units in Settlement from the first Settlement Period on the P277 Implementation Date (including submitting the necessary BM Unit registration data). Once ELEXON, IFA, BritNed and the Workgroup have all agreed an approach, ELEXON will liaise with affected Parties during implementation to ensure a smooth transition between the old and new rules.

This issue will not affect the Moyle Interconnector or the forthcoming East-West Interconnector, as their systems work to UK time.

## P277 impacts

Impact on BSC Systems and process	
BSC System/Process	Potential impact
CRA	Changes will be required to how the CRA assigns Interconnector BM Units and their P/C Flags. See Attachment A for more details.
SAA	Changes will be required to allocate the Interconnector Error volumes to the single IEA Interconnector BM Units. See Attachment A for more details.

Impact on BSC Parties and Party Agents
<ul style="list-style-type: none"><li>Each future Interconnector User and Interconnector Error Administrator will be required to have only one Interconnector BM Unit per Interconnector and to elect that BM Unit's P/C Flag/Status.</li><li>Each existing Interconnector User and Interconnector Error Administrator will need to deregister their existing pair of BM Units per Interconnector, reregister a replacement single Interconnector BM Unit per Interconnector and elect the P/C Flag/Status of their replacement Interconnector BM Unit(s).</li><li>Interconnector Administrators and Interconnector Error Administrators will also need to assign flows to the correct BM Units.</li></ul> <p>See Attachment A for more details.</p>



#### Impact on Transmission Company

National Grid would need to re-register Interconnector BM Units within their systems.  
See Attachment A for more details.

#### Impact on ELEXON

Area of ELEXON	Potential impact
Release Management	ELEXON will manage the implementation project.
BM Unit Registrations	Changes to ELEXON's working practices may be needed.

#### Impact on Code

Code Section	Potential impact
Sections K, Q, R, T and Annex X-1	Changes will be required to implement the solution. See draft legal text in Attachment B.

#### Impact on Code Subsidiary Documents

CSD	Potential impact
BSCP15	Changes will be required to implement the solution. The Workgroup will develop the necessary redlined changes during the Assessment Procedure, and the Panel will consult on these during its subsequent Report Phase Consultation in March 2012.
BSCP31	A minor change may be needed to clarify that the P/C Status of Interconnector BM Units will be fixed by the Lead Party and will therefore remain unaffected by their Trading Unit's Generation Capacity and Demand Capacity values. The Workgroup will develop the necessary redlined changes during the Assessment Procedure, and the Panel will consult on these during its subsequent Report Phase Consultation in March 2012.
CRA Service Description	Changes will be required to implement the solution. The Workgroup will develop the necessary redlined changes during the Assessment Procedure, and the Panel will consult on these during its subsequent Report Phase Consultation in March 2012.

#### Impact on other Configurable Items

Configurable Item	Potential impact
CRA User Requirements Specification	Changes will be required to implement the solution. The necessary redlined changes will be developed and consulted on as part of the implementation project if P277 is approved.
SAA User Requirements Specification	Changes will be required to implement the solution. The necessary redlined changes will be developed and consulted on as part of the implementation project if P277 is approved.

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Other Impacts	
Item impacted	Potential impact
ELEXON Info Sheets	Updates will be needed to the BM Units and P/C Status Information Sheets. ELEXON will make the necessary changes as part of the implementation project if P277 is approved.

## 5 Implementation

### Recommended Implementation Dates

The Workgroup's recommended Implementation Dates for P277 are:

- 28 February 2013 (February 2013 BSC Systems Release) if ELEXON receives Ofgem's decision on or before 28 May 2012;<sup>10</sup> or
- 27 June 2013 (June 2013 BSC Systems Release) if ELEXON receives Ofgem's decision after 28 May 2012 but on or before 27 September 2012.

The implementation lead times which impact assessment respondents requested from the point of Ofgem decision to the point of implementation ranged from minimal to 3 months for Interconnector Users and from 4-12 months for IAs/IEAs.

The longest requested lead time was 9-12 months from SONI. ELEXON subsequently clarified with SONI that this is because the new East-West Interconnector (EWIC) between GB and Ireland is currently being commissioned and is due to begin operations around September 2012. SONI will be the IA/IEA for this new Interconnector. Systems for the EWIC Interconnector have been designed using the current rules for Interconnector BM Units (i.e. two BM Units per Interconnector User). Implementing P277 close to this date would require changes to the systems for EWIC during a critical time when they will be focussing on beginning operations. As a result, they would struggle to implement P277 in the November 2012 Release. However, SONI has confirmed that they could implement P277 in the February 2013 Release providing they have at least 9 months' lead time – making this the earliest viable Release for P277. All other requested lead times are compatible with a February 2013 implementation.

#### Assessment Consultation Question

Do you agree with the Workgroup's recommended Implementation Date?

The Workgroup invites you to give your views using the response form in Attachment C

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<sup>10</sup> P277 will be sent to Ofgem for decision in mid-April 2012.



## Is P277 discriminatory?

The Workgroup has considered whether treating Interconnector Users differently to other types of Party would give rise to due or undue discrimination.

Historically, Interconnectors have been treated the same as other Parties to the BSC. Energy entering GB over an Interconnector has been considered to be an Export onto the GB Transmission System and therefore equivalent to GB generation. Similarly, Energy leaving GB over an Interconnector has been considered to be an Import from the GB Transmission System and therefore equivalent to GB demand.

Under the current BSC arrangements, vertically-integrated companies that consist of both licensed generation and licensed supply face the same issue that has been highlighted by P277. Their licensed generation is allocated to their Production BM Units/Energy Account, while their licensed supply is allocated to their Consumption BM Units/Energy Account. The Party would then need to use ECVNs to 'self-balance' their position in each Account and avoid imbalance charges.

This two-Account system has been in place since NETA Go-Live in 2001. It was designed to keep licensed generation and licensed supply volumes separate, in order to encourage vertically-integrated companies to trade to balance their position. It was also designed to prevent vertically-integrated companies from having a netting advantage over non-portfolio players and small Parties, who may only operate in one side of the market.<sup>11</sup>

Under a single-Account system, Parties with both generation and supply would be able to automatically net their volumes. They would then only be required to trade the difference between each side in order to balance their position.

**The Group notes that it is outside the scope of P277 to expand the solution to allow all BM Units to elect their P/C Status, as the identified issue/defect in the Modification Proposal relates specifically to Interconnector BM Units.**

## Arguments why P277 can be considered undue discrimination

The majority of the Group believes that P277 would allow Interconnector Users to be able to net their volumes off in a single Energy Account more easily than other Parties, and that this would give them an advantage over other Parties who are required to keep their licensed generation and supply separate.

These members believe that vertically-integrated Parties face the same imbalance risk every day, and note that there have been many examples of Parties who have been caught out by the current rules (particularly around NETA Go-Live, when the numbers of errors in contract notifications required the introduction of a Past Notification Error claims process to resolve them).

These members consider that Interconnector Users are in competition with GB generators and Suppliers as Trading Parties, and that an Interconnector User who is trading across GB borders still takes up a physical position in GB. These members believe that allowing Interconnector Users a netting advantage which is denied to vertically-integrated companies would be undue discrimination. They would be supportive of a wider Modification that offered this advantage to all Parties, but note that this is outside the scope of P277.

## Recommendation

The majority of the Workgroup initially recommend rejection of P277.

<sup>11</sup> See Section 4.3 of the 1999 [Ofgem/DTI conclusions document](#) on the NETA arrangements.

## Arguments why P277 can be considered due discrimination

While generation and supply are separately-licensable activities, a Party does not require a licence in order to become an Interconnector User and trade over an Interconnector (it is the Interconnector Agreement for the relevant Interconnector which requires them to sign up to the relevant industry codes, including the BSC). This means there is no licence requirement for them to ring-fence their business in the same way as licensed generators or Suppliers do. However, under the BSC they are required to ring-fence their Energy Accounts in the same way as licensed Parties and are therefore exposed to the same bureaucracy.

Exemptable Generating Plant (Generating Plant which, in isolation of any other generation assets owned by the Lead Party, would not require a Generation Licence) can register an Exempt Export BM Unit. As described in Section 3, the Lead Party can elect the Exempt Export BM Unit's P/C Status, thus allowing them to choose which of their Energy Accounts the BM Unit's Metered Volumes are allocated to. This provision has been in the BSC since NETA Go-Live.<sup>12</sup> It could be argued that Interconnector Users, who are also licence-exempt, should be offered this same 'light touch' treatment.

A minority of Workgroup members are sympathetic to this view, but are unsure how meaningful the comparison is between Interconnector Users and Exemptable generators. These members note that licence exemptions for generators are based partly on size, which is unlikely to be an applicable argument for Interconnector BM Units. They note that, if it can be established that the original reason why Exempt Export BM Units were allowed to choose their P/C Status at NETA Go-Live is because they do not require a Generation Licence, then they would be supportive of applying the same principle to Interconnector BM Units. ELEXON has been unable to identify any original NETA documentation which makes this link, although that does not necessarily mean the principle is invalid.

Some Workgroup members note that a Party does not need to have any physical generation or supply assets in order to trade across an Interconnector. They consider that this, when considered in a wider European context (see below), could justify different treatment for Interconnector Users.

## What is the wider European picture?

The Workgroup has considered the wider European picture and how far the arrangements are moving towards a single European energy market. When the current GB arrangements were established, Interconnector trading was considered only in the context of the GB market – i.e. energy entering or leaving the GB Transmission System. This gave rise to the current arrangements where Interconnector Users have pairs of BM Units, and energy entering GB is treated as equivalent to GB generation while energy leaving GB is treated as equivalent to GB demand.

Many non-physical traders trade energy between countries, buying energy in one country and selling it in another. This involves having to trade the energy across the intervening Interconnectors.

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<sup>12</sup> Initially, it was an optional ability which just applied to Exempt Export BM Units which were sole Trading Units on their own. In the absence of any explicit election by the Lead Party, the BM Unit's P/C Status was dynamically-determined according to the BM Unit's GC/DC values. In 2003, Approved Modification P100 allowed Exempt Export BM Units to join Trading Units and achieve embedded benefits. P100 left electing P/C Status as an optional ability for these BM Units, whose P/C Status would be dynamically-determined according to GC/DCs at the Trading Unit level in the absence of any explicit election. Once implemented on 23 February 2012, Approved Modification P268 will make it mandatory for all Exempt Export BM Units to explicitly elect their P/C Status.

If a non-physical trader trades purely within the GB market, then they do not take a physical position (i.e. they do not need to register BM Units and have no Credited Energy Volumes allocated to them). However, if they wish to trade across the borders with countries outside GB, then they need to trade the energy across the relevant Interconnector. In doing so, they have to register Interconnector BM Units and take up a physical position in the markets on both sides of the Interconnector.<sup>13</sup> The Party is then required to balance their positions in the respective markets. Some Workgroup members consider that, when the trade is considered in the context of a single European energy market, the Party effectively has no overall physical position in the same way as they would have no physical position had they traded solely within the GB market.

The Workgroup notes the intention of the European Commission to encourage cross-border flows and move towards a single European energy market. Some members question whether it is consistent with this objective that companies who are 'transiting' energy from one country to another via intervening Member States are exposed to the full bureaucracy and complex trading arrangements of every market they cross.

The Group notes that GB is unusual in requiring separate Production and Consumption accounts, with other European countries allowing Parties to trade on a net basis. Some members do not believe that this represents a barrier to trading in GB, noting that each European country has its own complex market arrangements which are a condition of trading in that country. These members believe that transit flows through one country to another should be facilitated by national Transmission System Operators co-operating to develop products, rather than by market harmonisation (e.g. there is no product that currently exists which allows trading between the French price hub and Northern Ireland price hub without being exposed to the GB arrangements).

Other members (including the Proposer) believe that while the imbalance risk created by two Accounts would not necessarily make companies refrain from trading in the GB market, it does represent a bigger risk and administrative burden than balancing in other countries. The need to balance two separate Energy Accounts and the mechanisms for doing so may cause them confusion, and could result in them being exposed to imbalance charges even if they are, in reality, balanced.

The Group notes that the new Applicable BSC Objective (e) relates to compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency for the Co-operation of European Regulators (ACER). The Electricity and Gas (Internal Markets) Regulations 2011 make amendments to electricity and gas legislation and licences in order to implement the Third Package. The Third Package includes Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity ("the Electricity Regulation"). The Group notes that, at this stage in the development of European legislation, there is no specific requirement for GB to move towards a single Energy Account for either Interconnector Users or other BM Units. It notes that the Framework Guideline on balancing may cover this, although it is too early to say (some member believe this is more likely to focus on products than market harmonisation). Some members consider that there is therefore no reason to treat Interconnector Users differently to other Parties. However, some members believe that there may be arguments in favour of P277 when considered in the wider European context and the general spirit of the Third Package, which seeks to remove barriers to cross-border flows. These members consider that, although Interconnectors add or remove energy from individual Transmission Systems, they are not true generation or demand. With recent changes to European legislation around the Third Package, Interconnectors

<sup>13</sup> [BSCP65](#) 'Registration of Parties and Exit Procedures' considers Interconnector Users to be physical Trading Parties because they register BM Units.

are moving towards being treated as a form of Transmission System. The Proposer considers that the changes proposed in P277 would help move towards greater European harmony. Given these changes, it should be considered as to whether the way GB treats Interconnectors is still correct when examined as part of the wider European picture.

### Assessment Consultation Question

Do you agree with the Workgroup's majority view that P277 would give rise to undue discrimination?

The Workgroup invites you to give your views using the response form in Attachment C

## What are the Workgroup's views on the Applicable BSC Objectives?

The following table contains the Proposer's and the Workgroup's initial views on each of the Applicable BSC Objectives:

Does P277 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's views	Other Workgroup members' views <sup>14</sup>
<b>A</b>	<ul style="list-style-type: none"> <li>Neutral – no impact.</li> </ul>	<ul style="list-style-type: none"> <li>Neutral – no impact.</li> </ul>
<b>B</b>	<ul style="list-style-type: none"> <li>Neutral – no impact.</li> </ul>	<ul style="list-style-type: none"> <li>Neutral – no impact.</li> </ul>
<b>C</b>	<ul style="list-style-type: none"> <li>Yes – Reduces risk of imbalance exposure for Parties trading over Interconnectors.</li> <li>Yes – Being able to choose P/C Flag would make nominations easier and more transparent.</li> </ul>	<ul style="list-style-type: none"> <li>No – Represents undue discrimination and preferential treatment for Interconnector Users over other Trading Parties. Would only support if widened to all Trading Parties.</li> <li>No – Don't believe GB arrangements are barrier to entry, as see non-GB companies entering the market.</li> <li>Yes – Simplifies arrangements for Interconnectors, which could facilitate greater competition and increase Interconnector trading.</li> <li>Maybe – Could be a case for treating Interconnector Users (as non-licensed Trading Parties) equivalently to Exempt Export BM Units rather than licensed generation/demand.</li> </ul>



### 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

(e) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency

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<sup>14</sup> Shows the different views expressed by the other Workgroup members – not all members necessarily agree with all of these views.



Does P277 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's views	Other Workgroup members' views <sup>14</sup>
<b>D</b>	<ul style="list-style-type: none"> <li>• Yes – Reduces need for Parties trading over Interconnectors to submit ECVNs.</li> </ul>	<ul style="list-style-type: none"> <li>• No – Slightly negative as results in implementation costs and can't see any benefit to central arrangements or material cost/efficiency savings.</li> <li>• Yes – If a Trading Party's interaction with the arrangements can be perceived as a barrier/risk, then this is not optimal.</li> <li>• Yes – Simplifies arrangements for Interconnectors.</li> </ul>
<b>E</b>	<ul style="list-style-type: none"> <li>• Yes – Facilitates movement towards harmonisation across Europe and the objective of a single European energy market.</li> </ul>	<ul style="list-style-type: none"> <li>• Neutral – Still too early to measure as the European guidelines and policy are still being formulated.</li> <li>• Yes – Although not about legal compliance at this stage, helps to promote intention of facilitating cross-border trades and a single European energy market.</li> </ul>

By majority, the Workgroup believes that P277 does not better facilitate the Applicable BSC Objectives, and therefore initially recommends that P277 is rejected.

#### Assessment Consultation Question

Do you agree with the Workgroup's initial majority view that P277 would not better facilitate the Applicable BSC Objectives when compared with the current BSC rules?

The Workgroup invites you to give your views using the response form in Attachment C

#### Assessment Consultation Question

Do you agree with the Workgroup that there is no Alternative Modification within the scope of P277 which would better facilitate the Applicable BSC Objectives than the Proposer's solution?

The Workgroup invites you to give your views using the response form in Attachment C