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# **European platforms' implementation frameworks –Business Requirements Specification for Transparency Platform**

Version 1.0

21<sup>th</sup> June 2021

WG MIT

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Note concerning wording used in this document:

The force of the following words is modified by the requirement level of the document in which they are used.

- **MUST:** This word, or the terms “REQUIRED” or “SHALL”, means that the definition is an absolute requirement of the specification.
- **MUST NOT:** This phrase, or the phrase “SHALL NOT”, means that the definition is an absolute prohibition of the specification.
- **SHOULD:** This word, or the adjective “RECOMMENDED”, means that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course.
- **SHOULD NOT:** This phrase, or the phrase “NOT RECOMMENDED”, means that there may exist valid reasons in particular circumstances when the particular behaviour is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behaviour described with this label.

**MAY:** This word, or the adjective «OPTIONAL», means that an item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because the vendor feels that it enhances the product while another vendor may omit the same item. An implementation which does not include a particular option **MUST** be prepared to interoperate with another implementation which does include the option, though perhaps with reduced functionality. In the same vein an implementation which does include a particular option **MUST** be prepared to interoperate with another implementation which does not include the option (except, of course, for the feature the option provides.)

Diagrams are for illustrative purposes only and do not constitute fully detailed definition of data structures.

### Revision History

Version	Release	Date	Comments
1	0	2021-06-21	Final draft for approval by MC

## 2. Introduction

### PURPOSE OF THIS DOCUMENT

This document specifies the requirements for the Transparency platform to support the additional publications foreseen by the European platforms' implementation frameworks. Those implementation frameworks are based on the EU Commission regulation 2017/2195 of 23<sup>rd</sup> November 2017 (EB GL) establishing a guideline on electricity balancing. Specifically, the articles listed below from the EB GL serve as the legal basis for the detailed data description upon which this business requirement specification is based.

- Article 20 calls for the establishment of a European platform for the exchange of balancing energy from frequency restoration reserves with manual activation, with article 20.1 requesting the corresponding implementation framework
- Article 21 calls for the establishment of a European platform for the exchange of balancing energy from frequency restoration reserves with automatic activation, with article 21.1 requesting the corresponding implementation framework
- Article 22 calls for the establishment of a European platform for the imbalance netting process, with article 22.1 requesting the corresponding implementation framework.

### REFERENCES

1. The EU Commission regulation 2017/2195 of 23<sup>rd</sup> November 2017 establishing a guideline on electricity balancing (EB GL)
2. The EU Commission Regulation 2013/543 of 14 June 2013 on submission and publication of data in electricity markets (TR)
3. Imbalance netting implementation framework dated 24 June 2020
4. Implementation Framework for mFRR platform dated 24 January 2020
5. Implementation Framework for aFRR platform dated 24 January 2020
6. Detailed Data Description for European platforms' IFs v.1.0-
7. Implementation guide for European platforms' IFs v1r2

## ABBREVIATIONS AND DEFINITIONS

Definitions and abbreviations used in the document

TERM	DEFINITION
<b>aFRR</b>	Automatically activated frequency restoration reserves
<b>BRS</b>	Business requirement specification
<b>Data provider</b>	The entity responsible for submitting data to the Transparency Platform
<b>EB GL</b>	Electricity Balancing Guideline
<b>IF</b>	Implementation framework
<b>ISP</b>	Imbalance Settlement Period, harmonised to 15 minutes for TSOs without derogation as foreseen by EB GL article 53(1)
<b>IN</b>	Imbalance netting
<b>mFRR</b>	Manually activated frequency restoration reserves
<b>LFC area</b>	Load frequency control area
<b>LFC block</b>	Load frequency control block
<b>MTU</b>	Market time unit
<b>TSO</b>	Transmission system operator
<b>TP</b>	Transparency Platform
<b>TR</b>	Transparency Regulation

## 3. Scope

It is the objective of this BRS to articulate the following data publications on TP. These publications are based on the IN, aFRR and mFRR IFs and are listed below:

- Fall-backs
- Netted and exchanged volumes
- Elastic demands
- Balancing border capacity limitations
- Permanent allocation limitations to cross-border capacity on HVDC lines
- Changes to bid availability

Also, in scope of this document are the detailed requirements on how data will be processed on TP, including applicable configurations, access rights, integrations, validations, filtering and monitoring.

## 4. Open points

No	Point	Comments

## **5. General requirements**

### **Configuration**

It shall be possible for platform administrator to configure the platform via the web-based user interface.

The baseline TP configurations implemented to date shall be reused where applicable.

A new process type "IN" shall be introduced to distinguish publications related to Imbalance netting.

### **Updates**

Baseline functionality applies: Data providers shall be able to update any data stored on TP by submitting a higher version of the document.

### **Monitoring**

Baseline functionality applies: It shall be possible to monitor data completeness and submission deadlines where applicable. When submissions are monitored, it shall be possible to trigger notifications to data providers when deadlines are not met.

### **Downloads, extracts and subscriptions**

Existing baseline TP functionality for download, extracts and subscriptions shall be available for the publications. Structured data shall be available for download from data views in csv and excel formats, in addition to XML. Data extracts toward FTP server shall be supported. Extraction in XML format via web-API (also referred to as restful API) shall be supported.

### **Navigation**

New views shall be added to the user interface on TP under the existing Balancing and Outages domains to support the query and display of the publications.

### **Access rights**

The publications shall be visible to the general public. There are no requirements on any new or changed user roles or privileges.

### **Validations**

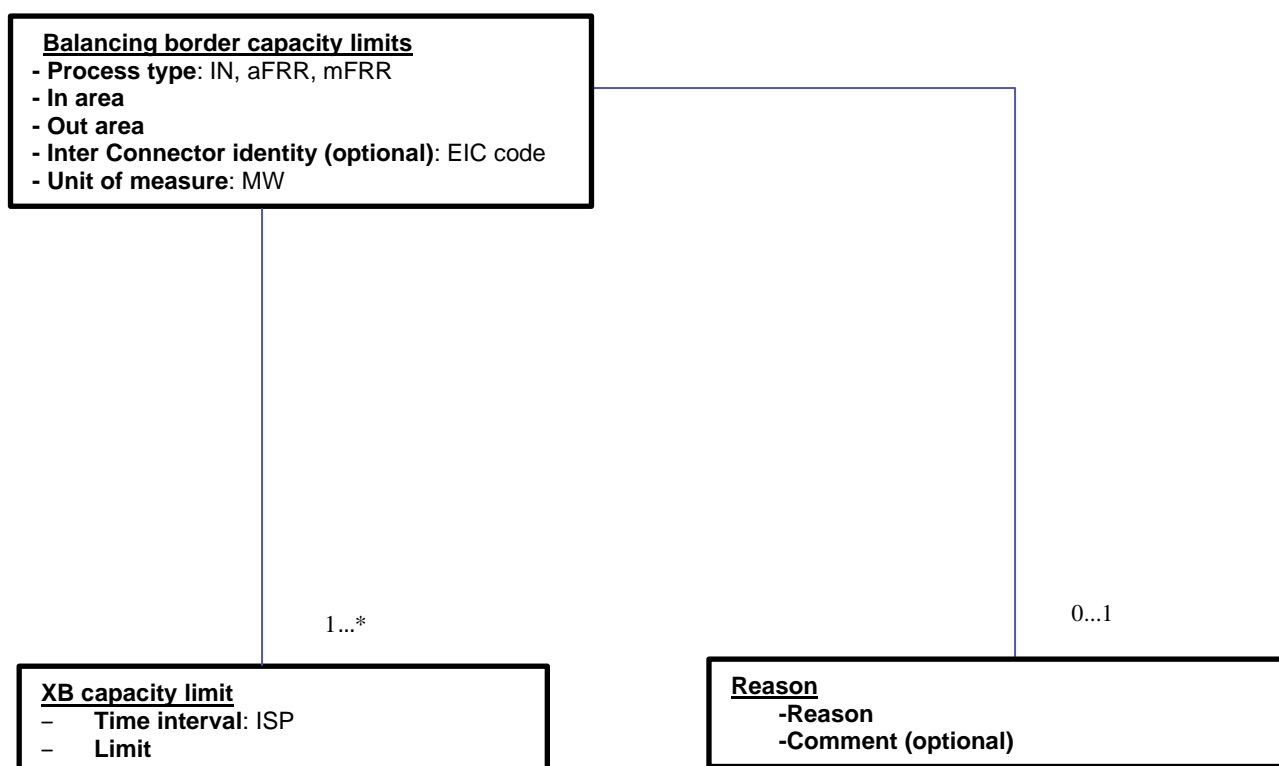
All submitted documents shall be validated according to the dedicated implementation guide.

## 6. Balancing Border Capacity Limits

### Data Description

This data item describes balancing border capacity limits on the exchange of balancing energy reserves. When limit has been adjusted due to operational concerns, the reason will be indicated. The process type and the concerned In and Out areas are declared. In and Out area may be of type LFC area, scheduling area or an aggregation thereof, in case of a technical profile. Optionally, the identity of the interconnector may be disclosed. The capacity limit is provided in MW for a given time interval. The data is submitted and published in ISP resolution. The data may not necessarily be continuous- this is the case when no adjustment to the limit was made or necessary during some ISPs of the described time interval.

### Data diagram



### Pre-Configuration

Platform administrator shall be able to configure one or several data providers per combination of process type and In and Out area couple.

For given combination of process type and In and Out area couple platform administrator shall be able to specify whether data submissions shall be monitored or not.



## Integration

Data provider shall be able to manually upload or submit in machine-to-machine fashion an XML document containing the data.

In case of competing submissions from two or more data providers for the same combination of Process Type, In and Out area couple (and interconnector, where applicable) and ISP, transparency platform shall in first-hand publish data submitted by the European platform. If no data is received from European platform but there are two or more submissions from TSOs or other data providers such as Regional Nomination Platform, the lowest value shall be published.

## Validations

Platform shall validate that the data provider is associated with the In and Out area couple and process type. If interconnector is identified by the data submission, it must be defined in TP master data.

The permitted reasons are defined by references [6] and [7].

## Monitoring

Data shall be submitted no later than 30 minutes after the end of the ISP in which the limitation applies. If submissions are configured to be monitored, all data providers shall be notified in case of missing data<sup>1</sup>.

## Filtering criteria

Data consumers shall be able to access the published data by selecting the following criteria:

- Area couple (mandatory)
- Interconnector (optional)
- Date and time range (mandatory)
- Process type (optional)

## Display

Data matching the selection criteria shall be displayed in a new view:

### **Balancing / Cross-border / Balancing border capacity limits**

Data consumers shall be able to view data below:

- Process type
- In area
- Out area

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<sup>1</sup> Submission monitoring probably only applicable to mFRR for which all capacity limits are to be published.

- Name of interconnector, when applicable
- Balancing border capacity limit in MW per ISP
- Reason code (if provided)
- Comments (if provided)

Data shall be displayed for both directions across the border, if available.

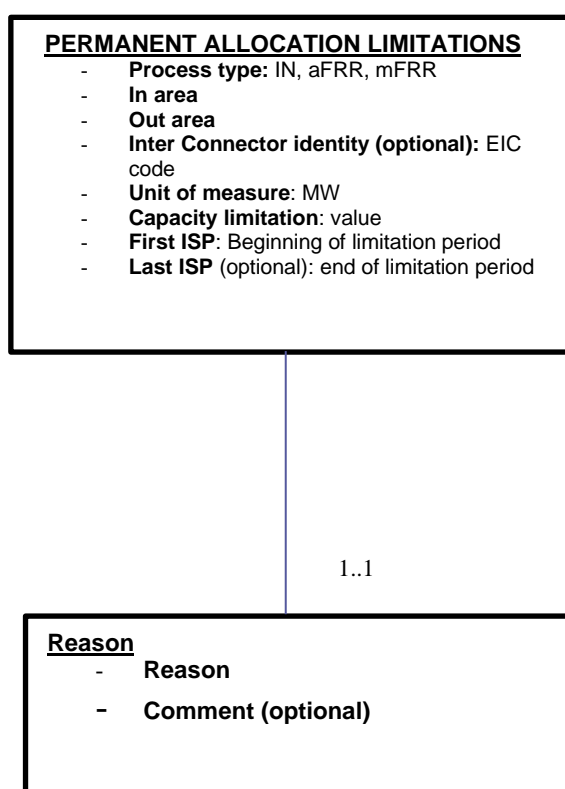
Data shall be available in table and graph formats.

## 7. Permanent allocation limitations to cross-border capacity on HDVC lines

### Data Description

This data item describes a permanent allocation limitation to the cross-zonal exchange on an HVDC interconnector between scheduling areas. It includes the process type, in and out areas and optionally the identity of the interconnector. The capacity limit is expressed in MW. The first ISP during which the limit applies must always be indicated. Optionally a last ISP after which the limitation ends may be provided. A reason for the limitation is mandatory, optionally accompanied by a comment providing further details and possibly including also a URL to a local transparency web site.

### Data diagram



### Pre-configuration

One or several data providers per combination of process type and In and Out area couple is foreseen, as per interconnector there might be a different TSO submitting data.

Platform administrator shall be able to configure the valid data providers.

### Integration

Data provider shall be able to manually upload or submit in machine-to-machine fashion an XML document containing the data.

## Validation

Platform shall validate that the data provider is associated with the In and Out area couple and process type. If interconnector is identified by the data submission, it must be defined in TP master data.

The permitted reasons are defined by references [6] and [7].

## Monitoring

Due to the nature of the data, no monitoring is foreseen.

## Filtering criteria

Data consumers shall be able to access the published data by selecting the following criteria:

- Area couple (mandatory)
- Interconnector (optional)
- Date or date range (mandatory)
- Process type (optional)

## Display

Data matching the selection criteria shall be displayed in the following new view:

### **Balancing / Cross-border / Permanent allocation limitations on HVDC lines**

The following attributes shall be displayed:

- Process type
- In area
- Out area

Name of interconnector, when applicable

- capacity limit in MW
- First ISP during which the limit applies
- Optionally, last ISP during which the limit applies
- Reason
- Comment (if provided)

Data shall be displayed for both directions across the border, if available.

Data shall be available in table format.

## 8. Netted and exchanged Volumes

### Data Description

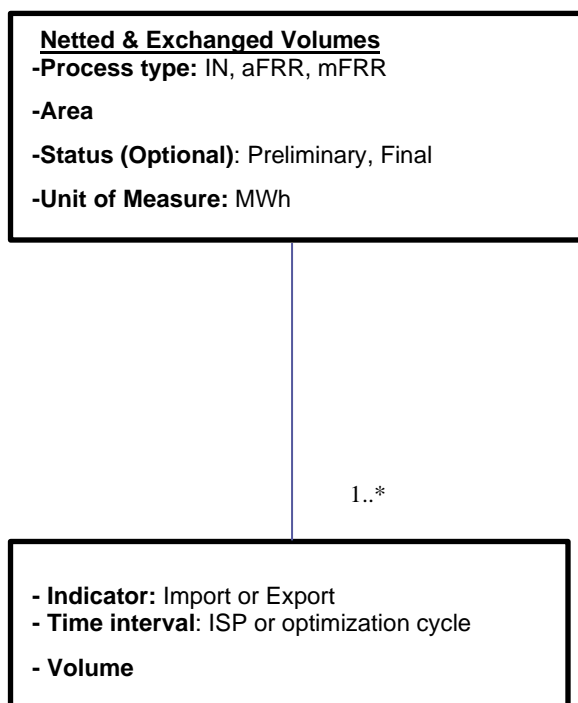
This data item describes Netted volumes for the IN process and the exchanged volumes for the mFRR and aFRR processes.

The netted and exchanged volumes are expressed in MWh per LFC area or Scheduling area (or aggregation thereof). Also, there will be an indicator whether it reflects export or import. The data is expressed with ISP resolution for IN and mFRR processes and with optimization cycle (4 second) resolution for aFRR process.

For mFRR, an aggregated value for both scheduled and direct activations will be published.

For IN and aFRR, it shall be possible to update preliminary values with final values after the matching process. This will be reflected by a dedicated status attribute.

### Diagram



### Pre-configuration

Platform administrator shall be able to configure the single data provider for a given combination of process type and area.

## Integration

Data provider shall be able to manually upload or submit in machine-to-machine fashion an XML document containing the data.

## Validation

Platform shall validate that the data provider is associated with the given combination of area and process type.

## Monitoring

Data shall be published no later than 30 minutes after the end of the ISP. The submission shall be monitored and the data provider notified in case of non-compliance.

Due to technical limitations on TP, monitoring is performed per entire ISP also for aFRR.

## Filtering criteria

Data consumers shall be able to access the published data by selecting the following criteria:

- Process type (mandatory)
- Area (mandatory)
- Date and time range (mandatory)

## Display

Data matching the selection criteria shall be displayed in a new view:

### **Balancing / Energy / Netted and exchanged volumes**

The following attributes shall be displayed:

- Process type
- Area
- Quantity in MWh per ISP or optimization cycle
- Direction: Import or export. When zero volume, white space.
- For IN and aFRR process types, the status: Preliminary or final

Data shall be available in table and graph formats. For aFRR, data shall be published as graph by default.

## 9. Fall-backs

### Data Description

This data item describes data provided to TP following the application of fall-back procedures by participants in European platforms as a result of events listed below:

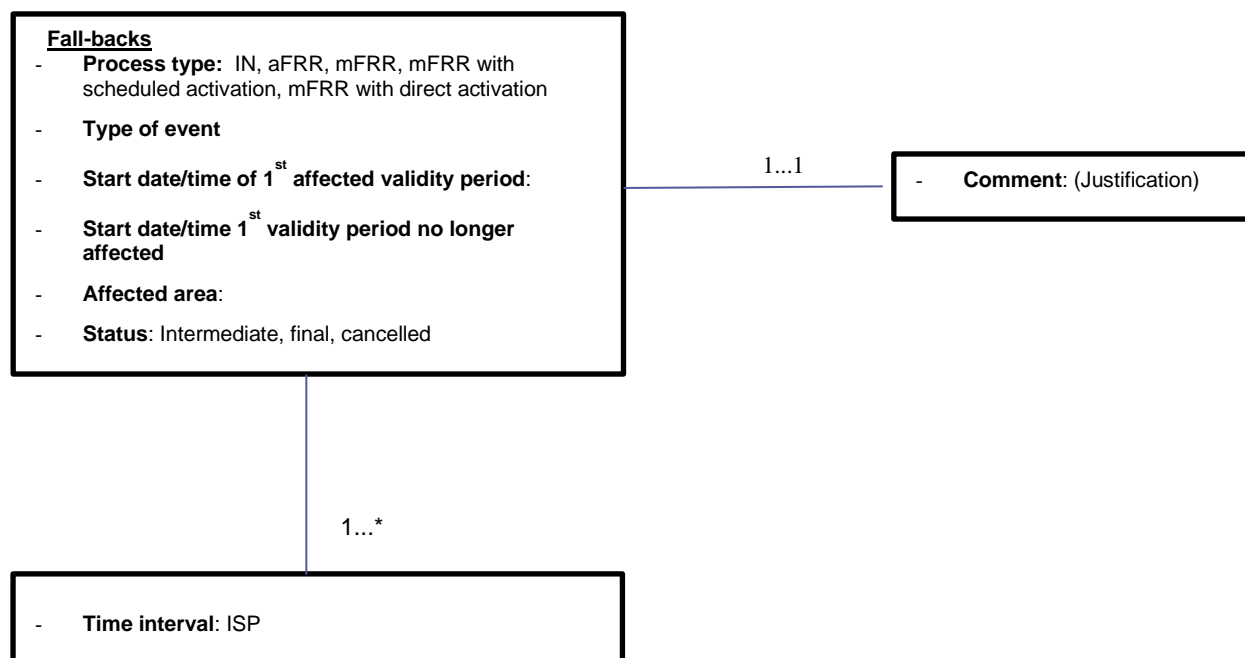
- Disconnection of TSO from the European platform
- Unavailability of European platform itself (planned or unplanned outage)
- Algorithm used on the platform fails or does not find solution

For each event, the published data describes the affected area, the process type, the affected ISP(s), start date and time of the first affected validity period and start date and time of the first validity period no longer affected. It also describes the status of the event and type of event.

In case of disconnection, the affected area is the TSO's control or LFC area. In case of events affecting the platform itself the affected area is the region covered by the process.

Changes to planned or actual date and time of disconnection/reconnection of TSO, or service suspension and reestablishment on European platform shall be submitted as updates to the originally published information.

### Data diagram



Note: The precise nature of the event may be described by a combination of business type and reason code, as per details defined in reference [7].

### Pre-configuration

Platform administrator shall be able to configure the single data provider for a given process type.

## Integration

Data provider shall be able to manually upload or submit in machine-to-machine fashion an XML document containing the data.

## Validation

Platform shall validate that the data provider is associated with the process type. Affected area must match existing reference data in TP.

## Monitoring

Disconnections and outages cannot be predicted. Therefore, no monitoring of submission is foreseen.

## Filtering criteria

Data consumers shall be able to access the published data by selecting the following criteria:

- Process type (mandatory)
- Area (optional)
- Affected ISPs: Date or Date Range (mandatory)

## Display

All data matching the filtering criteria shall be displayed.

The data shall be displayed in the following section:

### **Outages / Fall-backs**

The following attributes shall be displayed:

- Process type
- Event type
- Affected ISP(s)
- Start date and time of first affected validity period
- Start date and time of first affected validity period no longer affected
- Affected area
- Status
- Comment, if provided

Data shall be visible in table format and Gant chart.

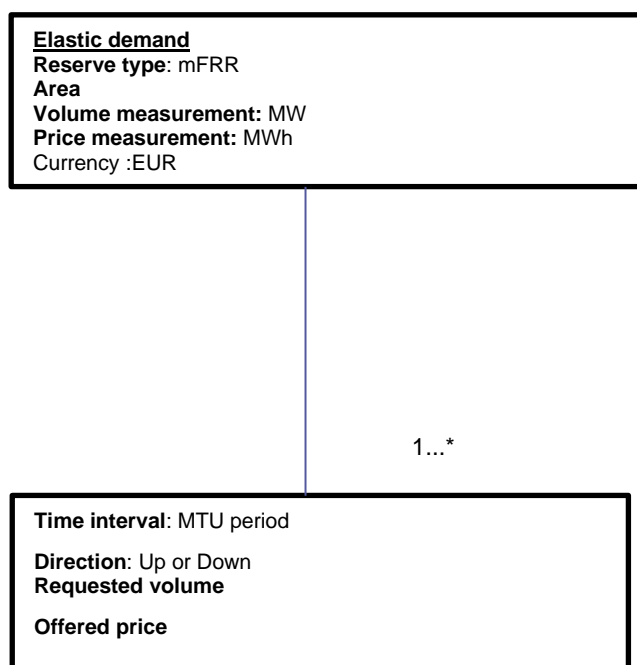


## 10. Elastic Demand

### Data Description

This data item describes all elastic demands for scheduled activation of standard mFRR product. It includes reserve type, area, direction, MTU period, requested volume and offered price. The data is provided with volumes in MW and prices in currency/MWh. There may be more than one demand per area and MTU period. Data is provided with MTU resolution.

### Diagram



### Pre-configuration

For normal operational circumstances, platform administrator shall be able to configure the single data provider for each reserve type (mFRR only foreseen). For exceptional circumstances, platform administrator shall be able to configure a single data provider per scheduling area.

### Integration

Data provider shall be able to manually upload or submit in machine-to-machine fashion an XML document containing the data.

### Validation

Platform shall validate that the data provider is associated with the reserve type or combination of reserve type and Scheduling area. Price may be positive, negative or zero.

## Monitoring

Elastic demands are not guaranteed to be submitted for all MTU periods or areas. Therefore, no monitoring of submission is foreseen.

## Filtering criteria

Data consumers shall be able to access the published data by selecting the following criteria:

- Area: Scheduling area, Aggregation of scheduling area (mandatory)
- Process type: mFRR only foreseen (mandatory)
- Date and time range (mandatory)
- Direction (optional)

## Display

Data matching the selection criteria shall be displayed in a new view:

### **Balancing / Energy / Elastic demands**

The following attributes shall be displayed:

- Reserve type: mFRR
  - Area
  - Currency: EUR
  - For each elastic demand, the following data is presented per MTU period:
    - o Requested volume in MW
    - o Offered price in MWh
    - o Direction

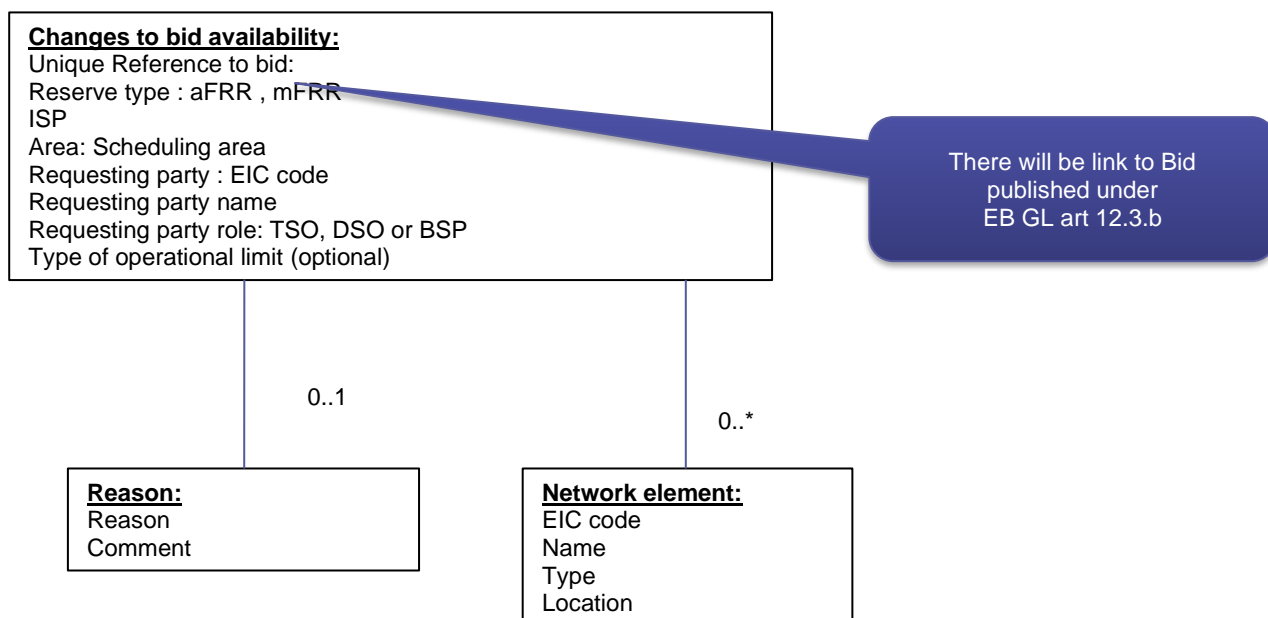
Data shall be presented in table and graph formats.

## 11. Changes to bid availability

### Data Description

This publication provides detailed reasons for modifications to submitted bids for standard aFRR or mFRR products, with details on the party requesting the change. The publication also includes a reference to the bid itself, reserve type, ISP and the scheduling area. When applicable, the type of operational limit that is endangered and the network element(s) concerned are also published.

### Diagram



### Pre-configuration

Under normal operational circumstances, data will be submitted by European platforms only. Exceptionally and as a fall-back measure, TSOs may submit data directly to TP.

For normal operational circumstances, platform administrator shall be able to configure the single data provider for each reserve type. For exceptional circumstances, platform administrator shall be able to configure a single data provider per scheduling area.

### Integration

Data provider shall be able to manually upload or submit in machine-to-machine fashion an XML document containing the data.

### Validation

Platform shall validate that the data provider is associated with the reserve type or scheduling area.

When provided, EIC of network element and requesting TSO must exist in master data. Network element(s) must be provided when the following two conditions are both fulfilled:

- 1) Type of operational limit: Thermal limit
- 2) Role of requesting party: TSO

Type of operational limit must be provided when role of requester is TSO or DSO. Reason “activation(s) of conditional bid(s)” is permitted only when role of requester is BSP.

Valid types of operational limits and reasons are defined by references [6] and [7].

The referenced bid must have been published in TP under EB GL art. 12.3.b. If bid has been archived on TP (currently one month after the delivery period) the document containing the changes to bid availability will be rejected.

Assumption: TP shall not attempt to validate EIC, name or role of DSO and BSP as those details are not present in master data.

## Monitoring

As changes to bid availability cannot be foreseen, no monitoring of submissions will occur.

## Filtering

Data consumers shall be able to access the published data by selecting the following criteria:

- Area (mandatory)
- Reserve type (mandatory)
- Date and time range (mandatory)
- Requesting party role (optional)

## Display

Data matching the filtering criteria shall be published in a new view:

### **Balancing / Energy / Changes to Bid Availability**

- Reserve type
- ISP
- Link to the bid published under EB GL art. 12.3.b
- Scheduling area
- Requesting party role, name and EIC
- Operational limit type
- Reason
- Comment, when provided
- When provided, a list of concerned network elements: EIC and name, type and location retrieved from Master Data

Data will be presented in table format.

Note: When requesting party is TSO, the name as recorded in Master Data will be published. When requesting party is BSP or DSO, EIC and name as provided in input file will be published.

### **Modification to existing data view**

When a change to availability has been published, there shall also be a link to the published data visible in the existing view dedicated to EB GL art. 12.3.b.