4.7 Issue Form

Issue Form - BSCP40/04	**Issue Number 100** *(mandatory by BSCCo)*

Issue Title *(Mandatory by originator)*

Assessing BSC Black Start processes to support NGESO's Distributed ReStart project

Issue Description *(Mandatory by originator)*

What is the issue?
National Grid Electricity System Operator's (NGESO's) Distributed ReStart project seeks to enable distribution-connected Plant to participate in an updated version of Electricity System Restoration (currently defined as Black Start in the BSC). This will broaden the range of providers who can offer the service, the networks it can be provided from and the situations in which these providers may be utilised.

The BSC only considers Black Start as being provided by the Lead Party of a Balancing Mechanism Unit (BM Unit), and so the terms describing Black Start instructions and fuel compensation relate to Lead Parties. This will be outdated when assets within a BM Unit not operated by the Lead Party of the BM Unit will be able to provide the service following NGESO's project. It was envisaged that the BSC would provide a single and consistent place for describing compensation. Therefore, if it doesn't cover assets within a BM Unit then this may be an issue.

Further information
For context, Electricity System Restoration/Black Start is the process used to restore power in the event of a Total Shutdown or Partial Shutdown of the National Electricity Transmission System, as described in Operating Code (OC) No. 9 of the Grid Code.

Distributed ReStart is a project exploring how distributed energy resources (DER)[1] such as solar, wind and hydro, can be used to restore power to the transmission network in the unlikely event of a blackout, i.e., provide a Black Start service. The implementation timeline (p.74) sees provision of the service commencing from 2025 onwards.

It is worth noting that while the project is called Distributed ReStart, the service that will be provided will be called Distribution Restoration. Distribution Restoration will be a Restoration Service, which, as per recent changes to both the Standard and ESO Special Conditions of the Transmission Licence, are a subset of Balancing Services.

We would like the Issue Group to consider any BSC impacts and whether any changes to the BSC, Code Subsidiary Documents (CSDs) (Balancing and Settlement Code Procedures (BSCPs), etc.) or BSC systems are required, to reflect a new approach to:

- How distribution and transmission connected service providers should be compensated for any fuel used following a Black Start instruction?

[1] i.e. energy resources that are connected to electricity distribution systems rather than transmission systems.

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- There is currently provision in the BSC to do this, but it only applies to individual BM Units and their Lead Parties as traditional Black Start units would comprise their own BM Unit. This wording would not work in a world where assets within a BM Unit are providing Black Start.
- It should be discussed as to how this would work where the service is provided by a technology type which does not use fuel, or if it is provided by storage (battery or pumped hydro) which would expend stored energy.

- The role Distribution System Operators (DSOs) and Distributed Energy Resources (DER) should play in the end-to-end Black Start process, including Metering System Identifiers (MSIDs) also registered within a Virtual Lead Party's (VLP) Secondary BM Unit
  - This relates to how communications should be handled between NGESO, DSOs and DERs when it comes to Black Start instructions and provision of metering data to allow imbalance settlement to be calculated. Currently all instructions have to come from NGESO, but for Distribution Restoration the ESO would instruct a DSO to manage a Distribution Restoration Zone (DRZ), to in turn instruct assets to restore the network. While the overall process would still be overseen by NGESO, the instructions process would be more nuanced than how it is currently described in the BSC.

Having considered these points, we would be seeking a recommendation from the Issue Group on the changes that should be made to the BSC and to any other Codes and related material. This could include proposed legal text changes and draft Modification Proposal Forms for the Issue Group to endorse.

NGESO also welcomes feedback from industry and the BSC Issue Group on related changes already being progressed through the Grid Code Modifications process.

Justification for Examining Issue *(Mandatory by originator)*

An industry workgroup is considering a modification to the Grid Code, GC0148: Implementation of EU Emergency and Restoration Code Phase II, which among other things is looking at how the Grid Code and Distribution Code could be updated to facilitate the implementation of Distribution Restoration. NGESO and industry are also discussing potential change to System Operator Transmission Owner Code (STC) provisions to facilitate the implementation of Distribution Restoration. The working assumption is that Distribution Restoration would be a 'type' of Electricity System Restoration and so the two terms can effectively be used interchangeably.

It is therefore appropriate to hold an Issue Group for the BSC, which can tie-in with the outputs of these other groups to ensure a solution is arrived at which aligns across all codes. As discussed in the previous section, the current BSC framework would result in inequality between transmission and distribution connected Black Start providers. It would also not accurately describe how Black Start instructions would be delivered, both in terms of the party which gives them and the party which receives them. It would be prudent to have industry discuss this and agree on an approach to how the Black Start arrangements are written in the BSC.

As the existing compensation arrangements are based in the BSC and its subsidiary documents, it follows that a BSC Issue Group would be an appropriate place to discuss these questions and

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agree on the correct course of action to update the codes to be reflective of this upcoming change to how Restoration Services will be provided.

Potential Solution(s) *(Optional by originator)*

Our current view is that there should be equality in the fuel compensation arrangements for providers regardless of their connection type (i.e., transmission or distribution), to ensure fair competition in the market. We also hold the view that the wording around instructions in the BSC should be made more nuanced to align with how the service is transforming in the coming years.

Industry codes should be aligned with updates to how Balancing Services can be procured and utilised. This would simplify arrangements for market participants and reduce regulatory burden. Since the whole market is impacted by Electricity System Restoration and how it's managed, it is sensible to hold an Issue Group to allow industry to arrive at a solution.

This solution could potentially be achieved by modifying the text in the BSC to be more nuanced about who is eligible to receive fuel compensation and who can provide/receive instructions.

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