

PUBLIC

P362 'Introducing BSC arrangements to facilitate an electricity market sandbox'

Business Requirements



Design and Delivery
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V1.2

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CONTENTS

Document History	2
Approvals	2
1. Introduction	5
1.1 Purpose of document.....	5
1.2 Background.....	5
1.2.1 What is a Regulatory Sandbox?	5
1.2.2 P362 Overview	5
1.3 References.....	6
2. Current State	7
2.1 Problem Statement.....	7
3. Business Vision	8
3.1 Scope	8
3.2 Vision	8
3.3 Alignment with ELEXON's strategic priorities	8
3.3.1 Business goals/outcomes	8
3.3.2 Benefits	8
3.3.3 Dis-benefits.....	9
4. Architecture Fit.....	9
5. Future State.....	10
6. Business Requirements	11

1. INTRODUCTION

1.1 Purpose of document

This document contains ELEXON's current Business Requirements for Balancing and Settlement Code (BSC) Modification [P362 'Introducing BSC arrangements to facilitate an electricity market sandbox'](#).

This document forms the basis on which:

- i) ELEXON agrees the Business Requirements for P362;
- ii) ELEXON communicates the Business Requirements internally and to the BSC Service Providers [if required] for High-level Impact Assessment;
- iii) ELEXON maintains any changes to the Business Requirements;
- iv) ELEXON's Design Authority approves the Solution Requirements, where required (for design, testing, implementation and post-implementation review); and
- v) ELEXON communicates the Business Requirements to industry via the Modification Assessment reports.

1.2 Background

1.2.1 What is a Regulatory Sandbox?

A sandbox enables limited pre-competitive trials of innovative products or services in a live market environment, which cannot currently be easily accommodated under the BSC (including code subsidiary documents) without a Modification or derogation. It is open to all BSC Parties and non-parties with innovative ideas. Applicants will need to accede to the BSC in order for their derogation to have effect.

The key focus of a regulatory sandbox is that it allows real life innovative experiments. Thus, enabling innovators to gather information about customer behaviour and whole system impacts while operating with appropriate safeguards. This is different to a software/systems sandbox, which is usually a replica of a live environment which allows testing without impacting live systems.

In practice, existing regulatory sandboxes exist as processes to obtain advice, access derogations or receive comfort. Ofgem became the first energy regulator to start operating a regulatory sandbox in February 2017.

The Financial Conduct Authority (FCA) has found that their sandbox has reduced the time taken for innovative products to reach the market, increased the availability of funding for innovators and improved their own understanding of new products and how to regulate for the future.

While ELEXON is not a regulator, the BSC can pose similar challenges to regulations, and ELEXON/BSC Parties can derive the same benefits from operating a sandbox.

1.2.2 P362 Overview

The energy industry is changing rapidly. ELEXON is increasingly approached by companies with innovative ideas such as peer to peer trading, local energy schemes and electric vehicle (EV) charging services who are finding that the BSC can constitute a barrier. Regulators are using regulatory sandboxes to support innovation, remove barriers and inform future developments. Ofgem launched a sandbox earlier this year.

Ofgem's remit for its regulatory sandbox does not extend to the BSC (or indeed other industry codes such as the Master Registration Agreement, the Grid Code or the Distribution Connection Use of System Agreement etc.). This means that the BSC (and other industry codes) can continue to pose a barrier to innovative businesses. ELEXON

already works with innovative companies to help them understand, and participate within, the arrangements; however, some barriers in the BSC are currently intractable. In its latest sandbox application round on 2 October 2017, Ofgem called for other industry bodies to adopt sandbox approaches to removing barriers.

The Panel, at its meeting on 12 October 2017, noted that the BSC does not have an electricity market sandbox or derogation process (Panel Paper 271/04). ELEXON believes the absence of an electricity market sandbox and process hinders the development and trialling of innovations within the electricity market. The Panel noted that ELEXON would request the Panel raise a Modification Proposal to introduce a sandbox and derogation process into the BSC at its November 2017 meeting. The Panel agreed with ELEXON, and raised P362.

1.3 References

Date	Version	Author	Title
Various	Various	ELEXON	See the ELEXON website for a full list of the change documentation for P362 https://www.elexon.co.uk/mod-proposal/p362
12 October 2017	v1.0	ELEXON	Paper presented to Panel on an electricity market sandbox (Paper 271/04) https://www.elexon.co.uk/wp-content/uploads/2016/08/11_271_04_Electricity-Market-Sandbox_PUBLIC-1.pdf
6 January 2017	v24.0	ELEXON	BSC Section B: The Panel https://www.elexon.co.uk/wp-content/uploads/2017/01/Section_B_v24.0.pdf
2 November 2017	v21.0	ELEXON	BSC Section H: General https://www.elexon.co.uk/wp-content/uploads/2017/11/Section_H_v21.0.pdf

2. CURRENT STATE

The BSC currently does not enable pre-competitive or proof of concept testing for innovative products/business models in the live BSC Settlement environment.

Currently, the only option open to participants, looking to test new ways of doing things under the BSC, is to raise a BSC Modification or Change Proposal (with the exception of the limited derogation options already facilitated within the BSC arrangements, such as the Metering Dispensations and non-standard BM Unit applications processes).

Progressing Modifications/Change Proposals would likely be more resource intensive for both industry and ELEXON given the prescribed BSC Change process and associated governance. The BSC Change Process was not designed for the trialling of new products or business ideas. These governance constraints limit the ability to trial in the live environment and evaluate the benefits that innovative projects may deliver. For the avoidance of doubt, the issue is not the current BSC Change process, which should remain unchanged and unaffected by this Modification.

2.1 Problem Statement

The current BSC arrangements can pose a barrier to innovative business ideas. The BSC rules are necessary for the robust operation of balancing and Settlement across the Total System. In order for the BSC to be enforced fairly to all Parties, all Parties are required to comply with the rules.

However, small trials/projects with little or no impact on Settlement might find the full BSC uneconomic or excessively burdensome to comply with for a proof of concept trial.

3. BUSINESS VISION

3.1 Scope

The BSC sandbox solution applies to the BSC and its subsidiary documents. The solution will be a new process and therefore a BSC document only change. However, sandbox applications may impact BSC central systems or other industry participant systems or processes. Each application will be subject to an impact assessment to identify these impacts and assess any changes that will be required, subject to the sandbox process.

3.2 Vision

This modification aligns with ELEXON's new vision *'By 2025 we will create the leading provider of central services to the GB energy sector, built on the best practice from the ELEXON service culture for the benefit of consumers and market participants'*.

3.3 Alignment with ELEXON's strategic priorities

This modification aligns with ELEXON's strategic priority of 'Improvement: Enhance and evolve our services to support industry changes and development of the energy market'.

3.3.1 Business goals/outcomes

Ref. no	Goal
O1	Agreed principles for Electricity Market Sandbox with workgroup
O2	Legal text to be incorporated into the BSC
O3	ELEXON to have an operational 'Sandbox Service' in place including relevant guidance documents for the customer/stakeholders of the processes

3.3.2 Benefits

Ref. no	Benefit
B1	Increased competition in the electricity market
B2	ELEXON not to pose an unnecessary barrier to innovative business ideas within the electricity market
B3	Reduced time to market/failure for innovative projects
B4	Increased access to funding for innovative projects
B5	Insight into electricity market developments and direction of travel
B6	Avoided costs. Inefficiencies of raising changes to the BSC to trial innovation where (cost of raising, processing change) and a change that doesn't deliver a business benefit from the

	innovation
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3.3.3 Dis-benefits

Ref. no	Dis-Benefit
D1	Costs of operating the process
D2	Potential increased risk to Settlement

4. ARCHITECTURE FIT

No system impact.

5. FUTURE STATE

The Electricity Market Sandbox would be operated in partnership with Ofgem to provide specialist advice on the BSC, and a route to apply to the Panel for derogation if necessary. The process would include attempting to find routes to market that do not require any derogation. Applications would be managed by Ofgem as an evolution of their existing sandbox process with applications being 'funnelled/filtered' by Ofgem first. Applications are anticipated to come from innovative organisations, outlining their new products, the benefits they would bring to the electricity system and to consumers, likely timescales to market and the nature and scale of any barriers to entry. Ofgem would assess the applications against initial criteria before passing relevant applications on to ELEXON for further consideration. The criteria for secondary assessment by Panel when making a recommendation to Ofgem on derogation will be maintained in a document subsidiary to the Code.

6. BUSINESS REQUIREMENTS

The following table lists the business requirements for a successful solution, which would be formed from a combination of technology, process and education activities.

They are prioritised as follows:

'M' = Must have (no point having a solution without this)

'S' = Should have (if not delivered then a workaround must be in place)

'C' = Could have

'W' = Won't have this time

Ref. no	Business Requirement	Category	Priority
1. ELEXON will establish a sandbox service			
1.1	ELEXON will create and maintain a sandbox register that will contain a history of each application	Operational	S
1.2	ELEXON should be able to set a cap on the amount spent on the sandbox service.	Operational	S
1.3	The Panel should be able to recommend a cap on amount spent of the sandbox service	Operational	S
1.4	ELEXON should include in its business plan details of costs of the sandbox service.	Operational	S
1.5	ELEXON will not provide any legal advice to the applicant and legal disclaimers will be provided in the code and operational documents	Code/Operational	M
1.6	ELEXON will act as a critical friend for the Applicant, consistent with existing services such as the OSM service.	Operational	S
1.7	The Panel may set a charge for each application	Code	C
1.8	ELEXON will establish and maintain guidance on: <ul style="list-style-type: none">• Sandbox criteria;• Roles and responsibilities;• BSC provisions that can and cannot be derogated• How ELEXON will process applications from Ofgem to achieve fairness and consistency• The process, including timescales• Reporting expectations for applicants	Operational	S

Ref. no	Business Requirement	Category	Priority
	<ul style="list-style-type: none"> Reporting expectations for ELEXON and the Panel What will be expected in applicant's application pack 		
1.9	The Code provisions enabling derogations to be granted must be covered by the existing Code indemnity provisions	Code	M
1.10	BSCCo must be indemnified from damage claims in connection to the activities of a derogated Party	Code	M
1.11	ELEXON should be able to process more than one application at a time, subject to any constraints imposed by spending caps	Operational	S
1.12	ELEXON will allow multiple derogations for different Parties concurrently	Code	M
1.13	ELEXON will provide Ofgem requested information to support applications	Operational	M
1.14	<p>ELEXON will deliver the following products, with accompanying working practices, to support the sandbox service:</p> <ul style="list-style-type: none"> Settlement Risk assessment Party Impact assessment Panel pack Panel recommendation report for Ofgem 	Operational	M
1.15	The BSC must contain provisions enabling the Authority to grant derogation from the BSC to individual Parties on the basis of a recommendation from the Panel	Code	M
1.16	No BSC Party other than the derogated Party can make use of a derogation	Code	M
2. Derogations shall have a trial period – the continuous period during which the idea is trialled			
2.1	Trial periods shall not be longer than a maximum period of [2] years from the effective date of the derogation	Code	M
2.2	The trial period should be the shortest period needed to test the idea	Code	S
2.3	The Authority should be able to grant extensions to the trial period, on recommendation by the Panel, for exceptional circumstances but cannot exceed the maximum trial period	Code	S
2.4	ELEXON will produce and maintain guidance on exceptional circumstances for trial extensions	Subsidiary	S

Ref. no	Business Requirement	Category	Priority
2.5	Where applicable, any settlement reconciliations shall not be considered as part of the trial period.	Subsidiary	M
2.6	Where applicable, settlement reconciliation must account for derogations in place on the settlement day in question	Subsidiary	M
2.7	The trial period begins when the derogation enters into force and ends in accordance with the derogation terms	Code	M
2.8	Extensions can only extend the trial period and not the scale of operation, commercial activity or any other aspect of the derogation	Code	M
3. Derogations shall have a transition period – the continuous period during which the party exits the sandbox			
3.1	Transition periods shall be the period detailed in the applicants' transition plan	Code	M
3.2	The transition period begins when the trial period ends regardless of whether due to project success or failure.	Code	M
3.3	Extensions to the transition period can only be granted for exceptional circumstances and must satisfy the following criteria: <ul style="list-style-type: none"> • Project outcomes have been achieved; • An associated BSC Modification to put enduring arrangements in place was raised during the trial period and is not yet implemented, rejected or withdrawn; • Must not adversely be impacting Settlement or Parties 	Code/Subsidiary	M
3.4	Extensions can only extend the transition period and not the scale of operation, commercial activity or any other aspect of the derogation	Code	M
3.5	Where an extension would lead to unforeseen material costs for BSC Parties, as determined by ELEXON or the Panel, the applicant should cover these costs or else an extension shouldn't be granted. These costs should be notified and agreed by the applicant in advance of the extension.	Code	S
3.6	Rejection of BSC Modifications associated with the derogation will trigger the exit plan. The transition period can be extended to cover this planned exit, if required.	Code/ subsidiary	M
3.7	An extension of a transition period must not exceed 3 years	Code	M

Ref. no	Business Requirement	Category	Priority
	from the effective date of the derogation		
3.8	The total derogation period shall be the continuous period covering the trial and transition period	Code	M
4. ELEXON will receive applications from Ofgem			
4.1	Applications will have been deemed to have met the Ofgem eligibility criteria	Operational	M
4.2	Applications will be published for transparency (save for any commercially sensitive and data protection reasons)	Code / Operational	M
4.3	The Applicant is responsible for its own compliance, for example with other codes and licences. It is not the responsibility of ELEXON or the Panel.	Code	M
4.4	Initial applications received by ELEXON via Ofgem must include: <ul style="list-style-type: none"> • Self-declaration of compliance - signed by a director of the applicant must be provided to ELEXON for consideration • An idea of the barriers faced and how derogation would help the business function • Details of the proposed product or service to be trialled • Estimated timelines for delivery and requested derogation 	Operational	M
5. ELEXON will assess applications			
5.1	ELEXON will carry out a risk and impact assessment for each application to satisfy itself that the impacts and risks have been identified for consideration by the Panel	Code	M
5.2	In addition to any internal assessment, ELEXON shall consult publically to identify potential impacts that an application may have on the BSC - an impact assessment	Code	M
5.3	ELEXON must consider all responses to an impact assessment	Code	M
5.4	ELEXON shall publish responses to its impact assessment on the BSC Website	Code	M
5.5	ELEXON must present a summary of the impact assessment to the Panel as part of the Panel pack	Code	M
5.6	ELEXON must re-consult on the impacts if the application	Code	M

Ref. no	Business Requirement	Category	Priority
	materially changes		
5.7	ELEXON must have controls in place to review and assess applications	Operational	M
5.8	ELEXON will submit applications to the Panel once they have assessed the application	Code	M
5.9	ELEXON may charge an applicant for costs of operating its derogation, including compliance costs. These costs must be agreed with the applicant and included in the report to the Panel	Code	M
6. Applications to enter the BSC sandbox must satisfy the BSC eligibility criteria			
6.1	The idea must better facilitate the Applicable BSC Objectives. This is the primary BSC eligibility criteria.	Code	M
6.2	The primary BSC eligibility criteria shall be included in the BSC	Code	M
6.3	Secondary BSC eligibility criteria will be included in a document subsidiary to the code containing criteria and directive guidance. This document will govern how the Panel assesses applications.	Code/Subsidiary	M
6.4	Both BSC Parties and non-Parties will be eligible to apply.	Code	M
6.5	Only BSC Parties can be derogated as part of the BSC sandbox.	Code	M
6.6a	Proposed Solution: BSC Companies and the Transmission Company shall not be able to apply for, or be granted derogation.	Code	M
6.6b	Alternative Solution: BSC Companies shall not be able to apply for, or be granted derogation (and Transmission Company shall be able to).	Code	M
6.7	Any section of the BSC can be derogated except for: <ul style="list-style-type: none"> • EMR provisions; • European Law provisions, including European Network Code Provisions; • The sandbox derogation provisions. 	Code	M
7. The Panel will recommend derogation decisions to Ofgem using its discretion on a case by case basis			
7.1	The Panel should be able to prioritise other Panel business over	Code	S

Ref. no	Business Requirement	Category	Priority
	derogations		
7.2	The Panel will hear applications in the order in which they are ready to go to Panel for recommendation	Code	S
7.3	The Panel must be satisfied that the eligibility criteria have been met prior to recommending a derogation to Ofgem	Code	M
7.4	Not used.	-	-
7.5	The Panel must consider the items presented by ELEXON	Code	M
7.6	The Panel can recommend conditional derogations. Conditions could include (but not limited to): <ul style="list-style-type: none"> • Time limit (length from decision or from start date) • Geographical scope limit • Limit on total number of MSIDs 	Code/subsidiary	M
7.7	The Panel must make unbiased recommendations and declare any conflict of interests (as they would do for Modifications)	Code	M
7.8	The Panel shall vote using existing general voting rules (in BSC Section B).	Code	M
7.9	Ad-hoc Panel meetings can be convened at the agreement of the Panel Secretary	Code	S
7.10	The Panel may defer making a recommendation if they require further information to inform their decision (as they can for Modifications). The Panel must specify what information it requires.	Code	M
7.11	Derogations cannot be varied (other than by time extension). If another derogation is required for a newly identified barrier there must be a new application	Code	M
7.12	The Panel must receive an application for derogation including; <ul style="list-style-type: none"> • A required trial and transition period, along with a justification for the length of the periods from the applicant and ELEXON • Analysis of whether the application meets the BSC eligibility criteria • The scope of the derogation • A risk assessment • An impact assessment • A transition plan – must include details of how they plan to undertake a planned and un-planned exit of the 	Code / Subsidiary	M

Ref. no	Business Requirement	Category	Priority
	<p>sandbox. This should include details of the timeline, key activities, success criteria, expected outcomes, failure criteria, exit criteria</p> <ul style="list-style-type: none"> A timetable that outlines what the applicant will report on and when 		
7.13	<p>ELEXON must provide the Panel with key items for consideration in making a recommendation to Ofgem as part of a Panel pack. These items include:</p> <ul style="list-style-type: none"> Summary of the application; Impacts, including any from an industry impact assessment; Key risks, including compliance considerations and awareness of any potential issues outside BSC, such as non-compliance with other code; Whether a similar application has been made before. 	Code / Subsidiary	M
7.14	<p>The Panel must provide Ofgem with a report that sets out in relation to the application the following:</p> <ul style="list-style-type: none"> The Panel's recommendation on whether to derogate against the BSC eligibility criteria; The recommended BSC sections to derogate if the derogation is granted; The recommended trial and transitional period; Other items as required in the document subsidiary to the code 	Code	M
7.15	The report to Ofgem must be provided within [7] Working Days after the relevant Panel meeting	Code	M
7.16	A copy of the report to Ofgem should be sent to Parties and interested third parties (save for any redactions for confidentiality reasons), the Panel and the applicant	Code	M
7.17	Ofgem may direct the Panel and BSCCo that an application has been withdrawn prior to the derogation start date	Code	M
8. The Panel will monitor derogations			
8.1	The Panel can recommend amendments to the trial or transition period or to remove derogations to Ofgem	Code	S
8.2	ELEXON will publish guidance on what it expects applicants to publish and report on – this could be a cross-code document	Operational	S
8.3	Applicants must provide information and reports in line with the	Code	M

Ref. no	Business Requirement	Category	Priority
	agreed reporting timetable		
8.4	<p>Applicants must report on whether the project:</p> <ul style="list-style-type: none"> • Is better than the current arrangements (the baseline) as assessed against the Applicable BSC Objectives; • Is delivering the expected outcomes; • Is meeting the success criteria; • Any issues identified, including impacts on Settlement; • Any lessons learnt related to Settlement or the existing arrangements; • Requires a Modification/Change Proposal and if so, a draft Modification/Change Proposal Proposal Form. 	Code / subsidiary	M
8.5	An applicant is expected to raise a Modification/Change Proposal if its project has proven a success	Operational	S
8.6	<p>Applicants' reporting will be:</p> <ul style="list-style-type: none"> • published on the BSC Website – this could be a cross-code report • Provided to Panel members • Provided to Ofgem 	Code / Operational	M
8.7	ELEXON shall bring to the Panel's attention any information it believes could impact an existing derogation decision	Subsidiary / Operational	M
8.8	Applicants can trigger their transition plan earlier than planned in accordance with the details of the plan and must adhere to its transition plan	Code / Operational	M
8.9	The Panel may recommend to Ofgem that derogations are removed in accordance with the eligibility criteria. A subsequent report to Ofgem will be provided, detailing the reasons in accordance with the items required in the Panel pack.	Code	M
8.10	<p>Within [7] Working Days after the relevant Panel meeting, the report referenced in 8.9 must be sent to:</p> <ul style="list-style-type: none"> • Ofgem; • Parties and interested third parties (save for any redactions for confidentiality reasons); • The Panel; and • The applicant 	Code	M
9. The Panel will report to Ofgem			
9.1	ELEXON shall prepare a lessons learnt report for Panel approval from time to time and at least annually	Code	M

Ref. no	Business Requirement	Category	Priority
9.2	ELEXON shall submit the approved lessons learnt report to Ofgem – cross code discussions may influence timings and content	Code	M
9.3	ELEXON shall publish the lessons learnt report on the ELEXON Website	Code	M
9.4	The lessons learnt report shall include details of the costs and effort incurred by BSCCo and any other details as requested by the Panel	Code	M
10. The Panel will re-consider derogations			
10.1	Should Ofgem require that the Panel reconsider a derogation application, ELEXON will update and present a revised Panel pack for consideration by the Panel	Code	M
10.2	The Panel will re-evaluate applications sent back by Ofgem	Code	M
10.3	The Panel will recommend to Ofgem as to whether to approve or reject the derogation taking account of the details provided by Ofgem in the send back	Code	M
10.4	The Panel will have regard for the circumstances, urgency and request of the applicant in choosing when to hear the revised derogation, similarly to the BSC Modifications Urgency provisions.	Code	M