ELEXON

CP Progression Paper

Creation of a new Interconnector Fuel Type Category for the Viking Link Interconnector

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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 provides information on a new Change Proposal (CP) and outlines our proposed progression timetable for this change, including when it will be issued for CP Consultation in the next suitable Change Proposal Circular (CPC) batch.

We are presenting this paper to the ISG on 4 April 2023 to capture any comments or questions from Committee Members on this CP before we issue it for consultation.

There are three parts to this document:

- This is the main document. It provides a summary of the solution, impacts, anticipated costs, and proposed implementation approach, as well as our proposed progression approach for this CP.
- Attachment A contains the CP Proposal Form.

Committee

Imbalance Settlement Group (ISG)

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- Attachment B contain the proposed redlined changes to deliver the CP solution.

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1. Summary

Why change?

The Viking Link Interconnector is currently under construction and due to be commissioned in October 2023. The commercial operation date is expected shortly after and while the date still needs confirmation, both Elexon and National Grid Electricity System Operator (NGESO) aim to complete the system changes in November 2023 BSC Release to ensure reporting of the data to the market.

Changes are needed to the Balancing Mechanism Reporting Service (BMRS) to ensure data relating to the new Viking Link Interconnector is provided to market participants alongside existing data relating to Settlement arrangements in the Great Britain (GB) electricity market.

The BSC requires a separate 'Fuel Type Category' to be defined for each Interconnector for reporting purposes. It also requires the Panel to approve all new fuel type categories. Therefore, for the Viking Link Interconnector data to be published on the BMRS, BSC Central System changes are needed, as is Panel approval for this new 'Fuel Type Category'.

Solution

The solution requires the new Fuel Type Category to be recognised within BSC and the Code Subsidiary Documents (CSDs) and the data reported through the BMRS service as defined in BSC Section V 'Reporting'[1], Balancing Mechanism Reporting Agent (BMRA) Service Description[2] and the BMRA User Requirements Specifications[3]. The service is currently fulfilled by the existing BMRS application and the replacement BMRS application labelled the 'Insights Solution'.

Impacts and costs

The Elexon central implementation cost is £65k.

This CP will impact NGESO who will be required to provide data for the new Viking Link Interconnector. Market participants consuming data from the BMRS will need to be aware of the addition of the new Interconnector as it may require changes to their reporting system consuming the data via BMRS endpoints.

Implementation

This CP is proposed for implementation on 2 November 2023 as part of the November 2023 Standard BSC Release. This will ensure that the reporting changes are made prior to the new Viking Link Interconnector becoming commercially operational at the end of 2023.

[1] https://bscdocs.elexon.co.uk/bsc/bsc-section-v-reporting
[2] https://bscdocs.elexon.co.uk/service-descriptions/balancing-mechanism-reporting-agent-service-description
[3] https://bscdocs.elexon.co.uk/user-requirements-specifications/balancing-mechanism-reporting-agent

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2. Why Change?

What is the issue?

The new Viking Link Interconnector is being constructed to connect the British and Danish electricity systems via High-Voltage Direct Current (HVDC) submarine cables between Lincolnshire in the UK and southern Jutland in Denmark. The project is expected to be commercially operational by the end of 2023. It is necessary to make BSC Central System changes to the Balancing Mechanism Reporting Service[4] (BMRS) to add a new Interconnector fuel type, before the Interconnector becomes operational, in order that the Interconnector data can be published in a transparent manner.

Background

The Viking Link Interconnector will be a 1.4GW Interconnector between the UK and Denmark carrying electricity to and from the Denmark 1 Bidding Zone.

BSC Section Q 'Balancing Mechanism Activities'[5] requires that a separate 'Fuel Type Category' is defined for each Interconnector. These fuel types are then published on the BMRS platform and reflected within the BSC Code Subsidiary Documents (CSDs) New Electricity Trading Arrangements (NETA) Interface Definition and Design (IDD) Document Part 1 – Interfaces with BSC Parties and their Agents[6] and NETA IDD Part 1 spreadsheet[7].

BMRS

The BMRS is the primary channel for providing operational data relating to Settlement arrangements in the Great Britain (GB) Electricity Market. It has over 100,000 users and around six million hits daily on its Application Programming Interfaces (APIs). Market participants use the data on the BMRS to inform trading decisions and understand market dynamics.

The BMRS receives, stores and publishes data relating to the Interconnectors to GB. This information is made available to BMRS users via several graphs, tables and XML / CSV downloads, along with API, Data Push services and TIBCO services. The BMRS contains Interconnector flow data. This data is subsequently separated by 'Fuel Type Category'.

Insights Solution

The Insights Solution is a function of Elexon's Kinnect digital platform. Through a number of releases over the next few years, the platform will build on the publication of the BMRS data providing a richer, more up to date and detailed data service.

In addition to Fuel Type datasets being published on BMRS, they are also published on Elexon's new data platform which will be fulfilling the BMRS service and is referred to as the Insights solution[8].

What are Interconnectors?

Electricity Interconnectors are the physical links which allow the transfer of electricity across country borders. There are currently operational Interconnectors linking the GB System to Ireland, France, Belgium and the Netherlands.

What is a Bidding Zone

A bidding zone is the largest geographical area within which market participants are able to exchange energy without capacity allocation.

Application Programming Interfaces (APIs)

APIs are a set of programming instructions for participants to access BMRS data directly from their systems.

TIBCO

A third party software providing the mechanism for automated publication of BMRS data to market participants via a dedicated line.

[4] https://www.bmreports.com/bmrs/?q=help/about-us
[5] https://bscdocs.elexon.co.uk/bsc/bsc-section-q-balancing-mechanism-activities
[6] https://bscdocs.elexon.co.uk/interface-definition-documents/neta-interface-definition-and-design-document-part-1-interfaces-with-bsc-parties-and-their-agents
[7] https://bscdocs.elexon.co.uk/interface-definition-documents/neta-interface-definition-and-design-part-1-spreadsheet
[8] https://bmrs.elexon.co.uk/

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Addition of New Fuel Type Categories

In accordance with BSC Section Q, the BSC Panel are required to approve new external Interconnectors as new Fuel Type Categories following any necessary consultation with industry.

Separately, a CP is required to gain approval for the BSC CSD amendments and system changes to the BMRS to enable the publication of the Interconnector data through a Fuel Type Category.

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3. Solution

Proposed solution

A new ‘Fuel Type Category’ will be created for the Viking Link Interconnector and the data will be subsequently published on the BMRS.

The Interconnector mapping table, which is managed by Elexon’s service provider, and the NETA IDD Part 1 Document and Spreadsheet documentation will require updating with the new Fuel Type Category. This will be designated as INTVKL and mapped to the Bidding Zone Denmark 1.

Data submission/receipt

National Grid ESO will need to amend its Balancing Mechanism (BM) Systems and Electricity Balancing System (EBS) to include the relevant new Interconnector data in the flows submitted to the BMRS.

Elexon will need to amend its flow loaders, which is the coding that reads the flows incoming from National Grid ESO, to include the new Interconnector’s data in BSC Central System databases. Therefore, flow loaders for FUELINST, FUELHH, UOU2T14D, UOU2T52W, UOU2T3YW, FOU2T14D, FOU2T3YW, FOU2T52W (as displayed on the table below) will be modified to recognise the INTVKL Interconnector Fuel Type.

Flow Type ID	Flow Description	Receipt Frequency
FUELINST	Instantaneous Generation by Fuel Type	Every 2 minutes
FUELHH	Half-Hourly Generation by Fuel Type	Every 30 minutes
FOU2T14D	National Output Usable by Fuel Type, 2-14 days ahead	Daily
FOU2T3YW	National Output Usable by Fuel Type, 2-156 weeks ahead	Hourly
FOU2T52W	National Output Usable by Fuel Type, 2-52 weeks ahead	Hourly
UOU2T14D	National Output Usable by BM Unit and Fuel Type, 2-14 days ahead	Daily
UOU2T52W	National Output Usable by BM Unit and Fuel Type, 2-52 weeks ahead	Once a week
UOU2T3YW	National Output Usable by BM Unit and Fuel Type, 2-156 weeks ahead	Hourly

Data Publication

The data visualisation on BMRS that uses the source files above (Generation by Fuel Type, Generation Forecasts and Interconnector Flows) will be updated to include Viking Link. Data in all endpoints (APIs, Data Push Service and TIBCO) should be updated to include Viking Link data.

Similarly the Insights Solution fulfils the BMRS publishing obligations and will make the data available on the website, APIs and the Insights Realtime Information Service (IRIS).

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Proposer's rationale

The Proposer states that this change should be made to allow for the Viking Link Interconnector to participate in the GB electricity market.

This CP ensures that market participants will have access to market data for a new Interconnector. Once the Panel approve the new Fuel Type Category, NGESO and Elexon will have an obligation to publish related data from the approved Implementation Date. This CP will allow for this requirement to be met.

Proposed redlining

Attachment B contains the proposed redlining to the NETA IDD: Part 1 Documentation – Interfaces with BSC Parties and their Agents.

The redlining to the NETA IDD Part 1 spreadsheet will be developed in parallel to the BSC Central System changes as part of the implementation phase of this CP. The spreadsheet is updated as part of the design phase, which is initiated following approval.

Updates will also be made to the BMRA API and Data Push Guide, however, as this is a Guidance Note it is not part of the BSC Baseline Statement and does not need to be sent for industry consultation nor approved by ISG.

4. Impacts and Costs

BSC Party & Party Agent impacts and costs

The implementation of this CP will require NGESO to send data for the new Viking Link Fuel Type Category to the BMRA. This will subsequently be published on BMRS, meaning that BMRS and Insights users could be impacted by the provision of additional data.

BSC Party & Party Agent Impacts	
BSC Party/Party Agent	**Impact**
NGESO	Low - NGESO will be required to send data for the new Viking Link Fuel Type Category
BMRS/Insights Users	Low - Market participants consuming the data from BMRS/Insights will need to be aware of the addition of a new Interconnector Fuel Type Category

Central impacts and costs

Central impacts

Changes are required to BMRS to receive data for the new Viking Link Interconnector and subsequently make this available to market participants.

Equivalent changes will also be required to the Insights Solution which will be made in parallel.

The NETA IDD: Part 1 Document and Spreadsheet will be updated with the proposed Fuel Type Category names for the Viking Link Interconnector (INTVKL).

Please note that the NETA IDD: Part 1 Spreadsheet is not being consulted upon as part of this CP consultation. Due to design and development work that must be undertaken before the IDD can be produced, this document will be drafted to reflect the solution as described in the CP, and will be sent for industry consultation as part of a Release Circular prior to the Implementation Date.

Central Impacts	
Document Impacts	**System Impacts**
• NETA IDD Part 1 Document • NETA IDD Part 1 Spreadsheet	• BMRS • New BMRS (Insights Solution)

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Impact on BSC Settlement Risks

Impact on BSC Settlement Risks
No impacts on the BSC Settlement Risks have been identified.

Central costs

The central implementation costs for this CP will be approximately £65,000. This includes the costs to amend the BMRS, the Insights Solution and to implement the changes to the IDD documentation.

5. Implementation Approach

Recommended Implementation Date

This CP is proposed for implementation on 2 November 2023 as part of the November 2023 Standard Release. This will ensure that the reporting changes are made prior to the New Viking Link Interconnector becoming commercially operational at the end of 2023.

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6. Proposed Progression

Progression timetable

BSC Section Q6.1.18 reserves the right for the Panel to approve Fuel Type Categories relating to further Interconnectors without making changes to the BSC itself.

However, as BSC Central System changes are required to enable the BMRS to publish data relating to the new Fuel Types, along with changes to associated documentation, a CP must also be progressed. BSC Panel approval will be sought for both the addition of the Interconnectors as Fuel Type Categories, and for this CP, as part of this CP Assessment Report for efficiency purposes. The joint approval approach has been used for previous CPs of this nature.

The table below outlines the proposed progression plan for this CP:

Progression Timetable	
Event	**Date**
CP Progression Paper presented to ISG for information	4 April 2023
CP Consultation	11 April 2023 – 9 May 2023
CP Assessment Report presented to ISG to seek feedback	6 June 2023
CP Assessment Report presented to BSC Panel for decision	8 June 2023
Proposed Implementation Date	2 November 2023 (November 2023 Release)

CP Consultation questions

We intend to ask the standard CP Consultation questions for this CP. We do not believe any additional questions need to be asked for this CP.

Standard CP Consultation Questions
Do you agree with the proposed solution?
Do you agree that the draft redlining delivers the proposed solution?
Will this CP impact your organisation?
Will your organisation incur any costs in implementing this CP?
Do you agree with the proposed implementation approach for this CP?

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7. Recommendations

We invite you to:

- **NOTE** the proposed progression timetable for the CP;
- **PROVIDE** any comments or additional questions for inclusion in the CP Consultation; and
- **NOTE** that this CP will be presented to:
    - the ISG on 6 June 2023 to seek feedback; and
    - the BSC Panel on 8 June 2023 for decision.

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