

## P451 'Updating BSC Black Start provisions and compensation arrangements to align with NGESO's new approach to System Restoration'

P451 seeks to facilitate the implementation of NGESO's new approach to Black Start, termed System Restoration. In doing so, it proposes to update all BSC references to "Black Start" to "System Restoration", and enable contracted Restoration Service Providers who are non-BSC parties to claim BSC Black Start compensation.



Elexon recommends P451 is progressed to the Assessment Procedure for an assessment by a Workgroup



Elexon does consider it likely that P451 will impact the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC



This Modification will need to be progressed as part of a package of cross code changes. This Modification is required as a consequence of GC0156

This Modification is expected to impact:

- BSCCo
- Trading Parties
- System Restoration Service Providers

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## About This Document



Not sure where to start? We suggest reading the following sections:

- Have 5 mins? Read section 1
- Have 15 mins? Read sections 1, 4, 5 and 6
- Have 30 mins? Read all sections
- Have longer? Read all sections and the annexes and attachments
- *You can find the definitions of the terms and acronyms used in this document in the [BSC Glossary](#)*

This document is an Initial Written Assessment (IWA), which Elexon will present to the Panel on 09 March 2023. The Panel will consider the recommendations and agree how to progress P451.

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 P451 Proposal Form.

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# 1 Summary

## What is the issue?

The National Grid Electricity System Operator (NGESO) is currently progressing [GC0156 'Facilitating the implementation of the Electricity System Restoration Standard'](#). GC0156 facilitates the implementation of NGESO's new approach to Black Start called System Restoration. It proposes to update all references to Black Start to System Restoration in the Grid Code. Unless a change is made to update the BSC, the BSC's Black Start processes will not align with the Grid Code if GC0156 is approved by Ofgem. Furthermore, NGESO's new approach will allow Distributed Energy Resources (DERs) to be used as System Restoration Service Providers. These providers will be connected to a Distribution System and operated by BSC or non-BSC Parties. Currently, non-BSC parties cannot claim Black Start compensation.

## What is the proposed solution?

To update all BSC references to "Black Start" to "System Restoration" and to amend [BSC Section G 'Contingencies'](#) to allow non-BSC parties who have a contract with NGESO to provide System Restoration services to claim BSC Black Start compensation. The proposed solution is for Elexon to recoup claims payments from BSC Parties as part of their Black Start Reallocation Proportion.

## Impacts and costs

We expect this Modification to impact BSCCo, Trading Parties and System Restoration Service Providers, but exact costs and further impacts on market participants will be determined as part of the Assessment Procedure.

## Implementation

The Proposer and Elexon agree that it is important to try to align the implementation of P451 with GC0156 and other related Connection and Use of System Code (CUSC) Modifications to update Black start references and terminology at the same time. This is to ensure alignment across rules that govern the electricity market. Elexon, the P451 Workgroup and Grid Code representatives will work together during assessment of this Modification to ensure an aligned approach to implementation. The Proposer would like this Modification implemented at the earliest opportunity.

## Recommendation

The Panel is invited to agree that P451 is submitted to the Assessment Phase for assessment by a Workgroup.

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### What is the issue?

In April 2021, the Department for Business, Energy and Industrial Strategy (BEIS)<sup>1</sup> issued a [policy statement](#) announcing its intention to introduce a legally binding target for the restoration of electricity supplies in the event of a National Electricity Transmission system (NETS) failure<sup>2</sup>. This new policy is called the Electricity System Restoration Standard (ESRS).

The ESRS will require the NGENSO to have the necessary restoration services and tools in place to restore 60% of regional electricity demand within 24 hours and 100% of national electricity demand within 5 days. ESNZ requires NGENSO to be compliant with the ESRS by 31 December 2026.

NGESO are currently progressing [GC0156 'Facilitating the implementation of the Electricity System Restoration Standard'](#) alongside other Grid Code Modifications (e.g. [GC0148 'Implementation of EU Emergency and Restoration Code Phase II'](#)) to put the necessary measures, tools and procedures in place to satisfy the ESRS.

NGESO raised GC0156 in February 2022 as a Standard Governance modification with assessment by a Workgroup. It was initially consulted on between 21 November 2022 and 21 December 2022 and is currently recommended for implementation 10 Working Days (WD) after Authority approval. GC0156's proposed solution has impacts on the BSC, which P451 seeks to address. These are discussed below.

### References to Black Start

GC0156 proposes to replace all Grid Code references to "Black Start" with "System Restoration" in line with the ESNZ's policy and the Transmission Licence<sup>3</sup>. To ensure consistency across industry codes, P451 will need to update both BSC references to Grid Code defined terms and the BSC's own defined terms that include the words "Black Start". It will also need to update cross references to relevant parts of the Grid Code that have been renumbered by the GC0156 legal text.

### BSC compensation arrangements

Whilst there is already an obligation under the Grid code for the NETS to incorporate Restoration Capability, the introduction of the ESRS has led NGENSO to re-evaluate its current approach.

If the NETS fails and there is a Total or Partial Shutdown, NGENSO can call upon contracted Black Start providers to re-energise parts of the Transmission System to gradually restore supply. The key to providing a Black Start service is the ability to start up without external supplies (i.e. power taken directly from the transmission and/or distribution networks).

<sup>1</sup> Now Department for Energy Security and Net Zero (ESNZ)

<sup>2</sup> Potential causes include physical damage to a network in the event of an extreme weather event, inadvertent configuration of the system due to malfunction or human error, or a malicious attack such as a cyber or terrorist attack.

<sup>3</sup> To facilitate the introduction of an ESRS and further align the regulatory framework for procurement of restoration services with that of balancing services, Ofgem made [modifications](#) to the Electricity Transmission Licence in October 2021.

### What is Black Start?

Black Start is the procedure to recover from a total or partial shutdown of the GB Transmission System, which has caused an extensive loss of supplies. This entails isolated power stations being started individually and gradually being reconnected to each other to form an interconnected system again.

This has traditionally been provided by (carbon intensive) gas or coal based power stations that are now reducing in numbers as the industry heads towards Net Zero.

To satisfy the new standard, NGENSO need to procure new types of Black Start (soon to be System Restoration) Service Providers. For example, the [Distributed ReStart](#) project demonstrated how distributed energy resources (DERs) such as solar, wind and hydro, can be used to restore power to the transmission network in the event of a NETS failure. DERs (e.g., windfarms, solar farms and battery energy storage systems<sup>4</sup>) are expected to be used as Restoration Service Providers from 2025.

GC0156 built on the Distributed ReStart project via its Market and Funding Mechanisms sub group. The sub group recommended a change to the BSC's rules on who can claim Black Start compensation.

The BSC's existing Black Start compensation applies to any BSC Party who is the Lead party for a BM Unit that is given a Black Start instruction by NGENSO under the Grid Code. When the existing rules were written, the expectation was that it would be transmission connected generators who receive the relevant Grid Code Black Start instructions and therefore claim the BSC compensation. The expectation was also that these generators would be BSC Parties.

However, the DERs that will be providing new System Restoration services will be connected to a Distribution System, registered within Suppliers' or Virtual Lead Parties' BM Units, and operated by BSC or non-BSC Parties.

Whilst the BSC does not exclude Suppliers from claiming Black Start compensation as Lead Parties, in the case of DERs, the Supplier would not be the entity that is given the relevant instruction, operates the relevant asset, or incurs the relevant costs. There is currently no alternative compensation mechanism that would allow this type of party to make such a claim.

## Background

### Issue 100 'Assessing BSC Black Start processes to support NGENSO's Distributed ReStart project'

NGESO raised Issue [100 'Assessing BSC Black Start processes to support NGENSO's Distributed ReStart project'](#) in April 2022. The original purpose of Issue 100 was to consider whether the BSC should be amended to allow providers of new Distribution Restoration services to claim BSC Black Start compensation.

It was originally intended to support progression of Grid Code Modification GC0148, which NGENSO raised in July 2020. However, the GC0156 Workgroup concluded in May 2022 (after its own consultation and NGENSO's raising of Issue 100) that Distributed ReStart requirements should instead be considered as part of GC0156. This was on the basis that it sat better within the framework of ESRS and was not an obligation of the EU Emergency and Restoration Code.

In July 2022, NGENSO asked Elexon to put Issue 100 on hold pending the outcome of the [GC0156 Markets and Funding Mechanisms subgroup](#)<sup>5</sup>. The subgroup recommended that a Modification should be raised to expand the BSC's compensation to contracted DERs. They

<sup>4</sup> NGENSO's live trials demonstrating Black Start from DERs can be found [here](#) and [here](#)

<sup>5</sup> See Annex 4 of the GC0156 Workgroup Consultation Report



### What is a Black Start Instruction?

For the purposes of BSC Section G3.3, a "black start instruction" is:

(a) in relation to any Settlement Period(s) which fall within both a Black Start Period and a Market Suspension Period, an instruction given by the NETSO pursuant to OC9.4.7.4, BC2.7 or BC2.9 of the Grid Code; or

(b) in relation to any Settlement Period(s) which fall within a Black Start Period but not within a Market Suspension Period, an instruction given by the NETSO pursuant to BC2.9.1.2(e)(i) of the Grid Code.

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did not recommend expanding this to other non-contracted DERs, which was originally proposed by Issue 100. As the original scope of Issue 100 is no longer relevant and has been superseded by P451, NGENSO has agreed that Issue 100 can be closed. The Issue report will be tabled at the BSC Panel meeting in April 2023.

## Desired outcomes

The desired outcome is for the BSC to remain robust whilst adopting changes to align with (and facilitate) the implementation of NGENSO's new System Restoration approach, including allowing contracted System Restoration Service Providers, who may or may not be BSC Parties, to claim BSC Black Start compensation.

NGESO's new approach is driven, in part, by the need to comply with the ESRS by 31 December 2026. P451 is informed by GC0156 which currently has a proposed implementation date of 10 WD following Authority approval. NGENSO also plan to raise a change to amend Black Start references in the CUSC. The desire is for the implementation dates of these changes to align so that the end-to-end Black Start process remains clear and effective across industry Codes.



**Proposed solution**

**References to Black Start**

P451 proposes to amend all references to “Black Start” to “System Restoration”. This includes BSC references to Grid Code defined terms and the BSC’s own defined terms that include the words “Black Start” (37 instances in Section G, four instances in Section T and one instance in Section X-1).

The table below shows the terms in the BSC that will need to be amended.

<b>Grid Code defined terms in the BSC</b>	<b>BSC defined terms</b>
Black Start	Black Start Period
Black Start Capability	Black start instruction
Black Start Station	Black start compensation
	Black start compensation amount
	Black start compensation amount volume
	Black Start Reallocation Proportion

[Section 6](#) lists all of the BSC Code documents that are impacted by this Modification.

**BSC Compensation arrangements**

P451 proposes to expand the BSC’s existing Black Start compensation arrangements in BSC Section G to include non-BSC Parties who have contracts with NGENSO to provide Anchor and Top up Restoration Services (collectively ‘Restoration Services’) under the Grid Code, whether or not they are connected to:

- The Transmission System, thereby providing Restoration Services through an invoked Local Joint Restoration Plan; or
- A Distribution System, thereby providing Restoration Services through an invoked Distribution Restoration Zone Plan<sup>6</sup>.

Under the draft GC0156 legal text, Anchor Restoration Service Providers have the capability to start up from shutdown and energise a part of the system (either transmission or distribution), while Top Up Restoration Service Providers have the capability to start up from shutdown and synchronise to the system (either transmission or distribution). These terms replace the previous Grid Code concepts of Black Start Service Provider and Black Start Capability.

**High-level guidance updates**

NGESO issues a notification to Grid Code Users that there is a Total or Partial Shutdown and that it intends to implement a Black Start. This triggers the BSC process for determining the start of the Black Start Period and whether there is a Market Suspension

<sup>6</sup> The Distributed ReStart project proposed the creation of distribution restoration zones as a means for facilitating the restoration process with distribution connected assets. GC0156 seeks to amend the Grid Code to facilitate this.

**How is the black start compensation amount calculated?**

The Lead Party’s black start compensation amount is determined as its Avoidable Costs minus the imbalance charges received (or the reduction in the imbalance charges paid) for its black start compensation volume.

Avoidable Costs are the amount of net costs of operating the BM Unit which would not have been incurred but for the black start instruction. The Lead Party’s Avoidable Costs are determined by the BSC Panel.

The black start compensation volume is the net change in the BM Unit’s Exports or Imports resulting from the Lead Party’s compliance with the black start instruction.

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Period. Aside from the above terminology changes and the expansion of the BSC's compensation arrangements to non-BSC Parties, GC0156 (and therefore P451) does not propose any changes to the actual BSC Black Start processes for deciding whether and when to suspend and resume normal BSC market operations.

GC0156 does propose changes to the Grid Code's System Restoration process (e.g. by introducing Distribution Restoration Zones). However, with the exception of some high-level guidance in [BSC Procedure \(BSCP\) 201 'Black Start and Fuel Security Contingency Provisions and Claims Processes'](#), which P451 proposes to update, the BSC is not concerned with the details of the Grid Code's System Restoration process.

### **Cross references to the Grid code**

P451 proposes to update cross references to relevant parts of the Grid Code that have been renumbered by the GC0156 legal text.

BSC Section G3 and BSCP201 make references to the current Grid Code OC9.4.7.9 which has content allowing NGENSO to make a determination under the Grid Code of when the Total System has returned to normal operation. This triggers the BSC process for determining the end of the Black Start Period (and of any "Market Suspension Period"). This clause OC9.4.7.9 is to due be renumbered to OC9.4.7.14 in the Grid Code if GC0156 is approved.

### **Benefits**

It is the Proposer's view that P451 will facilitate the implementation of NGENSO's new approach to System Restoration and ensure that the BSC remains aligned with the necessary changes to the Grid Code and CUSC.

[Section 6](#) expands on the intended benefits of P451, including the facilitation of a faster, more reliable, and less carbon intensive System Restoration process in the event of a NETS failure.



## Applicable BSC Objectives

The Proposer believes that this Modification will better facilitate Applicable BSC Objectives (a), (c) and (d).

### **Objective (a) - The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence**

The Proposer believes that P451 will facilitate the implementation of NGENO's new approach to System Restoration set out in GC0156. This new approach will enable NGENO to meet their new Transmission Licence obligation to satisfy the ESRS that comes into full effect on 31 December 2026.

### **Objective (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**

The Proposer believes that the new System Restoration/Distributed ReStart approach that P451 facilitates will enable a wider range of potential service providers to tender for System Restoration Services.

### **Objective (d) - Promoting efficiency in the implementation of the balancing and settlement arrangements**

The Proposer believes that P451 promotes efficiency in the implementation of balancing and settlement arrangements because without it, the BSC's Black Start processes and terminology will become outdated and misaligned with other industry codes such as the Grid Code and CUSC.

## Implementation approach

The Proposer and Elexon agree that it is important to align the implementation of P451 with GC0156 and other related CUSC Modifications that are yet to be raised to update Black Start references and terminology.

GC0156 is currently at the Workgroup Report phase and is recommended for implementation 10 Working Days (WD) after Authority approval. Once the report has been published, it will enter the Code Administrator Consultation phase. It is targeted for delivery to the Authority by August 2023.

Elexon responded to the GC0156 Workgroup Consultation on 20 December 2022. [The response](#) outlined Elexon's concern with the proposed 10 WD implementation approach for GC0156. This approach creates risks in the operation of the end-to-end Black Start process as it is not possible for the BSC changes proposed by P451 to be progressed and implemented by Q3 2023 (which we understand is NGENO's target implementation point for GC0156). This was also fed back to the Proposer as part of Elexon's critical friend review of the P451 Proposal.

Elexon will need to work with Proposers of the Grid Code and CUSC Modifications and the P451 Workgroup to understand and work through dependencies and align implementation dates, noting the time required for Elexon to implement potential BSC system changes arising from P451 (the timescales for which will become clear in the Assessment period



### **What are the Applicable BSC Objectives?**

(a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence

(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System

(c) Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity

(d) Promoting efficiency in the implementation of the balancing and settlement arrangements

(e) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency [for the Co-operation of Energy Regulators]

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

(g) Compliance with the Transmission Losses Principle

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following the development of full solution requirements and impact assessment by Elexon's Service Provider).

### Who is eligible, why and for what costs?

Under the existing BSC compensation mechanism, to receive Black Start compensation the Lead Party of a BM Unit has to provide the BSC Panel (or, if established, the Panel's Claims Committee) with the following evidence:

- That it's received a Black Start instruction under BSC Section G3.3 (i.e. provide evidence that it's received a specific type of instruction from the NGE SO under the Grid Code, during a Black Start, that the BSC defines as being a Black Start instruction).
- Of any changes (in MWh) in its BM Unit's Exports or Imports that resulted from its compliance with this Black Start instruction in each Settlement Period to which that instruction applied (i.e. as opposed to what it would otherwise have done had it not received that instruction).

Of the Avoidable Costs (as defined in BSC Section G2) that it incurred as a result of complying with the Black Start instruction in each Settlement Period to which that instruction applied (e.g. fuel costs, Plant and Apparatus costs, or other operational costs) – these costs must be directly incurred as a result of operating the Plant and Apparatus in the BM Unit, and must also be reasonably and prudently incurred.

The Panel/Claims Committee may also ask NGE SO and/or Licensed Distribution System Operator (LSDO) to provide information to help it in determining the claim.

The P451 Workgroup will need to consider:

1. What type(s) of Black Start instruction(s) would trigger eligibility for a non-BSC Party to receive BSC compensation? The BSC's definition of 'Black Start instruction' could then point to the relevant types of instructions in the Grid Code (or other relevant Industry Code, e.g. the Distribution Code) as being eligible for non-Party claims. Understanding the type of instruction(s) that could be given to non-Parties, whether they differ from the existing types of black start instructions, and what types of impact they might have on a non-Party, would drive how the compensation eligibility criteria were then drafted into the BSC.
2. Whether simply pointing to the relevant Grid Code (or other Industry Code) instructions is sufficient to limit compensation to the intended non-Party recipients, or if further restrictions need to be placed in the BSC (these could be, for example, that the non-Party must be a contracted Anchor or Top Up Restoration Service Provider as defined in the Grid Code).
3. How the non-Party would evidence both that it received the eligible type of instruction, and that the costs for which it's seeking compensation only occurred as a result of complying with that instruction.
4. Whether changes are needed to the BSC's definition of Avoidable Costs, for example if the relevant providers expend stored energy (e.g. batteries or hydro) rather than use fuel.
5. How we would ensure that, if the relevant asset is part of a Supplier's or Virtual Lead Party's BM Unit, there is no double-counting of costs for compensation

purposes. This also questions whether it clear as to how the proposed BSC compensation arrangements interact with and differ from other available funding options related to Black Start/System Restoration? E.g., the cost recovery mechanism proposed under CUSC Modification [CMP398 'GC0156 Cost Recovery mechanism for CUSC Parties'](#).

## How does Elexon recoup the amount paid out for BSC Black Start compensation claims?

Where there are upheld BSC claims for black start compensation under BSC Section G3.3, each BSC Lead Party claimant is entitled to be paid its black start compensation amount by Elexon – plus compound interest for the period between complying with the black start instruction and receiving the compensation payment.

Elexon is not-for-profit, and has to balance to zero. Therefore, the amounts of compensation paid out are funded by all BSC Trading Parties (including the Lead Party claimant) according to their Black Start Reallocation Proportions.

The calculation of a Trading Party's Black Start Reallocation Proportion in BSC Section G3.3 is its market share of offtaking BM Units (i.e. its share is its offtaking Credited Energy Volumes, divided by the market's offtaking Credited Energy Volumes), calculated as the sum across all Settlement Periods in the seven Settlement Days immediately preceding the Settlement Day on which the Black Start Period commenced. Delivering BM Units are excluded entirely, meaning that Black Start compensation payments are recovered from offtakers only.

Both the black start compensation amount payments and the Black Start Reallocation Proportions are considered to be Ad-Hoc Trading Charges (a type of Reconciliation Charge) that are paid/recouped by the Funds Administration Agent (FAA) under [BSC Section N 'Clearing, Invoicing and Payment'](#), paragraph 6.9.

Non-Parties, since they are not BSC signatories, do not pay BSC Trading Charges (or indeed contribute to any BSC/Elexon costs).

The P451 Workgroup will need to consider whether claims payments to non-BSC Parties are paid out and recouped via:

- The FAA as BSC Ad-Hoc Trading Charges (as currently happens with Party claims) – this would require FAA system changes and may be complex since non-Parties don't pay/receive Trading Charges; or
- Elexon as a different type of payment/BSCCo Charge – which would require Elexon finance system changes.

Under either option, the amounts paid out to non-BSC Parties would by default have to be recovered from BSC Parties. The Workgroup will need to consider if the recovery is from:

- Offtake only (as for current Party claims);
- All BSC Trading Parties;
- Some other subset of BSC Party; or
- Some other external source (e.g. by recharging the costs of upheld non-Party claims to NGESO).

The Workgroup could consider whether non-Party claimants could/should be charged a submission fee to cover Elexon’s administration costs in processing their claims, although this would be different to contributing to the general recouping of claims payments.

Finally, the likely volume of non-Party claims (and the impacts of this) will need to be established as part of developing any potential solution.

## How will implementation of the Grid Code and BSC changes be aligned?

The Workgroup will need to consider how to align implementation of the necessary BSC changes with GC0156 and other related CUSC Modification(s) that are yet to be raised to update references to Black Start.

It is important to ensure that the end-to-end Black Start process remains clear and effective across the Codes, and that the intended Parties and non-Parties are able to claim BSC compensation if a Black Start occurs.

## Areas to consider

The table below summarises the areas we believe a Modification Workgroup should consider as part of its assessment of P451:

Areas to Consider
What type(s) of 'Black Start instruction(s)' would trigger eligibility for a non-BSC Party to receive BSC compensation? What type of instruction(s) could be given to non-Parties, and do they differ from the existing types of black start instructions?
Will simply pointing to the relevant Grid Code (or other Industry Code) instruction be sufficient to limit compensation to the intended non-Party recipients, or do further restrictions need to be placed in the BSC?
How will the non-Party evidence that it received the eligible type of instruction, and that the costs for which it is seeking compensation only occurred as a result of complying with that instruction?
Are changes needed to the BSC’s definition of Avoidable Costs, for example if the relevant providers expend stored energy (e.g. batteries or hydro) rather than use fuel?
How do we ensure that, if the relevant asset is part of a Supplier’s or Virtual Lead Party’s BM Unit, there’s no double-counting of costs for compensation purposes?
Is it clear how the proposed BSC compensation arrangements interact with and differ from other available funding options related to Black Start/System Restoration? E.g., the cost recovery mechanism proposed under CUSC Modification <a href="#">CMP398 'GC0156 Cost Recovery mechanism for CUSC Parties'</a> .
Is the period of 20 Business Days after the end of a Black Start Period still an appropriate timescale for claims to be submitted?
Should BSC Black Start compensation claims be prioritised?
How will claims be submitted and validated by non-Parties? Will the Lead Party submit the claim on behalf of the non-BSC Party, or is will non-BSC Party submit the claim direct? How will such claims be paid out by Elexon?
How will the amounts paid out to non-Parties be recouped/recovered by Elexon? Should this come from BSC Parties as part of their Black Start Reallocation Proportion?

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## Areas to Consider

What is the likely volume of non-BSC Party claims and the associated impacts of this?

Should non-Party claimants be charged a submission fee? Alternatively, should a minimum permitted claim level/amount be set?

How will implementation of the Grid Code, CUSC and BSC changes be aligned? What are the risks if they do not align at the same time and can these risks be mitigated?

How will P451 impact the BSC Settlement Risks?

What changes are needed to BSC documents, systems and processes to support P451 and what are the related costs and lead times? When will any required changes to subsidiary documents be developed and consulted on?

Are there any Alternative Modifications?

Should P451 be progressed as a Self-Governance Modification?

Does P451 better facilitate the Applicable BSC Objectives than the current baseline?

Does P451 impact the EBGL provisions held within the BSC, and if so, what is the impact on the EBGL Objectives?

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## 5 Proposed Progression

### Next steps

This IWA report will be presented to the BSC Panel at its meeting on 09 March 2023. The Proposer and Elexon recommend that P451 is submitted to the Assessment Procedure for assessment by a Workgroup. We propose the first Workgroup is held in April 2023, subject to the Panel's agreement to progress P451 into the Assessment Procedure and forming a quorate Workgroup.

### Workgroup membership

Elexon is seeking Workgroup members with expertise in:

- Black Start processes and procedures;
- Trading Charges and payments under the BSC;
- GC0156 and Issue 100; and
- EBGL Matters.

### Timetable

Proposed Progression Timetable for P451	
Event	Date
Present Initial Written Assessment to Panel	09 March 2023
First Workgroup Meeting	W/B 10 April 2023
Assessment Procedure Consultation	10 July – 31 July 2023
Workgroup Meeting	W/B 07 August 2023
Present Assessment Report to Panel	14 September 2023
Report Phase Consultation	20 September – 20 October 2023
Workgroup Meeting (if required)	W/B 23 October 2023
Present Draft Modification Report to Panel	09 November 2023
Issue Final Modification Report to Authority	15 November 2023

## 6 Likely Impacts and costs

Costs will be assessed during the Assessment Procedure. However, for those roles we believe will be impacted, we have indicated whether we believe the costs are likely to be high, medium or low based on the following categories:

- High: >£1 million
- Medium: £100-1000k
- Low: <£100k

Impact on BSC Parties and Party Agents		
Party/Party Agent	Potential Impact	Potential cost
Trading Parties	Currently, the amounts of compensation paid out are funded by all BSC Trading Parties (including the Lead Party claimant), according to their Black Start Reallocation Proportions. There will be an impact to these parties if they are also required to fund compensation amounts paid to non-BSC Parties	L
System Restoration Service Providers	Contracted System Restoration Service Providers who are non-BSC Parties will be able to claim BSC Black Start compensation.	L

Impact on the NETSO	
Potential Impact	Potential cost
NETSO / NGENSO is the Proposer of this Modification. This Modification is being raised to facilitate the NGENSO's work on the new System Restoration approach and relevant Grid Code Modification GC0156. We do not anticipate any cost to NGENSO as a direct result of P451 as any costs to NGENSO are driven by GC0156.	N/A

Impact on BSCCo		
Area of Elexon	Potential Impact	Potential cost
Finance	Potential system changes required to the Funding Share System (FSS).	L
Settlement and Invoicing	Potential system changes required to the Funds Administration Agent (FAA).	M
Performance Assurance	Changes to the BSC Black Start compensation process and arrangements.	L/M

Impact on BSC Settlement Risks	
Impact on the Settlement Risks will be considered during the Assessment Procedure.	

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Impact on BSC Systems and processes	
BSC System/Process	Potential Impact
BSC black start compensation process	Process will need to be updated to reflect NGENSO's new approach to System Restoration and allow non-BSC parties to claim black start compensation.
Funds Administration Agent (FAA)	May require amendments to allow black start compensation payments to be made to non-BSC parties.
Funding Share System (FSS)	May require amendments to allow black start compensation payments to be made to non-BSC parties.

Impact on BSC Agent/service provider contractual arrangements	
BSC Agent/service provider contract	Potential Impact
Funds Administration Agent (FAA)	May require amendments to allow black start compensation payments to be made to non-BSC parties.

Impact on Code	
Code Section	Potential Impact
<a href="#">BSC Section G: Contingencies</a>	References to "black start", BSC Black Start processes, and cross references to the Grid Code will need to be updated. Section G also outlines the BSC's Black Start compensation arrangements which will be impacted.
<a href="#">BSC Section T: Settlement and Trading Charges</a>	References to "Black Start Period" and cross references to the Grid Code will need to be updated.
<a href="#">BSC Section X-1: General Glossary</a>	Reference to "Black Start Period" will need to be updated.

Impact on EBGL Article 18 terms and conditions
The changes proposed to BSC Section G3 and T1.7 amend BSC provisions identified as constituting European Balancing Guideline (EBGL) Article 18 Terms and Conditions, as listed in <a href="#">BSC Section F, Annex F-2</a> .

Impact on Code Subsidiary Documents	
CSD	Potential Impact
<a href="#">BSCP 18: Corrections to Bid-Offer Acceptance Related Data</a>	References to "black start" will need to be updated.
<a href="#">BSCP201: Black Start and Fuel Security Contingency Provisions and Claims Processes</a>	References to "black start", guidance on BSC Black Start processes, and cross references to the Grid Code will need to be updated.

Impact on other Configurable Items	
Configurable Item	Potential Impact
<a href="#">Energy Contract Volume Aggregation Agent (ECVAA) Service Description</a>	References to "black start" will need to be updated.
<a href="#">Central Registration Agent (CRA) User Requirements Specification</a>	References to "black start" will need to be updated.

Impact on Core Industry Documents and other documents	
Document	Potential Impact
Ancillary Services Agreements	No impact identified.
Connection and Use of System Code	
Data Transfer Services Agreement	
Distribution Code	
Grid Code	P451 has been raised to align the BSC with proposed changes to the Grid Code. However, there will be no direct impact on the Grid Code as a consequence of P451. Instead, it facilitates GC0156.
Retail Energy Code	No impact identified.
Supplemental Agreements	
System Operator-Transmission Owner Code	
Transmission Licence	
Use of Interconnector Agreement	

Impact on a Significant Code Review (SCR) or other significant industry change projects
No impacts identified. We have requested that Ofgem treat this Modification as a SCR exempt Modification on 02 March 2023.

Impact of the Modification on the environment and consumer benefit areas:	
Consumer benefit area	Identified impact
<p>1) Improved safety and reliability</p> <p>P451 ensures that NGESO's new System Restoration approach works coherently across industry Codes (in this case the BSC). This will ensure security of supply for consumers in the event of a NETS failure.</p>	Positive
<p>2) Lower bills than would otherwise be the case</p> <p>The new System Restoration approach will enable a wider range of potential service providers to tender for System Restoration Services. Through competition, this can reduce consumer costs via the Balancing Services Use of System (BSUoS) element within their retail electricity tariffs.</p>	Positive
<p>3) Reduced environmental damage</p> <p>The new System Restoration approach seeks to enable low carbon technologies and storage providers to take part in System Restoration as the number of carbon intensive black start power stations reduce in numbers due to Net Zero.</p>	Positive
<p>4) Improved quality of service</p> <p>The new System Restoration approach that this Modification facilitates will ensure that NGESO's System Restoration Capability meets the new ESRS. This means a more reliable, faster System Restoration in the event of a NETS failure.</p>	Positive
<p>5) Benefits for society as a whole</p> <p>As above. A quicker, more reliable System Restoration in the event of a NETS failure would reduce the economic damage that would arise from a more prolonged system shut down.</p>	Positive



### What are the consumer benefit areas?

- 1) Will this change mean that the energy system can operate more safely and reliably now and in the future in a way that benefits end consumers?
- 2) Will this change lower consumers' bills by controlling, reducing, and optimising spend, for example on balancing and operating the system?
- 3) Will this proposal support:
  - i) new providers and technologies?
  - ii) a move to hydrogen or lower greenhouse gases?
  - iii) the journey toward statutory net-zero targets?
  - iv) decarbonisation?
- 4) Will this change improve the quality of service for some or all end consumers. Improved service quality ultimately benefits the end consumer due to interactions in the value chains across the industry being more seamless, efficient and effective.
- 5) Are there any other identified changes to society, such as jobs or the economy.

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## 7 Recommendations

We invite the Panel to:

- **AGREE** that P451 progresses to the Assessment Procedure;
- **AGREE** the proposed Assessment Procedure timetable;
- **AGREE** the proposed membership for the P451 Workgroup; and
- **AGREE** the Workgroup's Terms of Reference.

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