

## 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.



The BSC Panel recommends **approval** of P356

This Modification is expected to impact:

- Interconnected System Operators
- Interconnector Administrators
- Interconnector Users

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## About This Document

This is the P356 Final Modification Report, which ELEXON has submitted to the Authority on behalf of the BSC Panel. It includes a summary of the Workgroup's assessment, the Panel's full views and the responses to both the Workgroup's Assessment Consultation and the Panel's Report Phase Consultation. The Authority will consider this report and will decide whether to approve or reject P356.

There are four 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 approved redlined changes to the BSC for P356.
- Attachment B contains the full responses received to the Workgroup's Assessment Procedure Consultation.
- Attachment C contains the full responses received to the Panel's Report Phase Consultation.

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## Why Change?

[Commission Regulation \(EU\) 2015/1222](#) (guidance on Capacity Allocation and Congestion Management (CACM)) requires the introduction of [new cross border intraday trading \(XBID\) processes](#). XBID outcomes for a particular Settlement Period will not be available until shortly after Gate Closure. So that the Transmission Company (National Grid Electricity Transmission - NGET) is best placed to schedule balancing operations, it is proposing amending the Grid Code to allow updated Interconnector Scheduled Transfers (ISTs), reflecting XBID, to be received by NGET no later than 10 minutes after Gate Closure. IST updates post Gate Closure is allowed by the BSC in certain circumstances; but not to reflect XBID. Not updating ISTs could result in discrepancies between Interconnector Users' (IUs') contracted and metered positions, potentially resulting in Imbalance Charges.

## Solution

P356 proposes allowing IST updates post Gate Closure to reflect XBID outcomes. P356 will also allow Expected Transfers (ETs) to be updated post Gate Closure to reflect XBID changes to ISTs. P356 will establish consistent cross-code provisions compatible with the European (EU) single intraday market coupling processes and Great Britain (GB) and EU balancing processes. P356 will align the BSC with the Grid Code following implementation of [GC0099 "Establishing a common approach to interconnector scheduling consistent with the single intraday market coupling processes set out within Regulation \(EU\) 2015/1222 \(CACM\)"](#).

## Impacts & Costs

There will be an implementation cost of £240 (one ELEXON working day). No BSC systems or processes will be impacted. There will be some small costs involved in implementing new, or updating existing, processes and systems for Parties with Interconnector Balancing Mechanism (BM) Units.

## Implementation

The proposed Implementation Date is 1 November 2018 (November 2018 BSC Release). The proposer has stated that P356 has to be implemented before the earliest possible XBID go-live (expected 2020). November 2018 is the next available release.

## Recommendation

The Workgroup and the BSC Panel agreed unanimously that P356 improves on the BSC baseline and the majority agreed that P356 better facilitates the BSC Applicable Objectives (a), (b), (c), and (e).



### 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.

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.

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

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## 2 Why Change?

### Background

In accordance with the Third Energy Package, EU electricity markets are moving towards greater harmonisation. 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 ensure cooperation and commonality between countries<sup>1</sup>.

Four Interconnectors link GB to other countries (France, The Netherlands, Republic of Ireland and Northern Ireland). Collectively they have a capacity of 4.1 GW and GB is a net importer of electricity; Interconnectors provide roughly 5% of annual GB consumption<sup>2</sup>. Seven more Interconnectors are due to become operational between 2019 and 2022, providing a further 7.3 GW of capacity<sup>3</sup>.

### Use of Interconnector Scheduled Transfers in the BSC

For each Interconnector, for a given Settlement Period, Interconnected System Operators (ISOs) must send ISTs to Interconnector Administrators (IAs) ([BSC Section R 'Collection and Aggregation of Meter Data from CVA Metering Systems' 7.2.1](#)). The IST specifies the Active Energy for spot times at the start, end and during the Settlement Period. ISTs may only be adjusted after Gate Closure for the related Settlement Period in specific circumstances (Section R7.1.3 (b)):

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

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 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 (BSC Section R 7.4.1).

Following notification of a revised IST post 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.



#### What is XBID?

XBID is a joint initiative by various power exchanges to create a joint integrated intraday cross-border market. It 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 other countries if transmission capacity is available.



#### 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>

The final IST in relation to a Settlement Period is the IST prevailing at the end of that Settlement Period (BSC Section R 7.1.3(c)). Any IST updates received after the Settlement Period has ended cannot be used to update ETs (and therefore BM Unit Metered Volumes) and so are of no use for Settlement purposes.

IAs 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 'Overview of Trading Arrangements'](#) 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 'Credit Cover and Credit Default' 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), used alongside the PN to inform NGET of any changes to the data already held and shall reasonably reflect the true operating characteristics of the BM Unit for the day ahead.

There is nothing within the Grid Code or BSC that requires ISTs to be submitted to NGET. However, they are required to be submitted to NGET in accordance with the various bilateral 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. To implement the Third Package, the European Network of Transmission System Operators (TSOs) for Electricity (ENTSO-E)<sup>4</sup> developed the European Network Codes (ENCs). 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



### 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](#)

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<sup>4</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.

competition in generation, trading and supply of electricity by establishing new cross-border EU electricity markets in the day-ahead and intraday timeframes. CACM aims to help with integrating renewable energy into the EU electricity market by giving parties new opportunities to balance their positions closer to real time. Commission Regulation (EU) 2015/1222 came into force on 24 July 2017 to establish guidance on CACM.

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

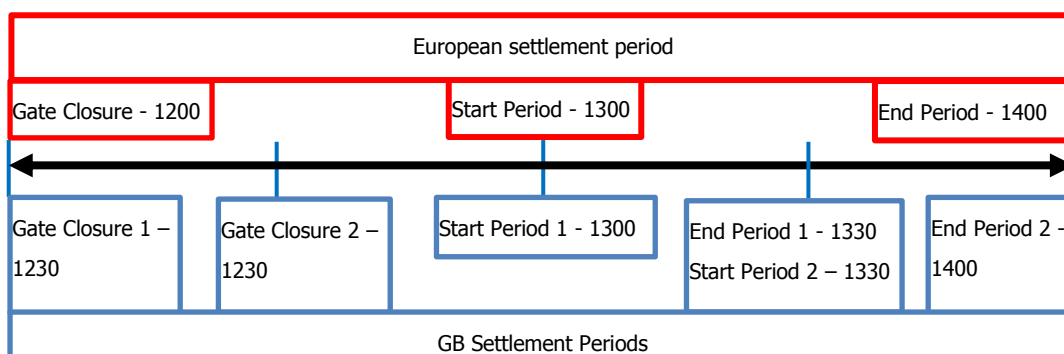
## Cross Border Intra-day Trading (XBID) and Settlement

XBID means 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. In order to comply with CACM, TSOs are responsible for ensuring national arrangements (e.g. Grid Code and BSC) facilitate XBID. Making changes to the BSC and Grid Code to allow ISTs to be updated post Gate Closure to reflect the results of XBID means that NGET (the GB TSO) will be meeting its CACM obligations to facilitate XBID.

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

Commission Regulation (EU) 2015/1222 requires that by 23 November 2018 TSOs shall propose intraday cross zonal gate closure times for each border relating to their Transmission System(s). GB has proposed that the gate closure time for its current Interconnectors is one hour before the start of the settlement period. This is the same as Gate Closure for BSC and Grid Code purposes and will make harmonisation simpler. CACM requires that XBID should occur up to intraday cross zonal gate closure. As such, 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 and therefore will make balancing the Network more difficult.

## Difference between EU and GB settlement timescales



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.



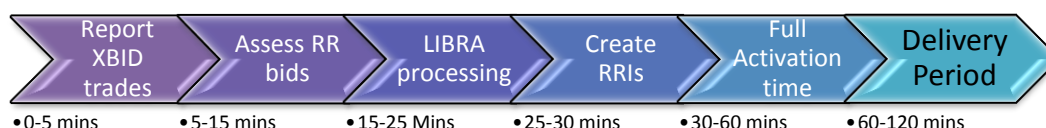
The European settlement period (Market Time Unit) will be one hour; therefore any XBID data submitted at the intraday zonal gate closure will cover two GB Settlement Periods.

## 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>5</sup> (RR) and to optimise allocation of RR across the different TSO systems. Project TERRE 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 bids. 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 ISOs to update ISTs post Gate Closure to reflect XBID outcomes.

Timings for the reporting of XBID results, assessing RR bids and inputting into LIBRA are short. Once RRIs have been issued as an outcome of LIBRA processing, TSOs will have 30 minutes activation time before the Settlement Period commences.

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



It should be noted that once RRIs are issued, this may yet again affect the expected flow of energy through an Interconnector. If this is the case, ISTs may be required to be updated post Gate Closure again (the first time being as a result of XBID). This is allowed for in the BSC as BSC Section R allows for ISTs to be updated up to the end of the Settlement Period i.e. 60 or 90 minutes after RRIs are issued.

## 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.

EI is a cumulative calculation of a Party's Trading Charges over a rolling 29 calendar day period (when trading charges are paid) and is updated following each Settlement Period and for when each Settlement Period is more than 29 days previous.<sup>6</sup>

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. In the case of Interconnectors, their EI is a combination of Credit Assessment Energy Indebtedness (CEI) for the first 5 Working Days (WDs) (before the Interim Information (II) Settlement Run occurs) and Actual Energy Indebtedness (AEI) until 29 calendar days after the Settlement Period. For Interconnector BM Units, the CEI is the difference between the FPN and the ECVN. The AEI is a comparison of ECVN and BM Unit Metered Volumes.

<sup>5</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

<sup>6</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](#)



### 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](#).

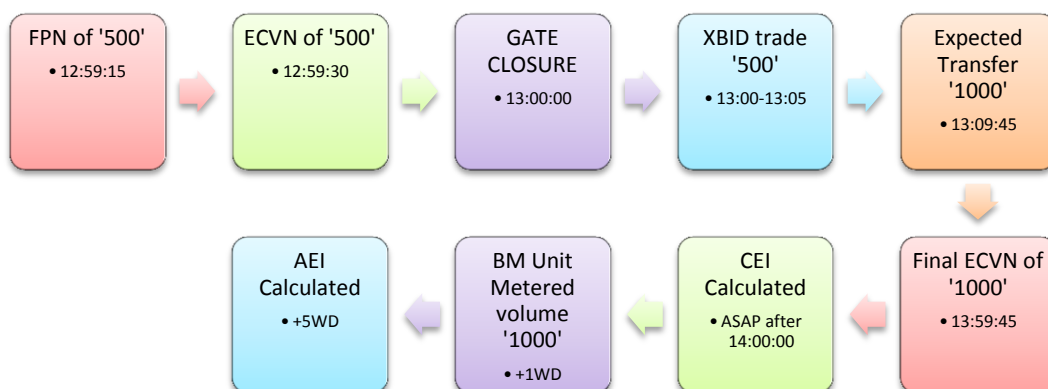
At present there is no clear precedence to show how often there is likely to be disparity between FPNs and final ISTs. It may be possible though, following detailed analysis, to determine inferred values from current cross border trading. Similarly, it would be difficult to determine the material impact (cost) of XBID causing increased CEI, although the average Imbalance price may be a useful indicator.

The risk is that if XBID increases the expected flow through an Interconnector, then this will lead to increased CEI. The biggest risk though is that XBID could result in a switch in flow direction of the entire capacity following Gate Closure. It is worth noting though that this is a worst case scenario.

### Examples of how XBID may affect Energy Indebtedness

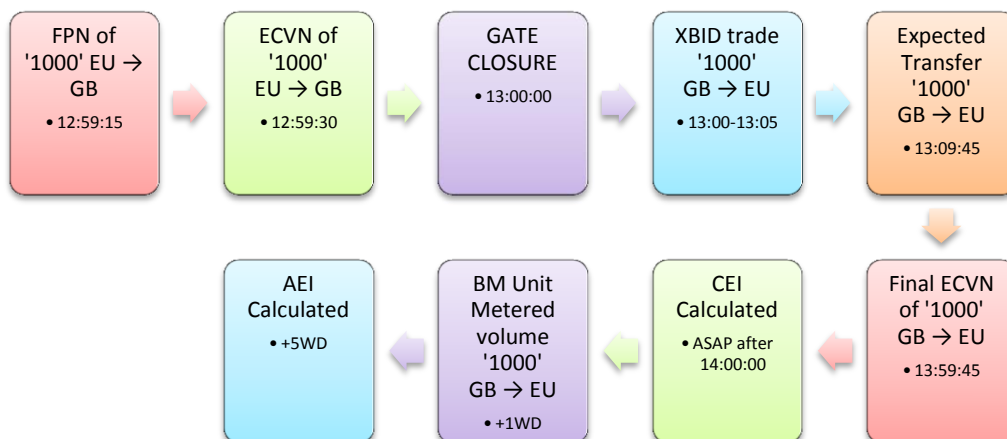
These are very simple examples of the relative difference between CEI and AEI, and only incorporate the submissions mentioned in this report. They use GB Settlement Periods as CEI and AEI are GB specific. Gate Closure is 13:00 and the Settlement Period is 14:00 – 14:30. The Interconnector has a capacity of '1000'. Units have not been used as these examples are for illustrative purposes and not an example of actual calculations.

#### Increase in flow as a result of XBID



- CEI compares FPN ('500') and final ECVN<sup>7</sup> ('1000') – CEI is '500'
- AEI compares final ECVN ('1000') and BM Unit Metered Volume ('1000') – AEI is '0'

#### Change in direction of flow as a result of XBID



<sup>7</sup> Since 2 November 2017 and the implementation of [P342 'Change to Gate Closure for Energy Contract Volume Notifications'](#) the final ECVN is the ECVN prevailing at the start of the Settlement Period. Previously it was the ECVN prevailing at Gate Closure.



- CEI compares FPN ('1000' EU → GB) and final ECVN ('1000' GB → EU) – CEI is '2000'
- AEI compares final ECVN ('1000' GB → EU) and BM Unit Metered Volume ('1000') – AEI is '0'

In both examples, the Party resubmits its ECVN prior to the Settlement Period commencing. This ensures its AEI is based on the eventual matching of contracted and delivered position brought about by XBID. A consequence of this is that the initial CEI reflects a difference between the FPN at Gate Closure that does not account for late XBID trades and the updated post Gate Closure ECVN that does.

## What is the issue?

BSC Section R only permits IST adjustments 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, this will lead to inaccurate BM Unit Metered Volumes in Settlement.

If ISTs are not updated to reflect XBID, 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.

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 the occasions for updating ISTs. 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 additional circumstances for post Gate Closure adjustments to ISTs and ETs to reflect XBID outcomes. Implementation of P356 will align the BSC with changes proposed by GC0099 so that NGET can meet its obligations under CACM to facilitate XBID. [Appendix two](#) contains the BSC business requirements for implementation of P356.

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 ISTs must be modified post Gate Closure; and
- Introduction of a new reason for adjusting ETs to reflect changes in ISTs.

P356 will only affect the wording in BSC Section R and [BSC Section X 'Definitions and Interpretations' Annex 1 'General Glossary'](#). The definition of intra-day cross-zonal gate closure in BSC Section X will refer to the definition in CACM, meaning that any change to the CACM definition will not lead to subsequent changes to the BSC. The reason for updating ISTs and ETs will be to reflect the result of XBID.

### Legal text

The draft legal text that was consulted on included a 10 minute time limit for updating ISTs to reflect XBID outcomes. This was included to mirror the proposed amendment to the Grid Code but has been removed following consultation and Workgroup discussion. It is not essential that ISTs are updated within 10 minutes of the intra-day cross-zonal gate closure for Settlement purposes. This is explained further in [Section 7 of this report](#). The proposed changes to BSC Section R and BSC Section X are in Attachment A. The proposed changes to BSC Section R reflect the removal of a time limit to update ISTs.

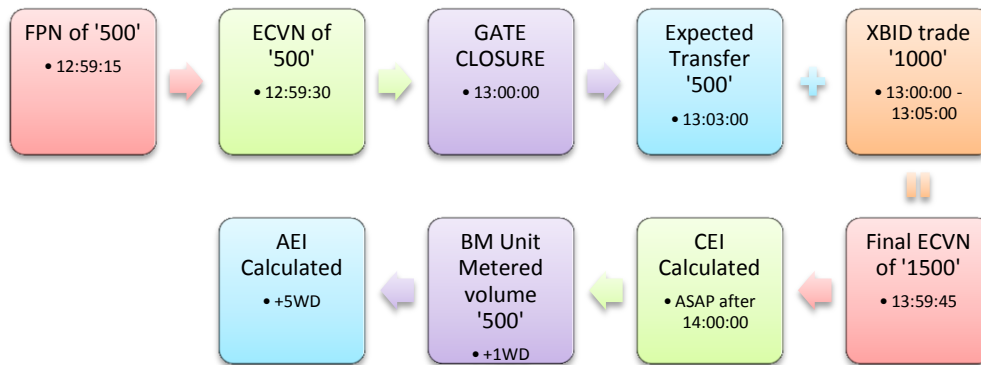
### Are there any alternative solutions?

The Workgroup discussed two potential Alternative Modifications. The first was to allow post-Gate Closure PN updates to reflect the updated IST, allowing FPNs to reflect ECVNs. This would reduce the Credit exposure of IUs between CEI and AEI being calculated. The second was suggested by two consultation respondents (one current and one future Interconnector). They suggested that instead of amending PNs post Gate Closure, the Credit calculations for Interconnectors should be amended.

The Workgroup noted that either Alternative Modification would likely require significant changes to the BSC as well as Parties' own systems. The first would also require significant changes to National Grid processes and systems. Both would require more Workgroup time to develop and would likely be more expensive and time consuming to implement when compared to the Proposed Modification. Additionally, the Workgroup believed that these Alternatives did not better address the issue at hand.

The development and implementation of either Alternative Modification would potentially exceed the first XBID go-live date for GB Interconnectors<sup>8</sup> as the final decision would likely not be made until after Interconnectors are planning to begin preparation for 'go-live'. This would mean that Parties would not be able to update ISTs to reflect XBID outcomes and as such, would be disadvantaged in terms of potential Credit risk. The additional exposure, if they are not able to update ISTs post Gate Closure, would remain for the remaining 29 calendar days after CEI becomes AEI. However, if P356 is implemented before XBID go-live, then the Credit risk is only for 5 WD, when CEI becomes AEI.

### Credit calculations if P356 is not implemented ahead of XBID go-live



- CEI compares FPN ('500') and final ECVN ('1500') – CEI is '1000'
- AEI compares final ECVN ('1500') and BM Unit Metered Volume ('500' – derived from Expected Transfer) – AEI is '1000'

Given the Proposer is concerned that assessing an Alternative Modification could miss implementation in time for the first XBID go-live, the Workgroup decided not to adopt an Alternative Modification. Another factor is that the risk is speculative. Until XBID goes live for non-GB Interconnectors, it may be difficult to quantify the risk and determine whether or not there is need to modify the credit calculations for Interconnectors. However, should a BSC Party wish to propose a Modification to Credit Calculations and/or updating PNs post Gate Closure, ELEXON would be more than happy to assist and support their proposal taking consideration of other ongoing work and prioritisations.

### GC0099 proposed solution

GC0099 proposes to introduce a common process and timings for reporting ISTs for all Interconnectors. It proposes that ISOs deliver an updated IST to NGET by ten minutes<sup>9</sup> after each intra-day cross-zonal gate closure. The updated IST will therefore reflect XBID results.

The GC0099 workgroup adopted two Workgroup Alternative Code Modifications (WACMs). The first proposes that ISTs are updated by 10 minutes after gate closure on 96% of occasions per month. The second proposes that ISOs make 'best endeavours' to update IST by 10 minutes after gate closure.

<sup>8</sup> XBID go-live was expected to be late Q1 2019. However, it was confirmed late January 2018 that GB Interconnector Owners are waiting for further clarity from the Brexit negotiations (regarding whether or not the UK will have access to market coupling once the UK leaves the EU) before starting work to implement XBID. This is not expected until late 2018 at the earliest, and implementation is expected to take up to 18 months from the start date. Therefore it is likely that XBID will not be implemented in GB before 2020.

<sup>9</sup> The original proposal was five minutes. This was amended after the first Working Group to reflect TERRE. An alternative proposal has been sub

### 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.

### Indicative industry costs of P356

There will be a need for minor system updates required to implement P356. 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 after Gate Closure will not affect the timeframe for submitting BM Unit Metered Volumes.

There are already three reasons for updating ISTs post Gate Closure, so adding a fourth will have minimal impact beyond ensuring systems are capable of handling potential increases in volume. It should be noted that even though the planned implementation date is November 2018, any changes to Interconnectors' systems will not actually need to be in place until XBID go-live, which will be Q1 2020 at the earliest.

BSC systems for passing BM Unit Metered Volume data to the SAA do not need to be updated. The cost and impact of delaying final ISTs will be negligible.

None of the consultation responses indicated that P356 implementation would require a specific lead time or that they would incur notable costs as a result.

The Workgroup agreed that the impacts and costs put forward in the P356 Assessment Procedure Consultation remain the same:

### P356 impacts

Impact on BSC Parties and Party Agents	
Party/Party Agent	Impact
Interconnected System Operators	ISOs may need to update ISTs post Gate Closure more frequently.
Interconnector Administrators	There are already occasions for updating ISTs post Gate Closure. IA's systems already allow for post Gate Closure changes to ISTs. Some IAs may need to make changes to their own systems to allow for increase in volume.
Interconnector Users	P356 will not require IUs to do anything different, but changes to ISTs and ETs can affect IUs' BM Unit Metered Volumes.

Impact on Transmission Company	
P356 will not impact NGET. The P356 proposal is for Settlement purposes only.	

Impact on BSCCo	
Area of ELEXON	Impact
None - implementation costs and time are accounted for in ELEXON's operating costs.	

Impact on BSC Systems and process	
BSC System/Process	Impact
All systems and processes	No impact

Impact on BSC Agent/service provider contractual arrangements	
BSC Agent/service provider contract	Impact
All BSC Agents and service providers	No impact

Impact on Code	
Code Section	Impact
Section R and Section X	Changes will be required to implement the proposed legal text.

Impact on Code Subsidiary Documents	
CSD	Impact
All CSDs	No impact

Impact on other Configurable Items	
Configurable Item	Impact
All Configurable Items	No impact

Impact on Core Industry Documents and other documents	
Document	Impact
Ancillary Services Agreements	No impact
Connection and Use of System Code	No impact
Data Transfer Services Agreement	No impact
Distribution Code	No impact

#### Impact on Core Industry Documents and other documents

Document	Impact
Distribution Connection and Use of System Agreement	No impact
Grid Code	The Grid Code will not be impacted as a result of implementing P356. However, implementing P356 will enable changes proposed by GC0099.
Master Registration Agreement	No impact
Supplemental Agreements	No impact
System Operator-Transmission Owner Code	No impact
Transmission Licence	No impact
Use of Interconnector Agreement	No impact

#### Other Impacts

Item impacted	Impact
No impact	

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

None



### Recommended Implementation Date

The Workgroup and BSC Panel recommend an Implementation Date for P356 of:

- 1 November 2018 (as part of the November 2018 BSC Release) if the Authority's decision is received on or before 30 June 2018; or
- 21 February 2019 (as part of the February 2019 BSC Release) if the Authority's decision is received after 30 June 2018.

All six Workgroup Members agreed that the recommended Implementation Date should be 1 November 2018 as part of the November 2018 BSC Release. This reflects the two month extension to the Assessment Phase as a result of a WACM solution development under GC0099.

The Proposer has requested that implementation be ahead of the first GB Interconnector XBID go-live. Of the three consultation respondents that provided thoughts on the implementation date, all three agreed that the implementation date should be consistent with the 'go-live' of XBID. XBID 'go-live' will now not be until Q1 of 2020 at the earliest. As such, implementing P356 in November 2018 will not affect XBID 'go-live'. Although the earliest expected 'go-live' date has slipped, the proposer wishes for the P356 implementation date to align as close as possible to the GC0099. Therefore, given the minimal impact and costs involved, November 2018 is the earliest implementation date.

This Implementation Date, at the time of the Workgroup, was subject to confirmation from ELEXON that it is possible to achieve implementation in November 2018 alongside other changes already scheduled for that Release. The Workgroup agreed the proposed Implementation Date pending confirmation of availability by ELEXON, which has since been confirmed.

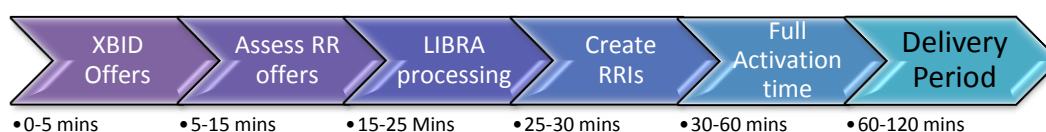
## 6 Workgroup's initial discussions

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>10</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>10</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.

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.

## **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>11</sup> and NGET. The Workgroup agreed with this assessment.

## **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.

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<sup>11</sup> Interconnector System Operator; Interconnector Error Administrator; Interconnector Administrator; and Interconnector User.

## 7 Workgroup's second discussion (after consulting)

The second joint Workgroup for BSC Modification P356 and Grid Code Modification GC0099 was held at ELEXON's offices on Tuesday 7 November 2017.

### Review of Consultation responses

There were seven respondents for both consultations in total, which consisted of:

- Three existing Interconnectors;
- One future Interconnector;
- One Interconnector User (IU);
- One Generator; and
- The Transmission Company.

In principle, most respondents were supportive of the proposed solution for P356 and GC0099 but suggested some key potential changes. Common themes in the responses were:

- A view that the 10 minute window for submitting ISTs post intraday cross-zonal gate closure could be problematic;
- Not updating PNs after Gate Closure to reflect the outcomes of XBID has the potential to cause last minute volatility in credit requirements; and
- The Implementation Date for both P356 and GC0099 should align with XBID go-live.

### Ten Minute IST submission deadline post Gate Closure

The proposer explained why the deadline for submitting IST's by 10 minutes post intraday cross-zonal gate closure is important. NGET requires XBID outcomes, and the effect it will have on the Interconnectors, in order to determine its TERRE requirements for the relevant Settlement Period. NGET can then submit orders to the LIBRA platform 15 minutes post Gate Closure. NGET has confirmed that it requires a minimum five minute period from 10 to 15 minutes post Gate Closure to prepare its TERRE submissions.

ELEXON talked the Workgroup through their recommendation that the proposed legal text for P356 should not make reference to any time limits in relation to updating ISTs to reflect XBID outcomes. BSC Section R already allows for ISTs to be updated after gate closure. The final IST in relation to a Settlement Period is the IST prevailing at the end of that Settlement Period. The results of XBID will cover two successive Settlement Periods meaning ISTs reflecting XBID can be updated up until either 90 or 120 minutes after intraday cross-zonal gate closure and still be used for Settlement Purposes.

The two main time points are that final ISTs are those prevailing at the end of the Settlement Period and BM Unit Metered Volumes (derived from updated ETs and ISTs) must be submitted to the SAA by the end of the Business Day following the Settlement Period.



If the draft legal text that was consulted on was implemented, it would mean that ISTs would need updating 10 minutes after the intra-day cross-zonal gate closure and potentially again 80 or 110 minutes later, for the same Settlement Period to reflect those occasions already listed in BSC Section R.

Adding a time limit to update ISTs as a result of XBID would not be consistent with other parts of BSC Section R 7.1.3 and could, potentially, add in further requirements for updating ISTs that are not, necessarily required.

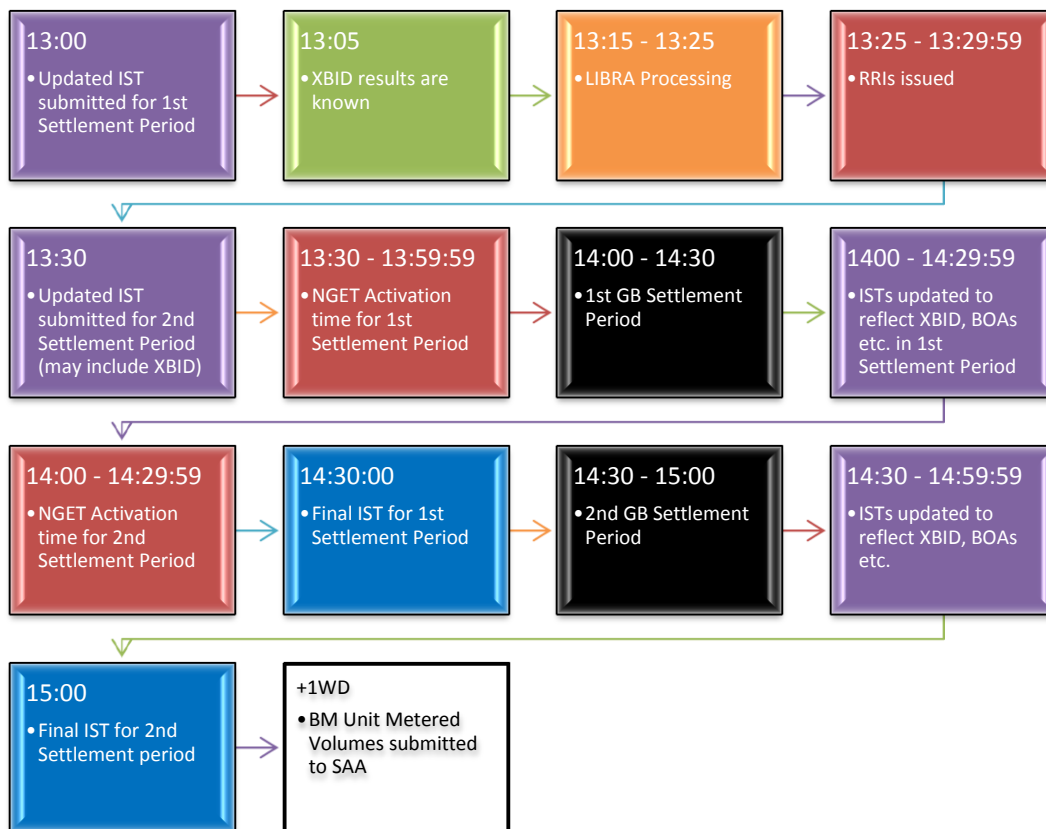
Two of the seven consultation respondents disagreed with the draft Legal Text because they did not believe that there should be a time limit to submit updated ISTs to reflect XBID results. One respondent offered no opinion on the draft legal Text and the other four respondents agreed that the draft legal Text was suitable.

Two consultation respondents suggested that a potential Alternative Solution could be raised to soften the requirement to provide ISTs within ten minutes by making the requirement subject to 'best endeavours'. One of the two also suggested that if this wasn't possible, and the deadline for submitting updated ISTs to reflect XBID results is time critical, then NGET may wish to consider providing direct data connections (i.e. to mitigate the risk of being unable to send ISTs within 10 minutes).

### Timelines for updating ISTs – original proposal



## Timelines for updating ISTs – final proposal



It was agreed by the Workgroup and the Proposer that the draft legal text should be amended so that it does not refer to a 10 minute deadline for updating ISTs.

## Changing FPNs and Credit related issues

In response to consultation responses, ELEXON shared their thoughts on how potential credit related issues could be resolved. CEI occurs shortly after the start of the Settlement Period and compares FPNs and ECVNs. ECVNs may be submitted by IUs for each BM Unit they have associated with that Interconnector until the start of the Settlement Period. It is expected, though not mandated, that the ECVN will represent the energy contracted to be transferred across the Interconnector, including anything resulting from XBID. This means that the ECVN would be more representative of the IST than the FPN.

Due to the fact that XBID results will not be known until after the FPN has been submitted there is the potential for a discrepancy between FPNs and ISTs and therefore discrepancy between FPNs and ECVNs leading to increased EI.

AEI occurs 5WD post Settlement Period. The AEI compares ECVNs and BM Unit Metered Volumes. BM Unit Metered volumes are derived from ISTs. As BM Unit Metered Volumes are derived from ISTs they should be representative of the ECVN. Therefore the EI issue will be resolved when CEI becomes AEI after 5 WD, but the Party risks always being exposed to erroneous CEI for 5WD as a result of the FPN not including the XBID results.

The Credit issue is potentially complicated and there are two immediate potential solutions:

- Allow FPNs to be updated post Gate Closure; and
- Change the Credit calculations for Interconnectors, e.g. to replace FPNs with a different measure.

Two of the consultation respondents (both Interconnectors) expressed deep concern over the impact of P356 on EI. One of the two provided hypothetical examples of how they might be affected<sup>12</sup> and, indeed, offered no other thoughts on the Assessment Procedure Consultation. National Grid Interconnectors (representing the IFA Interconnector) noted that XBID go-live had been rescheduled to be no earlier than late Q1 2019 at the time of the Workgroup Meeting, and is still subject to amendment [as mentioned above, this has now changed to Q1 2020]. Further there are potential and as yet unknown impacts from Brexit.

There is no apparent precedence to assess and quantify the impact of XBID on the Credit position of Trading Parties under the BSC until the provisions become active. It was noted that it may be possible to use data from energy exchanges in relation to Interconnector trades that take place already, or will take place for non-GB borders once XBID goes live elsewhere in Europe. However, this would involve some interpolation and assumption in order to arrive at some comparable data and would, therefore, be far from conclusive.

Assessing the two potential Alternative Solutions would involve a large amount of Workgroup time and would likely only be indicative rather than predictive of XBID results. Any changes to the arrangements for submitting PNs would almost certainly have large impacts for the Grid Code and NGET's ability to fulfil their Balancing obligations. For these reasons, it was agreed not to raise an Alternative Modification at this time, however, it was noted that should a Party feel otherwise, then they would be able to raise a separate Modification based on the above.

## Potential change to GC0099 solution

Respondents and Workgroup members with Interconnector experience noted that there may be circumstances out of their control, which meant the requirement to update ISTs within 10 minutes may not always be achievable. The main reason would be failure in communications channels between the various IT systems that share data which, when collated, is used to produce the IST. An example of an interface would be between the XBID platform and the Interconnectors' Regional Nomination Platform<sup>13</sup>. Workgroup members with Interconnector experience were clear that Interconnectors aim to comply with the Grid Code at all times, and would continue to do so if the new requirement was implemented.

In order to mitigate the risk of a failure in communications, the joint Workgroup elected to raise two WACMs to the GC0099 solution:

- Amend the solution to require that ISTs are received by NGET no later than 10 minutes post Gate Closure by using 'best endeavours'; and
- Amend the solution to introduce a percentage compliance rate. For instance, updated ISTs to be received by NGET no later than 10 minutes after Gate Closure, 95% of the time on a monthly/annual basis.

<sup>12</sup> These were verified by ELEXON subject matter experts for accuracy of interpretation of the applicable parts of the BSC and proposed changes as a result of P356. ELEXON did not verify whether or not the figures used as examples could be indicative of actual flow when XBID commences. See Attachment B for further details

<sup>13</sup> A System that has been developed bilaterally by various GB Interconnectors in order to assimilate XBID data



## Applicable BSC Objectives

The Workgroup members agreed unanimously that P356 would better facilitate the applicable BSC Objectives and recommended that it should be **approved**. Not all members had the same view on individual Objectives though:

- All Workgroup Members agreed that P356 would better facilitate Objective (a);
- Four out of six Workgroup Members agreed that P356 would better facilitate Objective (b). The other two Members were neutral;
- Five Workgroup Members agreed that P356 would better facilitate Objective (c);
- Five Workgroup Members were neutral in regards to Objective (d), one Member thought that P356 was positive;
- All Workgroup Members agreed that P356 would better facilitate Objective (e);
- All six Workgroup Members were neutral in regards to Objective (f);
- The Workgroup Members were unanimous in their neutrality towards Objective (g).

### 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 administering 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

## Summary of workgroup's views against the Applicable BSC Objectives

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. The BSC will facilitate NGET's efficient discharge of its obligations to comply with EU legislation by implementing P356.</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. Workgroup members noted that P356 enables NGET to better facilitate the efficient discharge of their obligations.</li> </ul>
(b)	<ul style="list-style-type: none"> <li>• <b>Positive</b> - P356 will enable alignment with CACM, which has been introduced to bring efficiencies to those Markets affected. Enabling greater efficiency and economic cooperation with other TSOs 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>• Two Members were neutral on this as they felt that P356 will not affect the National Electricity Transmission System. However, those that voted Yes did so as it facilitates 'co-ordinated operation' i.e. co-operation with other Transmission System Operators.</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. CACM promotes effective competition amongst participants</li> </ul>	<ul style="list-style-type: none"> <li>• Unanimous agreement with proposer's views and reasons. It was noted that there isn't a direct correlation, but by facilitating the introduction of CACM etc., P356 is indirectly having a positive effect on Applicable BSC</li> </ul>

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Does P356 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views
	by enabling GB parties to participate in EU markets,	Objective (c).
(d)	<ul style="list-style-type: none"> <li>• <b>Neutral</b> - P356 will not result in any changes to BSC processes or systems</li> </ul>	<ul style="list-style-type: none"> <li>• One Workgroup Member thought this was positive following change to the draft legal text.</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. 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> - P356 is not expected to impact CfDs or EMR</li> </ul>	<ul style="list-style-type: none"> <li>• Unanimous agreement with proposer's views and reasons</li> </ul>
(g)	<ul style="list-style-type: none"> <li>• <b>Neutral</b> – P356 is not expected to impact Transmission Losses</li> </ul>	<ul style="list-style-type: none"> <li>• Unanimous agreement with proposer's views and reasons</li> </ul>

### Consultation respondents' views

Question 1: 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	Neutral/No Comment	Other
5	1	0	1

Of the seven consultation respondents, five agreed that P356 better facilitates the Applicable BSC Objectives and so should be approved:

- One thought that P356 better facilitates the Applicable BSC Objectives. They thought that P356 better facilitates Objectives (c) and (e) by promoting effective competition whilst facilitating greater harmonisation of arrangements in line with the Third Package of European Network Codes and specific Network Codes;
- One respondent agreed, but was concerned about Interconnector system risks and that Interconnector Parties shouldn't be put in a position where they face being in breach of codes for circumstances outside their control. This was in relation to not always being able to submit ISTs no later than 10 minutes after Gate Closure, which has now been removed from the legal text;
- The third respondent commented that P356 will better facilitate Applicable Objective (e) by ensuring compliance with the Electricity Regulation;
- One respondent stated that they agree with the reasons for why P356 better facilitates the Applicable BSC Objectives as set out in the Consultation; and
- The fifth respondent to agree offered no further comment.

One respondent thought that P356 would not better facilitate the Applicable BSC Objectives because of the proposed draft legal text. They thought that a fixed time limit

for IST submission was contrary to Applicable BSC Objective (d). They suggested adding a 'best endeavours' clause to protect IOs against external issues such as internet delays.

The seventh respondent offered no views on whether or not P356 better facilitates the Applicable BSC Objectives.

## **Workgroup's final views on Self-Governance**

The Workgroup agreed by majority (four to two) that P356 should be presented to the Authority for approval and should not proceed as a Self-Governance Modification.

The Workgroup concluded that implementation will have a material impact on industry on the basis that the outcome will discriminate between Interconnector Parties and 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 after Gate Closure to reflect the outcomes of XBID. Not participating in XBID, and therefore not having to complete the additional tasks (and expose themselves to increased Credit risk), would mean that GB industry participants would be materially impacted as they would not be competing in emerging European markets.

It was also agreed that any disparity between the solutions for P356 and GC0099 could have a material effect on the GB market as discrepancies in when ISTs should and shouldn't be submitted it may affect NGET's ability to manage the Total System.

One member thought that P356 should be treated as Self-Governance as the link to the Grid Code through the 10 minute IST update window post Gate Closure had been removed. Another member agreed with this position, but noted that both arguments for and against Self-governance are reasonable.

It was also noted that as GC0099 will be presented to the authority for decision, P356 should also be presented to ensure consistency in implementation.



## 9 Panel's Initial Discussions

The BSC Panel did not pose any questions or hold any discussions during the presentation of the P356 Assessment Report at the February 2018 Panel meeting ([Panel 275/07](#)). The Panel unanimously agreed its initial recommendation to the Authority:

- That the P356 Proposed Modification does better facilitate Applicable BSC Objectives (a), (b), (c) and (e);
- That P356 Proposed Modification should be approved;
- An Implementation Date for P356 of:
  - 1 November 2018 (as part of the November 2018 BSC Release) if the Authority's decision is received on or before 30 June 2018; or
  - 21 February 2019 (as part of the February 2019 BSC Release) if the Authority's decision is received after 30 June 2018;
- The draft BSC legal text for the P356 Proposed Modification; and
- That P356 should not be treated as a Self-Governance Modification

The BSC Panel did not request that any further non-standard questions be added to the Report Phase Consultation for P356.

## 10 Report Phase Consultation Responses

This section summarises the responses to the Panel's Report Phase Consultation on its initial recommendations. You can find the full responses in Attachment C.

Three respondents submitted a response to the consultation. Two respondents e-mailed ELEXON to confirm that they have nothing further to add from their Assessment Phase Consultation responses. Two Workgroup members (who responded to the Assessment Phase Consultation) confirmed by telephone that, as they were happy with the arguments made in the Assessment Report and felt they had nothing further to add by responding.

### Summary of P356 Report Phase Consultation Responses

Question	Yes	No	Neutral/ No Comment	Other
Do you agree with the Panel's initial unanimous recommendation that P356 should be approved?	3	0	0	0
Do you agree with the Panel that the draft legal text in Attachment A delivers the intention of P356?	2	0	1	0
Do you agree with the Panel's recommended Implementation Date?	3	0	0	0
Do you agree with the Panel's initial view that P356 should not be treated as a Self-Governance Modification?	3	0	0	0
Do you have any further comments on P356?	1	2	N/A	N/A

### Consultation respondent's views on Proposed Modification

The three respondents that submitted a response all agreed that P356 should be approved. They all agreed that P356 will better facilitate Applicable BSC Objective (c). Two agreed that P356 will also better facilitate Applicable BSC Objective (e).

### Consultation respondent's views on draft legal text

Two respondents agreed that the draft legal text will deliver the intention of P356 without further explanation. The third respondent was neutral in their response, stating that the draft legal text would meet the P356 objectives if it made clear that BSC Section R7.1.3 does not relieve obligations in Section R 7.2 to provide prevailing information at Gate Closure. Having followed up on this observation, the cause for concern is that ISTs submitted before Gate Closure may not necessarily reflect the latest XBID trades at the time of submission and instead, all of the XBID trade will be declared on the post Gate Closure IST, i.e. there will be a substantial difference between the pre and post Gate Closure ISTs. From a Settlement perspective though, this would not be an issue. The BSC allows for ISTs to be updated up to the end of the Settlement Period (and are not used to calculate ETs and BM Unit Metered Volumes until the following day), so whether or not XBID trades are added pre or post Gate Closure, it will not affect the ISO or IA's related Parties' Settlement calculations. However, BSC Section R7.2 states that the prevailing ISTs and PNs at Gate Closure shall be sent to the IA, which can be taken as implying that the ISTs and PNs ahead of Gate Closure should reflect the latest positions, including XBID trades. Once this had been discussed, the respondent agreed that the draft redlining for P356 need not be updated.

## Consultation respondent's views on Implementation Date

All three respondents agreed with the recommended Implementation Date. One commented that the Implementation date is not wholly relevant given that XBID go-live is approximately 2 years away, but 1 November 2018 gives a firm indication of expectation ahead of XBID go-live.

## Consultation respondent's views on Self-Governance

All three respondents agreed that P356 is not a Self-Governance Modification. One respondent agreed with the rationale provide in the Report Phase Consultation document (see [Section 8](#) above) that P356 should go to the Authority due to the effect on competition and potential impact on NGET and IAs in administering the proposed changes.

## Other comments

One respondent provided comments outside of the scope of the consultation, taking the opportunity to express their views on P356 as a whole<sup>14</sup>. Their paraphrased observations and our response are at [Appendix 4](#). Full comments are in Attachment C.

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<sup>14</sup> It should be noted that this respondent did not respond to the Assessment Phase Consultation

## 11 Panel's Final Discussions

This section summarises the Panel's discussions on the Draft Modification Report at its meeting on 8 March 2018.

The Panel noted the responses received to the Report Phase Consultation. The Panel did not have any further comments or discussions. The Panel unanimously agreed:

- That the P356 Proposed Modification does better facilitate Applicable BSC Objectives (a), (b), (c) and (e) for the reasons given previously for the Assessment Report; and
- Approved the P356 Modification Report.

## 12 Recommendations

The BSC Panel recommends to the Authority:

- That P356 should be **approved**;
- That P356 is **not** a Self-Governance Modification;
- An Implementation Date for P356 of:
  - 1 November 2018 (as part of the November 2018 BSC Release) if the Authority's decision is received on or before 30 June 2018; or
  - 21 February 2019 (as part of the February 2019 BSC Release) if the Authority's decision is received after 30 June 2018; and
- The BSC legal text for P356.

### 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	7 Nov 17
Panel considers Workgroup's Assessment Report	8 Feb 18
Panel considers Draft Modification Report	8 Mar 18



## Workgroup membership and attendance

P356 Workgroup Attendance			
Name	Organisation	25 Jul 17	7 Nov 17
Members			
Elliott Harper	ELEXON ( <i>Chair</i> )	✓	✓
Chris Wood	ELEXON ( <i>Lead Analyst</i> )	✓	✓
Giulia Barranu	ELEXON ( <i>Lead Analyst</i> )	✓	✗
Robert Selbie	National Grid ( <i>Proposer</i> )	✓	✓
Christine Brown	National Grid ( <i>Chair</i> )	✗	✗
Taran Heir	National Grid ( <i>Alternate Chair/Lead Analyst</i> )	✓	✗
Heena Chauhan	National Grid ( <i>Lead Analyst</i> )	✗	✓
Alexander Roberts	ElecLink Limited	✓	✓
Andrew Colley	SSE	✓	✗
Caroline Kluyver	National Grid Interconnectors	✓	✓
Isaac Gutierrez	Scottish Power Renewables	✗	✗
Nick Pittarello	Nemo Link	✓	✓
Paul Youngman	Drax Power	✓	✓
Peter Bolitho	Waterswye	✓	☎
Attendees			
Nicholas Rubin	ELEXON ( <i>Design Authority</i> )	✓	✓
Nicholas Brown	ELEXON ( <i>Lead Lawyer</i> )	✓	✓
Thomas Jones	Ofgem	✓	✗
Jakub Pilecky	BritNed	✓	✗
Michael Carrington	Eirgrid	✗	☎

## Appendix 2: BSC business requirements

### Assumptions

- At its last meeting the Workgroup agreed to recommend that ISTs should be updated to reflect XBID outcomes in accordance with provisions elsewhere in the BSC for updating ISTs post Gate Closure. ISOs will update ISTs and send these to IAs. Updated ISTs will also be sent to NGET following implementation of GC0099. PNs will not be updated post Gate Closure to reflect the outcomes of XBID.
- '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

ISOs must update ISTs post Gate Closure to include the outcomes of XBID Trading.

#### Requirement 3

IAs must update 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 4

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.
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#### Requirement 5

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 Code
BSCP	Balancing and Settlement Procedure (Code Subsidiary Document)
CACM	Capacity Allocation and Congestion Management
CEI	Credit Assessment Energy Indebtedness
CfD	Contracts for Difference
CSD	Code Subsidiary Document
DUKES	Digest of UK Energy Statistics
ECVAA	Energy Contract Volume Aggregation Agent
ECVN	Energy Contract Volume Notification
EI	Energy Indebtedness
EMR	Electricity Market Reform
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
IFA	Interconnexion France-Angleterre
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
SCR	Significant Code Review
SO	System Operator
TERRE	Trans European Replacement Reserve Exchange
TSO	Transmission System Operator
WACM	Workgroup Alternative Code Modification

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Acronyms	
Acronym	Definition
WD	<a href="#">Working Day</a>
XBID	<a href="#">Cross border intraday trading</a>

## 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	<a href="#">Commission Regulation (EU) 2015/1222</a>	<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	<a href="#">Cross border intraday trading (XBID) explanation</a>	<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	<a href="#">Grid Code Modification GC0099 webpage</a>	<a href="https://www.nationalgrid.com/uk/electricity/codes">https://www.nationalgrid.com/uk/electricity/codes</a>
4	<a href="#">BSC Section R 'Collection and Aggregation of Meter Data from CVA Metering Systems'</a>	<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>
4	<a href="#">Digest of UK Energy Statistics (DUKES) 2017: main report</a>	<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>
4	<a href="#">Electricity Interconnectors page on Ofgem website</a>	<a href="https://www.ofgem.gov.uk/electricity/transmission-networks/electricity-Interconnectors">https://www.ofgem.gov.uk/electricity/transmission-networks/electricity-Interconnectors</a>
5	<a href="#">Procedure (BSCP) 01 'Overview of Trading Arrangements'</a>	<a href="https://www.elexon.co.uk/bsc-and-codes/bsc-related-documents/bscps/?show=all">https://www.elexon.co.uk/bsc-and-codes/bsc-related-documents/bscps/?show=all</a>
5	<a href="#">BSC Section M 'Credit Cover and Credit Default'</a>	<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	<a href="#">The Grid Code on NGET website</a>	<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>
5	<a href="#">European Network Codes and guidelines</a>	<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>
5	<a href="#">CACM Webpage</a>	<a href="https://www.entsoe.eu/major-projects/network-code-development/capacity-allocation-and-congestion-">https://www.entsoe.eu/major-projects/network-code-development/capacity-allocation-and-congestion-</a>

External Links		
Page(s)	Description	URL
		<a href="#">management/Pages/default.aspx</a>
7	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>
7	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>
7	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>
8	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>
10	P356 Modification webpage	<a href="https://www.elexon.co.uk/mod-proposal/p356/">https://www.elexon.co.uk/mod-proposal/p356/</a>
10	BSC Section X 'Definitions and Interpretations' Annex 1 'General Glossary'	<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>
27	BSC Panel 275 page on ELEXON website	<a href="https://www.elexon.co.uk/meeting/panel-meeting-275/">https://www.elexon.co.uk/meeting/panel-meeting-275/</a>
30	BSC Panel 276 page on ELEXON website	<a href="https://www.elexon.co.uk/meeting/bsc-panel-meeting-276/">https://www.elexon.co.uk/meeting/bsc-panel-meeting-276/</a>
38	P344 Modification webpage	<a href="https://www.elexon.co.uk/mod-proposal/p344/">https://www.elexon.co.uk/mod-proposal/p344/</a>

## Appendix 4: Report Phase consultation comments

The following table contains paraphrased comments and ELEXON's response in relation to the Report Phase Consultation

Additional Comments on P356	
Comment	ELEXON response
Parties participating in the BM and TERRE are/will be required to operate to their FPN, only deviating from it if instructed by the System Operator (SO), with SO Balancing instructions being measured relative to FPNs. If XBID results are not known until or after Gate Closure, participants can't allow for it in their FPNs and could be at risk of operating contrary to their FPNs, which could lead to a breach of the Grid Code.	<p>XBID continuously matches trades up to Intraday Cross-Zonal Gate Closure, but trades matched close to gate closure may not be reported until afterwards. This may mean that ISTs and PNs, which ordinarily are finalised at Gate Closure, do not include XBID trades reported after Gate Closure. As with the Credit issues discussed above, because XBID has not commenced trading it is not possible to assess the risk of 'last minute' XBID trades on the accuracy of ISTs and PNs at Gate Closure.</p> <p>The implications of deviating from PNs as a consequence of last minute XBID or other post-Gate Closure instruction (e.g. as a consequence of TERRE) were considered, but discounted as mentioned above. It would be better to raise these concerns with the <a href="#">P344 'Project TERRE implementation into GB market arrangements'</a> Workgroup to assess if there is indeed a risk.</p>
Changes to ISTs and XBID positions post Gate Closure may distort post Gate Closure Balancing and TERRE balancing. Ideally, there would be rapid XBID processing to allow a short window post Gate Closure for changes to ISTs, PNs and ETs before the main balancing processes begin. In the absence of this, uncertainty is likely to reduce the effectiveness of balancing.	This is more relevant to GC0099, which is proposing that ISTs are delivered to NGET no later than 10 minutes after Gate Closure so that NGET can submit to TERRE by 15 minutes after Gate Closure. Changing PNs post Gate Closure was discussed by the Workgroup but discounted (see above). There is no BSC reason why ETs need to be changed in a short window after Gate Closure, i.e. because Settlement calculations that rely on ISTs and ETs take place after the Settlement Period. As with the previous comment, this should also be raised with the P344 Workgroup
P356 does not address the CEI/AEI Credit issue identified in the consultation.	This is discussed at length above, as well as the Workgroup's recommendations. In summary, the Workgroup concluded that at this point there was no actual evidence to justify a change but that as XBID trading commenced (elsewhere in Europe) the matter could be monitored and a Modification raised if necessary.

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#### Additional Comments on P356

Comment	ELEXON response
BSC rules for Interconnectors are particularly opaque. Further, The BSC does not explicitly describe how BM Unit Metered Volumes for IUs are determined.	<p>BSC Section R7 implies interpolation between final ISTs, final ETs and FPNs to determine the BM Unit Metered volumes with reference being made to Interconnection Agreements, which are not specified in detail in the BSC or in related BSC Code Subsidiary Documents.</p> <p>Whilst ELEXON note that the precise methods used to calculate BM Unit Metered Volumes are not explicitly described in the BSC, this is not a concern previously raised by BSC Parties and falls outside of the scope of P356. If a Party wishes to raise a Modification to address this, we would be happy to assist.</p>