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# **European platforms' implementation frameworks - extensions to Detailed Data Description for Transparency Platform**

Version 1.1

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WG MIT

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## 1. Introduction

### REVISION HISTORY

Version	Release	Date	Description
1	0	2021-06-25	<p>Incorporated feedback from ACER Opinion 10/2021.</p> <p>mFRR exchanged volumes will be reported separately for DA and SA.</p> <p>Identity of BSP must not be disclosed when reporting changes to bid availability.</p> <p>Draft for review.</p>
1	1	2022-05-24	<p>Identity of BSP must not be disclosed when reporting changes to bid availability.</p> <p>Netted volumes may also be published per scheduling area for IN.</p> <p>Changes to bid availability will be submitted by European platforms only.</p> <p>Net position limits may also be published under balancing border capacity limits.</p> <p>Incorporated feedback from ACER Opinion 10/2021:</p> <ul style="list-style-type: none"> <li>- mFRR exchanged volumes will be reported separately for DA and SA</li> <li>- netted or exchanged volumes will be reported also per border</li> <li>- identity of TSO requesting adjustment of balancing border capacity limit may be published</li> </ul>

			- Various other editorial adjustments.
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## PURPOSE OF THIS DOCUMENT

The purpose of this document is to provide a detailed data definition for the transparency publications foreseen by the implementation frameworks of the IN, aFRR and mFRR European platforms, beyond the scope of EB GL article 12 and TR. It is intended to facilitate the work of data providers, TSOs and the ENTSO-E secretariat when implementing the corresponding data exchanges.

## LEGAL AND POLICY BACKGROUND

The EU Commission regulation 2017/2195 of 23<sup>rd</sup> November 2017 (EB GL) establishes a guideline on electricity balancing. It sets out technical, operational and market rules for the electricity balancing markets. Specifically, the following articles sets the legal background to this document:

- 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.

The implementation frameworks approved by ACER constitute the legal basis for the publications described in this document.

Note: In case there would be future amendments to the RR IF requiring additional transparency publications, an updated version of this detailed data description shall be issued.

## 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

## ABBREVIATIONS AND DEFINITIONS

Definitions and abbreviations used in the document

TERM	DEFINITION
<b>BSP</b>	Balancing Service Provider
<b>CBMP</b>	Cross-Border Marginal Price
<b>EB GL</b>	Electricity Balancing Guideline
<b>FRP</b>	Frequency Restoration Process
<b>IF</b>	Implementation framework
<b>ISP</b>	Imbalance Settlement Period, harmonised to 15 minutes as foreseen by EB GL article 53(1)
<b>IN</b>	Imbalance netting
<b>aFRR</b>	Automatically activated frequency restoration reserves
<b>mFRR</b>	Manually activated frequency restoration reserves
<b>MoP</b>	Manual of Procedures
<b>MTU</b>	Market Time Unit
<b>LFC area</b>	Load frequency control area
<b>LFC block</b>	Load frequency control block
<b>RRP</b>	Replacement Reserve Process
<b>TSO</b>	Transmission system operator
<b>TP</b>	Transparency Platform
<b>TR</b>	Transparency Regulation
<b>Data provider</b>	The entity responsible for submitting data to the Transparency Platform

## 2. Open points

Not applicable.

### 3. Scope

The scope of this detailed data description is limited to additional publications on the transparency platform beyond those already mandated by transparency regulation [2] and the guideline on electricity balancing [1], as required by the implementation frameworks of the European platforms.

#### 3.1 Publications introduced by IN IF

The following additional transparency publications are foreseen by the IN IF:

- Netted volumes (article 3.10)
- balancing border capacity limits (articles 4.3 and 4.4)
- Permanent allocation limitations to cross-border capacity on HVDC lines (article 4.5)
- Fall-backs (article 7.2)

#### 3.2 Publications introduced by mFRR IF

The mFRR IF requires the following set of additional transparency publications:

- Elastic demands (article 3.4)
- Fall-backs (article 3.11)
- Exchanged volumes (article 3.17)
- balancing border capacity limits (articles 4.3 and 4.4)
- Permanent allocation limitations to cross-border capacity on HVDC lines (article 4.5)
- Changes to bids availability (article 9.9)

#### 3.3 Publications introduced by aFRR IF

The aFRR IF requires the following additional transparency publications

- Fall-backs (article 3.10)
- Exchanged volumes and prices provided by the AOF (article 3.16)
- balancing border capacity limits (articles 4.3 & 4.4)
- Permanent allocation limitations to cross-border capacity on HVDC lines (article 4.5)
- Changes to bid availability (articles 9.6 & 9.8)

## 4. Detailed Data Descriptions

The following contains the detailed descriptions of the data to be published on the TP. Key business attributes and their meanings are elaborated upon.

Data will be published with MTU resolution when the MTU is smaller than the ISP and the implementation frameworks require publication per MTU period.

### 4.1 Balancing border capacity limits

Balancing border capacity limits	
Relevant article(s)	Articles 4.3 & 4.4 of IN IF Articles 4.3 & 4.4 of aFRR IF Articles 4.3 & 4.4 of mFRR IF
Detailed description	<p>The balancing border capacity limits shall be described by a time series that conveys the following information:</p> <ul style="list-style-type: none"> <li>- Process type: aFRR, mFRR, IN</li> <li>- In area</li> <li>- Out area</li> <li>- Identity of interconnector, when applicable</li> <li>- balancing border capacity limit or adjustment in MW</li> <li>- Time interval during which the limit or adjustment is applied</li> <li>- If the capacity limit has been adjusted, the identity of the TSO requesting the adjustment</li> </ul> <p>Adjustment here refers to the difference (also called “delta”) between originally foreseen capacity limit and the updated capacity limit actually being applied.</p> <p>Net position limits impose a cap on the net import and/or export into/from an area, without affecting transit flows. These shall also be published. For imports the Out area corresponds to the region. For exports the In area corresponds to the region.</p> <p>Data is published with ISP resolution.</p> <p>A reason shall be published whenever a temporary limit or adjustment has been applied. The following single reason is foreseen: Operational security constraints. A free-text comment must be included to provide additional explanation and justification.</p> <p>Area may be scheduling area, LFC area or, in case of a technical profile, an aggregation thereof.</p>



	<p>Time series does not have to be continuous. This is the case when the submitted limit or adjustment applies only during some of the ISPs.</p> <p>Interconnector may be identified by its EIC code when it is necessary to distinguish between the interconnectors on a given border. This may typically be the case when there is more than one HVDC interconnector on the border.</p> <p>For IN and aFRR only temporary adjustments due to operational security constraints will be published.</p> <p>For mFRR all capacity limits, including their updates due to operational security constraints, will be published. When the border does not correspond to a bidding zone border, and the capacity limit therefore equals the technical exchange limit, only the temporary limits due to operational security will be published.</p>
Specification of calculation	<p>If adjustments for the same border or interconnector and the same time interval are received from individual TSOs and from the IN or aFRR platform, the adjustment sent by the platform shall be published.</p>
Data provider	<p>IN, aFRR and mFRR platforms</p> <p>For IN and aFRR individual TSOs may also submit adjustments.</p>
Publication deadline for ENTSO-E	<p>Adjustments and their justification shall be published as soon as the need has been identified and as soon as technically feasible but no later than 30 minutes after the end of the first market time unit in which the limit applies.</p> <p>The additional free text comment providing further details will be published as soon as technically and operationally feasible.</p>
Updates	<p>May be submitted in case the time interval, during which adjustments due to operational security constraints are in place, is extended or shortened. An update may also be submitted in case the limit itself has been modified.</p>
Comments	<p>The list of possible reasons may be extended in the future to align with the evolution of capacity calculation methodologies.</p> <p>The publication will be extended with information about TSOs requesting the limits or adjustments at a later stage, once necessary adaptations to European platforms and TSOs' systems have been put in place.</p>

## 4.2 Permanent allocation limitations to cross-border capacity on HVDC lines

Permanent allocation limitations to cross-border capacity on HVDC lines	
Relevant article(s)	Article 4.5 of IN IF Article 4.5 of aFRR IF Article 4.5 of mFRR IF
Detailed description	<p>This publication concerns permanent allocation limitation due to technical inability to facilitate cross zonal exchange on a HDVC interconnector. The following attributes are to be published:</p> <ul style="list-style-type: none"> <li>- Process type: aFRR, mFRR, IN</li> <li>- In area</li> <li>- Out area</li> <li>- identity of interconnector, when applicable</li> <li>- capacity limit in MW</li> <li>- Date and time of the beginning of the first ISP during which the limit applies</li> <li>- Optionally, date and time of end of the last ISP during which the limit applies</li> </ul> <p>In and Out Areas shall be scheduling areas only..</p> <p>A reason shall be provided for the limitation. The following reasons are foreseen:</p> <ul style="list-style-type: none"> <li>- Physical cable or converter restrictions</li> <li>- Limitations in controller systems</li> </ul> <p>A free-text comment shall be included to provide additional explanation and justification, possibly including a URL to a local transparency web site.</p> <p>Interconnector may be identified by its EIC code when it is necessary to distinguish between the interconnectors on a given border. This may typically be the case when there is more than one HVDC interconnector on the border.</p>
Specification of calculation needed	No calculation foreseen.
Data provider	TSOs
Publication deadline for ENTSO-E	Data shall be published before the permanent allocation limitation is applied.
Updates	Normally not expected but may be relevant occasionally in case there is a change to the limitation itself or the time during which it applies.

Comments	Further technical analysis will be performed by a common IN/aFFR task force to ensure the correct integration of HVDC interconnectors between synchronous areas.
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### 4.3 Netted and exchanged volumes

Netted and exchanged volumes	
Relevant article(s)	Article 3.10 of IN IF Article 3.16 of aFRR IF Article 3.17 of mFRR IF
Detailed description	<p>The netted or exchanged volumes, as applicable, shall be described by time series specifying:</p> <ul style="list-style-type: none"> <li>- process type: IN, aFRR, mFRR</li> <li>- area (for volumes per area) or in and out area couple (for volumes per border)</li> <li>- netted volume or exchanged volume in MWh</li> <li>- Indicator whether import or export occurred (for volumes per area only)</li> <li>- when applicable, status of data: Preliminary or final</li> </ul> <p>Resolution is ISP for IN and mFRR and operational cycle (4 seconds initially) for aFRR.</p> <p>For IN, netted volumes will be published. Status of data will be indicated. Zero shall be published if no netting occurred.</p> <p>For mFRR and aFRR, exchanged volumes will be published.</p> <p>Area will be scheduling area, LFC area or an aggregation thereof.</p> <p>For mFRR, exchanged volumes will be published separately for scheduled and direct activations.</p>
Specification of calculation needed	No calculation foreseen on TP.
Data provider	IN, aFRR and mFRR platforms
Publication deadline for ENTSO-E	<p>No later than 30 minutes after the end of the ISP for IN and mFRR.</p> <p>No later than 30 minutes after the end of the operational cycle for aFRR</p>
Updates	For IN and aFRR, preliminary values shall be updated by final values after the matching process between participating TSOs and the IN platform. Updates normally not expected for mFRR.
Comments	

#### 4.4 Fall-backs

Application of fall-back procedures	
Relevant article(s)	Article 7.2 of IN IF Article 3.11 of mFRR IF Article 3.10 of aFRR IF
Detailed description	<p>The following events shall be published: Disconnection and reconnection of TSOs from/to European platform, unavailability of European platform and algorithm failure in European platform. The following details of the event shall be published:</p> <ul style="list-style-type: none"> <li>– Process type: IN, mFRR or aFRR</li> <li>– Type of event: Disconnection of TSO, algorithm fails or does not find solution, planned maintenance of platform, unplanned outage of platform</li> <li>– The affected ISP(s)</li> <li>– Start date and time of first affected validity period</li> <li>– Start date and time of first validity period no longer affected</li> <li>– Affected area: Control or LFC area when TSO disconnects, otherwise region</li> <li>– Status of data: Intermediate, final, cancelled</li> <li>– Optionally a comment with additional explanation may be provided</li> </ul> <p>End date and time must always be provided. An estimate shall be provided in case definite information is not available.</p>
Specification of calculation needed	No calculations foreseen.
Data provider	IN, aFRR and mFRR platforms
Publication deadline for ENTSO-E	<p>No later than 30 minutes after the end of the first ISP of the disconnection and reconnection of the TSO.</p> <p>No later than 30 minutes after the end of the first ISP of the service suspension or reestablishment of the European platform.</p> <p>No later than 30 minutes after the end of the ISP for which algorithm failed or did not find a solution.</p>
Updates	<p>Changes to planned or actual date and time of disconnection/reconnection of TSO shall be submitted as updates to the originally published information.</p> <p>Changes to the planned or actual date and time of service suspension and reestablishment on European platform shall be submitted as updates to the originally published information.</p>
Comments	The detailed description outlined above allows data consumers to distinguish “ <i>temporary incidents linked to the complexity of the real-time processes and the limitations of the IT systems, with an expected duration longer than 5 minutes and shorter than 30 minutes</i> ” as foreseen by aFRR IF art. 3.10.



## 4.5 Elastic demands

Elastic demands	
Relevant article(s)	Article 3.4 of mFRR IF
Detailed description	<p>All elastic demands for scheduled activation of standard mFRR product shall be published, no matter whether they were satisfied or not. The following information shall be submitted for publication:</p> <ul style="list-style-type: none"> <li>- Reserve type: mFRR</li> <li>- Scheduling area or an aggregation of scheduling areas</li> <li>- Direction: Up or Down</li> <li>- MTU period</li> <li>- Requested volume</li> <li>- Offered price</li> </ul> <p>Data is provided with MTU resolution.</p> <p>Unit of measurement for volumes is MW and for prices currency/MWh.</p> <p>Demand for scheduled activation only shall be reported.</p> <p>There may be more than one demand per area and MTU period. In such situation, the demands typically have different prices.</p>
Specification of calculation needed	No calculations foreseen
Data provider	mFRR platform
Publication deadline for ENTSO-E	Elastic demands shall be submitted for publication no later than 30 minutes after the end of the MTU period to which they refer, aligning with the submission deadline stipulated by EB GL art. 12.3.b for energy bids.
Updates	Normally not foreseen
Comments	

#### 4.6 Changes to bid availability

Changes to bid availability	
Relevant article(s)	Articles 9.6 & 9.8 of aFRR IF Articles 9.7 & 9.9 of mFRR IF
Detailed description	<p>When the availability or offered volume of a bid for a standard aFRR or mFRR product has been modified after its submission to TSO, the TSO shall provide details of the party requesting the change and the reasons:</p> <ul style="list-style-type: none"> <li>- Reserve type: aFRR or mFRR</li> <li>- ISP that the bid refers to</li> <li>- Unique reference to the bid</li> <li>- Scheduling area from which bid originates</li> <li>- Requesting party role (TSO, DSO or BSP)</li> <li>- Identity of requesting party in case of TSO or DSO</li> <li>- When applicable, type of operational limit: Thermal, frequency, voltage, current, short-circuit current, dynamic stability</li> <li>- The reason: Activation(s) of conditional bid(s), insufficient reserve capacity, unavailability of unit(s), internal congestion, operational security constraints, unavailability of automatic protection systems, failure</li> <li>- When applicable, concerned network element(s)</li> </ul> <p>The type of operational limit is applicable and mandatory when TSO or DSO has requested the modification.</p> <p>The reason “activation(s) of conditional bid(s)” is applicable only when modification was requested by BSP.</p> <p>Information about concerned network element(s) is mandatory only in case of thermal limit and when modification was requested by TSO.</p> <p>Modifications to submitted bids shall be published no matter whether they occurred before or after TSO energy bid submission gate closure time.</p>
Specification of calculation needed	No calculation is foreseen
Data provider	aFRR and mFRR platforms.
Publication deadline for ENTSO-E	no later than 30 minutes after the end of the ISP that the bid refers to.
Updates	Normally not foreseen
Comments	TP shall provide a link to the bid published under EB GL art. 12.3.b. It is the responsibility of data provider to ensure a matching bid identification.



#### 4.7 CBMPs for aFRR standard products

##### CBMPs for aFRR standard products

Relevant article(s)	Article 3.16 of aFRR IF
Detailed description	<p>The following attributes will be published:</p> <ul style="list-style-type: none"> <li>- LFC area</li> <li>- Direction: Up or Down</li> <li>- Price</li> <li>- MTU period</li> </ul> <p>Per LFC area and MTU period, there may be a single price for either Up or Down direction or the same price may apply to both directions. Price may be positive, zero or negative and expressed in EUR/MWh. MTU period length is four seconds.</p>
Specification of calculation needed	No calculation foreseen on the transparency platform.
Data provider	aFRR platform
Publication deadline for ENTSO-E	Data shall be published no later than 30 minutes after the end of the MTU period
Updates	Normally not expected.
Comments	