

Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

P360 'Making the BSC's imbalance price compliant with the European Balancing Guideline'

The European Electricity Balancing Guideline is expected to become law in 2017. The current BSC imbalance price calculations will not be compliant with Article 55 of the Guideline. It will be necessary for the BSC imbalance price calculations to be compliant within one year of the Guideline becoming law. This Modification proposes changes to the BSC to ensure that compliance is achieved.



ELEXON recommends P360 is progressed to the Assessment Procedure for an assessment by a Workgroup

This Modification is expected to impact:

- Generator
- Supplier
- Non Physical Trader
- Transmission Company
- ELEXON

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About This Document

This document is an Initial Written Assessment (IWA), which ELEXON will present to the Panel on 14 September 2017. The Panel will consider the recommendations and agree how to progress P360.

There are two parts to this document:

- This is the main document. It provides details of the Modification Proposal, an assessment of the potential impacts and a recommendation of how the Modification should progress, including the Workgroup's proposed membership and Terms of Reference.
- Attachment A contains the P360 Proposal Form.



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1 Why Change?

Background

On 3 March 2011, the European Third Energy Package came into effect with the aim of developing a more harmonised European energy market. This legislation required the development of European Network Codes (ENCs), which would apply across Europe and take precedence over existing national arrangements. The introduction of the ENCs will have a far reaching impact on the GB electricity industry, with changes required to grid connections, markets and system operation.

European Electricity Balancing Guideline

The European Electricity Balancing guideline (EB GL) is one of these ENCs and will set out rules on the operation of balancing markets, i.e. those markets that Transmission System Operators (TSOs) use to procure energy and capacity to keep the system balanced in real time. The objectives of the EB GL include increasing the opportunities for cross-border trading and the efficiency of balancing markets.

Pending text

The EB GL is still in draft. The latest version was approved on 16 March 2017. We are not expecting the text to be amended from that approved on 16 March 2017, so the Proposer believes the Modification can proceed with sufficient certainty on the legislative text. Should a new version be published we will use that version.

Entry into force

The exact date for EB GL entry into force is unknown at this time, however, it is currently expected to be in December 2017.

What is the issue?

One year after the EB GL enters into force the current BSC imbalance price calculations will need to be amended to ensure compliance with the binding requirements on imbalance price contained in Article 55. With entry into force anticipated in December 2017, the Article 55 requirements are expected to become binding by December 2018. Therefore the BSC imbalance price calculations need to be modified and changes implemented before that date.

Assignment

Currently National Grid (NGET) as the Transmission Systems Operator (TSO) is responsible for the Article 55 obligations. However, it is assumed that these requirements will be reassigned to ELEXON. Should that assignment happen then ELEXON will have responsibility to be compliant with Article 55 obligations by one year after EB GL enters into force, December 2018.

Derogation

Ofgem is able to grant derogation to the requirements in Article 55 for up to 2 years. This would delay the anticipated implementation date from December 2018 to December 2020.

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Discussions have been held between Ofgem, NGET and ELEXON on the fundamentals of the derogation process, in order to gain an understanding of what is required for a derogation request.

Since a second change to the imbalance price calculation will be introduced by the end of 2020 (harmonising imbalance settlement and pricing as required by EB GL Article 52, by three years after entry into force), NGET and ELEXON are seeking two year derogation from the Article 55 obligations. This will align the implementation date with the Article 52 implementation date. By aligning these two dates, it will avoid the need to make two separate changes to the imbalance price in a three year period, thereby providing efficiency savings to industry and consumers and avoiding risk to the implementation of other ENC requirements, such as project TERRE.

It is understood that if Ofgem is minded to grant a derogation, this could not be formally confirmed until after the EB GL enters into force. There is therefore a risk that if derogation is not granted there is less than 12 months between raising the BSC Modification, which will require assessment by a Workgroup, and the required implementation date. This will not allow sufficient time to implement any system change.

Due to the uncertainty around the derogation process and the risk of not meeting the implementation timeline, this Modification is being raised pre-emptively, even though responsibilities have not been formally assigned, and derogation is currently being sought.

If derogation is granted, this Modification will be withdrawn. The imbalance price will then be updated to meet the Article 55 obligations in coordination with imbalance price harmonisation (Article 52), currently anticipated for 2020. The output of the Workgroup for this Modification can be used to inform discussion for that future Modification.

Proposed solution

NGET raised [P360 'Making the BSC's imbalance price compliant with the European Balancing Guideline'](#) on 7 September 2017.

This Modification proposes to amend the BSC imbalance price calculations to ensure compliance with Article 55 requirements by the end of 2018; one year after EB GL is expected to enter into force.

The specific requirements of Article 55 are listed below, together with a description of the non-compliance with the current BSC.

	Article 55 'Imbalance Price' verbatim	BSC Compliance									
Para 1	<p>Each TSO shall set up rules to calculate the imbalance price, which can be positive, zero or negative, as defined in Table 2:</p> <table border="1"> <thead> <tr> <th></th><th>Imbalance price positive</th><th>Imbalance price negative</th></tr> </thead> <tbody> <tr> <td>Positive imbalance</td><td>Payment from TSO to BRP</td><td>Payment from BRP to TSO</td></tr> <tr> <td>Negative imbalance</td><td>Payment from BRP to TSO</td><td>Payment from TSO to BRP</td></tr> </tbody> </table> <p><i>Table 2: Payment for imbalance</i></p>		Imbalance price positive	Imbalance price negative	Positive imbalance	Payment from TSO to BRP	Payment from BRP to TSO	Negative imbalance	Payment from BRP to TSO	Payment from TSO to BRP	<p>Compliant</p> <p>This paragraph sets out sign convention to be used with imbalances and imbalance prices. The current BSC is compliant and no change is required.</p>
	Imbalance price positive	Imbalance price negative									
Positive imbalance	Payment from TSO to BRP	Payment from BRP to TSO									
Negative imbalance	Payment from BRP to TSO	Payment from TSO to BRP									
Para 2	<p>The rules pursuant to paragraph 1 shall include a definition of the value of avoided activation of balancing energy from frequency restoration reserves or replacement reserves.</p>	<p>Non-compliant</p> <p>This paragraph requires a definition of 'the value of avoided activation of balancing energy from frequency restoration reserves or replacement reserves'.</p> <p>There is no definition in the BSC, so the current BSC is not compliant.</p>									
Para 3	<p>Each TSO shall determine the imbalance price for:</p> <ul style="list-style-type: none"> (a) each imbalance settlement period; (b) its imbalance price areas; (c) each imbalance direction 	<p>Compliant</p> <p>This paragraph requires the calculation of imbalance prices by each TSO. The separate process of allocating this task (assignment/delegation) to BSCCo is anticipated to bring this into alignment with the current GB BSC arrangements before Article 55 comes into force.</p> <p>But otherwise the BSC is compliant and no change is required.</p>									
Para 4 (a)	<p>The imbalance price for negative imbalance shall not be less than, alternatively:</p> <ul style="list-style-type: none"> (a) the weighted average price for positive activated balancing energy from frequency restoration reserves and replacement reserves; 	<p>Non-Compliant</p> <p>These two paragraphs (4(a) and 5(a)) require the System Buy Price to be greater than a certain threshold value; and the System Sell Price to be less than a certain threshold value respectively. These threshold values must be calculated for</p>									

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Para 5 (a)	<p>The imbalance price for positive imbalance shall not be greater than, alternatively:</p> <p>(d) the weighted average price for negative activated balancing energy from frequency restoration reserves and replacement reserves;</p>	<p>each Settlement Period individually.</p> <p>It cannot be guaranteed that the current BSC arrangements will ensure compliance with these requirements for each and every Settlement Period so we believe the current BSC will not be compliant.</p>
Para 4 (b)	<p>The imbalance price for negative imbalance shall not be less than, alternatively:</p> <p>(e) in the event that no activation of balancing energy in either direction has occurred during the imbalance settlement period, the value of the avoided activation of balancing energy from frequency restoration reserves or replacement reserves.</p>	<p>Non-Compliant</p> <p>These two paragraphs (4(b) and 5(b)) require a new default value to be calculated when no balancing actions have been taken by NGET in a particular Settlement Period. This default value is based on the “value of avoided activation of balancing energy”.</p> <p>This concept does not currently exist in the BSC, so the current BSC is not compliant.</p>
Para 5 (b)	<p>The imbalance price for positive imbalance shall not be greater than, alternatively:</p> <p>(b) in the event that no activation of balancing energy in either direction has occurred during the imbalance settlement period, the value of the avoided activation of balancing energy from frequency restoration reserves or replacement reserves.</p>	
Para 6	<p>In the event that both positive and negative balancing energy from frequency restoration reserves or replacement reserves have been activated during the same imbalance settlement period, the imbalance settlement price shall be determined for positive imbalance and negative imbalance based on at least one of the principles pursuant to paragraphs 4 and 5.</p>	<p>Non-Compliant</p> <p>This paragraph requires that when NGET has taken both buy and sell balancing actions, the imbalance price is calculated according to one of the other principles set out in Article 55. As noted above, the BSC is not compliant with all the above principles, so it is also not compliant with Article 55, paragraph 6.</p>

Applicable BSC Objectives

The Proposer believes that P360 would better facilitate **Applicable BSC Objectives (b) and (e)** compared with the existing baseline for the reasons set out below:

Proposer's views against Objectives (d)

Article 55 of the EB GL will become law and this expected to be by the end of 2018. Unless a BSC Modification to ensure compliance is raised now, there is a danger that the BSC will not be compliant from that date. To ensure efficiency of implementation, i.e. to combine it with expected changes to harmonise imbalance settlement, ELEXON has asked Ofgem if two-year derogation (delay) might be granted to the Article 55 compliance requirements.

However, at this time there is uncertainty whether this derogation will be granted by Ofgem. If derogation is granted, it is likely that this will not be formally known until after the EB GL enters into force, in December 2017.

If derogation is not granted, this allows less than 12 months between raising the Modification and the required implementation date (which we suggest should be part of the November 2018 Release under this scenario).

As with other requirements on Imbalance Adjustment and the harmonisation of Imbalance Settlement Period, NGET, ELEXON, Ofgem are in discussion regarding the fundamentals of the derogation process, in order to gain an understanding of what is required for a derogation request. It is intended that NGET and ELEXON continue working with Ofgem until entry into force, so that NGET or ELEXON, as appropriate, can submit a derogation request to Ofgem on EB GL entry into force.

The Proposer believes this preliminary work will aid Ofgem in making a decision in a short timeframe.

Further, the Proposer believes that raising a Modification now, as well as continuing the discussions to obtain derogation from Ofgem, is the least risky option in ensuring compliance with the EB GL.

Proposer's views against Objective (e)

The BSC will not be compliant with Article 55 of the legally-binding European Electricity Balancing Guideline unless this Modification is made.

Implementation approach

It is currently anticipated that the EB GL will enter into force in December 2017. Should Article 55 be assigned to ELEXON, the BSC will need to be compliant with the Article 55 requirements by December 2018; one year after EB GL enters into force.

Therefore this Modification is proposed to target an implementation date on 1 November 2018, as part of the November 2018 Release. This is the final release before the expected compliance deadline.

This release date coincides with the final phase of implementation of P305, e.g. Price Average Reference (PAR) 1. Further, [P344 'Project TERRE implementation into GB market arrangements'](#), which has a targeted implementation date of 22 February 2018, will be mid-system development. Conflicting requirements for implementation of this Modification and P344 means there will be significant risk to delivery of both under this implementation approach. However, this approach is required to maintain compliance.



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

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3 Areas to Consider

In this section we highlight areas which we believe the Panel should consider when making its decision on how to progress this Modification Proposal, and which a Workgroup should consider as part of its assessment of P360.

The Workgroup will focus on the following three areas:

- Define 'the value of avoided activation of balancing energy from frequency restoration reserves or replacement reserves'
- Define 'Activated Balancing Energy'
- Consider how the imbalance price will be calculated in GB terms.

Areas to consider

In addition to the standard Workgroup questions, we recommend that the areas below form the basis of a Workgroup's Terms of Reference, supplemented with any further areas specified by the Panel.

- **How to best ensure that the imbalance price always meets the threshold price requirements of Article 55 paragraphs 4(a) and 5(a).**

For example, changes could be made to the current BSC calculations to guarantee compliance; or we could retain the current rules but with an additional post-calculation check against the thresholds and adjust the pre-checked imbalance price values to the threshold levels where necessary to ensure compliance.

- **How to best to determine what these threshold values should be, based on the current and future balancing services within the GB market.**

The thresholds are based on weighted average price for positive or negative activated balancing energy from frequency restoration reserves (FRR) and replacement reserves (RR).

Currently it is unclear which elements of the existing imbalance price calculation fall within FRR and RR definitions. Workgroup therefore needs to map current and future balancing services to FRR, RR or neither.

- **How to define the value of avoided activation required by Article 55 paragraph 4(b) and 5(b).**

For the BSC to be compliance with the Article 55 requirements, a definition is needed for the value of avoided energy. That is, the default value to be calculated when no balancing actions have been taken by NGET in a particular Settlement Period.

- **Should the market index price (MIP) be used to calculate imbalance price.**

Currently the MIP is used when NIV equals zero or when there are no priced actions left in the stack to set the Replacement Price. The MIP is provided by two Market Index Data Providers (MIDPs), EPEX and N2EX. Therefore this value is reflective of the contracted prices, and not the price of balancing the system in a given Settlement Period.

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- **What principles to adopt in compliance with Article 55, paragraph 6.**

Paragraph 6 gives a choice as to which principles to apply, but for BSC purposes we need certainty in each given situation as to how the imbalance price should be calculated.

- **What data should be published on BMRS or elsewhere related to this new calculation of imbalance prices.**

If the Workgroup's preferred solution relies on different data and parameters than that currently used, then the Workgroup will need to consider what changes/additions are needed to the current imbalance price related data published on BMRS.

The table below summarises the areas we believe a Modification Workgroup should consider as part of its assessment of P360:

Areas to Consider
How to best ensure that the imbalance price always meets the threshold price requirements of Article 55 paragraphs 4(a) and 5(a).
How to best to determine what these threshold values should be, based on the current and future balancing services within the GB market.
How to define the value of avoided activation required by Article 55 paragraph 4(b) and 5(b).
Should the MIP be used to calculate imbalance prices.
What principles to adopt in compliance with Article 55, paragraph 6
What data should be published on BMRS or elsewhere related to this new calculation of imbalance prices.
What changes are needed to BSC documents, systems and processes to support P360 and what are the related costs and lead times?
Are there any Alternative Modifications?
Should P360 be progressed as a Self-Governance Modification?
Does P360 better facilitate the Applicable BSC Objectives than the current baseline?

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4 Proposed Progression

Next steps

We recommend that P360 is progressed to a four month Assessment Procedure for consideration by a Workgroup.

Self-Governance

The Proposer is not requesting that P360 is progressed as a Self-Governance Modification on the basis that the Modification introduces new requirements to how the imbalance price will be calculated. These changes are likely to materially impact on competition in the generation, distribution, or supply of electricity, as well as potentially impact commercial activities connected with the generation, distribution, or supply of electricity. As such, the Self-governance Criteria will not be met.

Workgroup membership

We recommend that the P360 Workgroup should comprise of participants who have expertise in the current BSC imbalance price calculation, and the EB GL and specifically interpretation of Article 55.

Timetable

We recommend that P360 undergoes a five month Assessment Procedure, with the Assessment Report being presented to the Panel at its meeting on 8 February 2018. However, if two year derogation is received for the EB GL Article 55 requirements before then, it is understood that the Proposer will withdraw the Modification.

We recommend that the Panel agrees a 15WD Assessment Procedure consultation period.

Proposed Progression Timetable for P360	
Event	Date
Present Initial Written Assessment to Panel	14 Sept 17
Workgroup Meeting	W/B 2 Oct 17
Workgroup Meeting	W/B 30 Oct 17
Workgroup Meeting	W/B 27 Nov 17
Assessment Procedure Consultation	4 Jan 18 – 23 Jan 18
Workgroup Meeting	W/B 29 Jan 18
Present Assessment Report to Panel	8 Feb 18
Report Phase Consultation	19 Feb 18 – 9 Mar 18
Present Draft Modification Report to Panel	12 Apr 18
Issue Final Modification Report to Authority	13 Apr 18



What is the Self-Governance Criteria?

A Modification that, if implemented:

- (a) is unlikely to have a material effect on:
 - (i) existing or future electricity consumers; and
 - (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; and

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

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5 Likely Impacts

Impact on BSC Parties and Party Agents

Party/Party Agent	Potential Impact
Generator	Parties with imbalance positions will experience the impact of a change in imbalance price calculations. The change is not expected to be significant, but depending on the solution parties may want or need to change behaviour impacting on their imbalance positions.
Supplier	
Non Physical Trader	

Impact on Transmission Company

The Transmission Company may be required to change their systems, to ensure that RR and FRR actions are flagged.

- Potentially, but not necessarily, create a new process for calculating the value of avoided activation, which may be carried out by NGET or the SAA.
- Potentially, but not necessarily, require new input data to SAA and BMRS from NGET for avoided costs.

Impact on BSCCo

Area of ELEXON	Potential Impact
Market Analysis	ELEXON will need to make changes to its internal systems, processes and guidance documents.
Settlement Operations	

Impact on BSC Systems and processes

BSC System/Process	Potential Impact
BMRA	Changes may be required to implement this Modification.
SAA	

Impact on BSC Agent/service provider contractual arrangements

BSC Agent/service provider contract	Potential Impact
None anticipated.	

Impact on Code

Code Section	Potential Impact
Section T	Changes may be required to implement this Modification.
Section G	

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Impact on Code	
Code Section	Potential Impact
Section V	
Section X	
Annex X-1	

Impact on Code Subsidiary Documents	
CSD	Potential Impact
BSCP18	Changes may be required to implement this Modification.

Impact on other Configurable Items	
Configurable Item	Potential Impact
None anticipated based on current understanding of solution.	

Impact on Core Industry Documents and other documents	
Document	Potential Impact
Transmission Licence	Changes to the C16 Statement may be required.
Ancillary Services Agreements	No direct impacts identified.
Connection and Use of System Code	
Data Transfer Services Agreement	
Distribution Code	
Distribution Connection and Use of System Agreement	
Grid Code	
Master Registration Agreement	
Supplemental Agreements	
System Operator-Transmission Owner Code	
Use of Interconnector Agreement	

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

We do not believe this Modification will impact the two open SCRs:

- [Electricity Settlement Reform](#)
- [Targeted Charging Review](#)

The Proposer requests that this Modification be exempt from the Significant Code Review process.

Ofgem was notified that this Modification was to be raised on 7 September 2017 and that it was ELEXON and the Proposer's view that this Modification should be a SCR Exempt Modification Proposal.

Impact on Consumers

This Modification will potentially change imbalance prices so will have an indirect effect on consumers to the extent that their electricity suppliers pass on any costs or savings.

Impact on the Environment

No direct impact identified.

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6 Recommendations



We invite the Panel to:

- **AGREE** that P360 progresses to the Assessment Procedure;
- **AGREE** the proposed Assessment Procedure timetable;
- **AGREE** the proposed membership for the P360 Workgroup; and
- **AGREE** the Workgroup's Terms of Reference.

Recommendation

We recommend the Panel submits P360 to a five month Assessment Procedure.

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Appendix 1: Glossary & References

Acronyms

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

Acronym	
Acronym	Definition
BMRS	Balancing Mechanism Reporting System (<i>BSC System</i>)
BSC	Balancing and Settlement (<i>Industry Code</i>)
BSCP	Balancing and Settlement Procedure
EB GL	European Network Code on Electricity Balancing (<i>Industry Code</i>)
IWA	Initial Written Assessment
MIDP	Market Index Data Providers
MIP	Market Index Price
PAR	Price Average Reference
SAA	Settlement Administration Agent (<i>BSC System</i>)
SPAR	System Price Analysis Report

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
5	P360 page on the ELEXON website	https://www.elexon.co.uk/mod-proposal/p360/
7	P344 page on the ELEXON website	https://www.elexon.co.uk/mod-proposal/p344/