

## Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

## P356 'Aligning the BSC with Grid Code Modification GC0099 "Establishing a common approach to interconnector scheduling consistent with the single intraday market coupling processes set out within Regulation (EU) 2015/1222 (CACM)'"

This Modification will align the BSC with Grid Code Modification GC0099, which seeks to introduce a standard and updated interconnector scheduled transfer process to the Grid Code. This is in order to establish common, cross-code provisions which are compatible with both the EU single intraday market coupling processes, and GB and EU balancing processes.

This Assessment Procedure Consultation for P356 closes:

**5pm on Friday 22 September 2017**

The Workgroup may not be able to consider late responses.



The P356 Workgroup initially recommends **approval** of P356

This Modification is expected to impact:

- Interconnected System Operators
- Interconnector Administrators
- Interconnector Users

P356

Assessment Procedure  
Consultation

9 October 2017

Version 1.0

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## About This Document

The purpose of this P356 Assessment Procedure Consultation is to invite Balancing and Settlement Code (BSC) Parties and other interested parties to provide their views on the merits of P356. The P356 Workgroup will then discuss the consultation responses, before making a recommendation to the BSC Panel at its meeting on 14 December 2017 on whether or not to approve P356.

There are three parts to this document:

- This is the main 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, and contains details of the Workgroup's membership and full Terms of Reference.
- Attachment A contains the draft redlined changes to the BSC for P356.
- Attachment B 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 or comments you wish the Workgroup to consider.
- **Please note:** due to the interdependencies, this consultation is being run alongside the consultation for Grid Code Modification GC0099. Respondents can respond to either consultation and responses will be shared between ELEXON and National Grid, so that a response to one consultation is a response to the other. The Consultations questions at Attachment B include the GC0099 questions. However, when responding, to only one Modification consultation, we request that you provide detail of how you will be impacted by the other Modification.

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## Why Change?

[Commission Regulation \(EU\) 2015/1222](#) on Capacity Allocation and Congestion Management (CACM) requires the introduction of [new cross border intraday \(XBID\) trading processes](#). Details of all XBID trades relevant to a particular Settlement Period will only be available to ISOs/Interconnector owners at or shortly after Gate Closure. In order that the Transmission Company (National Grid Electricity Transmission - NGET) is best placed to schedule balancing operations, the Grid Code is proposing to allow Interconnector owners up to 10 minutes after Gate Closure to update Interconnector Scheduled Transfers (ISTs) to reflect the outcome of XBID trading. The BSC allows some changes to ISTs post Gate Closure for specific operational purposes, however, it does not allow changes post Gate Closure to reflect XBID outcomes meaning the BSC will not reflect EU legislation, potentially disadvantaging GB participants.

## Solution

P356 proposes to allow ISOs to update ISTs up to 10 minutes after Gate Closure to reflect the outcomes of any XBID trading. In addition Interconnector Administrators (IAs) will be allowed to update Expected Transfers (ETs) to reflect any changes to ISTs after Gate Closure.

P356 will also align the BSC with Grid Code Modification [GC0099 'Establishing a common approach to interconnector scheduling consistent with the single intraday market coupling processes set out within Regulation \(EU\) 2015/1222 \(CACM\)'](#), which seeks to introduce an updated and common version of the IST process to the Grid Code.

P356 will establish cross-code provisions that are compatible with the European (EU) single intraday market coupling processes and Great Britain (GB) and EU balancing processes.

## Impacts & Costs

There will be an implementation cost of £240 which is one working day of ELEXON effort to implement this document only change. No BSC systems or processes are expected to be impacted as a result of P356

We do not anticipate any material costs for BSC Parties or industry participants, but there may be small costs involved in implementing new or updating existing processes and systems. We seek confirmation of this in this Assessment Consultation.

## Implementation

The proposed Implementation Date is 28 June 2018 (June 2018 Scheduled BSC Release). The proposer has stated that the change has to be implemented no later than 30 June 2018 in order to facilitate anticipated XBID Trading from 1 July 2018 onwards.



### What are Interconnector Scheduled Transfers (ISTs) and Expected Transfers (ETs)?

The IST For each Interconnector, in relation to a Settlement Period, is the Active Energy flow, scheduled for all Interconnector Users across the Interconnector (as a whole), stated as at the Transmission System Boundary, in the form of a schedule expressed as MW values for the spot times at the start and end of, and other spot times within, the Settlement Period.

ISTs are subject to Interconnection Agreements established between the Interconnected System Operator and the Externally Interconnected System Operator.

Interconnector Administrators use ISTs and FPNs to determine the ET and from that, the Metered Volumes for each BM Unit associated with that Interconnector.

Like the IST, ETs are the Active Energy flow, stated as at the Transmission System Boundary, in the form of a schedule expressed as MW values for the spot times at the start and end of, and other spot times within, the Settlement Period.

## Recommendation

The Workgroup agrees that the Proposed Modification improves on the BSC baseline and better facilitates the following BSC Applicable Objectives and so should be approved:

- A - Efficient discharge by NGET of obligations imposed by the Transmission Licence;
- B - Efficient, economic and co-ordinated operation of the Transmission System;
- C - Promoting effective competition in the generation and supply of electricity and promoting such competition in the sale and purchase of electricity; and
- E - Compliance with the Electricity Regulation and any relevant legally binding decision of the EU Commission and/or the Agency.

## 2 Why Change?

In accordance with the Third Energy Package, EU electricity markets are moving towards greater harmonisation between 42 Transmission System Operators (TSOs) (covering 35 countries). In order to support the implementation of the Third Energy Package, a series of EU network codes are coming into force over the next few years to allow for cooperation and commonality between countries<sup>1</sup>.

Interconnectors regularly supply up to 10% of GB demand at any one time. There are four interconnectors linking GB to other countries (France, The Netherlands, Republic of Ireland and Northern Ireland). Collectively they have a capacity of 4.1 GW. Overall, GB is a net importer of electricity and the Interconnectors provide roughly 5% of annual GB consumption<sup>2</sup>. There are seven more Interconnectors at various stages of planning due to become operational between 2019 and 2022, which are scheduled to provide a further 7.3 GW of capacity<sup>3</sup>. Interconnectors play a valuable part in GB's overall security of supply strategy as well as opening up markets in other countries for both import and export of electricity. It is essential that GB industry codes and arrangements reflect pan-European harmonisation so that GB industry participants are not disadvantaged against their European counterparts.

Ensuring IST data is as accurate as possible enables NGET to balance the Transmission System more effectively and efficiently. In addition, the accuracy of ISTs has a direct bearing on the calculation of Interconnector Users' (IUs') metered volumes, which are used in Settlement.

### Use of Interconnector Scheduled Transfers in the BSC

ISTs are integral to BSC Settlement processes. In particular, IAs<sup>4</sup> use them to determine ETs and Balancing Mechanism (BM) Unit Metered Volumes for each Interconnector BM Unit.

For a given Settlement Period and for each Interconnector, Interconnected System Operators (ISOs) must send ISTs to IAs ([BSC Section R 7.2.1](#)). ISTs describe a scheduled transfer of Active Energy in megawatts (MW) at the Transmission System Boundary between the Interconnector and Total System. The IST specifies the Active Energy for spot times at the start, end and during the Settlement Period. Currently, except in specific circumstances (Section R7.1.3 (b)), the IST may not be adjusted after Gate Closure for the Settlement Period it is related to. Those circumstances are:

- i. Any failure or derating of the Interconnector, and any subsequent uprating;
- ii. The acceptance by the NGET of any Offer or Bid submitted by an IU in respect of an Interconnector BM Unit; and
- iii. Any event occurring in relation to an External System.



#### What are Balancing Mechanism Units?

They are used in the BSC to account for all energy that flows on or off the Total System, which is the Transmission System and the Distribution System combined.

A BM Unit is the smallest grouping of equipment that can be independently metered for Settlement. Most BM Units consist of a generating unit or a collection of consumption meters, and the energy produced or consumed by the contents of a BM Unit is accredited to that Unit.

<sup>1</sup> Regulation 2015/1222 – Capacity Allocation and Congestion Management (CACM) - which entered into force 14 August 2015; Regulation 2016/1719 – Forward Capacity Allocation (FCA) - which entered into force 17 October 2016; Regulation 2016/631 - Requirements for Generators (RfG) - which entered into force 17 May 2016; Regulation 2016/1388 - Demand Connection Code (DCC) - which entered into force 7 September 2016; Regulation 2016/1447 - High Voltage Direct Current (HVDC) - which entered into force 28 September 2016; Transmission System Operation Guideline (TSOG) - entry into force anticipated Summer 2017; Emergency and Restoration (E&R) Guideline - entry into force anticipated Autumn 2017; and The Electricity Balancing Guideline (EBGL) - entry into force anticipated Autumn 2017.

<sup>2</sup> <https://www.gov.uk/government/statistics/digest-of-uk-energy-statistics-dukes-2017-main-report>

<sup>3</sup> <https://www.ofgem.gov.uk/electricity/transmission-networks/electricity-interconnectors>

<sup>4</sup> A Party appointed to carry out particular functions on behalf of IUs in accordance with Section K of the BSC

For each Interconnector BM Unit, the IU is responsible for sending a copy of the Final Physical Notification (FPN) to the IA no later than Gate Closure (BSC Section R 7.2.2).

The IA then uses ISTs and FPNs to determine ETs for each Interconnector BM Unit at Gate Closure (BSC Section R 7.2.3) and BM Unit Metered Volumes for each related Interconnector BM Unit (BSC Section R 7.4.2) no later than the end of the next business Day following the Settlement Day.

Following notification of a revised IST following Gate Closure, IAs shall adjust ET's as required to ensure the sum of the ETs for each Interconnector BM Unit is equal to the revised IST for that Interconnector (BSC Section R 7.3.1). Adjustments to ETs are made by reference to the relevant Interconnection Agreements – the BSC does not specify the use of FPNs in the adjustment of ETs. This therefore means that even where ISTs are adjusted post Gate Closure, the FPN value used to determine Interconnector BM Unit Metered Volumes is the FPN at Gate closure.

ISOs must submit ISTs to IAs and IAs must determine ETs and BM Unit Metered Volumes no later than the end of the next Business Day following the Settlement Day (BSC Section R 7.4.1). IAs then forward BM Unit Metered Volumes to the Settlement Administration Agent (SAA) no later than one Business Day following the Settlement Period (BSC Procedure (BSCP) 01 4.1.13). Once submitted to the SAA, the BM Unit Metered Volumes are used (alongside other data) to determine Trading Parties' Credited Energy Volumes. The BM Unit Metered Volumes are used in forming Credit and Debit Reports forwarded to the Energy Contract Volume Aggregation Agent (ECVAA) from the SAA which then form part of the calculation of each Trading Party's Energy Indebtedness (EI) (BSC Section M 1.2.6), which is used to determine Parties' Credit Cover Percentage (BSC Section M 3.1.4) and therefore the level of credit they need to provide in a 29 day rolling period.

## Submission of data to NGET

The IU is required (either directly or via the IA) to submit a Physical Notification (PN) and any associated data to NGET no later than 11:00 each day in respect of the next following Operational Day ([Grid Code BC1.4.2](#)) in order that the information used in relation to the capability of the Interconnector is expressly provided.

Any subsequent revisions (i.e. updated PNs) may be submitted up to Gate Closure (the FPN). The exemption to this is Dynamic Parameters (Day Ahead) (Grid Code BC1.A.1.5) which are used alongside the PN to inform NGET of any changes to the data already held by them and shall reasonably reflect the true operating characteristics of the BM Unit for the Day Ahead.

There is nothing within the Grid Code that requires ISTs to be submitted to NGET. However, they are required to be submitted to NGET in accordance with the various agreements in place between NGET and the Interconnector System Operators.

## European Network Codes

The EU Third Energy Package ('the Third Package') came into force in March 2011 to ensure the harmonisation of the EU energy market. In order to implement the Third Package, the European Network of Transmission System Operators for Electricity (ENTSO-



### What is a Physical Notification?

A Physical Notification (PN) is a notification from a generator or a supplier of the amount of electricity that it intends to produce or consume in a given Settlement Period.

PNs are submitted to NGET and can be updated at any point prior to Gate Closure. The prevailing PN at Gate Closure is the Final PN (FPN)

It can be broken down for various points in the half-hour called a spot time. The values for the spot time show the actual amount that will be taken at that spot time. This allows NGET to be able to see how volumes will fluctuate within the Settlement Period.

Further information can be found at [Appendix 1 to section BC1 of the Grid Code](#)



E)<sup>5</sup> developed the European Network Codes (ENCs), which will have a major impact on the GB electricity industry.

The [European network codes and guidelines](#) are sets of rules which aim to ensure:

- Security of supply;
- Competitive electricity market; and
- Decarbonisation of the electricity sector.

## **Capacity Allocation and Congestion Management Network Code**

The [Capacity Allocation and Congestion Management Network Code \(CACM\)](#) is the second network code developed by ENTSO-E. CACM aims to promote effective cross-border competition in generation, trading and supply of electricity by establishing new cross-border EU electricity markets in the day-ahead and intra-day timeframes. By giving parties new opportunities to balance their positions closer to real time, CACM aims to help with integrating renewable energy sources into the EU electricity market. Commission Regulation (EU) 2015/1222 came into force on 24 July 2017 to establish guidance on CACM.

For single day-ahead and intra-day coupling, available cross-border capacity needs to be calculated in a coordinated manner by the TSOs. CACM requires that TSOs establish a common grid model including estimates on generation, load and network status for each hour. The available cross-border capacity is one of the key inputs into the XBID trading process. All bids and offers made by market participants across Europe, collected by power exchanges, are then matched, taking into account available cross-border capacity in an economically optimal manner. Single day-ahead and intra-day coupling aims to ensure that power usually flows from low-price to high-price areas.

## **Cross Border Intra-day Trading (XBID) and settlement**

The XBID initiative is a joint initiative by various Power Exchanges to create a joint integrated intraday cross-border market. XBID will mean that orders entered by market participants for continuous matching in one country can be matched by orders similarly submitted by market participants in any other country as long as transmission capacity is available. XBID trading already occurs across some borders in Europe. In order to comply with CACM, all TSOs are responsible for ensuring national arrangements (e.g. Grid Code and BSC) facilitate XBID trading. Making changes to the BSC and Grid Code to allow ISTs to be updated post Gate Closure to reflect the results of XBID trades means that NGET (the GB TSO) will be meeting its CACM obligations to facilitate XBID trading.

## **Intra-day Gate closure and relationship to GB Gate Closure**

Commission Regulation (EU) 2015/1222 requires that within 16 months of coming into force (i.e. 23 November 2018) TSOs shall propose intra-day cross zonal gate closure times for each of the borders relating to their Transmission System(s). GB has proposed that the Gate Closure for each of its current Interconnectors will be one hour before the start of the settlement period (GB term – EU equivalent is Market Time Unit). This is the same

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<sup>5</sup> ENTSO-E represents 42 electricity TSOs from 35 countries across Europe, thus extending beyond EU borders. ENTSO-E has been created to support the internal energy market and Europe's energy transition.

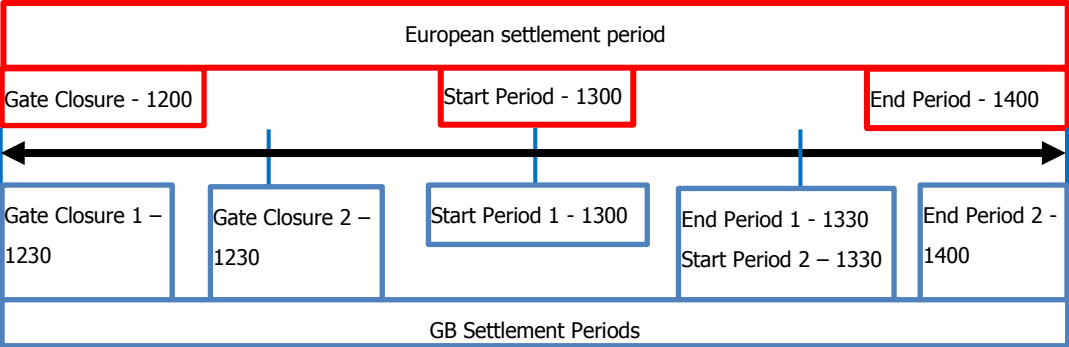
time period as Gate Closure for BSC and Grid Code purposes and will make harmonisation simpler.

The CACM requirements are that XBID trading should occur up to intra-day cross zonal gate closure and as such, the results will not be known until after Gate Closure. It is likely that ISTs submitted prior to Gate Closure will not fully reflect the actual flow as a result of XBID trading and therefore will make balancing the Network more difficult.

The European settlement period (Market Time Unit) will be one hour; any XBID data submitted at the intra-day zonal gate closure will cover two GB Settlement Periods.

NGET estimates generation, load and network status for each half-hour Settlement Period. It then compares these forecasts with the FPNs (and other data items required in Grid Code BC1) to calculate whether or not the Transmission System will be balanced. If the System is not expected to balance, NGET takes action by dispatching Balancing Services (including accepting Bids and Offers) or taking other actions specified in the Grid Code.

**Difference between European and GB settlement timescales**

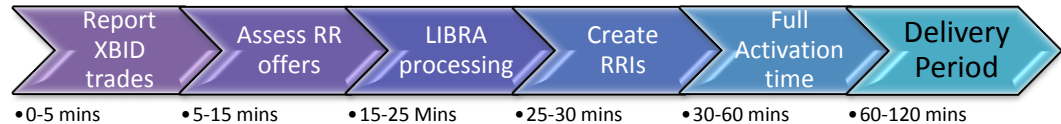


**XBID’s relationship with Project TERRE**

Project TERRE (Trans European Replacement Reserve Exchange) aims to establish a platform capable of gathering offers for Replacement Reserve<sup>6</sup> (RR) and to optimise allocation of RR across the different TSO systems. Project TERRE currently assumes the time-lines for XBID and RR Instructions (RRIs) post Gate Closure as per the diagram below. LIBRA is the new platform that is being proposed for evaluating RR offers. In order for NGET to effectively participate in TERRE, it must have understood the effects of XBID on the GB Total System before submitting offers to LIBRA. This is why NGET raised GC0099, i.e. to enable Interconnectors to (re-)submit ISTs after Gate Closure following the conclusion of XBID trading and matching.

The timings for the reporting of XBID trades, assessing RR Offers and inputting into LIBRA is short. Once RRIs have been issued as an outcome of LIBRA processing, TSOs will have 30 minutes activation time before the Settlement period (Delivery period in EU terminology) commences. The timelines and key points are shown in the diagram below.

**Process timings envisaged by TERRE (Gate Closure at minute zero)**



<sup>6</sup> Replacement Reserve in this context shall mean operating reserve used to restore the required level of operating reserves to be prepared for a further system imbalance



## Impact of Physical Notifications on Energy Indebtedness

A Party's EI is calculated by comparing the FPNs and Energy Contract Volume Notifications (ECVNs) initially and then IST derived data and ECVNs later. Where there is a disparity between FPNs and ISTs (i.e. because the IST has been updated post Gate Closure and the FPN hasn't) then this could, potentially, have an adverse effect on EI.

The EI is a cumulative calculation of a Party's Trading Charges over a rolling 29 day period (when the trading charges are paid) and is updated for each Settlement Period that occurs and for when each Settlement Period is more than 29 days previous.<sup>7</sup> It is calculated and updated on a rolling basis for each Settlement Period.

In the case of Interconnectors, their EI is a combination of Credit Assessment Energy Indebtedness (CEI) for the first 5 Working Days (WD) (before the Interim Information (II) Settlement Run occurs) and Actual Energy Indebtedness (AEI) for the remaining 24 days.

### Current BSC requirements

At a high level, the CEI for Interconnector BM Units is the difference between the FPN and the ECVN. In theory the volume derived from the FPN and the ECVN should be the same, as the ECVN for Interconnector BM Units should be the same as the volume derived from an IST at Gate Closure (although within the BSC, this isn't a requirement). The AEI is the Trading Charges divided by the Credit Assessment Price (CAP<sup>8</sup>, expressed as £/MWh).

Trading Charges take account of various sources of data including the BM Unit Metered Volume, which in the case of an Interconnector, is determined by reference to the final ISTs, final ETs and the ECVN.

At or before Gate Closure the ECVA will receive the ECVN and a copy of the FPN for each BM Unit. As soon as practicable after Gate Closure the ECVA will calculate the EI of each BM Party.

### Changes as a result of BSC Modification P342

BSC Modification [P342 'Change to Gate Closure for Energy Contract Volume Notifications'](#) was approved by the Authority on 1 February 2017 and is due to be implemented on 2 November 2017.

P342 will allow ECVNs to be submitted at the start of the Settlement Period i.e. one hour after Gate Closure. This is to allow for trading to continue after Gate Closure up to the start of the Settlement Period and will allow those parties with an Imbalance at Gate Closure to 'trade out' their imbalance before the start of the Settlement Period. This means that if a Party (including an Interconnector related Party) has a discrepancy between their FPN at Gate Closure and latest ECVN, then they still have an hour to make trades so that they match, thus, potentially, reducing their EI.

Given that P342 is due for implementation in November 2017, almost eight months before P356 is due to be implemented, the EI calculations will be based on final ECVNs being submitted up to one hour after Gate Closure.



### Why is Energy Indebtedness (EI) important?

Parties will incur trading charges as a matter of course when partaking in Balancing and Settlement.

These charges accrue over a rolling 29 day period and are intended to ensure Parties have sufficient collateral to cover these charges in the event of a Party defaulting.

The EI is a measure of how close a Party is to their credit cover limit and flags are raised when the accumulated charges reach 80% of the Credit Cover that has been lodged with ELEXON.

If a Party reaches above 90% of its credit limit, and fails to resolve this within permitted timescales, then any trades will be automatically blocked by the ECVA and other Party's trades with that Party will also be blocked by ECVA, which will have a knock-on effect for that second Party.

Any parties that have reached the 80% or 90% limit will be published on the [Balancing Mechanism Reporting Service \(BMRS\) website](#).

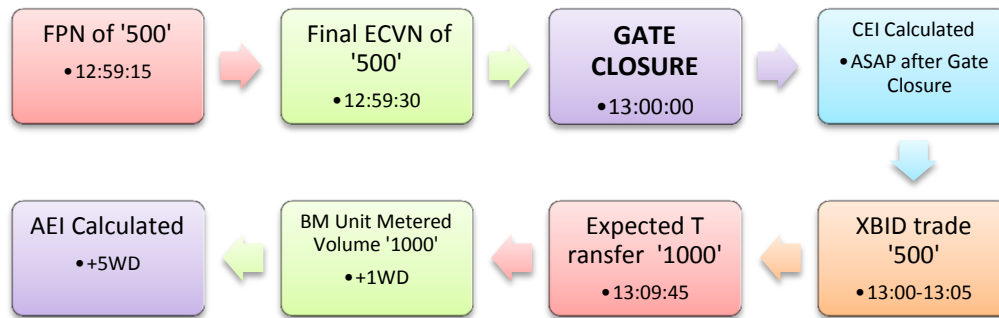
<sup>7</sup> Further information on Credit Assessment and Trading Charges can be found in [BSC Guidance notes](#) and [BSC Section M](#) as well as the [Service Description for Energy Contract Volume Aggregation](#)

<sup>8</sup> The CAP is a static value and 15 days' notice is given of change i.e. the CAP is the same for all parties.

Under the new requirements that are due to be introduced, if the XBID process results in the contracted position changing after Gate Closure, the Party will risk having a CEI for 5 WD which will then be resolved when AEI is calculated. This is assuming that the Party has not managed to 'trade out' their imbalance in the hour between Gate Closure (or Gate Closure +10 minutes for Interconnector BM Units) and final submission of ECVN at the start of the Settlement Period an hour later.

### High Level Example of the difference between CEI and AEI (current BSC)

For this example Gate Closure is at 13:00 and the Settlement Period is 14:00 – 14:30<sup>9</sup>. Units have intentionally not been used as this example is for illustrative purposes and not an example of actual calculations.

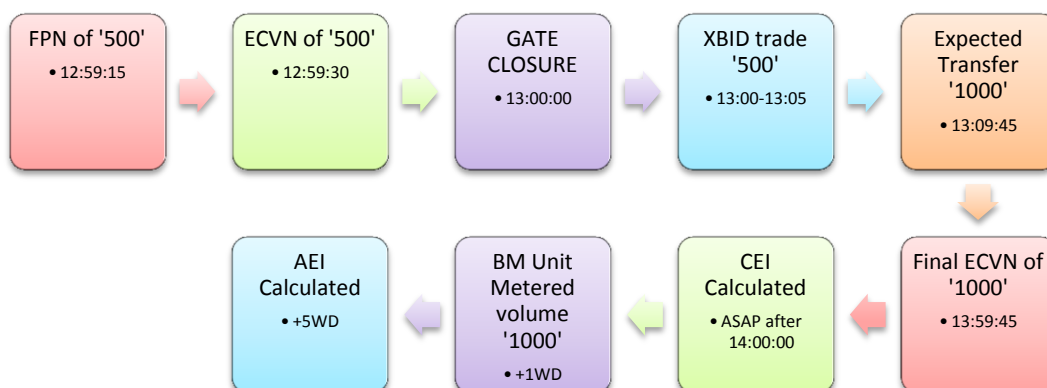


- CEI compares the FPN ('500') and the final ECVN ('500') – CEI is '0'
- AEI compares the final ECVN ('500') and BM Unit Metered Volume ('1000') – AEI is '500'

Under current BSC requirements, if the XBID process results in the credited energy position (i.e. Metered Volume) changing after Gate Closure, the Party will risk having an AEI for between 17 and 24 calendar days (5 WD can be as long as 12 calendar days over Bank Holiday periods).

### High Level Example of difference between CEI and AEI (post Nov 17)

For this example Gate Closure is also at 13:00 and the settlement period is 14:00 – 14:30<sup>10</sup>. Units have intentionally not been used as this example is for illustrative purposes and not an example of actual calculations.



- CEI compares FPN ('500') and final ECVN ('1000') – CEI is '500'

<sup>9</sup> This is a very simplified example of the relative difference between CEI and AEI and only incorporates the submissions mentioned in this report. It uses GB Settlement Periods as CEI and AEI are GB specific.

<sup>10</sup> This is a very simplified example of the relative difference between CAI and AEI and only incorporates the submissions mentioned in this report. It uses GB Settlement Periods as CEI and AEI are GB specific.

- AEI compares final ECVN ('1000') and BM Unit Metered Volume ('1000') – AEI is '0'

In this example, the Party resubmits its ECVN prior to the Settlement Period commencing to ensure its AEI is based on the eventual matching contracted and delivered position brought by an XBID trade notified post Gate Closure. However, a consequence of this is that the initial CEI reflects a difference between the FPN at Gate Closure that does not account for the late XBID trade and the updated post Gate Closure ECVN that does.

By contrast with the 'Current BSC' example above, this 'Post Nov 17' example reduces the Party's overall EI because it is limited to affecting the CEI rather than the AEI.

## Impact on Party's Imbalance

At a high level, a Party's imbalance for each Settlement Period is based on a comparison of their contracted position against their metered volumes. That is to say, the comparison is between the BM Unit Metered Volume (calculated as described above for Interconnectors) and the ECVN(s) at Gate Closure. The FPN is not taken into account when determining a Party's Imbalance. To that end, a disparity between the FPN and the IST will not affect a Party's imbalance for any given Settlement Period.

## What is the issue?

BSC Section R 'Collection and Aggregation of Meter Data from CVA Metering Systems' only permits adjustments to ISTs after Gate Closure for a defined list of events:

- Any failure, derating, or uprating of the physical capability of the Interconnector so long as the uprated capability doesn't exceed the IST at Gate Closure;
- Acceptance by NGET of any Offer or Bid; or
- An event occurring in relation to an External System, as provided in the Interconnection Agreements, as notified to the IA.

If the IST is changed after Gate Closure, then the ETs shall be adjusted provided that:

- If, due to an Offer or Bid acceptance, only the ET for that BM Unit is adjusted; or
- If, due to an event occurring in relation to an External System, only the ET(s) of the IU(s) affected are adjusted in accordance with the Interconnector Agreement.

If it is not possible to update ISTs post Gate Closure to reflect XBID trades, this will lead to inaccurate BM Unit Metered Volumes in Settlement.

If ISTs are not updated to reflect XBID trading then NGET will not have all of the possible information available to conduct Balancing operations. In addition to carrying forward revised PN data, having updated ISTs will also enable NGET to accurately input into the LIBRA platform, needed for P344.

GC0099 proposes incorporating the BSC definition of IST into the Grid Code. If GC0099 is implemented and P356 is not, there will be disparity between the two Codes as to when ISTs may and may not be updated. This in turn runs the risk of causing confusion for industry participants in determining when, and to whom, to send updated ISTs.

### Proposed solution

NGET raised [P356 'Aligning the BSC with Grid Code Modification GC0099 'Establishing a common approach to interconnector scheduling consistent with the single intraday market coupling processes set out within Regulation \(EU\) 2015/1222 \(CACM\)''](#) on 3 July 2017. It proposes to modify BSC Section R to include an additional circumstance for post Gate Closure adjustments to ISTs and ETs. This will allow ISTs and therefore ETs and BM Unit Metered Volumes to be adjusted to reflect XBID trading. Implementation of P356 will align the BSC with changes proposed under GC0099 so that NGET meets its obligations under the CACM to facilitate XBID trading. Appendix two contains the BSC business requirements for implementation of P356.

Modification GC0099 proposes to introduce a common process and timings for reporting ISTs for all Interconnectors. It proposes that ISOs shall deliver an updated IST to NGET by ten minutes after each intra-day cross-zonal gate closure. The updated IST should therefore reflect the results of single intra-day market coupling.

Post Gate Closure timings will be made consistent with the timings proposed in GC0099. Under GC0099 Interconnector owners will deliver an updated IST to NGET by 10 minutes<sup>11</sup> after each intra-day cross-zonal gate closure to reflect XBID trading.

P356 is proposing three changes to the BSC:

- Introduction of the CACM definition of the intraday cross-zonal gate closure time;
- Introduction of a new reason why the ISTs must be modified after Gate Closure, within a time limit of 10 minutes after the intra-day cross-zonal gate closure time; and
- Introduction of a new reason why ETs must be adjusted to reflect the change in the IST.

These changes will be textual amendments to Section R of the BSC and Section X 'Definitions and Interpretations' Annex 1 'General Glossary'. The definition of intra-day cross-zonal gate closure will be the same as that used in CACM. This means that any change to CACM will not lead to subsequent changes to the BSC. The reason for updating ISTs and ETs will be to reflect the result of XBID trades no later than 10 minutes after Gate closure.

### Exclusion of changes to Physical Notifications

P356 does not intend to allow IUs or other Grid Code Parties to incorporate intra-day trades into their FPNs post Gate Closure.

It is NGET's view that PN and FPN data provisions can remain unchanged, as a best estimate prevailing at Gate Closure. NGET validated this understanding at the GC0099 workgroup, where workgroup members noted that many other BM Participants do not have a 100% accurate estimate of their PN data at Gate Closure (e.g. wind or solar generators).

<sup>11</sup> The original proposal was for five minutes however, this was amended after the first Working Group to reflect TERRE timescales

## Legal text

The proposed changes to BSC Section R can be viewed in Attachment A.

Assessment Consultation Question	
Do you agree with the Workgroup that the draft legal text in Attachment A delivers the intention of P356?	Yes/No
Please provide your rationale with reference to the Applicable BSC Objectives.	
Insert rationale here	

## Are there any alternative solutions?

At the joint Workgroup meeting held at ELEXON on 25 July 2017 the Workgroup discussed allowing PNs to be updated post-Gate Closure to reflect the updated IST. This was discussed with a view to reducing the liability of IUs between CEI and AEI being calculated. Please see the Section 'Workgroup's Discussion' below for more details.

If an Alternative Modification, allowing post Gate Closure PN changes, is progressed then it is likely to require significant changes to BSC processes and systems (as well as Parties' own systems), which will require more Workgroup time to develop and will likely be more expensive and time consuming to implement compared to the Proposed Modification, as it will be a more complex solution. The development and implementation of such an alternate solution would likely exceed the latest implementation date specified by the Proposer – 30 June 2018. The reason for this hard deadline is that the first XBID trading by a GB Party is expected to commence from 1 July 2018 at the earliest.

Given that the Proposer is concerned that assessing an Alternative Modification will delay delivering a Final Modification Report to Ofgem and consequently miss implementing in time for the hard deadline, the Workgroup decided not to adopt an Alternative Modification at this time. However, the Proposer and Workgroup welcomes feedback on this matter particularly in relation to the likelihood and severity of the risk of not updating PNs post Gate Closure.

Once consultation responses have been received, the Workgroup will reconsider the requirement for further changes to the BSC and what the best approach to this could be (e.g. raise an Alternative Modification under P356 or subsequently raise a new Modification focused solely on PNs) given the time sensitive nature of P356.

**NOTE:** This section is solely in relation to the implementation of BSC Modification P356. It does not cover impacts and costs that may result from Grid Code Modification GC0099. For more details on these costs, please see GC0099.

### Estimated central implementation costs of P356

ELEXON will incur a one-off cost of approximately £240 which is equivalent to one person's work for one day to implement the document changes.

There will be no ongoing impacts or costs for ELEXON associated with the implementation of the change proposed by P356.

There are already three reasons why ISTs can be updated post Gate Closure and we would expect that IAs already have processes in place to deal with this and adding a fourth shouldn't be too onerous. BM Unit Metered Volume data does not have to be submitted to the SAA by the IA until 1 WD following the Settlement Period. Allowing ISTs to be updated up to 10 minutes after Gate Closure will not affect the timeframe for submitting BM Unit Metered Volumes and as such BSC systems for passing BM Unit Metered Volume data to the SAA do not need to be updated.

### Indicative industry costs of P356

The implementation of P356 will impact ISOs and IAs. ELEXON does not anticipate a requirement for systems to be created to implement P356. It is expected that IAs will be required to delay submitting Final ISTs, using existing functionality, to take account of any late XBID trades and ahead of final adjustments to ETs. ELEXON expects that the cost and impact of delaying final ISTs will be negligible and we seek confirmation of this in this Assessment Consultation.

### P356 impacts

The following are expected to be impacted by the implementation of P356.

Impact on BSC Parties and Party Agents	
Party/Party Agent	Potential Impact
Interconnected System Operators	By adding an additional circumstance for updating ISTs post Gate Closure, Interconnected System Operators may need to update Interconnector Scheduled Transfers post Gate Closure more frequently.



### Impact on BSC Parties and Party Agents

Party/Party Agent	Potential Impact
Interconnector Administrators	<p>There are already occasions when ISTs may be updated post Gate Closure and as such, we expect that IA's systems are already configured to allow for post Gate Closure changes to ISTs.</p> <p>By adding an additional circumstance for post Gate Closure changes, IAs may need to update ETs post Gate Closure more frequently. As a result, some IAs may need to make some changes to their own internal systems to allow for the increase in volume.</p>
Interconnector Users	Although P356 will not require IUs to do anything different, amendments to ISTs and ETs can affect IUs' BM Unit Metered Volumes.

### Impact on Transmission Company

As NGET is an Interconnected System Operator please see impact above

### Impact on BSCCo

Area of ELEXON	Potential Impact
No impact	
Impact on BSC Systems and processes	
BSC System/Process	Potential Impact
All systems and processes	No impact
Impact on Code	
Code Section	Potential Impact
Section R	Changes will be required to implement the proposed solution. As described above, an additional circumstance will be added to enable post Gate Closure amendments of ISTs and ETs.

### Impact on Core Industry Documents and other documents

Document	Potential Impact
Grid Code	GC0099 – proposes related changes that will introduce common requirements on 'Interconnector Owners' to send NGET updated ISTs within 10 minutes of each intraday cross-zonal gate closure.
Use of Interconnector Agreement	In order to standardise requirements in accordance with GC0099, NGET proposes to amend relevant Interconnection Agreements so they are aligned with the proposed Grid Code requirements.

Impact on a Significant Code Review (SCR) or other significant industry change projects

None

#### Assessment Consultation Question

Will P356 impact your organisation?

**Yes/No**

If 'Yes', please provide a description of the impact(s) and any activities which you will need to undertake between the Authority's approval of P356 and the P356 Implementation Date (including any necessary changes to your systems, documents and processes).

Insert rationale here

#### Assessment Consultation Question

Will your organisation incur any costs in implementing P356?

**Yes/No**

If 'Yes', please provide details of these costs, how they arise, an indication of magnitude, and whether they are one-off or on-going costs. Please also state whether it makes any difference to these costs whether P356 is implemented as part of or outside of a normal BSC Systems Release.

Insert rationale here

## 5 Implementation

### Recommended Implementation Date

The Workgroup recommends an Implementation Date for P356 of:

- 28 June 2018 if the Authority's decision is received on or before 31 March 2018; or
- As soon as possible as a stand-alone release if the Authority's decision is received after 31 March 2018.

The Proposer has requested that implementation be no later than 30 June 2018. The reason for this is that the earliest XBID trading is due to commence is the third quarter of 2018 which commences on 1 July 2018.

#### Assessment Consultation Question

How long (from the point of Authority approval) would you need to implement P356?

**Yes/No**

Please provide an explanation of your required lead time, and which of the activities listed in your answer to Question 2 are the key drivers behind the timescale. Please also state whether it makes any difference to this lead time whether P356 is implemented as part of or outside of a normal BSC Systems Release.

Insert rationale here

#### Assessment Consultation Question

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

**Yes/No**

If 'No', please provide your rationale.

Insert rationale here

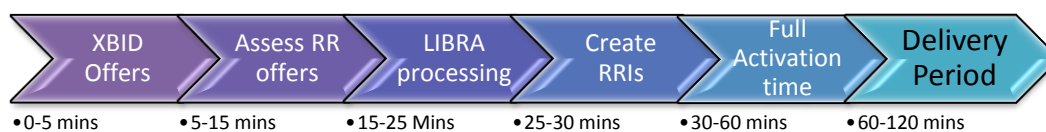
## 6 Workgroup's Discussions

In light of the relationship between GC0099 and P356, the BSC Panel and Grid Code Review Panel agreed that the two Modification Proposals be progressed together by a joint Workgroup. As such the first joint Workgroup for BSC Modification P356 and Grid Code Modification GC0099 was held at ELEXON's offices on Tuesday 25 July 2017.

### Gate closure times and follow on actions

The proposer explained to the Workgroup how XBID gate closure, existing BSC and Grid Code Gate Closure and subsequent timings envisaged by Project TERRE interacted and how they are relevant to the solution proposed by P356. The Workgroup considered whether five minutes following cross border intraday gate closure was the right amount of time in which to submit a revised IST.

#### Process timings envisaged by TERRE (Gate Closure at minute zero)



The Proposer noted that the period after Gate Closure is a key time for submitting ISTs that include the outcomes of XBID trading. That is, the receipt of updated ISTs allows NGET to revise their forecasts and determine the GB System needs to be submitted to LIBRA. The Proposer explained that they had proposed that ISTs are updated within five minutes of Gate Closure to allow NGET sufficient time to submit their positions to LIBRA. However, Workgroup Members with experience working for Interconnectors noted that the five minutes may not be sufficient time to update ISTs and report these to the NGET. This is because Interconnectors will not have received details of final XBID trades until a few minutes after the intra-day cross border gate closure and would need time to process these and produce updated ISTs. This would likely exceed five minutes.

The Proposer considered that if Interconnectors had already submitted forecasts ahead of Gate Closure (e.g. in accordance with existing requirements to submit ex-ante submissions – Grid Code BC1), then the requirement to submit updated ISTs may not be as pressing. That is the requirement could be stretched to 10 minutes if NGET was processing updated data, rather than new data being submitted. The proposer explained that there is a potential that National Grid has flexibility in its communication time to the LIBRA platform, but there is no known flexibility in the timescales past 15 minutes after Gate Closure.

It was suggested that the P356 solution should be amended so that final ISTs should be submitted not later than 10 minutes post Gate Closure instead of five. The proposer was happy to adopt this amendment.

The Workgroup noted that the European gate closure time is not yet defined but work is in process to define it. An updated intra-day cross zonal gate time proposal in accordance with CACM Article 35 is due to be submitted to all National Regulatory Authorities in August 2017. An announcement (but not necessarily a regulatory decision) will be due two months later in October 2017. GB is looking for a one hour Gate Closure with the TSOs that it shares an Interconnector with. Anything less than a one hour Gate Closure could have potential impacts on GB processes in general and are not limited to this Modification Proposal. It was agreed that ELEXON would draft changes to the legal text in

such a way that allows flexibility to accommodate change in the European gate closure time.

## Amending Physical Notifications post Gate Closure

The FPN is a statement at Gate Closure of a Party's best estimate of the expected input or output of Active Power for a given point during a Settlement Period. The Grid Code only intends it to be a best estimate prepared in accordance with Good Industry Practice.

Assuming Parties produce or consume electricity as agreed by Gate Closure, the implication is that the sum of FPNs for all IUs should be equal to the IST for that Interconnector. Indeed IAs use FPNs to convert ISTs (at Gate Closure) into ETs. Also, the volume of Active Energy derived from an Interconnector BM Unit's FPN should also equal the volume reported in ECVN(s) for that BM Unit at Gate Closure.

ELEXON explained to the Workgroup that as it stands P356 would likely result in situations where ISTs are updated post Gate Closure to reflect XBID trades but PNs are not. ELEXON summarised scenarios in which it might be appropriate for PNs to be updated post Gate Closure to reflect the outcomes of XBID. These included:

- Maintaining the relationship between ISTs and FPNs – as summarised above, allowing ISTs to be updated after Gate Closure but not PNs would weaken the relationship between these two values;
- Accuracy of Credit Cover – as summarised below, ELEXON uses FPNs in the calculation of Interconnector BM Unit Lead Parties' credit requirements. Not updating PNs after Gate Closure when XBID trades are accepted at short notice could result in less accurate Credit Cover calculations, which become costly to manage;
- Integrity of PN – there is a common understanding that PNs provide a relatively certain view of a BM Unit's expected production or consumption during a Settlement Period. XBID trading will likely mean that unless they can be updated after Gate Closure, Interconnector BM Units' PNs will reflect likely flows less accurately;
- Transparency – PNs are made available for all to see (unlike ISTs and ETs which are only visible to ISOs and IAs), which enables market participants to build a comprehensive view of the state of the system. Less accurate PNs may weaken participants' ability to effectively forecast and plan.

One Workgroup attendee explained that at the moment there is a risk that if XBID trades are accepted after the FPN is submitted but before the ECVN is submitted, then the related Parties' EI could be affected. Under the proposed P356 change, XBID trades accepted at short notice prior to or after Gate Closure would separate the final IST from the ECVN<sup>12</sup>. In the worst case scenario (though it was understood to be low possibility), the Credit Cover position could be reached due to the disparity between Gate Closure expectations (FPNs) and post Gate Closure reality (ISTs). Where this position remains in breach, the Party's ability to submit ECVNs may be suspended and thus affect the Interconnector Party's ability to trade in future Periods.

<sup>12</sup> As described above, P342 will allow Parties to 'trade out' this difference if they choose to do so and are able to. This was not discussed at the Workgroup meeting

The workgroup member explained that this is theoretically possible as the systems could permit this to happen and it is outside of manual controls.

The Workgroup noted the potential risk for Lead Parties of Interconnector BM Units. However, the Workgroup agreed it would be useful to better understand, (i.e. both qualify and quantify) the risk in terms of its likelihood and materiality for registrants of Interconnector BM Units. The Workgroup also considered that it would be helpful to compare the risks associated with Interconnector BM Units with other BM Units, e.g. generators. ELEXON took this as an action and the findings are discussed below.

One of the Workgroup members raised concerns in relation to transparency and openness i.e. all trades should be visible as well as expected flows and agreements. Whilst it was felt that it is good practice for 'final' to mean 'final' and not be updated post Gate Closure, Workgroup members considered that the concerns regarding Credit costs presented a reasonable argument to consider change. It was agreed that this consultation should summarise the concern and seek views from other industry participants.

It was agreed that it would be useful to model the impact on the GB market as a whole if FPNs and ISTs are different.

***Post meeting note: ELEXON has investigated the credit calculation process and has looked at analysis undertaken as part of BSC Modification P342. From November 2017 it will be possible to submit ECVNs 60 minutes after Gate Closure, i.e. at the start of the Settlement Period. In theory, this means that the final ECVN at Gate Closure +60 minutes will reflect the Final IST. The P342 Workgroup concluded that there would be sufficient 'liquidity' in the market post Gate Closure to allow Parties to 'trade out' their imbalance. The P342 Workgroup also concluded that there was no need to amend Credit calculations as part of their work and that it could, if need arose, be raised at a later stage.***

As noted above, the Workgroup also considered other scenarios for updating PNs post Gate Closure. In general the Workgroup were less concerned about the other scenarios. The following is a summary of the Workgroup's thoughts.

The group recognised the role PNs play in terms of providing a relatively certain view to NGET and other participants. However, they also noted that PNs are only a best estimate and that the unpredictable nature of some renewable generating technologies already results in less accurate PNs at Gate Closure. The Proposer noted that the NGET already manages the inherent inaccuracies of PNs in its forecasting and planning. Other Workgroup Members also noted that whilst the publication of updated PNs would theoretically improve market transparency, traders would likely be monitoring sources other than (or at best in addition to) PNs to understand the implications of XBID.

Workgroup Members with experience of working with or for IAs noted that FPNs are not currently used to update ETs after Gate Closure. Instead the terms of bilateral interconnection agreements explain how they update ETs after Gate Closure. Consequently it was noted that it is not essential for PNs to be updated after Gate Closure to enable ETs to be updated and for Interconnector BM Unit Metered Volumes to be calculated.

## Potential Alternate Solution

The possibility of raising an alternative solution was discussed. The alternative solution would be connected with allowing PNs to be updated post Gate Closure to achieve parity between PNs and ISTs for EI purposes.



ELEXON noted that the processes and systems that support the calculation, reporting and processing of PNs would affect NGET, BSC central systems and BSC Parties. Therefore, development and implementation of an alternate solution to allow for updates to PNs after Gate Closure would likely require more time and effort than the relatively simple proposed Modification. Given that changes need to be in place before the first participation in XBID in Q3 of 2018 it was agreed to assess consultation responses ahead of deciding whether or not to raise an alternative solution. Should there be appetite from industry then the Workgroup would reconsider the case for changing the BSC to allow updates to PNs after Gate Closure. Furthermore, the Workgroup considered that, given the time sensitivity of implementing P356, it would be better to raise a new Modification (rather than an Alternative Modification) if the consultation identifies a desire to be able to change PNs post Gate Closure.

For an alternative to be considered within the Grid Code process, a formal alternative must be raised by either the Grid Code Workgroup or a 'user' request made (for which 'user' shall mean any person who is under any obligation or granted any rights under the Grid Code). Any alternative is required to be supported by a majority of the Workgroup or by the Workgroup Chair in order to be taken forward as a formal alternative. These can only be raised ahead of submission of the Workgroup Report to the Grid Code Panel.

Assessment Consultation Question	
Do you agree that there are no other potential Alternative Modifications within the scope of P356 that would better facilitate the Applicable BSC Objectives compared to the Proposed Modification?	Yes/No
If 'No', please provide justification for your answer. We would also welcome your thoughts on a new Modification being raised to allow Physical Notifications to be updated post Gate Closure.	
Insert rationale here	

## Impact of different Gate Closure times for borders between GB and other interconnected countries

The impact of having different gate closure times for different borders was discussed as CACM allows for this to happen. NGET shared the latest information from the TSO drafting group which has agreed in principle to maintain a one hour Gate Closure time for all GB Interconnectors. Workgroup members had no further comment and were comfortable with the existing Governance process in place for a one hour intra-day Gate Closure in accordance with CACM.

## Impact of P356

ELEXON explained that P356 Proposed Modification will not impact most Parties – i.e. its impact is limited to Interconnector Parties<sup>13</sup> and NGET. The Workgroup agreed with this assessment.

<sup>13</sup> Interconnector System Operator; Interconnector Error Administrator; Interconnector Administrator; and Interconnector User.

## Cross code working

ELEXON and National grid jointly explained that each code (BSC and GC) will follow its own governance processes so far as practicable, including having their own meeting Chair, Consultation periods and Panel approval processes.

Where joint Workgroup meetings occur, the Code hosting the meeting will be the lead Chair with the Chair of each Code then chairing the sections of the meeting most relevant to their Code.

Consultations will be issued at the same time, and will run for the same period of time but each Code will issue its own consultation. The questions in each consultation will be identical so that respondents will only have to reply to either the BSC or GC consultation. ELEXON and National Grid will share the responses from their respective consultations with each other.

Reports will be presented to the BSC Panel and Grid Code Panel at the same time and both the BSC and Grid Code Final Reports will be submitted to Ofgem at the same time for approval from the Authority so that each can be considered alongside the other.

## Applicable BSC Objectives

All workgroup members agreed that implementation of the P356 proposed solution would better facilitate the Applicable BSC Objectives.



### 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 [for the Co-operation of Energy Regulators]

(f) Implementing and administrating the arrangements for the operation of contracts for difference and arrangements that facilitate the operation of a capacity market pursuant to EMR legislation

(g) Compliance with the Transmission Losses Principle

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Does P356 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views
(a)	<ul style="list-style-type: none"> <li><b>Positive</b> - NGET is required to make the proposed changes to align with CACM. P356 will enable NGET to discharge its obligations to comply with EU legislation and therefore, by implementing P356, the BSC will be facilitating the Transmission company's efficient discharge of its obligations</li> </ul>	<ul style="list-style-type: none"> <li>Unanimous agreement with proposer's views and reasons – as set out in its Modification Proposal Form</li> </ul>
(b)	<ul style="list-style-type: none"> <li><b>Positive</b> - The BSC change will enable alignment with CACM which has been introduced to bring efficiencies to those Markets affected. By enabling greater efficiency and economic cooperation with other TSOs, P356 will allow for improved efficient, economic and co-ordinated operation of the National Electricity Transmission System</li> </ul>	<ul style="list-style-type: none"> <li>Unanimous agreement with proposer's views and reasons</li> </ul>
(c)	<ul style="list-style-type: none"> <li><b>Positive</b> - CACM and cross border trading are designed to promote effective competition across borders and between EU markets. By enabling GB parties to participate in EU markets, CACM will promote effective competition amongst participants</li> </ul>	<ul style="list-style-type: none"> <li>Unanimous agreement with proposer's views and reasons, but two members noted that if an alternative solution is raised, they may wish to reconsider their views</li> </ul>
(d)	<ul style="list-style-type: none"> <li><b>Neutral</b> - Neither positively or negatively impacted by P356 as this will not result in any changes to BSC processes or systems</li> </ul>	<ul style="list-style-type: none"> <li>Unanimous agreement with proposer's views and reasons</li> </ul>
(e)	<ul style="list-style-type: none"> <li><b>Positive</b> - Changes are proposed to align with CACM which is European Electricity Regulation, therefore implementation of P356 will enable compliance with European Regulation 2015/1222</li> </ul>	<ul style="list-style-type: none"> <li>Unanimous agreement with proposer's views and reasons</li> </ul>
(f)	<ul style="list-style-type: none"> <li><b>Neutral</b> - Neither positively or negatively impacted by P356 as it is not expected to impact CfDs or</li> </ul>	<ul style="list-style-type: none"> <li>Unanimous agreement with proposer's views and reasons</li> </ul>

## Does P356 better facilitate the Applicable BSC Objectives?

Obj	Proposer's Views	Other Workgroup Members' Views
	EMR	
(g)	<ul style="list-style-type: none"> <li>• <b>Neutral</b> – Neither positively or negatively impacted by P356 as it is not expected to have any impact on Transmission Losses</li> </ul>	<ul style="list-style-type: none"> <li>• Unanimous agreement with proposer's views and reasons</li> </ul>



### What are the Self-governance Criteria

The Self-Governance route is set out in the Transmission licence and provided for in Section F of the BSC.

A Modification Proposal may be considered by the Self-Governance route if, when implemented, it is:

a) unlikely to have a material effect on:

i) existing or future electricity consumers;

ii) competition in the generation, distribution, or supply of electricity or any commercial activities connected with the generation, distribution, or supply of electricity; and

iii) the operation of the national electricity transmission system; and

iv) matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies; and

v) the Code's governance procedures or modification procedures,

b) is unlikely to discriminate between different classes of Parties.

### Assessment Consultation Question

Do you agree with the Workgroup's initial unanimous view that P356 does better facilitate the Applicable BSC Objectives than the current baseline, and so should be approved?	Yes/No
If 'No', please provide justification for your answer.	
Insert rationale here	

## Progressing P356 as a self-governance modification

It was agreed by all Workgroup members that P356 should not progress as a Self-Governance modification. The workgroup concluded that implementation will have a material impact on Industry on the basis that Interconnector Parties will be treated differently to non-Interconnector Parties in that they will be required to undertake additional tasks post Gate Closure to be compliant with the BSC i.e. update ISTs and ETs not later than 10 minutes after Gate Closure. Any disparity between the solutions for P356 and GC0099 could have an adverse effect on the GB market.

GC0099 has already been approved to precede as a non-Self-Governance Modification, as such P356 and GC0099 will be reviewed by the Authority simultaneously to ensure both are compatible and deliver a co-ordinated change.

## Consumer Impact

It was agreed that there will be no impact on consumers as a result of P356 as the cost of developing and implementing BSC Change is already accounted for in ELEXON's costs to industry. It was also noted that the change is required to facilitate EU legislation to deliver a pan-European intra-day market, which is aimed at delivering consumer benefit.

## Appendix 1: Workgroup Details

### Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P356 Terms of Reference

What is the impact of P356 on national electricity system and on the balancing market?

What is the impact of P356 on the Transmission Company and interconnectors?

What is the impact of having different Gate Closure times for different borders between GB and other interconnected countries?

Should Physical Notifications be amended?

Cross-code impacts and working

What changes are needed to BSC documents, systems and processes to support P356 and what are the related costs and lead times?

Are there any Alternative Modifications?

Should P356 be progressed as a Self-Governance Modification?

Does P356 better facilitate the Applicable BSC Objectives than the current baseline?

Consumer Impacts

### Assessment Procedure timetable

P356 Assessment Timetable

Event	Date
Panel submits P356 to Assessment Procedure	13 Jul 17
Workgroup Meeting 1	25 Jul 17
Assessment Procedure Consultation	14 Sep 17 – 6 Oct 17
Workgroup Meeting 2	w/c 6 Nov 17
Panel considers Workgroup's Assessment Report	14 Dec 17

## Workgroup membership and attendance

P356 Workgroup Attendance		
Name	Organisation	25 Jul 17
Elliott Harper	ELEXON ( <i>Chair</i> )	✓
Taran Heir	National Grid ( <i>Alternate Chair/Lead Analyst</i> )	✓
Chris Wood	ELEXON ( <i>Lead Analyst</i> )	✓
Giulia Barranu	ELEXON ( <i>Lead Analyst</i> )	✓
Christine Brown	National Grid ( <i>Chair</i> )	✗
Robert Selbie	National Grid ( <i>Proposer</i> )	✓
Andrew Colley	SSE	✓
Caroline Kluyver	National Grid	✓
Isaac Gutierrez	Scottish Power Renewables	✗
Nick Pittarello	Nemo Link	✓
Paul Youngman	Drax Power	✓
Peter Bolitho	Waterswye	✓
Nicholas Rubin	ELEXON ( <i>Design Authority</i> )	✓
Nicholas Brown	ELEXON ( <i>Lead Lawyer</i> )	✓
Thomas Jones	Ofgem	✓
Alan Creighton	Northern Powergrid	✗
Alastair Frew	Scottish Power	✗
Alexander Roberts	ElecLink Limited	✓
Christopher Smith	National Grid Ventures	✗
Garth Graham	SSE	✗
Jakub Pilecky	BritNed	✓



## Appendix 2: Business Requirements

### Assumptions

- At its last meeting the Workgroup agreed that 10 minutes should be sufficient time after cross-zonal gate closure time for Interconnected System Operators to update Interconnected Schedule Transfers ISTs and send these to Interconnector Administrators (IAs). Updated ISTs will also be sent to the Transmission Company following implementation of Grid Code Modification GC0099. Until the solution is finalised we have assumed that this period of time may change.
- Physical Notifications (PNs) will not be updated post Gate Closure to reflect the outcomes of intraday cross border market coupling (i.e. XBID trading).
- 'Intraday cross-zonal gate closure time' will be one hour before the beginning of every odd-numbered Settlement Period.
- 'Market Time Units' commence at the beginning of every clock hour and last one hour.

### Business Requirements

#### Requirement 1

Interconnector BM Unit Metered Volumes must reflect the outcomes of XBID trading.

#### Requirement 2

Interconnected System Operators (ISOs) must update ISTs post Gate Closure to include the outcomes of XBID Trading.

#### Requirement 3

ISOs must update ISTs to include the outcomes of XBID Trading within 10 minutes of intraday cross-zonal gate closure time

#### Requirement 4

IAs must update Expected Transfers (ETs) post Gate Closure to reflect updated ISTs as a result of requirements two and three above. To be completed in accordance with BSC Section R

#### Requirement 5

The 'intraday cross-zonal gate closure time' has yet to be decided between the relevant National Regulation Authorities (e.g. Ofgem in GB), therefore the BSC solution must be flexible enough to accommodate any intraday cross-zonal gate closure time.

- |     |   |
|-----|---|
| 5.1 | Based on or by reference to the CACM definition, introduce a definition of 'intraday cross-zonal gate closure time' into the BSC. |
|-----|---|

#### Requirement 6

Align the BSC solution with the solution for GC0099, in particular that timescales for amending ISTs post Gate Closure are consistent.

## Appendix 3: Glossary & References

### Acronyms

Acronyms used in this document are listed in the table below.

Acronyms	
Acronym	Definition
AEI	Actual energy Indebtedness
BM	Balancing Mechanism
BSC	Balancing and Settlement
BSCP	Balancing and Settlement Procedure (Code Subsidiary Document)
CACM	Capacity Allocation and Congestion Management
CAP	Credit Assessment Price
CEI	Credit Assessment Energy Indebtedness
ECVAA	Energy Contract Volume Aggregation Agent
ECVN	Energy Contract Volume Notification
EI	Energy Indebtedness
ENC	European Network Code
ENTSO-E	European Network of Transmission System Operators for Electricity
ET	Expected Transfer
EU	European Union
FPN	Final Physical Notification
GB	Great Britain
GC	Grid Code
IA	Interconnector Administrator
II	Interim Information
IST	Interconnector Scheduled Transfer
IU	Interconnector User
NGET	National Grid Electricity Transmission (the Transmission Company)
PN	Physical Notification
RR	Replacement Reserve
RRI	Replacement Reserve Instruction
SAA	Settlement Administration Agent
TERRE	Trans European Replacement Reserve Exchange
TSO	Transmission System Operator
WD	Working Day
XBID	Cross border Intra-Day

### External links

A summary of all hyperlinks used in this document are listed in the table below.

All external documents and URL links listed are correct as of the date of this document.

External Links		
Page(s)	Description	URL
3	Commission Regulation (EU) 2015/1222	<a href="http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32015R1222">http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32015R1222</a>
3	Cross border intraday trading (XBID) explanation	<a href="https://www.entsoe.eu/about-entsoe/market/enhancing-regional-cooperation/Pages/Regional%20Cooperation.aspx">https://www.entsoe.eu/about-entsoe/market/enhancing-regional-cooperation/Pages/Regional%20Cooperation.aspx</a>
3	Grid Code Modification GC0099 webpage	<a href="http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-code/Modifications/GC0099/">http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-code/Modifications/GC0099/</a>
5	BSC Section R 'Collection and Aggregation of Meter Data from CVA Metering Systems'	<a href="https://www.elexon.co.uk/bsc-related-documents/balancing-settlement-code/bsc-sections/">https://www.elexon.co.uk/bsc-related-documents/balancing-settlement-code/bsc-sections/</a>
5	Digest of UK Energy Statistics (DUKES) 2017: main report	<a href="https://www.gov.uk/government/statistics/digest-of-uk-energy-statistics-dukes-2017-main-report">https://www.gov.uk/government/statistics/digest-of-uk-energy-statistics-dukes-2017-main-report</a>
5	Electricity Interconnectors page on Ofgem website	<a href="https://www.ofgem.gov.uk/electricity/transmission-networks/electricity-interconnectors">https://www.ofgem.gov.uk/electricity/transmission-networks/electricity-interconnectors</a>
6	The Grid Code on NGET website	<a href="http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-code/The-Grid-code/">http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-code/The-Grid-code/</a>
6	European Network Codes and guidelines	<a href="https://www.entsoe.eu/major-projects/network-code-development/Pages/default.aspx">https://www.entsoe.eu/major-projects/network-code-development/Pages/default.aspx</a>
7	CACM Webpage	<a href="https://www.entsoe.eu/major-projects/network-code-development/capacity-allocation-and-congestion-management/Pages/default.aspx">https://www.entsoe.eu/major-projects/network-code-development/capacity-allocation-and-congestion-management/Pages/default.aspx</a>
8	BSC Guidance Notes on Credit Cover and Settlement Hierarchy	<a href="https://www.elexon.co.uk/bsc-related-documents/bsc-guidance-notes/">https://www.elexon.co.uk/bsc-related-documents/bsc-guidance-notes/</a>
8	BSC Section M 'Credit Cover and Credit Default'	<a href="https://www.elexon.co.uk/bsc-related-documents/balancing-settlement-code/bsc-sections/">https://www.elexon.co.uk/bsc-related-documents/balancing-settlement-code/bsc-sections/</a>
8	Service Description for Energy Contract Volume Aggregation	<a href="https://www.elexon.co.uk/bsc-related-documents/related-documents/service-descriptions/">https://www.elexon.co.uk/bsc-related-documents/related-documents/service-descriptions/</a>
8	Balancing Mechanism Reporting Service Electricity Data Summary	<a href="https://www.bmreports.com/bmrs/?q=eds/main">https://www.bmreports.com/bmrs/?q=eds/main</a>

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9	P342 'Change to Gate Closure for Energy Contract Volume Notifications'	<a href="https://www.elexon.co.uk/mod-proposal/p342/">https://www.elexon.co.uk/mod-proposal/p342/</a>
12	P356 Modification webpage	<a href="https://www.elexon.co.uk/mod-proposal/p356/">https://www.elexon.co.uk/mod-proposal/p356/</a>