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# P399 Business Requirements

Damian Clough  
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# P399 BUSINESS REQUIREMENTS

## Document History

Date	Version	Author	Reviewers	Description
03 February 2020	0.1	Damian Clough	Shamaila Jawaid	Initial draft of requirements
10 February 2020	0.2	Damian Clough	Shamaila Jawaid	Refined requirements following review
14 February 2020	0.3	Damian Clough	Shamaila Jawaid	Further refined and detailed requirements following review
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21 February 2020	1.0	Damian Clough	Justin Andrews	Further refined and detailed requirements following review
14 August 2020	1.1	Damian Clough	John Lucas	Further refined following workgroup review and new Impact Assessment from the NETSO
22 September 2020	2.0	Damian Clough	John Lucas	Further refined following workgroup consultation and further discussion with the NETSO

## Approvals

Date	Name	Role
21 February 2020	Justin Andrews	Head of Design Authority

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## 1. INTRODUCTION

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### 1.1 Document Purpose

The purpose of this document is to communicate the Business Requirements of BSC Change [P399 'Making the identity of Balancing Service providers visible in the Balancing Services Adjustment Data'](#) to industry members and service providers. It enables an initial impact assessment to be carried out by a Service Provider.

### 1.2 Introduction

There is currently incomplete distribution of information among market participants because of the anonymised nature of the trading actions taken by NETSO. This anonymity potentially creates a barrier to efficient competition.

Each Balancing Service Adjustment Action within the Balancing Services Adjustment Data (BSAD) is assigned a unique sequential number as required under BSC Section Q. The purpose of this number is to separate and identify each trade made by the National Electricity Transmission System Operator (NETSO) However, this does not identify the counterparty to the trade, leaving it anonymous and providing an information advantage to counterparties that bilaterally trade with NETSO.

Many of the benefits are intangible and tied with general open data principles (i.e. greater knowledge leading to improved competition, in turn leading to lower prices for consumers etc.). One tangible example is the potential for improved targeted investment, where parties will be cognisant of the specific system conditions or location of an asset repeatedly utilised by the NETSO and can therefore place similar assets to effectively compete.

There seem to be an increasing volume of actions taken outside the BM to manage constraints which make up a huge proportion of the system operation balancing spend. Previously most of these actions would have been taken through the BM where BM Unit IDs/generators affected can be identified. However, as the proportion of non-BM actions increases an increasing volume and value of the system operation actions are becoming less transparent.

[Standard Condition C16 of the Transmission License](#) requires NETSO to operate the Transmission System in such a way that does not hamper competition in the market, while ensuring that the operation is done efficiently and transparently, as cited below:

*Condition C16: Procurement and use of balancing services*

1. *The licensee shall co-ordinate and direct the flow of electricity onto and over the national electricity transmission system in an efficient, economic and co-ordinated manner. This includes but is not be limited to the following:*
  - (b) taking into account the impact such actions have on competition in the wholesale electricity market and on the total system, and in doing so, the licensee shall:*
    - (i) compare the costs of actions outside the balancing mechanism with the likely costs of actions inside the balancing mechanism; and*
    - (ii) consider the likely impact any such action would have on:*
      - (aa) wholesale electricity market price signals;*
      - (bb) the behaviour of electricity market participants; and*
      - (cc) the efficiency of the national electricity transmission system;*
  - (e) publishing information which the licensee holds to enable electricity market participants to make efficient operational and investment decisions;*
  - (g) ensuring the procurement of balancing services is transparent;*

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(h) ensuring that the technical requirements of balancing services do not unduly restrict new and existing balancing service providers from competing in the provision of such services;

The current lack of transparency in actions taken by NETSO when balancing the system does not fully realise these objectives. This Modification will better enhance transparency for market participants which in turn will ensure fair competition between all balancing service providers and other market players, ensuring that the system is operated in the most efficient manner possible.

## 1.3 Scope

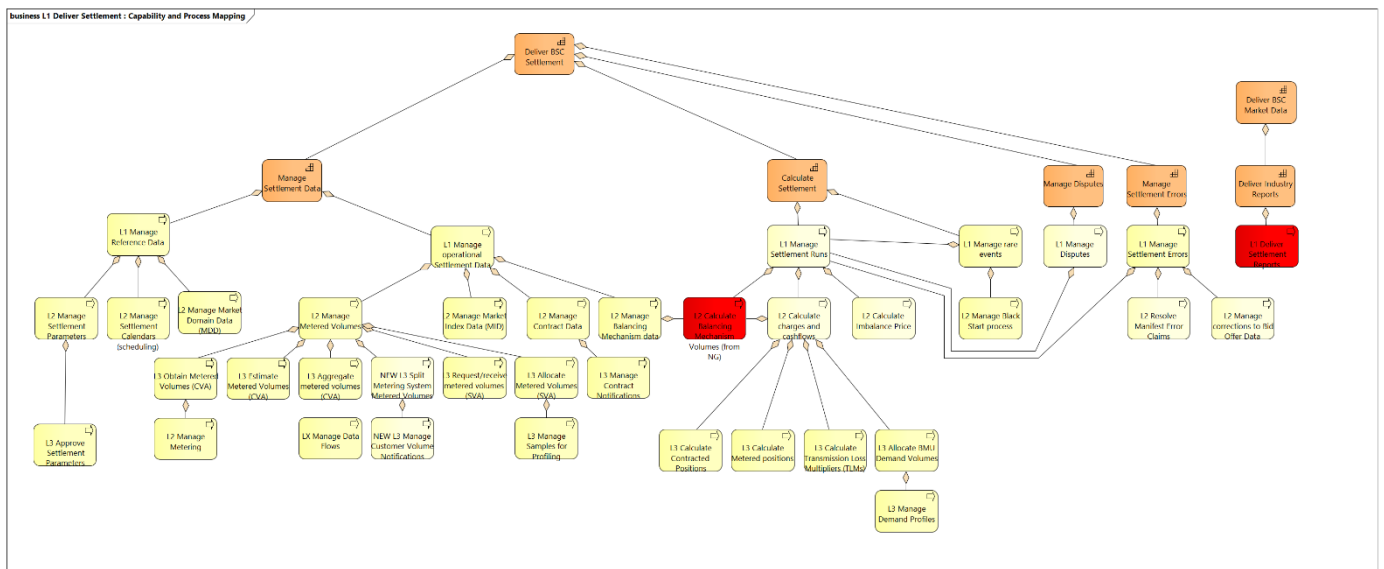
The scope of P399 includes the receipt, processing and publishing of additional BSAD data items provided by NETSO. This Modification seeks to increase the transparency of data of non-BM trades by reporting the following additional data items for trades undertaken:

- BSAD Party ID;
- BSAD Asset ID;
- Service type; and
- Tendered status.

The BSAD Party ID will link to a spreadsheet published on the NETSO website with a link on the BMRS. The spreadsheet will give other Industry Parties further information on the Party providing the Balancing Service.

## 1.4 Architecture Fit

The following business processes as shown in red are impacted by BSC Modification P399:



## 1.5 References

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Document	Author	Date
BSC Section Q – Balancing Services Activities	BSCCo	18/12/19

## 2. SOLUTION

### 2.1 Background

#### What is the Balancing Mechanism?

The BM is the period between Gate Closure (one hour prior to real time) until the end of a Settlement Period (30 minute window). During this time the NETSO can instruct (or dispatch) parties to increase or decrease their generation or consumption Parties who respond to this instruction in the BM do this through their BM Unit (BMU). NETSO receive commercial and operational data (also known as dynamic parameters) from each BMU.

This includes:

- Final Physical Notifications (FPNs) – the expected generation or consumption profile of the BMU for each settlement period (30 minutes) of the day;
- Operational data – technical data such as ramp rates, i.e. how quickly a BMU can alter its generation or consumption; and
- Bids or Offers – how much the BM participant is willing to pay or be paid by NETSO to increase or decrease their BMU's generation or consumption by a given amount. This data is used by NETSO in balancing tools to inform balancing decisions with the objective of ensuring cost efficiency whilst accounting for system needs and security. All wholesale market participants, Generators and Suppliers (apart from Non-Physical Traders) will register as BMUs. These BMUs contain either a generating unit or a collection of consumption Meters. After each Settlement Period (30 minute window) all energy that is produced or consumed at Meters within a BMU is then used to calculate energy positions and Parties imbalance by the BSC Central Systems.

#### What is the purpose of non-BM bilateral trades?

Not all Parties are able to participate in the BM as they may not have a BMU, and as well not all Balancing Services are dispatched through the Balancing Mechanism. Therefore there are a number of balancing services that are not visible through Balancing Data. Any relevant balancing service including non-BM Short Term Operating Reserve (STOR) actions, taken outside the Balancing Mechanism, will be provided through BSAD as a Balancing Service Adjustment Action.

#### What is Balancing Services Adjustment Data (BSAD) received from the NETSO

NETSO publish Balancing Service Adjustment Data (BSAD) as required under C16 of the Transmission Statement and is used as part of the electricity imbalance price calculation specified in [Section T 'Settlement and Trading Charges'](#) (paragraph 4.4) of the Balancing and Settlement Code (BSC).

Balancing Service Adjustment Actions that impact the imbalance price may include, but are not limited to, the following balancing actions:

- Non-BM Short Term Operating Reserve (STOR);

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- Forward Contracts; and
- Maximum Generation.

Section Q 6.3.2 specifies the BSAD shall comprise the following data for each Settlement Period:

- a) *the unique sequential number for each Balancing Services Adjustment Action;*
- b) *for each such Balancing Services Adjustment Action:*
  - i. *the Balancing Services Adjustment Volume;*
  - ii. *the Balancing Services Adjustment Cost;*
  - iii. *whether the NETSO has classified such Balancing Services Adjustment Action as "SO-Flagged"; and*
  - iv. *whether the NETSO has classified such Balancing Services Adjustment Action as "STOR Flagged";*
- c) *Buy Price Price Adjustment; and*
- d) *Sell Price Price Adjustment.*

System Operator (SO) flagged actions are those associated with system management and are therefore removed from the imbalance price calculations.

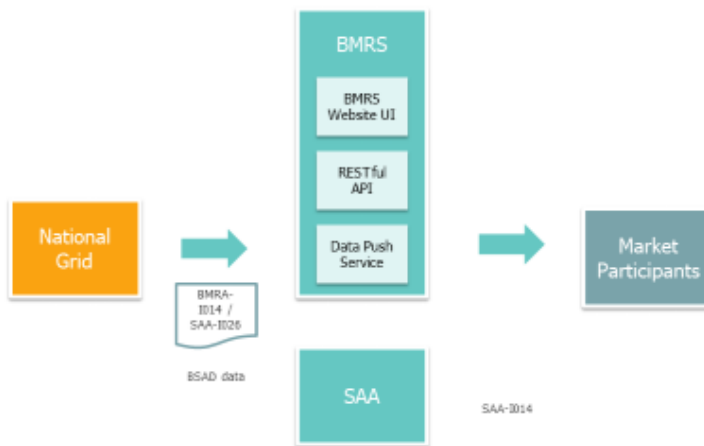
The inclusion of this information ensures market participants have visibility of the balancing actions NETSO has taken outside of the BM. This data is then published through the [Trade Reporting page on NETSO's website](#) as well as being sent to BSCCo, where it is published alongside BM data on the [Balancing Mechanism Reporting Service \(BMRS\)](#).

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## 2.2 Current State

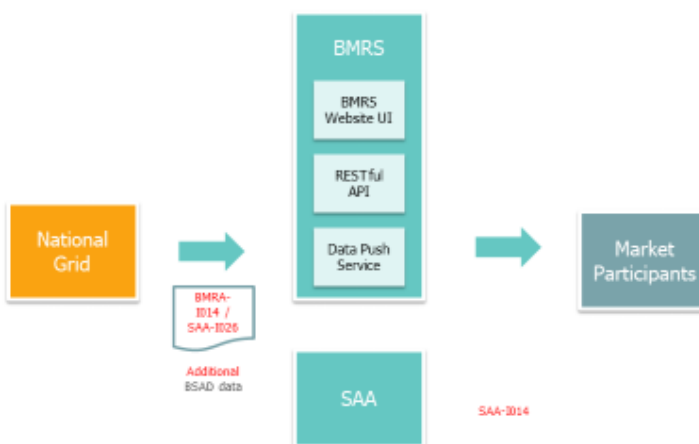
Both Balancing Mechanism Reporting Agent (BMRA) and Settlement Administration Agent (SAA) require BSAD data. The [BSC Interface Definition Document](#) (IDD) describes two different interfaces that provide BSAD data: the BMRA-I014 (input – Price Adjustment Data) from NETSO to BMRA, and the SAA-I026 (input – Price Adjustment Data) from NETSO to SAA (with very similar descriptions). However, in reality they are the same data file. The NETSO sends this file showing disaggregated data. The NETSO can trade ahead of a Settlement Period. Any trades made on n-1, where n is the trading day, will be reported at 5pm the day ahead. For example, a trade made at 4pm on Monday relating to the Settlement Period 2pm on Tuesday will be reported. However, any trades made after 5pm on Monday for the Settlement Period 2pm on Tuesday will not be reported until after 2.30pm on Tuesday even though these trades will be reported on the NETSO website. The proposal will also require the NETSO to continuously report trades filling in the gap described above.

### Current state



## 2.3 Future State

### Future state





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## 2.4 Proposed Solution

The proposed solution requires: BSAD Party ID, BSAD Asset ID, tendered status and service type to be included in the BMRA-I014: (input) Price Adjustment Data / SAA-I026: (input) Price Adjustment Data file:

- *BSAD Party ID*
  - *To link to a reference sheet, linking the ID to the company name*
- *BSAD Asset ID*
  - *To contain one of three possible data items:*
    - *Assigned BMU ID where one exists;*
    - *If no BMU ID, a reference assigned by the NETSO indicating the party name and interconnector used;*
    - *If no BMU ID or interconnector used, field will be populated as "N/A" or something of equivalent effect*
- *Tendered status*
  - *A binary true/false*
- *Service Type*
  - *A generic tag describing the contract type (e.g. non BM STOR, non BM FFR etc.)*

The BSAD Party ID will link to a reference sheet published on the NETSO website. The BSAD Asset ID will be the BSC-assigned BMU ID where available. If there is no associated BMU ID, this field will be populated with the BSAD Party ID and the interconnector used. If a trade is not associated with an assigned BMU ID or an interconnector, the field be populated as "N/A" or something of equivalent effect. The tendered status will be a true or false.

Service Type will be a high level tag depending on the type of balancing action taken. If a bilateral trade, it will be populated as 'Energy' or 'System' depending on the purpose of the action. If a non-BM dispatch instruction it will be populated with either 'NON BM STOR' or 'NON BM FR' as these are the only services that fit into this category at the time of writing. Note that non-BM dispatch instructions are likely to evolve in the near future. Existing services may evolve or be retired and new services may become available. The NETSO will update the text in this field accordingly. Similarly there is potential for the bilateral trade Service Type to become more granular in future (i.e. referencing specific services for which the trade has been made).

### Further requirement

Currently the NETSO are required to publish trades the day ahead by 5pm and then not until after the Settlement Period. Trades may be made for a Settlement Period after 5pm the day ahead but will not be reported on BMRS until after the Settlement Period.

These trades however are shown on the NETSO's website. The solution also includes the requirement for trades to be reported as close to real time as possible through BSAD.

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Currently, no information is reported in the BMRA-I014/SAA-I026 file received from the NETSO indicating the BSAD Party ID, BSAD Asset ID, tendered status or service type. NETSO will start to report this data and the BMRA will subsequently publish on BMRS.

### BR1 NETSO provides further transparency of non-BM trades via BSAD

The NETSO will start reporting additional data in the BSAD file to give further transparency of the non-BM trade to industry. This data will provide details on which Party has carried out the action, the BSC BMU ID, which interconnector was used to provide the action (where relevant), whether the action was from a tendered service or not, and the type of Balancing Service. The data will be for information purposes only and will not be used in any imbalance calculations.

BR1.1	The NETSO will report BSAD Party ID, BSAD Asset ID, tendered status and service type using existing data flows (BMRA-I014/SAA-I026) in accordance with BSC Section Q Paragraphs 6.3.1(a) and 6.3.1(b)
BR1.2	<p>The BMRA and SAA shall receive the following data from the NETSO via an automatic interface.</p> <p>The BMRA-I014/SAA-I026 data flow contains a number of Balancing Services Adjustment Actions. For each action the following is required:</p> <p><b>EXISTING</b></p> <ul style="list-style-type: none"><li>• Settlement Day;</li><li>• Settlement Period;</li><li>• ID;</li><li>• Cost (£);</li><li>• Volume (MWh);</li><li>• SO-Flag (T/F); and</li><li>• STOR Provider Flag (T/F) (for Settlement Days on or after the P305 effective date).</li></ul> <p><b>NEW/ADDITIONAL</b></p> <ul style="list-style-type: none"><li>• BSAD Party ID (TEXT);</li><li>• BSAD Asset ID (TEXT);</li><li>• Tendered Status (TEXT: tendered, non-tendered); and</li><li>• Service type (TEXT)</li></ul>
BR1.3	<p>In accordance with BSC Section Q (paragraph 6.3.2), the requirements for Balancing Services Adjustment Data shall change from those currently described in the data items required in the BSAD data file detailed in Q6.3.2(a) to (b) to include:</p> <ul style="list-style-type: none"><li>• BSAD Party ID (TEXT);</li><li>• BSAD Asset ID (TEXT);</li></ul>

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	<ul style="list-style-type: none"> <li>• Tendered Status (TEXT: tendered, non-tendered); and</li> <li>• Service type (TEXT)</li> </ul>
BR1.4	The BSAD Party ID data item will match a reference sheet contained on the NETSO's websites and a link will be published on an appropriate place on the BMRS. The NETSO will update this table as and when required to ensure it is up to date.

### BR2 SAA receives and publishes further transparency of non-BM trades via BSAD

SAA will be able to load the additional data items from the NETSO via the SAA-1026 file

BR2.1	<p>SAA must be able to load the following extra data in the SAA-IO26 file sent from the NETSO:</p> <ul style="list-style-type: none"> <li>• BSAD Party ID (TEXT);</li> <li>• BSAD Asset ID (TEXT);</li> <li>• Tendered Status (TEXT: tendered, non-tendered); and</li> <li>• Service type (TEXT)</li> </ul>
BR2.2	SAA will report this additional data via the SAA-I014 file sub flows 1 & 2..

### BR3 BMRA receives and publishes provides further transparency of non-BM trades via BSAD

BMRA must be able to receive the data via the BMRA-IO14 file and publish on BMRS. The SAA-IO26 and BMRA-IO14 file are the same file sent by the NETSO, but is received by two separate BSC Agents, so therefore has two different names.

BR3.1	<p>BMRA must be able to receive the following extra data in the BMRA-IO14 file sent from the NETSO:</p> <ul style="list-style-type: none"> <li>• BSAD Party ID (TEXT);</li> <li>• BSAD Asset ID (TEXT);</li> <li>• Tendered Status (TEXT: tendered, non-tendered); and</li> <li>• Service type (TEXT)</li> </ul>
BR3.2	<p>BMRA to publish the data on BMRS under current reporting requirements within 5 minutes of receipt as described in BSC Section V (paragraph 2.3.3):</p> <p><i>(a) data provided by the NETSO pursuant to Section Q will be available within 5 minutes after the BMRA received such data from the NETSO.</i></p>

### BR4 NETSO to include trades between 5pm Day Ahead and Settlement Period

Currently the NETSO does not report on non-BM trades carried out after 5pm the day ahead up until Settlement Period in the BMRA-I014/SAA-I026 file. This requirement is for the NETSO to report them as close to real time as possible.

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BR4.1	NETSO will report BSAD for all non-BM dispatch instructions 30 minutes after the Settlement Period in which those instructions were sent (and no later than 1 hour after those instructions are first sent).
BR4.2	Bilateral trade BSAD will be reported by the NETSO to the BMRA no later than 1 hour after the trade is entered into the NETSO's system
BR4.3	No system changes required for BMRS as data received via the files currently overwrites existing data published but is not used by BMRA for calculating the Indicative Imbalance Price until after the Settlement Period has occurred in real time.