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Common Platform for manually activated restoration reserves IMPLEMENTATION GUIDE

2022-05-10

APPROVED DOCUMENT
VERSION 1.4

ENTSO-E Common Platform for manually
activated Frequency Restoration Reserves
IMPLEMENTATION GUIDE v1.4

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

21 • SHALL: This word, or the terms "REQUIRED" or "MUST", means that the definition is an
22 absolute requirement of the specification.

23 • SHALL NOT: This phrase, or the phrase "MUST NOT", means that the definition is an
24 absolute prohibition of the specification.

25 • SHOULD: This word, or the adjective "RECOMMENDED", means that there may exist valid
26 reasons in particular circumstances to ignore a particular item, but the full implications shall
27 be understood and carefully weighed before choosing a different course.

28 • SHOULD NOT: This phrase, or the phrase "NOT RECOMMENDED", means that there may
29 exist valid reasons in particular circumstances when the particular behaviour is acceptable
30 or even useful, but the full implications should be understood and the case carefully weighed
31 before implementing any behaviour described with this label.

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

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40   Revision History

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Version	Release	Date	Comments
0	1	2020-02-17	First draft
1	0	2020-11-04	Approved by MC.
1	1	2021-01-26	Maintenance request MARI_04: Conditionally linked bids may by default be either available or not available. Introduced status values "conditionally available" and "unconditionally available" in BidTimeSeries status attribute. Introduced six new status values for unconditionally available bids in the links to bids in previous MTU periods, mirroring the existing six values that will apply to conditionally available bids. Removed reference to tolerance band since out of scope. Reflected in chapter 5.3.4 that net position limits are not necessarily submitted for both import and export. Most recent version of HVDC link schema will be used to avoid dummy EIC when submitting DFR for AC border. Higher version of Acknowledgement schema will be used to handle longer mRID. Editorial correction: Removed earlier draft references to technicalConditionality and commercialConditionality.
1	2	2021-06-01	Maintenance request MARI05: - EAR file shall cover one month in CET/CEST - rounding error output explicitly in EAR file - volumes and values of exchanged energy due to DA shall be output separately for positive and negative settlement prices - introduced ability to cancel interconnector flow constraint Editorial corrections: - Bid document may contain bids from scheduling areas that do not belong to sending TSO (Amprion submitting bids on behalf of all German TSOs, for example) - Period rather than Series_Period used in capacity document - Added clarification that BidAvailability document shall not be submitted for bids that were withdrawn due to erroneous submission Approved by MC.

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1	3	2022-02-01	Maintenance request MARI06: When submitting CBCLs, if reason is provided it shall be associated with time series rather than header. Reason for unavailability associated with time series only, not with header. Reflected in dependency table of HVDC Link document that ID of interconnector is not mandatory. For AC interconnectors, it would typically not be populated. A simple bid may not be updated into a component of an exclusive or multipart bid. Editorial correction in dependency table for EAR: Replaced reference to B09 with C48 and C49 for DA also on series period level. Specified how to submit changes to bid availability in the unlikely event that the bid underwent changes at different points in time. Document describing changes to bid availability must cover exactly one MTU period. Demands in the MOL document may contain additional two reasons to indicate fully netting and/or bids activated in same direction. mFRR platform should be noted as sender of capacity documents toward transparency platform. Clarified that bids and elastic demands are reported in separate documents toward transparency platform. Transparency reporting of net positions will be done separately for SA and DA. Editorial correction in Note 2 in chapter 5.3.10: Role code referred to shall be A49 instead of A04. Specified in 5.4 that reflection of ramps in signalling is configurable. Maintenance request MARI07: Clarified that zero value shall be populated in activated quantity attribute of MOL document when bid rejected and demand not satisfied. Curve type defaults to A01 if excluded when submitting capacity or HVDC Link documents to mFRR platform. Approved by MC.

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1	4	2022-05-10	Maintenance request MARI08: TSO may request disconnection or decoupling by submitting Outage document. Clarified in chapter 5.3.2 what updates may be submitted to demands and within which timelines. Disaggregated transparency reporting of net positions with separate values for DA and SA will be implemented already by go-live. Identity of BSP must not be disclosed when reporting changes to bid availability. Editorial corrections. Approved by MC.

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1 Introduction

This document was drafted based on IEC 62325 series. In particular, the IEC 62325-450 methodology was applied to develop the conceptual and assembly models.

2 Scope

This implementation guide defines the data exchanges with the European platform for the exchange of balancing energy from frequency restoration reserves with manual activation, as mandated by article 20 of the electricity balancing guideline (EB GL).

3 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC TS 61970-2, *Energy management system application program interface (EMS-API) –Part 2: Glossary*

IEC 62325-301, *Framework for energy market communications – Part 301: Common information model (CIM) extensions for markets*

IEC 62325-351, *Framework for energy market communications – Part 351: CIM European market model exchange profile*

IEC 62325-450, *Framework for energy market communications – Part 450: Profile and context modeling rules*

IEC 62325-451-1, *Framework for energy market communications – Part 451-1: Acknowledgement business process and contextual model for CIM European market*

IEC 62325-451-2, Framework for energy market communications – Part 451-2: Scheduling business process and contextual model for CIM European market

IEC 62325-451-3, Framework for energy market communications – Part 451-3: Transmission capacity allocation business process (explicit or implicit auction) and contextual model for CIM European market

IEC 62325-451-4, Framework for energy market communications – Part 451-4: Settlement and reconciliation business process and contextual model for CIM European market

IEC 62325-451-6, Framework for energy market communications – Part 451-6: Transparency business process and contextual model for CIM European market

IEC 62325-451-7, *Framework for energy market communications – Part 451-7: Reserve resource business process and contextual model for CIM European market*

ENTSO-E RG CE scheduling reporting process implementation guide

ENTSO-E Manual of Procedures for central Transparency Platform v3r2

Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing (EB GL)

Commission Regulation (EU) 2013/543 of 14 June 2013 on submission and publication of data in electricy markets (TR)

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164 **3.1   Applicable EDI documents**

165 This implementation guide assumes the use of the following EDI documents and contextual and
166 assembly models (also referred to as XSD or schema versions):

167 **Table 1 – Applicable EDI documents**

168

EDI document	version
Capacity document	urn :iec62325.351 :tc 57wg16 :451-3 :capacitydocument :8 :0
HVDC link document	urn:iec62325.351:tc57wg16:451-8:hvdclinkdocument:1:1
Bid document	urn:iec62325.351:tc57wg16:451-7:reservebiddocument:7:2
MOL document	urn:iec62325.351:tc57wg16:451-7:moldocument:7:2
Schedule document	urn:iec62325.351:tc57wg16:451-2:scheduledocument:5:1
Energy account document	urn:iec62325.351:tc57wg16:451-4:energyaccountdocument:4:0
Balancing market document	urn:iec62325.351:tc57wg16:451-6:balancingdocument:4:1
Acknowledgement document	urn:iec62325.351:tc57wg16:451-1:acknowledgementdocument:8:1
Problem document	urn:iec62325.351:tc57wg16:451-5:problemdocument:3:0
Unavailability market document	urn:iec62325.351:tc57wg16:451-6:outagedocument:4:0
Bid availability market document	urn:iec62325.351:tc57wg16:451-n:bidavailabilitydocument:1:1

169 All schemas are available for download from the ENTSO-E website.

170 **3.2   Applicable protocols for file based data exchange**

171 For file-based data exchange the following protocols will be supported:

172   -   MADES (IEC 62325-503)

173   -   web services (IEC 62325-504)

174   -   EDX protocol

175 **4   Terms and definitions**

176 **AOF**
177   Activation Optimisation Function; as defined by EB GL article 2(39)

178 **activation period**
179   For the mFRR standard product, the activation period starts in the middle of ramp-up and
180   ends in the middle of ramp-down. For scheduled activations the activation period is equal to
181   15 minutes and coincides with the MTU period that is being optimized by the AOF. For direct
182   activations the activation period may have a duration from 15 minutes up to 30 minutes,

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183   starting during the MTU period being optimized by the AOF and ending with the following
184   MTU period.

185 **area**
186   Unless explicitly specified, area may refer to either a scheduling area, LFC area, control
187 area, LFC control block or an aggregation thereof.

188 **Balancing service provider (BSP)**
189   As defined by EB GL art. 2(6)

190 **CBCL**
191   Cross-border capacity limit

192 **direct activation (DA)**
193   direct activation can be initiated at any point in time after scheduled optimization has begun
194 for given MTU period

195 **GCT**
196   Gate closure time

197 **HVDC**
198   High voltage direct current

199 **IF**
200   Implementation Framework

201 **mFRR**
202   Manual frequency restoration reserves; active power reserves that may be manually
203   activated, available to restore system frequency to the nominal frequency and, for a
204   synchronous area consisting of more than one LFC area, to restore power balance to the
205   scheduled value.

206 **MTU**
207   Market Time Unit

208 **SA CE**
209   Synchronous Area Continental Europe

210 **scheduled activation (SA)**
211   scheduled activation can be initiated only at a specific point in time in relation to given MTU
212 period

213 **simple bid**
214   A bid which is not part of a multipart or exclusive group of bids

215 **XB**
216   Cross-border

217 **XB flows**
218   Cross-border flows in the context of this document is equivalent to cross-border schedules

219

220   5   The manual frequency restoration reserve business process for standard
221   products

222   5.1   General overview

223 The common mFRR platform is dedicated to the mFRR process only and will therefore, as a
224 general rule, receive input data and produce output data that is related to the mFRR timeframe
225 only[1]. The platform has a number of operational phases that will be carried out continuously 24
226 * 7:

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[1] The only exception to this rule is the input HVDC and AC schedules. Please refer to 5.3.5 for further details.

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227
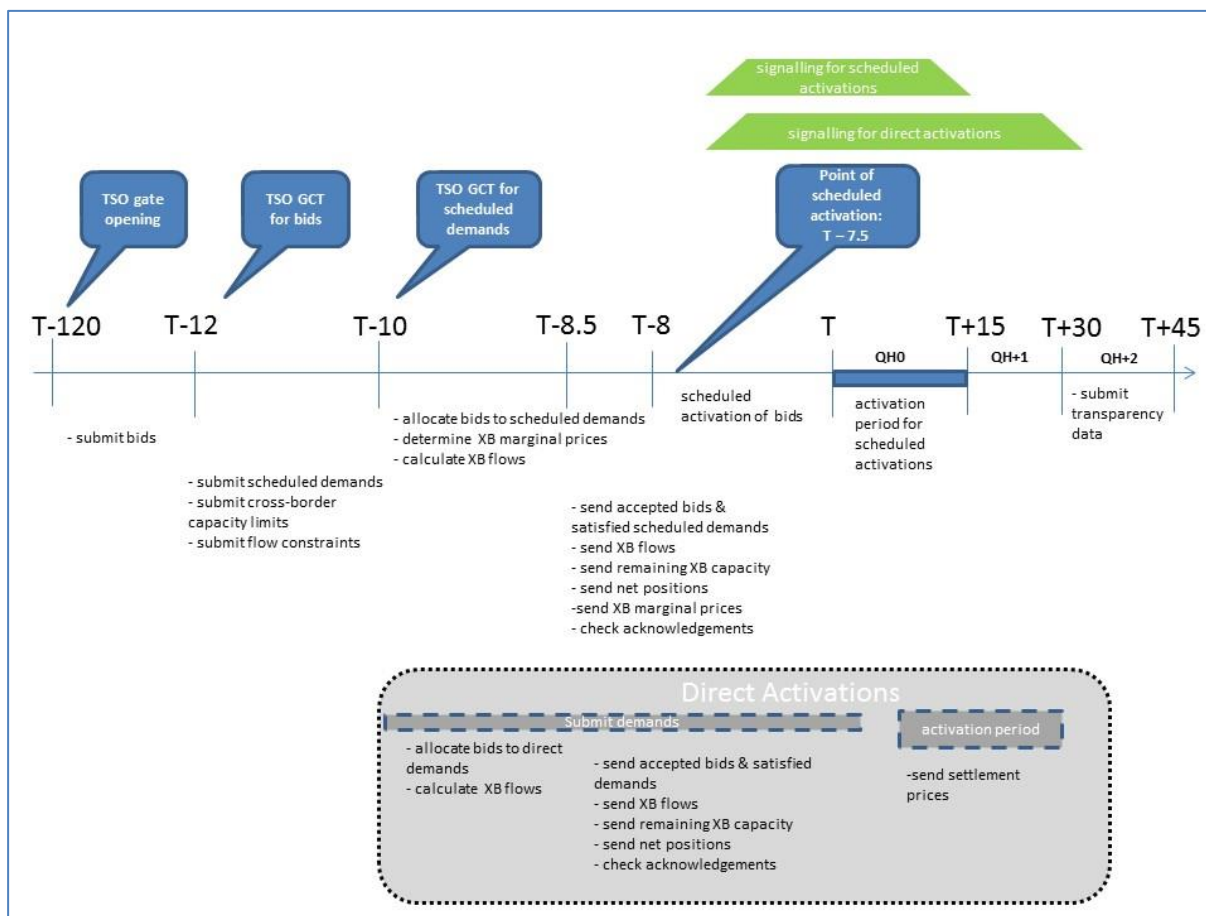
Figure 1: Manual frequency restoration reserve process in common platform - overview

229 The common platform's operational phases outlined in Figure 1 exhibits the timing in order to
230 satisfy a fifteen minute scheduled activation period starting at T and ending at T+15. All timings
231 throughout the whole document are expressed in minutes and relative to the start of the market
232 time unit for which activations are optimised by the platform (MTU0).

233 At T-120 the gate opens for submissions of all types of data from TSOs to the mFRR platform,
234 except for demands for direct activations.

235 TSO gate closure for balancing energy bids occurs at T-12.

236 TSO gate closure for demands for scheduled activations, CBCLs and interconnector flow
237 constraints occurs at T-10. Note that updates to CBCLs may be submitted continuously.

238 Between T-10 and T-8.5 the mFRR platform with its AOF selects bids to satisfy the demands
239 for scheduled activations, determines the cross-border marginal prices and calculates the
240 cross-border flows. In the subsequent results communication and verification phase between
241 T-8.5 and T-8, the resulting net positions, cross-border flows and remaining capacity are sent
242 to TSOs together with cross-border marginal prices and the bids selected for activation and the
243 satisfied demands. The net positions and cross-border flows are also sent to the SA CE monitor.

244 At T-8 the scheduled activation phase begins during which bids selected by the AOF are
245 communicated by each TSO to their respective BSPs. At T-7.5, scheduled activation is initiated.

246 Delivery of balancing energy for scheduled activations, including ramping, occurs between T-5
247 and T+20. This is also the time interval during which corresponding signalling will occur.

248 TSOs may submit their demands for direct activation from T-10 until T+5. Processing of such
249 demands will have to wait until the AOF completes optimisation of the scheduled activations.
250 Likewise, if the AOF is already busy processing one or several demands for direct activations,
251 any subsequently arriving demands for direct activations will have to wait until the AOF finishes.

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252   Delivery of balancing energy for direct activations, including ramping, may start at any point in
253   time between T-5 and T+10, depending on when the demand(s) arrived on the platform. The
254   delivery will always end at T+35. This is also the time interval during which corresponding
255   signalling will occur.

256   As soon as the AOF has finished processing a set of demands for direct activations the cross-
257   border flows, remaining capacity and net positions are sent to TSOs together with the selected
258   bids and satisfied demands. It should be noted that the activation period for direct activations
259   stretches until T+30, i.e. until end of following quarter hour.

260   Settlement prices related to the energy delivered in MTU1 for direct activations submitted for
261   MTU0 can only be determined and distributed to TSO by T+7, after the scheduled optimisation
262   for MTU1.

263   By T+40 the latest, TSOs submit the detailed reasons for changes to bid availability.

264   By T+45 the latest reporting of data to the ENTSO-E central transparency platform shall occur.

265   Up until T+5, TSOs may submit an unavailability document requesting its disconnection or
266   decoupling. Whenever a TSO is disconnected or decoupled from the mFRR process or the
267   platform experiences a failure or becomes unavailable, the platform will send an unavailability
268   document to all participating TSOs.

269

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5.2   Overall business context

This Implementation Guide provides the means of exchanging between the common platform
and all concerned parties the information necessary to fulfill the process requirements outlined
in paragraph 5.1.

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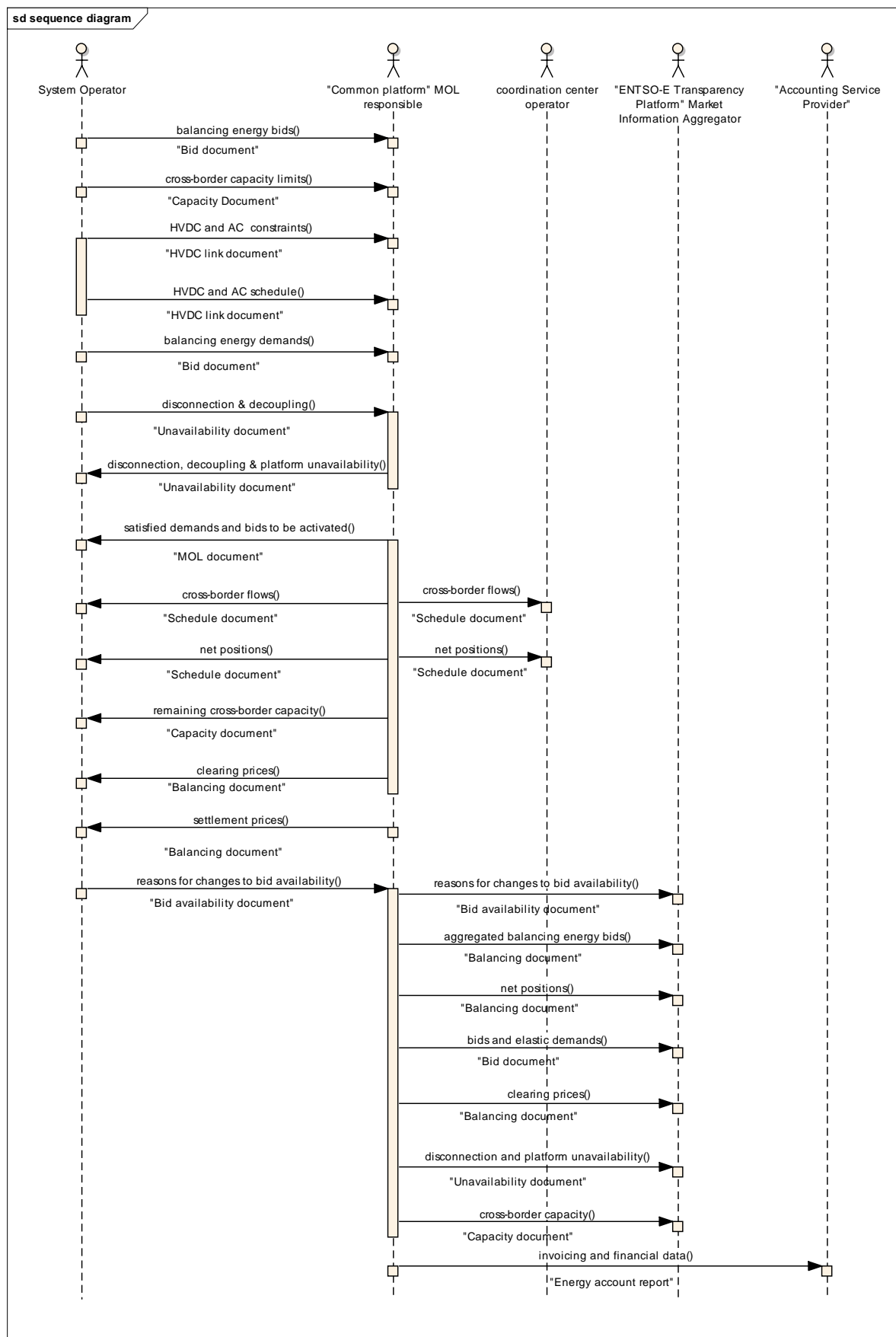activated Frequency Restoration Reserves
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Figure 2: The manual frequency restoration reserve process in common platform - sequence diagram

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277 The illustration above depicts file exchanges only. Real-time signaling is detailed in chapter
278 5.4.

279 The information flows under normal operating conditions are outlined in the following
280 paragraphs. Data exchanges related to missing, rejected or conflicting data will be described in
281 the mFRR operational handbook.

5.2.1 Balancing energy bids

283 Participating TSOs submit to the common platform all balancing energy bids for the standard
284 mFRR product. Bids may be freely updated up until the TSO gate closure for balancing energy
285 bids at T-12 while respecting the limitations stated in chapter 5.3.2.

286 Changes in availability, activation type or in the offered volume of energy bids may be submitted
287 at any time, however if submitted after T-10 such updates will be taken into account during
288 subsequent direct activations only.

5.2.2 Cross-border capacity limits

290 The participating TSOs provide to the common platform the cross-border capacity limits
291 (CBCLs) as well as any applicable technical profiles or net position limits. This information will
292 be used by the AOF when selecting energy bids to satisfy the demands for scheduled and direct
293 activations. In some cases participating TSOs may provide the CBCL through a regional
294 nomination platform.

295 TSOs may submit updates to cross-border capacity limits at any point in time and such updates
296 will be taken into account by the mFRR platform in the next execution of the AOF (for scheduled
297 or direct activation, as applicable) according to specific business rules, depending on the point
298 in time when the update was submitted and whether the AOF is in the process of generating
299 new cross-border flows.

5.2.3 HVDC and AC constraints

301 Optionally, the TSOs may provide to the common platform constraints related to high voltage
302 direct current (HVDC) lines. Such constraints may also be submitted for AC links for
303 countertrading purposes.

5.2.4 HVDC and AC schedules

305 TSOs submitting constraints to the common platform for HVDC or AC lines must also provide
306 the schedules for the lines. In some cases the schedule may be provided by a regional
307 nomination platform or the operator of the line. The schedule must always be provided for a line
308 having a deadzone.

5.2.5 Balancing energy demands

310 Participating TSOs submit to the common platform their demands for balancing energy for
311 scheduled and direct activations, respectively, referring to a specific MTU period. While all
312 demands for scheduled activations have to be submitted by the TSO gate closure at T-10
313 (relevant to the beginning of the specific MTU period), the demands for direct activations may
314 subsequently be submitted at any point in time up until T+5 (relevant to the beginning of the
315 specific MTU period).

316 A demand for direct activation may be updated up until the point in time when the AOF starts
317 processing it.

5.2.6 Satisfied demands and bids to be activated

319 After execution of the AOF for scheduled and direct activations respectively, the common
320 platform sends to each participating TSO the satisfied demands and the bids selected for
321 activation.

5.2.7 Cross-border flows

323 The common platform informs the participating TSOs of the cross-border flows resulting from
324 scheduled and direct activations, respectively. In some cases the resulting cross-border flows
325 may be sent to regional nomination platform or operator of interconnector. Subject to

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326 configuration in the common platform, the resulting cross-border flows may be communicated
327 in an EDI document, a signal, or a combination of both.

328 SA CE monitor will also receive the cross-border flows on all internal and external borders of
329 the SA CE.

330 **5.2.8   Net position**

331 Each TSO receives from the common platform the net position for its LFC area or scheduling
332 areas as resulting from scheduled and direct activations, respectively. Subject to configuration
333 in the common platform, the resulting net positions may be communicated in an EDI document,
334 a signal, or a combination of both.

335 SA CE monitor will also receive the net positions for all areas within the SA CE.

336 **5.2.9   Remaining cross-border capacity**

337 The common platform notifies the participating TSOs of any cross-border capacity that remains
338 unused after the optimization of the scheduled and direct activations, respectively.

339 **5.2.10   Clearing prices**

340 After completion of the optimization of scheduled activations, the common platform provides
341 the clearing prices to the TSOs.

342 **5.2.11   Settlement prices**

343 At T+7, after completion of the optimization of scheduled activations for the following quarter
344 hour, the common platform distributes to TSOs the settlement prices for direct activations.

345 **5.2.12   Detailed reasons for changes to bid availability**

346 By T+40 the latest, TSOs submit to the common platform the detailed reasons for changes to
347 bid availability.

348 **5.2.13   Outages**

349 Up until T+5, TSOs may submit an unavailability document requesting its disconnection or
350 decoupling.

351 Whenever a TSO is disconnected or decoupled or the common platform becomes unavailable
352 or experiences a failure, the common platform sends an unavailability document to all TSOs
353 participating in the process.

354 **5.2.14   Transparency reporting**

355 The common platform submits clearing prices, all balancing energy bids and an aggregation of
356 all balancing energy bids to the ENTSO-E central transparency platform for publication as
357 required under TR article 17.1.f and EB GL articles 12.3.b&c and 12.3.e.

358 Elastic demands are reported as required by article 3.4 of the mFRR IF. Disconnection of a
359 TSO and unavailability or failure of the mFRR platform are reported in accordance with article
360 3.11 of the mFRR IF. Detailed reasons for changes to bid availability are reported as required
361 by articles 9.7 and 9.9 of the mFRR IF.

362 CBCLs and technical profiles and their adjustments due to operational security reasons are
363 reported as required by articles 4.3 and 4.4 of the mFRR IF.

364 Net positions are reported as required by article 3.17 of the mFRR IF.

365 **5.2.15   Invoicing and financial data**

366 The common platform provides the financial information to the entity that will carry out financial
367 settlement between the TSOs.

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368   **5.3   Business rules**

369   **5.3.1   General rules**

370   For each file-based electronic data interchange defined in this document, an acknowledgement
371   document, as defined in IEC 62325-451-1, should be generated either accepting the whole
372   received document or rejecting it completely. Problem documents may be exchanged in
373   exceptional circumstances, as outlined by the operational handbook.

374   The business process described in this chapter will be executed separately for each region,
375   also referred to as virtual scheduling area. For manual frequency restoration reserves, the
376   following regions shall apply:

377   **Table 2 – Region codes**

Region	EIC code	Geographical scope
mFRR virtual scheduling area	10Y1001C--00085O	scheduling areas of all TSOs participating in the mFRR process

378

379   In all documents the single applicable coding scheme shall be A01 = EIC coding scheme.

380   For Reserve Bid Market Documents, data providers may submit higher versions containing
381   updated bids only as detailed in chapter 5.3.2. For all other documents, higher versions must
382   contain the same number of time series and cover the same time interval.

383   The mFRR platform will as far as technically feasible validate that submitted data complies with
384   the business rules and permitted combinations of attributes as articulated by this
385   implementation guide. Any data submission that fails such validation will be rejected by the
386   platform.

387   TSO shall not submit a higher version of a document before it has received acknowledgement
388   of previous version. This rule must be implemented locally. A data submission that violates this
389   rule may result in data not processed properly by the mFRR platform; bids may be ignored, for
390   example.

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391   **5.3.2   Dependencies governing the ReserveBid_MarketDocument**

392   The reserve bid market document is used to provide all the information related to bids and demands that are submitted to the common platform. It is
393   also used to submit all bids to the ENTSO-E central transparency platform. See Table 4 for submissions to the Transparency platform

394   All demands from a given TSO (elastic, inelastic and tolerance bands) must be placed within a single document. Bids may be distributed among more
395   than one document, at the discretion of the TSO. The TSO is responsible for ensuring unique bid identifiers (in the mRID attribute of BidTimeSeries)
396   across all documents. Each TSO is expected to submit at least one bid for every MTU period. Bids and demands must be submitted in separate
397   documents.

398   If TSO wants to update one or several bids or demands that have already been submitted to the platform, it is sufficient to include only the
399   corresponding time series in a document with higher version. Unchanged bids and demands do not have to be repeated. A higher version of the Bid
400   Document only updates the bids or demands contained within the document, while all other bids or demands not described by the higher version
401   remain unchanged within the platform. Platform will reject a higher version of a Bid document that introduces multipartBidIdentification or
402   exclusiveBidsIdentification in a bid that previously did not contain such attribute.

403   Platform will reject bid document containing links to bids submitted in other documents that have not yet been positively acknowledged. Therefore,
404   data provider should wait for acknowledgements of bid documents for earlier MTU periods before submitting bid document containing links to bids in
405   those earlier MTU periods.

406   After TSO gate closure for submission of balancing energy bids at T-12, only updates to bid availability (i.e. status attribute), activation type (i.e.
407   standard_MarketProduct.marketProductType attribute) and to the offered volume (i.e quantity.quantity attribute) are permitted. In the status attribute,
408   the following changes are then permitted :
409   -   change the value from A65=Conditionally available or A66=Conditionally unavailable to A11=Unavailable, or vice versa, while r especting the
410   basic rule that conditional links must have been provided in Linked_BidTimeSeries before T-12
411   -   change the value from A06=Available to A11=Unavailable, or vice versa

412   Demands for scheduled activation may be updated until T-10. Demands for direct activation may be updated until T+5 as long as the mFRR platform
413   has not yet processed them. The followings attributes may be modified: Status, needed quantity (i.e quantity.quantity attribute), direction, price and
414   reason code.

415   If TSO wants to withdraw a single demand or bid that erroneously has already been submitted to the platform, it is necessary to submit a higher
416   version of the same document and mark the bid or demand as unavailable in the Status attribute.

417   Table 3 provides the dependencies for the reserve bid market document when TSOs submit bids and demands to the common platform.

418

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419 **Table 3 – Reserve bid market document dependency table (submissions of bids and demands to common platform)**

		BIDS	DEMANDS	XSD requirements
ReserveBid_MarketDocument				
mRID	Unique identification of the Bid Document	Used	Used	Mandatory
revisionNumber	Initial transmission should normally equal "1"	Used	Used	Mandatory
type	A37 = Reserve Bid document B21 = Reserve need document	A37	B21	Mandatory
process.processType	A47 = Manual frequency restoration reserve	Used	Used	Conditional
sender_MarketParticipant.mRID	EIC of the transmitting TSO	Used	Used	Mandatory
sender_MarketParticipant.marketRole.type	A04 = System Operator	Used	Used	Mandatory
receiver_MarketParticipant.mRID	EIC of common platform operator: 10X1001C--00009H	Used	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A35 = MOL responsible	Used	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Used	Mandatory
reserveBid_Period.timeInterval	The MTU period that the bids or demands within the document refer to. Always of 15 minutes length.	Used	Used	Mandatory
domain.mRID	EIC of region	Used	Used	Mandatory
subject_MarketParticipant.mRID	EIC of the transmitting TSO	Used	Used	Mandatory
subject_MarketParticipant.marketRole.type	A27 = Resource Provider	Used	Used	Mandatory

420

		BIDS	DEMANDS	XSD requirements
BidTimeSeries				
mRID	Unique identification of the bid or demand assigned by the transmitting TSO	Used	Used	Mandatory
auction.mRID	Constant value of "AUCTION-mFRR".	Used	Used	Mandatory
businessType	B74 = Offer B75 = Need	B74 = Offer	B75 = Need	Mandatory
acquiring_Domain.mRID	For bids it corresponds to the EIC identification of the region. For demands it corresponds to the EIC identification of a scheduling area, control area	Region	Used	Mandatory

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	or an aggregation of scheduling areas belonging to different control areas (in case of aggregated demand)			
connecting_Domain.mRID	For bids it corresponds to the EIC identification of the scheduling area providing the reserves. Associated multipart, linked, conditional and exclusive bids must be associated with the same area. For demands it corresponds to the EIC identification of the region providing the reserves	Used	Region	Mandatory
provider_MarketParticipant.mRID	The balance service provider (BSP) identification.	May be used	Not used	Conditional
quantity_Measure_Unit.name	MAW = Megawatts	Used	Used	Mandatory
currency_Unit.name	EUR = Euro. This currency is only provided in the case of a demand where there is a price in the point class. For bids it is always populated.	Used	May be used	Conditional
price_Measure_Unit.name	MWH = Megawatt hours.	Not used	Not used	Conditional
divisible	A01 = quantity may be reduced to the minimum activation quantity by increments of the StepIncrementQuantity A02 = No reduction possible on the quantity	Used	A01	Mandatory
linkedBidsIdentification	The identification used to associate bids that are to be technically linked together. If the bid is not linked then the attribute is not used.	May be used. See note 1 below.	Not used	Conditional
multipartBidIdentification	The identification used to associate multipart bids. If bid with flowDirection.direction=A01 (Up) is accepted then all associated bids with lower price must also be accepted. If bid with flowDirection.direction=A02 (Down) is accepted then all associated bids with higher price must also be accepted. If the bid is not multipart then the attribute is not used.	May be used. See note 2 below.	Not used	Conditional
exclusiveBidsIdentification	The identification used to associate exclusive bids. If bid is accepted then all others with same identification shall be ignored. If the bid is not exclusive then the attribute is not used.	May be used. See note 2 below.	Not used	Conditional
blockBid	Not used. Redundant due to the existence of Divisible attribute.	Not used	Not used	Optional
status	A06 = Available A11 = Unavailable A65 = Conditionally available A66 = Conditionally unavailable Associated multipart or exclusive bids must have the same status. A65 or A66 must be used when bid is conditionally linked, i.e. having one or several instances of Linked_BidTimeSeries. A65 or A66 shall not be used for demands, multipart bids or exclusive bids.	Used	Used	Conditional
priority	A sequential number indicating the priority of the bid in relation to other bids	Not used	Not used	Conditional
registeredResource.mRID	The identification of the resource used to provide the reserves	May be used	Not used	Conditional

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flowDirection.direction	A01 = UP A02 = DOWN Refer to the price payment table for use in relation to price. Multipart bids shall have the same direction.	Used	Used	Mandatory
stepIncrementQuantity	Not used. For needs and divisible offers the input step increment has been harmonised to 1 MW.	Not used	Not used	Conditional
energyPrice_Measure_Unit.name	MWH = Megawatt hours This unit of measure is only provided in the case of a demand where there is a price in the point class. For bids it is always populated.	Used	Used for elastic demands	Conditional
marketAgreement.type	The type of the market agreement	Not used	Not used	Conditional
marketAgreement.mRID	Not used	Not used	Not used	Conditional
marketAgreement.createdDateTime	Time stamp used to identify the date and time that a specific offer was received.	Not used	Not used	Conditional
activation_ConstraintDuration.duration	Not used	Not used	Not used	Conditional
resting_ConstraintDuration.duration	Not used	Not used	Not used	Conditional
minimum_ConstraintDuration.duration	Not used	Not used	Not used	Conditional
maximum_ConstraintDuration.duration	Not used	Not used	Not used	Conditional
standard_MarketProduct.marketProductType	A05 = Standard mFRR product eligible for scheduled activation only A06 = Standard mFRR product eligible for direct activation only A07 = Standard mFRR product eligible for scheduled and direct activation For bids, any of the three values may be used. Associated multipart and exclusive bids must have the same value. A05 shall be used to indicate a demand for scheduled activation. A06 shall be used to indicate a demand for direct activation. A07 shall not be used for demands.	A05 A06 A07	A05 A06	Conditional
original_MarketProduct.marketProductType	Used when the bid has been converted into a standard product: A02 = Specific product A03 = Integrated scheduling process	May be used	Not used	Conditional

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	Associated multipart and exclusive bids must have the same value.			

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validity_Period.timeInterval	The period when the bid can be activated	Not used	Not used	Optional
procuredFor_MarketParticipant	EIC code of TSO for which bid was procured. Must be populated when the capacity was procured on behalf of other TSO. Not populated otherwise. Associated multipart, or exclusive bids must have the same value. See note 3 below.	May be used	Not used	Conditional
sharedWith_MarketParticipant	EIC code of TSO sharing the reserve. Must be populated when capacity constitutes a shared reserve. Not populated otherwise. Associated multipart or exclusive bids must have the same value. See note 3 below.	May be used	Not used	Conditional

424
425 Note 1: The attributed linkedBidIdentification may be used to associate technically linked bids in different MTU periods. Within a given MTU period,
426 there may not be more than one bid having the same value in linkedBidIdentification. The following rule for technically linked bids will always be
427 applied by the platform to bids having the same value in linkedBidIdentification: If bid in MTU-1 was subject to direct activation the bid in MTU0 is not
428 available.
429
430 Note 2: A given bid can not be exclusive and multipart at the same time. Therefore, the attributes exclusiveBidIdentification and
431 multipartBidIdentification cannot be used in combination. It is the responsibility of data provider to ensure uniqueness of exclusiveBidsIdentification
432 and multipartBidIdentification across all documents and MTU periods. It is permitted to have technical links between exclusive and multipart bids in
433 different MTU periods. Therefore, the attribute exclusiveBidIdentification may be combined with attribute linkedBidIdentification and the attribute
434 multipartBidIdentification may be combined with attribute linkedBidIdentification.
435
436 All components of a multipart bid (i.e. having the same value in multipartBidIdentification) with a technical link to a bid in another MTU period must
437 have the same value in the linkedBidIdentification attribute. The same applies to all components of an exclusive bid (i.e. having the same value in
438 exclusiveBidsIdentification) with a technical link to a bid in another MTU period.
439
440 Note 3: The attributes procuredFor_MarketParticipant and sharedWith_MarketParticipant are mutually exclusive. There may be several instances of
441 sharedWith_MarketParticipant - this is the case when the reserve is shared among three or more TSOs.
442
443

Period				
timeInterval	A time interval that coincides with the quarter hour described in reserveBid_Period.timeInterval.	Used	Used	Mandatory

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resolution	PT15M	Used	Used	Mandatory
Point				
position	Position within the time interval	Used	Used	Mandatory
quantity.quantity	Quantity offered or needed with 1 MW precision.	Quantity offered	Quantity needed	Mandatory
minimum_Quantity.quantity	Required if divisible = A01. Precision is 1 MW.	May be used	0	Conditional
price.amount	Not used	Not used	Not used	Conditional
energy_Price.amount	The price of the product. Precision is 0.01. Components of a multipart bid must have different prices. Note: Refer to the Price payment table for establishing who is paid.	Used	Used for elastic demands	Conditional

AvailableMBA_Domain (Associated with time series)	Not used	Not used	Not used	**Conditional**
mRID				

Reason (associated with BidTimeSeries)	Optionally exactly one instance of Reason may be associated with the BidTimeSeries.	May be used	May be used	**Conditional**
code	For a bidTimeSeries with status = A11 (Unavailable) one of the following codes may be used to specify the activation purpose of a bid: B55 = Because of redispatching B56 = Because of countertrading B57 = Because of other remedial action Exceptionally the code B18 = Failure shall be used to indicate that a bid or demand has been submitted erroneously. Associated multipart or exclusive bids must have the same value. If the purpose of a demand is other than for balancing purposes the code A96 = Technical constraint shall be used	May be used. See note 4 below.	May be used	Conditional
text	Textual information provided by the TSO	Not used	Not used	

444

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445   Note 4: The normal reasons for bid unavailability will be conveyed by the dedicated BidAvailability_MarketDocument described in chapter 5.3.10.
446

Linked_BidTimeSeries (associated with BidTimeSeries)	May be used to indicate conditional dependencies upon bids in earlier MTU periods	May be used	Not used	Conditional
mRID	mRID of a simple bid in MTU-1 or MTU-2	Used	Not used	Mandatory
status	One of the following values shall be used when bid in MTU0 is conditionally available, i.e. BidTimeSeries.status = A65: A55 = Not available if linked bid activated A56 = Not available if linked bid rejected A59 = Not available if linked bid subject to SA A60 = Not available if linked bid subject to DA A57 = Not available for DA if linked bid subject to DA A58 = Not available for DA if linked bid subject to SA One of the following values shall be used when bid in MTU0 is conditionally unavailable, i.e. BidTimeSeries.status = A66: A67 = Available if linked bid activated A68 = Available if linked bid rejected A69 = Available if linked bid subject to SA A70 = Available if linked bid subject to DA A71 = Available for DA if linked bid subject to DA A72 = Available for DA if linked bid subject to SA	Used	Not used	Conditional

447
448   Multipart or exclusive bids may not be conditionally linked. Therefore, no instances of Linked_BidTimeSeries are permitted when
449   multipartBidIdentification or exclusiveBidsIdentification have been populated. Conditional and technical links between two bids are permitted however
450   in such case both must be simple bids.
451
452   For a simple bid there may be up to six instances of Linked_BidTimeSeries, with no more than three instances referring to bids in MTU-1 and no more
453   than three instances referring to bids in MTU-2. The referenced bid in MTU-1 or MTU-2 must always be a simple bid. There may not be more than
454   one link to any given bid, hence the mRIDs must be unique.
455
456   The mFRR platform will apply the following rules:
457   - A conditionally available bid in MTU0 (i.e. bid with status A65) becomes completely unavailable when at least one of the conditional links
458   indicate unavailability due to the outcome of the linked bid in MTU-1 or MTU-2
459   - A conditionally available bid in MTU0 becomes unavailable for direct activation when at least one of the conditional links indicate unavailability
460   for direct activation due to the outcome of the linked bid in MTU-1 or MTU-2
461   - A conditionally unavailable bid in MTU0 (i.e. bid with status A66) becomes available when at least one of the conditional links indicate
462   availability due to the outcome of the linked bid in MTU-1 or MTU-2
463   - A conditionally unavailable bid in MTU0 becomes available for direct activation when at least one of the conditional links indicate availability
464   for direct activation due to the outcome of the linked bid in MTU-1 or MTU-2
465

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466 Table 4 provides the dependencies for the reserve bid market document when the common platform submits bids to the ENTSO-E transparency
467 platform as required by EB GL articles 12.3.b&c and elastic demands as required by the mFRR IF article 3.4. A separate document will be sent for
468 every area. Bids and demands are reported in separate documents.

469 **Table 4 – Reserve bid market document dependency table (balancing energy bids and elastic demands submitted to transparency**
470 **platform)**

		BIDS	DEMANDS	XSD requirements
ReserveBid_MarketDocument				
mRID	Unique identification of the Bid Document	Used	Used	Mandatory
revisionNumber	Initial transmission should normally equal "1"	Used	Used	Mandatory
type	A37 = Reserve Bid document	Used	Used	Mandatory
process.processType	A47=Manual frequency restoration reserve	Used	Used	Conditional
sender_MarketParticipant.mRID	EIC of common platform operator: 10X1001C--00009H	Used	Used	Mandatory
sender_MarketParticipant.marketRole.type	A35 = MOL responsible	Used	Used	Mandatory
receiver_MarketParticipant.mRID	10X1001A1001A450 = EIC of the ENTSO-E transparency platform	Used	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A32 = Market information aggregator	Used	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Used	Mandatory
reserveBid_Period.timeInterval	The duration of the MTU period (15 minutes)	Used	Used	Mandatory
domain.mRID	EIC of the region	Used	Used	Mandatory
subject_MarketParticipant.mRID	EIC of common platform Operator	Used	Used	Mandatory
subject_MarketParticipant.marketRole.type	A35 = MOL responsible	Used	Used	Mandatory

471

BidTimeSeries				
mRID	Unique identification of the bid or demand assigned by the transmitting TSO	Used	Used	Mandatory

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auction.mRID	Constant value of "AUCTION-mFRR".	Used	Used	Mandatory
businessType	B74 = Offer B75 = Need	B74 = Offer	B75 = Need	Mandatory
acquiring_Domain.mRID	For bids it corresponds to the EIC identification of the region For demands it corresponds to the EIC identification of the scheduling area, control area or an aggregation of scheduling areas belonging to different control areas (in case of aggregated demand)	Region	Used	Mandatory
connecting_Domain.mRID	For bids it corresponds to the EIC identification of the scheduling area providing the reserves. For demands it corresponds to the EIC identification of the region providing the reserves	Used	Region	Mandatory
provider_MarketParticipant.mRID	The balance service provider (BSP) identification	Not used	Not used	Conditional
quantity_Measure_Unit.name	MAW = Megawatts	Used	Used	Mandatory
currency_Unit.name	EUR = Euro	Used	Used	Conditional
price_Measure_Unit.name	MWH = Megawatt hours	Not used	Not used	Conditional
divisible	A01 = quantity may be reduced to the minimum activation quantity A02 = No reduction possible on the quantity	A01 or A02	A01	Mandatory
linkedBidsIdentification	Not used	Not used	Not used	Conditional
multipartBidIdentification	Populated if the bid is multipart	May be used	Not used	Conditional
exclusiveBidsIdentification	Populated if the bid is exclusive	May be used	Not used	Conditional
blockBid	Not used. Redundant due to the existence of Divisible attribute.	Not used	Not used	Optional
status	A06 = Available A11 = Unavailable	Used	Not used	Conditional
priority	A sequential number indicating the priority of the bid in relation to other bids	Not used	Not used	Conditional
registeredResource.mRID	The identification of the resource used to provide the reserves	Not used	Not used	Conditional
flowDirection.direction	A01 = UP A02 = DOWN Refer to the price payment table for use in relation to price	Used	Used	Mandatory

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stepIncrementQuantity	Not used. For demands and divisible bids the input step increment has been harmonised to 1 MW.	Not used	Not used	Conditional
energyPrice_Measure_Unit.name	MWH = Megawatt hours	Used	Used	Conditional
marketAgreement.type	The type of the market agreement	Not used	Not used	Conditional
marketAgreement.mRID	Not used	Not used	Not used	Conditional
marketAgreement.createdDateTime	Time stamp used to identify the date and time that a specific offer was received.	Not used	Not used	Conditional
activation_ConstraintDuration.duration	Not used	Not used	Not used	Conditional
resting_ConstraintDuration.duration	Not used	Not used	Not used	Conditional
minimum_ConstraintDuration.duration	Not used	Not used	Not used	Conditional
maximum_ConstraintDuration.duration	Not used	Not used	Not used	Conditional
standard_MarketProduct.marketProductType	The type of product that the bid or demand refers to: A05 = Standard mFRR product eligible for scheduled activation only A07 = Standard mFRR product eligible for scheduled and direct activation See note 1 below.	A05 A07	A05	Conditional
original_MarketProduct.marketProductType	Used when the bid refers to a specific product that has been converted into a standard product: A02 = Specific product A03 = Integrated scheduling process	May be used	Not used	Conditional
validity_Period.timeInterval	The period when the bid can be activated	Used	Not used	Conditional

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procuredFor_MarketParticipant		Not used	Not used	Conditional
sharedWith_MarketParticipant		Not used	Not used	Conditional
Period				
timeInterval	A time interval that coincides with the MTU period	Used	Used	Mandatory
resolution	PT15M	Used	Used	Mandatory
Point				
position	Position within the time interval	Used	Used	Mandatory
quantity.quantity	Quantity offered or requested with 1 MW precision	Used	Used	Mandatory
minimum_Quantity.quantity		Not used	Not used	Conditional
price.amount		Not used	Not used	Conditional
energy_Price.amount	The price of the product. Precision is 0.01. Refer to the Price payment table for establishing who is paid.	Used	Used	Conditional
AvailableMBA_Domain (Associated with time series)	Not used	Not used	Not used	**Conditional**
mRID				
Reason (associated with time series)	May be used to specify the activation purpose of unavailable bids. See also note 2 below.	May be used	Not used	**Conditional**
code	For a bidTimeSeries with status = A11 (Unavailable) one of the following codes may	Used	Not used	

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	be used to specify the activation purpose of a bid: B55 = Because of redispatching B56 = Because of countertrading B57 = Because of other remedial action			
text	Textual information provided by the TSO	Not used	Not used	

472
473 Note 1: Bids that were marked by TSOs as eligible for direct activation only will be reported with their original activation type A07 = Standard mFRR
474 product eligible for scheduled and direct activation, in order to accurately reflect the bid as originally submitted by the BSP.
475
476 Note 2: Reason for bid unavailability will be provided in the dedicated BidAvailability_MarketDocument described in chapter 5.3.10.
477
478

Linked_BidTimeSeries (associated with BidTimeSeries)	Not used	Not used	Not used	Conditional
mRID		Not used	Not used	Mandatory
status		Not used	Not used	Conditional

479
480

5.3.3   Determination of final bid availability within mFRR platform

482 The final availability of a bid for scheduled and/or direct activation may potentially be influenced by up to three different mechanisms, which the
483 mFRR platform will apply in the following descending order of precedence:
484 1.   Unavailability as foreseen by EB GL art. 29(14), represented by status attribute in BidTimeSeries
485 2.   Activation type, represented by attribute standard_MarketProduct.marketProductType
486 3.   Dependencies on associated bids in previous MTU periods due to conditional and/or technical linking, represented by linkedBidIdentification
487 and Linked_BidTimeSeries
488
489 If a bid is subject to both conditional and technical linking and those links would yield different outcomes, the most restrictive result shall apply.

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490 **5.3.4   Dependencies governing the Capacity_MarketDocument**

491   The capacity market document is used to provide the cross-border capacity limits, net position limits and technical profiles during exactly one MTU
492   period. For a given border values must be provided for both directions in the same file. It is also used by the common mFRR platform to inform the
493   TSOs of any remaining cross-border capacity.

494   For a given MTU period, the remaining cross-border capacity resulting from scheduled and direct activations, respectively, shall be sent in separate
495   documents. The remaining cross-border capacity from subsequent direct activations for the same MTU period will be sent as higher versions of the
496   document that contained the remaining capacity from the first direct activation.

497   Data consumer has a choice between receiving the remaining cross-border capacity with or without ramping. When the document with the remaining
498   cross-border capacity describes the ramping, it may partially cover up to three MTU periods for scheduled activations and for direct activations partially
499   up to four MTU periods. When the document does not describe ramping, it will cover exactly one MTU period for scheduled activation and two MTU
500   periods for direct activations.

501   The Period.timeInterval shall not bridge the change of CET/CEST day - separate documents will be output as necessary.

502   The capacity document will also be used to submit cross-border capacity limits and technical profiles to the transparency platform.

503   **Table 5 – capacity market document dependency table**

		Use	XSD requirements
Capacity_MarketDocument			
mRID	Unique identification of the Capacity Document	Used	Mandatory
revisionNumber	Initial transmission should normally equal "1"	Used	Mandatory
type	A31 = Agreed capacity (used when submitting cross-border capacity limits, net position limits or technical profiles to common platform) A26 = Capacity document (used to transmit remaining cross-border capacity from the common platform to the TSOs)	Used	Mandatory
process.processType	A47 = Manual frequency restoration reserve	Used	Mandatory
sender_MarketParticipant.mRID	EIC of the Transmission System Operator when submitting documents of type = A31 to common platform EIC of the common platform Operator when the DocumentType = A26 and when common platform submits documents of type = A31 to central transparency platform: 10X1001C--00009H	Used	Mandatory
sender_MarketParticipant.marketRole.type	A04 = System operator when submitting documents of type = A31 to common platform	Used	Mandatory

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		Use	XSD requirements
	A35 = MOL responsible when type = A26 and when common platform submits documents of type = A31 to central transparency platform		
receiver_MarketParticipant.mRID	EIC of the common platform Operator when submitting documents of type = A31 to common platform: 10X1001C--00009H EIC of the Transmission System Operator when type = A26 EIC of the central transparency platform when common platform reports documents of type = A31: 10X1001A1001A450	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A35 = MOL responsible Operator when type = A31 A04 = System operator when type = A26 A32 = Market information aggregator when common platform reports documents of type A31 to central transparency platform	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Mandatory
period.timeInterval	The MTU period described (15 minutes) when type = A31. From beginning of ramp up until end of ramp down when type = A26 and ramps included. The MTU period(s) described (15 minutes for SA and 30 minutes for DA) when type = A26 and ramps excluded	Used	Mandatory
domain.mRID	EIC of the region	Used	Mandatory

TimeSeries			
mRID	The unique identification of the time series within the document	Used	Mandatory
businessType	A26 = ATC	Used	Mandatory
product	8716867000016 = active power	Used	Mandatory
in_Domain.mRID	EIC identification of the area where the power is being put. Shall contain the TSO's area when submitting net position limits on import. Shall contain the region when submitting net position limits on export.	Used	Mandatory
out_Domain.mRID	EIC identification of the area where the power is coming from. Shall contain the region when submitting net position limits on import. Shall contain the TSO's area when submitting net position limits on export.	Used	Mandatory
measure_Unit.name	MAW = Megawatts	Used	Mandatory
auction.mRID	The identification of an auction specification	Not used	Conditional
auction.category	The category under which capacity is classified	Not used	Conditional
curveType	A01 = Sequential fixed size block, when type = A31 A03 = variable sized block when type = A26 and ramps excluded A05 = non-overlapping breakpoint, when type = A26 and ramps included	May be used	Conditional

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		Use	XSD requirements
	Defaults to A01 if attribute excluded when submitting document to mFRR platform.		
connectingLine_RegisteredResource.mRID	The identification of a set of lines that connect two areas together. This is only used when specific tie lines have to be identified.	May be used	Conditional

Note: CIM EG recommends that curveType shall always be populated and therefore the use of the attribute will become mandatory in future release.

Period			
timeInterval	A time interval of the same length as the period.timeInterval in header	Used	Mandatory
resolution	PT15M when type = A31 PT1M when type = A26	Used	Mandatory

Point			
position	Position within the time interval	Used	Mandatory
quantity	When type = A31: Quantity of limit with 1 MW precision. Negative values are not permitted. When type = A26: Quantity of remaining capacity with 0.1 MW precision.	used	Mandatory

Reason (associated with time series)	Exactly one instance of Reason class may be included when type = A31 to indicate adjustment due to operational security.	May be used	Conditional
code	B47 = Operational security constraints	Used	
text	May be populated to provide additional explanation or justification in free text format	May be used	

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505 **5.3.5** **Dependencies governing the HVDCLink_marketDocument**

506 The HVDC link market document is used by the TSO to provide all the HVDC constraints and schedules to the common platform. This document may
507 optionally also be used by TSOs to provide constraints on AC links. For a given interconnector, schedules must be provided for both directions within
508 the same document.

509   **Table 6 – HVDC link market document dependency table**

		Constraint	Schedule	XSD requirements
HVDCLink_MarketDocument				
mRID	Unique identification of the HVDC link market document	Used	Used	Mandatory
revisionNumber	Initial transmission should normally equal "1"	Used	Used	Mandatory
type	The coded type of a document. The document type describes the principal characteristic of the document.	A99 = HVDC link constraints	B02 HVDC schedule	Mandatory
process.processType	A47 = Manual frequency restoration reserve	Used	Used	Mandatory
sender_MarketParticipant.mRID	EIC of the Transmission System Operator	Used	Used	Mandatory
sender_MarketParticipant.marketRole.type	A04 = System operator	Used	Used	Mandatory
receiver_MarketParticipant.mRID	EIC of the common platform Operator: 10X1001C--00009H	Used	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A35 = MOL responsible	Used	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Used	Mandatory
schedule_Period.timeInterval	The MTU period covered by the schedule (15 minutes)	Used	Used	Conditional
docStatus	A02 = Final A09 = Cancelled	Used	Used	Mandatory
domain.mRID	EIC of the region	Used	Used	Mandatory

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TimeSeries		Constraint	Schedule	
mRID	The unique identification of the time series within the document	Used	Used	Mandatory
businessType	B30 = HVDC settings	Used	Used	Mandatory
product	8716867000016 = active power	Used	Used	Mandatory
objectAggregation	A09 = DC link	Used	Used	Mandatory
connectingLine_RegisteredResource.mRID	The identification of the HVDC link or group of HVDC links.	May be used	May be used	Conditional
hVDCMode_AttributeInstanceComponent.attribute	A01 = HVDC set point schedule	Used	Used	Conditional
out_Domain.mRID	EIC identification of the area where the product is being extracted	Used	Used	Conditional
in_Domain.mRID	EIC identification of the area where the product is being delivered	Used	Used	Conditional
measurement_Unit.name	MAW= Megawatts	Used	Used	Mandatory
curveType	A01 = Sequential fixed size block Defaults to A01 if attribute excluded when submitting document to mFRR platform.	May be used	May be used	Conditional
minimumExchange_Quantity.quantity	The minimum value of a power exchange range between the In_Domain and the Out_Domain of the timeseries.	Not used	Not used	Conditional
maximumExchange_Quantity.quantity	The maximum value of a power exchange range between the In_Domain and the Out_Domain of the timeseries.	Not used	Not used	Conditional
start_DateAndOrTime		Not used	Not used	Conditional
end_DateAndOrTime		Not used	Not used	Conditional

Series_Period				
timeInterval	A time interval of the same length as the schedule_Period.timeInterval (15 minutes)	Used	Used	Mandatory
resolution	PT15M	Used	Used	Mandatory

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Point		Constraint	Schedule	
position	Position within the time interval	Used	Used	Mandatory
quantity	The value of the scheduled product. One of the directions must equal zero (net schedule). Precision is 1 MW.	Not used	Used	Conditional
minimum_Quantity.quantity	The minimum value of power exchange on the HVDC line (or AC link) for a scheduled point. Precision is 1 MW. Shall be zero if constraints are provided in both directions for a given position.	Used	Not used	Conditional
maximum_Quantity.quantity	The maximum value of power exchange on the HVDC line (or AC link) for a scheduled point. Precision is 1 MW.	Used	Not used	Conditional
optimum_Quantity.quantity	The value of the optimum power exchange on the HVDC line for a scheduled point.	Not used	Not used	Conditional

512   **Note:** CIM EG recommends that curveType shall always be populated and therefore the use of the attribute will become mandatory in future release.

513

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514 **5.3.6** **Dependencies governing the MeritOrderList_MarketDocument**

515 The merit order list market document is used by the common platform to provide to TSOs all the information related to the bids that have been accepted
516 as well the demands that have been satisfied. The merit order list document is sent after each execution of the AOF to all TSOs connected to the
517 platform. Document will contain only bids and demands submitted by the given TSO. Activated and partially activated bids will be sent in one file.
518 Rejected bids will be sent in a second file.

519 **Table 7 – merit order list market document dependency table**

		BIDS	DEMANDS	XSD requirements
MeritOrderList_MarketDocument				
mRID	Unique identification of the MOL Document	Used	Used	Mandatory
revisionNumber	Initial transmission should normally equal "1"	Used	Used	Mandatory
type	B23 = Offers to be activated (activated bids and all demands) A43 = MOL document (rejected bids)	B23 A43	B23	Mandatory
process.processType	A60 = mFRR with scheduled activation A61 = mFRR with direct activation	Used	Used	Conditional
sender_MarketParticipant.mRID	EIC of the common Operator: 10X1001C--00009H	Used	Used	Mandatory
sender_MarketParticipant.marketRole.type	A35 = MOL responsible	Used	Used	Mandatory
receiver_MarketParticipant.mRID	EIC of the Transmission System Operator	Used	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A04 = System operator	Used	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Used	Mandatory
period.timeInterval	The duration of the activation period: 15 minutes for scheduled activation and up to 30 minutes for direct activation)	Used	Used	Mandatory
domain.mRID	EIC of the region	Used	Used	Conditional

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BidTimeSeries				
marketAgreement.mRID	Identification of the bid or the demand as indicated by the mRID of the BidTimeSeries in the ReserveBid_MarketDocument received from the TSO.	Used	Used	Mandatory
marketAgreement_createdDateTime	The timestamp of when the bid was received	Not used	Not used	Conditional
priority	A sequential number indicating the priority of the bid in relation to other bids.	Not used	Not used	Conditional
resourceProvider_MarketParticipant.mRID	The balance service provider (BSP) identification.	May be used	Not used	Conditional
registeredResource.mRID	The identification of the resource used to provide the reserves.	May be used	Not used	Conditional
acquiring_Domain.mRID	For bids it corresponds to the EIC identification of the region. For demands it corresponds to the EIC identification of the receiving TSO's area.	region	Receiving TSO's area	Mandatory
connecting_Domain.mRID	for bids it corresponds to the EIC identification of the receiving TSO's scheduling area providing the reserves. for demands it corresponds to the EIC identification of the region providing the reserves	Receiving TSO's area	region	Mandatory
auction.mRID	Identification of auction as defined in the reserve bid document. Constant value of "AUCTION-mFRR".	Used	Used	Mandatory
businessType	B74 = Offer B75 = Need	B74 = Offer	B75 = Need	Mandatory
bid_Period.timeInterval	The activation period: Duration is fixed to 15 minutes for scheduled activation and from 15 up to 30 minutes for direct activation.	Used	Used	Mandatory
quantity_Measure_Unit.name	MAW = Megawatts	Used	Used	Mandatory
currency_Unit.name	EUR = Euro	Used	Used	Conditional
price_Measurement_Unit.name	MWH = Megawatt hours	Used	Used	Conditional
auction.paymentTerms	A01 = Pay as bid A02 = Pay as cleared	Not used	Not used	Conditional
energyPrice_Measurement_Unit.name	MWH = Megawatt hours	Not used	Not used	Conditional

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direction	A01 = UP A02 = DOWN Refer to the price payment table for use in relation to price.	Used	Used	Mandatory
minimumActivation_Quantity.quantity	The minimum quantity that can be activated	Not used	Not used	Conditional
stepIncrement_Quantity.quantity	Not used. For demands and divisible bids the output step increment has been harmonised to 1 MW.	Not used	Not used	Conditional
marketObjectStatus.status	A06 = available (the bid has not been selected for activation) A10 = ordered (i.e. common platform has requested that the TSO activates a bid) A11 = unavailable (the bid is no longer available for activation) A33 = not satisfied (i.e. The demand cannot be satisfied by the common platform)	A06 A10 A11	A10 A33	Mandatory

Period				
timeInterval	The activation period. Shall be the same value as in bid_Period.timeInterval	Used	Used	Mandatory
resolution	Equivalent to the length of the bid's activation period. For scheduled activation: PT15M For direct activation: Integer value from PT15M up to PT30M	Used	Used	Mandatory

Point				
position	Position within the time interval. As there shall always be exactly one point within the Period, value shall always be 1.	Used	Used	Mandatory
quantity.quantity	Quantity offered or needed. Precision is 1 MW.	Quantity offered	Quantity needed	Mandatory
price.amount	The price for activating the product. Precision is 0.01.	Used when bid accepted	Used when demand satisfied	Conditional
energy_Price.amount	For bids: The offered price. For elastic demands: The requested price. Precision is 0.01.	Used	Used when elastic demand	Conditional

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activated_Quantity.quantity	Quantity activated. Precision is 1 MW.	Quantity to be activated. 0 if bid rejected.	Quantity for which activation has been requested. 0 if demand rejected.	Conditional

521

Reason (associated with time series)		Not used	Not used	**Conditional**
code	B66 = Demand fully netted B67 = Bid activated in same direction	Not used	May be used	Mandatory
text		Not used	Not used	Conditional

522 Note: One or two instances of Reason may optionally be populated to indicate that the demand was fully netted and/or a bid wa s acticated in the same
523 direction as the demand.

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524 **5.3.7   Price payment table**

525   Aligning with EB GL art. 47, Table 8 clarifies whether TSO or Balancing Service Provider (BSP) should pay the price indicated.

526   **Table 8 – price payment table**

BIDS					
acquiring_Domain.mRID	Domain where the reserve will be used	region	region	region	region
connecting_Domain.mRID	Domain providing the reserve	TSO area	TSO area	TSO area	TSO area
flowDirection.direction	Direction of the flow	UP	UP	DOWN	DOWN
price.amount	Price of the energy	>0	<0	>0	<0
Which party pays		TSO	BSP	BSP	TSO

527

528   **5.3.8   Dependencies governing the Schedule_MarketDocument**

529   The schedule document is used by the common platform to provide all the cross border information related to the nominations that have been assigned.
530   It is also used to provide the TSO with the net position of its area(s).

531   For a given MTU period, the XB flows and net positions resulting from scheduled and direct activations, respectively, shall be sent in separate
532   documents.

533   The resulting XB flows from the optimization for scheduled activation in MTU1 will be aggregated on top of the resulting flows from the direct activations
534   during MTU0.

535   The resulting net positions from the optimization for scheduled activation in MTU1 will be aggregated on top of the net positions from the direct
536   activations during MTU0.

537   The resulting XB flows from an optimization for direct activation in MTU0 will be aggregated on top of the resulting flows from the scheduled activation
538   for MTU0 and any earlier optimizations for direct activations in MTU0 or MTU-1. The resulting flows from subsequent direct activations for the same
539   MTU period will be sent as higher versions of the same document.

540   The resulting net positions from an optimization for direct activation in MTU0 will be aggregated on top of the resulting net positions from the scheduled
541   activation for MTU0 and any earlier optimizations for direct activations in MTU0 or MTU-1. The resulting net positions from subsequent direct
542   activations for the same MTU period will be sent as higher versions of the same document.

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543 Data consumer has a choice between receiving the resulting cross-border flows and net positions with or without ramping. When the documents with
544 the resulting cross-border flows and net positions sent to TSOs describe the ramping, they may partially cover up to three MTU periods for scheduled
545 activations and for direct activations partially up to four MTU periods. When the documents do not describe ramping, they will cover exactly one MTU
546 period for scheduled activation and two MTU periods for direct activations.

547 The schedule_Time_Period.timeInterval shall not bridge the change of CET/CEST day. Separate documents will be output as necessary.

548 **Table 9 – schedule market dependency table**

		Use	XSD requirements
Schedule_MarketDocument			
mRID	Unique identification of the Schedule Document	Used	Mandatory
revisionNumber	Initial transmission should normally equal "1"	Used	Mandatory
type	A30 = Cross border schedule (for cross-border flows) B17 = Aggregated netted external TSO schedule document (for net positions)	Used	Mandatory
process.processType	A47 = Manual frequency restoration reserve	Used	Mandatory
process.ClassificationType	A01 = Detail type	Used	Mandatory
sender_MarketParticipant.mRID	EIC of the common platform Operator: 10X1001C--00009H	Used	Mandatory
sender_MarketParticipant.marketRole.type	A35 = MOL responsible	Used	Mandatory
receiver_MarketParticipant.mRID	EIC of the Transmission System Operator:	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A04 = System operator A16 = coordination center operator	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Mandatory
schedule_Time_Period.timeInterval	From start of ramp up until end of ramp down when ramps included The MTU period(s) described (15 minutes for SA and 30 minutes for DA) when ramps excluded	Used	Mandatory
domain.mRID	EIC of the region	Used	Mandatory
subject_MarketParticipant.mRID	EIC of the receiving party	Used	Mandatory
subject_MarketParticipant.marketRole.type	A04 = System Operator A16 = coordination center operator	Used	Mandatory
matching_Time_Period.timeInterval	Matching period for the schedule document	Not used	Conditional

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TimeSeries			
mRID	The unique identification of the time series within the document	Used	Mandatory
version	The version of the time series. It must always be the same as the version of the document	Used	Mandatory
businessType	A45=Scheduled activated reserves B09 = Net position	Used	Mandatory
product	8716867000016 = active power	Used	Mandatory
objectAggregation	A01 = Area	Used	Mandatory
in_Domain.mRID	EIC identification of the area where the power is being put	Used	Conditional
out_Domain.mRID	EIC identification of the area where the power is coming from	Used	Conditional
marketEvaluationPoint.mRID	Identification of a resource	Not used	Conditional
in_MarketParticipant.mRID	identification of a market participant putting the power into the area	May be used when type=B17	Conditional
out_MarketParticipant.mRID	Identification of a market participant that is taking the power from the area	May be used when type=B17	Conditional
marketAgreement.type	Identification of the type of agreement	Not used	Conditional
marketAgreement.mRID	Identification of the reserve contract	Not used	Conditional
connectingLine_RegisteredResource.mRID	Provided in case there are multiple interconnectors	May be used when type=A30	Conditional
measurement_Unit.name	MAW = Megawatts	Used	Mandatory
curveType	A03 = variable sized block when ramps excluded A05 = non-overlapping breakpoint when ramps included	Used	Mandatory

550

Series_Period			
timeInterval	A time interval within the schedule_Time_Period.timeInterval	Used	Mandatory
resolution	PT1M	Used	Mandatory

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Point			
position	Position within the time interval	Used	Mandatory
quantity	Quantity scheduled	Used	Mandatory

Reason (associated with time series and point)		Not used	**Conditional**

551 Notes:

552 1. When Business type is B09 = Net position and TSO is exporting, the in_Domain shall be populated with the region and out_Domain with the
553 TSO's area. When TSO is importing, in_Domain shall be populated with the TSO's area and out_Domain with the region.

554 2. Information on In and Out Market Participants will be included for select scheduling areas, due to local market rules for handling of reserve
555 products: When B09 = Net position out_MarketParticipant or in_MarketParticipant will be populated with the party code of the BRP, depending
556 on whether the TSO is importing or exporting energy. The other attribute will be populated with the party code of the entity operating the
557 common platform.

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558 **5.3.9   Dependencies governing the Balancing_MarketDocument**

559 The balancing market document covers requirements for transmission of the clearing prices
560 from the common platform to TSOs and the ENTSO-E transparency platform, as well as for
561 transmitting the settlement prices for direct activations to TSOs. The same document will also
562 be used for transmitting to the ENTSO-E transparency platform the aggregated balancing
563 energy bids and the net positions.

564 Note that due to the design of the optimisation algorithm in the common platform, clearing
565 prices for Up and Down regulation in scheduled activation will always be equal.

566 Table 10 provides the dependencies for the balancing market document when the common
567 platform sends the clearing prices to the TSO.

568 Table 11 provides the dependencies for submission of settlement prices to TSO.

569 Table 12 provides the dependencies for the balancing market document when the common
570 platform sends clearing prices to the ENTSO-E transparency platform as required by TR article
571 17.1.f.

572 Table 13 provides the dependencies for the balancing market document when the common
573 platform sends aggregated balancing energy bids and net positions to the ENTSO-E
574 transparency platform as required by EB GL article 12.3.e and mFRR IF article 3.17.

575 **Table 10 – Balancing market document dependency table (submission of clearing**
576 **prices to TSO)**

		Use	XSD requirements
Balancing_MarketDocument			
mRID	Unique identification of the balancing market Document	Used	Mandatory
revisionNumber	Initial transmission should normally equal "1"	Used	Mandatory
type	B24 = Clearing price	Used	Mandatory
process.processType	A60 = mFRR with scheduled activation	Used	Mandatory
sender_MarketParticipant.mRID	EIC of the common platform Operator: 10X1001C--00009H	Used	Mandatory
sender_MarketParticipant.marketRole.type	A35 = MOL responsible	Used	Mandatory
receiver_MarketParticipant.mRID	EIC of the Transmission System Operator	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A04 = System operator	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Mandatory
docStatus	A01 = Intermediate A02 = Final	Not used	Conditional
Area.Domain.mRID	area described by the document	Used	Conditional
allocationDecision_DateAndOrTime	Date and time when the decision on allocation was made	Not used	Optional
Period.timeInterval	The duration of the MTU period covered by the document. (15 minutes)	Used	Mandatory

		Use	XSD requirements
TimeSeries			
mRID	Unique identification of the time series	Used	Mandatory
businessType	A97 = Manual frequency restoration reserve	Used	Mandatory
acquiring_Domain.mRID		Not used	Conditional

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connecting_Domain.mRID		Not used	Conditional
type_MarketAgreement.type	Identification of the procurement time unit.	Not used	Conditional
standard_MarketProduct.marketProductType	Used when the reported quantities refer to standard products: A01 = Standard product	Used	Conditional
original_MarketProduct.marketProductType		Not used	Conditional
mktPSRType.psrType	Identification of the source type of the reserve	Not used	Conditional
flowDirection.direction	A03 = Up and Down	Used	Conditional
currency_Unit.name	EUR = Euro	Used	Conditional
quantity_Measure_Unit.name	MAW = Megawatts	Not used	Conditional
price_Measure_Unit.name	MWH= Megawatt hours	Used	Conditional
curveType	A01 = Sequential fixed block	Used	Conditional
cancelledTS	If the data for a time series has been cancelled this attribute shall be specified with A01 = Yes	Not used	Conditional

577

Series_Period			
timeInterval	A time interval equivalent to the MTU period (15 minutes)	Used	Mandatory
resolution	PT15M	Used	Mandatory

Point			
position	Position within the time interval	Used	Mandatory
quantity	The accepted offer quantity identified for a point.	Not used	Conditional
secondaryQuantity	The activated quantity	Not used	Conditional
unavailable_Quantity.quantity	The unavailable quantity	Not used	Conditional
activation_Price.amount	The activation price for the quantity of reserve.	Used	Conditional
procurement_Price.amount	The procurement price for the quantity of reserve.	Not used	Conditional
min_Price.amount	The minimum price for the reserve	Not used	Conditional
max_Price.amount	The maximum price for the reserve	Not used	Conditional
imbalance_Price.amount	The imbalance price for the quantity of reserve.	Not used	Conditional
imbalance_Price.category	Identification of whether the imbalance price is in excess or insufficient balance.	Not used	Conditional
flowDirection.direction		Not used	Conditional

Financial_Price (associated with Point)		Not used	Conditional
amount		Not used	Mandatory
Direction		Not used	Conditional

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578 **Table 11 – Balancing market document dependency table (submission of Settlement**
579 **prices to TSO)**

		Use	XSD requirements
Balancing_MarketDocument			
mRID	Unique identification of the balancing market Document	Used	Mandatory
revisionNumber	Initial transmission should normally equal "1"	Used	Mandatory
type	A84 = activated balancing price	Used	Mandatory
process.processType	A61= mFRR with direct activation	Used	Mandatory
sender_MarketParticipant.mRID	EIC of the common platform Operator: 10X1001C--00009H	Used	Mandatory
sender_MarketParticipant.marketRole.type	A35 = MOL responsible	Used	Mandatory
receiver_MarketParticipant.mRID	EIC of the Transmission System Operator	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A04 = System operator	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Mandatory
docStatus	A01 = Intermediate A02 = Final	Not used	Conditional
area.Domain.mRID	area described by the document	Used	Conditional
allocationDecision_DateAndOrTime	Date and time when the decision on allocation was made	Not used	Optional
period.timeInterval	The duration of the MTU periods covered by the document. (30 minutes)	Used	Mandatory

		Use	XSD requirements
TimeSeries			
mRID	Unique identification of the time series	Used	Mandatory
businessType	A97 = Manual frequency restoration reserve	Used	Mandatory
acquiring_Domain.mRID		Not used	Conditional
connecting_Domain.mRID		Not used	Conditional
type_MarketAgreement.type	Identification of the procurement time unit.	Not used	Conditional
standard_MarketProduct.marketProductType	Used when the reported quantities refer to standard products: A01 = Standard product	Used	Conditional
original_MarketProduct.marketProductType		Not used	Conditional
mktPSRType.psrType	Identification of the source type of the reserve	Not used	Conditional
flowDirection.direction	A01 = Up A02 = Down	Used	Conditional
currency_Unit.name	EUR = Euro	Used	Conditional
quantity_Measure_Unit.name	MAW = Megawatts	Not used	Conditional
price_Measure_Unit.name	MWH= Megawatt hours	Used	Conditional
curveType	A01 = Sequential fixed block	Used	Conditional
cancelledTS	If the data for a time series has been cancelled this attribute shall be specified with A01 = Yes	Not used	Conditional

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Series_Period			
timeInterval	A time interval equivalent to the MTU periods described (30 minutes)	Used	Mandatory
resolution	PT15M	Used	Mandatory

Point			
position	Position within the time interval	Used	Mandatory
quantity	The accepted offer quantity identified for a point.	Not used	Conditional
secondaryQuantity	The activated quantity	Not used	Conditional
unavailable_Quantity.quantity	The unavailable quantity	Not used	Conditional
activation_Price.amount	The activation price for the quantity of reserve.	Used	Conditional
procurement_Price.amount	The procurement price for the quantity of reserve.	Not used	Conditional
min_Price.amount	The minimum price for the reserve	Not used	Conditional
max_Price.amount	The maximum price for the reserve	Not used	Conditional
imbalance_Price.amount	The imbalance price for the quantity of reserve.	Not used	Conditional
imbalance_Price.category	Identification of whether the imbalance price is in excess or insufficient balance.	Not used	Conditional
flowDirection.direction		Not used	Conditional

Financial_Price (associated with Point)		Not used	Conditional
amount		Not used	Mandatory
direction		Not used	Conditional

581

582   **Table 12 – Balancing market document dependency table (submission of clearing**
583   **prices to transparency platform)**

		Use	XSD requirements
Balancing_MarketDocument			
mRID	Unique identification of the balancing market Document	Used	Mandatory
revisionNumber	Initial transmission should normally equal "1"	Used	Mandatory
type	A84 = activated balancing price	Used	Mandatory
process.processType	A60 = mFRR with scheduled activation A61 = mFRR with direct activation	Used	Mandatory
sender_MarketParticipant.mRID	EIC of the common platform Operator: 10X1001C--00009H	Used	Mandatory
sender_MarketParticipant.marketRole.type	A35 = MOL responsible	Used	Mandatory
receiver_MarketParticipant.mRID	10X1001A1001A450 = EIC of the ENTSO-E transparency platform	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A32 = Market information aggregator	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Mandatory
docStatus	A01 = Intermediate A02 = Final	Not used	Conditional

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area.Domain.mRID	area described by the document	Used	Conditional
allocationDecision_DateAndOrTime	Date and time when the decision on allocation was made	Not used	Optional
period.timeInterval	The duration of the MTU period covered by the document. (15 minutes)	Used	Mandatory

TimeSeries			
mRID	Unique identification of the time series	Used	Mandatory
businessType	A97 = Manual frequency restoration reserve	Used	Mandatory
acquiring_Domain.mRID		Not used	Conditional
connecting_Domain.mRID		Not used	Conditional
type_MarketAgreement.type	Identification of the procurement time unit.	Not used	Conditional
standard_MarketProduct.marketProductType	A01 = Standard product	Used	Conditional
original_MarketProduct.marketProductType		Not used	Conditional
mktPSRType.psrType	Identification of the source type of the reserve	Not used	Conditional
flowDirection.direction	A01 = Up A02 = Down	Used	Conditional
currency_Unit.name	EUR = Euro	Used	Conditional
quantity_Measure_Unit.name	MAW = Megawatts	Not used	Conditional
price_Measure_Unit.name	MWH= Megawatt hours	Used	Conditional
curveType	A01 = Sequential fixed block	Used	Conditional
cancelledTS	If the data for a time series has been cancelled this attribute shall be specified with A01 = Yes	Not used	Conditional

584

Series_Period			
timeInterval	A time interval equivalent to the delivery period (15 minutes)	Used	Mandatory
resolution	PT15M	Used	Mandatory

Point			
position	Position within the time interval	Used	Mandatory
quantity	The accepted offer quantity identified for a point.	Not used	Conditional
secondaryQuantity	The activated quantity	Not used	Conditional
unavailable_Quantity.quantity	The unavailable quantity	Not used	Conditional
activation_Price.amount	The activation price for the quantity of reserve.	Used	Conditional
procurement_Price.amount	The procurement price for the quantity of reserve.	Not used	Conditional
min_Price.amount	The minimum price for the reserve	Not used	Conditional
max_Price.amount	The maximum price for the reserve	Not used	Conditional
imbalance_Price.amount	The imbalance price for the quantity of reserve.	Not used	Conditional
imbalance_Price.category	Identification whether the imbalance price is due to excess or insufficient balance.	Not used	Conditional
flowDirection.direction	A01 = Up A02 = Down	Not used	Conditional

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Financial_Price (associated with Point)		Not used	Conditional
amount		Not used	Mandatory
direction		Not used	Conditional

585

586 Table 13 – Balancing market document dependency table (submission of aggregated 587 bids and net positions to transparency platform)

		Use	XSD requirements
Balancing_MarketDocument			
mRID	Unique identification of the balancing market Document	Used	Mandatory
revisionNumber	Initial transmission should normally equal "1"	Used	Mandatory
type	A24 = Bid document (when aggregated bids) B17 = Aggregated netted external TSO schedule document (when net positions)	Used	Mandatory
process.processType	A47 = Manual frequency restoration reserve A60 = mFRR with scheduled activation A61 = mFRR with direct activation	Used	Mandatory
sender_MarketParticipant.mRID	EIC of the common platform Operator: 10X1001C--00009H	Used	Mandatory
sender_MarketParticipant.marketRole.type	A35 = MOL responsible	Used	Mandatory
receiver_MarketParticipant.mRID	10X1001A1001A450 = EIC of the ENTSO-E transparency platform	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A32 = Market information aggregator	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Mandatory
docStatus	A01 = Intermediate A02 = Final	Not used	Conditional
area.Domain.mRID	area described by the document	Used	Conditional
allocationDecision_DateAndOrTime	Date and time when the decision on allocation was made	Not used	Optional
period.timeInterval	The MTU period covered by the document	Used	Mandatory

TimeSeries			
mRID	Unique identification of the time series	Used	Mandatory
businessType	A14 = Aggregated energy data B09 = Net position	Used	Mandatory
acquiring_Domain.mRID	The EIC identification of an area that imports energy. The EIC identification of the region when area exports energy.	Used when business type = B09	Conditional
connecting_Domain.mRID	The EIC identification of an area that exports energy. The EIC identification of the region when area imports energy.	Used when business type = B09	Conditional
type_MarketAgreement.type	Identification of the procurement time unit.	Not used	Conditional
standard_MarketProduct.marketProductType	A01 = Standard product	Used	Conditional
original_MarketProduct.marketProductType		Not used	Conditional
mktPSRType.psrType	Identification of the source type of the reserve	Not used	Conditional

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flowDirection.direction	A01 = Up A02 = Down	Used when business type = A14	Conditional
currency_Unit.name		Not used	Conditional
quantity_Measure_Unit.name	MWH = Megawatt hours when business type B09 MAW = Megawatts when business type A14	Used	Conditional
price_Measure_Unit.name		Not used	Conditional
curveType	A01 = Sequential fixed block	Used	Conditional
cancelledTS	If the data for a time series has been cancelled this attribute shall be specified with A01 = Yes	Not used	Conditional

588

Series_Period			
timeInterval	A time interval equal to the MTU period (15 minutes)	Used	Mandatory
resolution	PT15M	Used	Mandatory

Point			
position	Position within the time interval	Used	Mandatory
quantity	The offered quantity when business type = A14 and process type = A47 The net position when business type B09 and process type = A60 or A61 Not used for other combinations of business and process types.	May be used	Conditional
secondaryQuantity	The activated quantity	Used when business type = A14	Conditional
unavailable_Quantity.quantity	The unavailable quantity	Used when business type = A14	Conditional
activation_Price.amount	The activation price for the quantity of reserve.	Not used	Conditional
procurement_Price.amount	The procurement price for the quantity of reserve.	Not used	Conditional
min_Price.amount	The minimum price for the reserve	Not used	Conditional
max_Price.amount	The maximum price for the reserve	Not used	Conditional
imbalance_Price.amount	The imbalance price for the quantity of reserve.	Not used	Conditional
imbalance_Price.category	Identification whether the imbalance price is due to excess or insufficient balance.	Not used	Conditional
flowDirection.direction		Not used	Conditional

Financial_Price (associated with Point)		Not used	Conditional
amount		Not used	Mandatory
direction		Not used	Conditional

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5.3.10   Dependencies governing the BidAvailability_MarketDocument

591 The bid availability market document is used to provide the detailed reasons for changes to
592 the availability of bids or the offered volumes. Whenever a TSO modifies a bid either before
593 or after energy bid gate closure at T-12, it must submit the detailed reasons to the common
594 platform no later than T+40. The common platform will distribute this information to the central
595 transparency platform no later than T+45.

596 The TSO shall not submit any BidAvailability document when a bid was declared unavailable
597 by TSO because it was submitted in error, and hence was resubmitted with reason code B18
598 = Failure.

599 In the unlikely event that the same bid undergoes several changes to its availability at different
600 points in time, the TSO may transmit to the mFRR platform higher version(s) of the same Bid
601 Availability Market Document.

602   **Table 14 – bid availability market document dependency table**

		Use	XSD requirements
BidAvailability_MarketDocument			
mRID	Unique identification of the bid availability market document	Used	Mandatory
revisionNumber	Initial transmission should normally equal "1"	Used	Mandatory
type	B45 = bid availability document	Used	Mandatory
process.processType	A47 = Manual frequency restoration reserve	Used	Mandatory
sender_MarketParticipant.mRID	EIC of the transmitting TSO EIC of the common platform operator: 10X1001C--00009H	Used	Mandatory
sender_MarketParticipant.marketRole.type	A04 = System operator A35 = MOL responsible	Used	Mandatory
receiver_MarketParticipant.mRID	EIC of the common platform operator: 10X1001C--00009H EIC of the ENTSO-E transparency platform: 10X1001A1001A450	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A35 = MOL responsible A32 = Market information aggregator	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Mandatory
docStatus	A13 = Withdrawn Only used in case a document has been submitted by mistake	May be used	Conditional
time_Period.timeInterval	The MTU period covered by bid(s) referenced in the document	Used	Mandatory

BidTimeSeries			
mRID	Identification of the bid time series when simple bid. multipartBidIdentification when multipart bid. exclusiveBidsIdentification when exclusive bid.	Used	Mandatory
bidDocument_MarketDocument.mRID	Bid document that contained the bid time series	Used	Mandatory
bidDocument_MarketDocument.revisionNumber	Version number of the bid document	Used	Mandatory
requestingParty_MarketParticipant.mRID	EIC code of Party requesting update of bid. Not populated when Requesting Party is a BSP.	May be used	Conditional
requestingParty_MarketParticipant.name	Populated when Requesting Party is a DSO	May be used	Conditional
requestingParty_MarketParticipant.marketRole.type	A49 = Transmission System Operator A46 = Balancing Service Provider A50 = Distribution System Operator	Used	Mandatory

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businessType	C40 = Conditional bid C41 = Thermal limit C42 = Frequency limit C43 = Voltage limit C44 = Current limit C45 = Short-circuit current limits C46 = Dynamic stability limit	Used	Conditional
domain.mRID	EIC code of scheduling area from which bid originates	Used	Mandatory
operationalLimit_Quantity.quantity		Not used	Conditional
limit_Measurement_Unit.name		Not used	Conditional

603

Reason (associated with time series)	**See note 1 below.**		
code	When business type = C40 the following reason only applies: B16 = Tender unavailable in MOL list When business type = C42 one of the following reasons apply: B58 = Insufficiency of reserves B59 = Unavailability of reserve providing units When business type = C41, C43, C44, C45 or C46 one of the following reasons apply: B18 = Failure B46 = Internal congestion B47 = Operational security constraints B60 = Unavailability of automatic protection systems	Used	Mandatory
text	May be populated to provide additional explanation in free text format	May be used	Conditional

604

RegisteredResource (associated with BitTimeSeries)	**See note 2 below.**		
mRID	EIC code of concerned network element	Used	Mandatory

605 Note 1: Exactly one instance of Reason shall be populated.

606 Note 2: One or several instances of RegisteredResource shall be associated with the
607 BidTimeSeries when Business Type is Thermal Limit = C41 and
608 requestingParty_MarketParticipant.marketRole.type is A49 (Transmission System Operator).
609 RegisteredResource shall not be populated for any other Business Types.

610

5.3.11   Dependencies governing the Unavailability_MarketDocument

612 Up until T+5, TSOs may submit an unavailability document requesting its disconnection or
613 decoupling. It should be noted that for the time being, higher versions are not supported.
614 Hence, via document submission it is not possible to cancel or modify a disconnection or
615 decoupling. Full functionality is provided by the platform's graphical user interface though.

616 The common platform uses the unavailability document to communicate toward all
617 participating TSOs the disconnection of a TSO or the decoupling of an area, as well as
618 unavailability or failure in the common platform. Except for decoupling, the common platform
619 submits the same information to the central transparency platform. Updates to a
620 disconnection, decoupling or unavailability will be reported in a higher version of the original
621 document.

622 Each document will describe a single instance of a disconnection, decoupling, unavailability
623 or failure. Hence the document shall contain exactly one time series. No Series_Period shall
624 be included.

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625 **Table 15 – unavailability market document dependency table**

		Use	XSD requirements
Unavailability_MarketDocument			
mRID	Unique identification of the unavailability market document	Used	Mandatory
revisionNumber	Initial transmission should normally equal "1"	Used	Mandatory
type	A53 = Outage publication document	Used	Mandatory
process.processType	A47 = Manual frequency restoration reserve A60 = mFRR with scheduled activation A61 = mFRR with direct activation Only A47 applicable when TSO transmits document	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Mandatory
sender_MarketParticipant.mRID	EIC of the transmitting TSO EIC of the common platform operator	Used	Mandatory
sender_MarketParticipant.marketRole.type	A04 = System Operator A35 = MOL responsible	Used	Mandatory
receiver_MarketParticipant.mRID	EIC of the common platform operator EIC of the receiving TSO EIC of the ENTSO-E transparency platform: 10X1001A1001A450	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A35 = MOL responsible A04 = System Operator A32 = Market information aggregator	Used	Mandatory
unavailability_Time_Period.timeInterval	The MTU period(s) affected by the unavailability	Used	Mandatory
docStatus	A01 = Intermediate A02 = Final A09 = Cancelled A13 = Withdrawn A09 is used when a future dated outage, decoupling or disconnection is cancelled. A13 may be used to withdraw erroneously communicated outage Only A01 applicable when TSO transmits document	May be used	Conditional

		Use	XSD requirements
TimeSeries			
mRID	identification of the time series	Used	Mandatory
businessType	C47 = Disconnection C50 = Decoupling A83 = Auction cancellation (used in case no solution found or algorithm failure) A53 = Planned maintenance A54 = Unplanned outage Only C47 and C50 applicable when TSO transmits document	Used	Mandatory
biddingZone_Domain.mRID	EIC code of control area when businessType = C47 EIC code of decoupled area when businessType = C50 EIC code of region when businessType = A83, A53 or A54	Used	Conditional
in_Domain.mRID		Not used	Conditional
out_Domain.mRID		Not used	Conditional
start_DateAndOrTime.Date	start date of the first affected validity period	Used	Mandatory
start_DateAndOrTime.Time	start time of the first affected validity period	Used	Mandatory

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end_DateAndOrTime.Date	start date of the first validity period no longer affected by the unavailability	Used	Mandatory
end_DateAndOrTime.Time	start time of the first validity period no longer affected by the unavailability	Used	Mandatory
quantity_Measure_Unit.name	MAW	Used	Mandatory
curveType	A03	Used	Mandatory
production_RegisteredResource.mRID		Not used	Conditional
production_RegisteredResource.name		Not used	Conditional
production_RegisteredResource.location.name		Not used	Conditional
production_RegisteredResource.pSRType.psrType		Not used	Conditional
production_RegisteredResource.pSRType. powerSystemResources.mRID		Not used	Conditional
production_RegisteredResource.pSRType. powerSystemResources.name		Not used	Conditional
production_RegisteredResource.pSRType. powerSystemResources.nominalP		Not used	Conditional

626

Reason (associated with time series)			
code	B11 = Cooperating area problem (when area decoupled) B13 = Communication status currently inactive (when TSO disconnects) B18 = Failure (in platform) B19 = Foreseen Maintenance B27 = Calculation process failed (when algorithm failed) A99 = Auction cancelled (when no solution found by algorithm) Only B11 and B13 applicable when TSO transmits document	Used	Mandatory
text	May be populated to provide additional explanation in free text format	May be used	Conditional

627   Series_Period and consequently Point classes are not used.

628

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629 **5.3.12 Dependencies governing the EnergyAccount_MarketDocument**

630 The energy account document is used by the common platform to provide the invoicing
631 financial information for the mFRR to the accounting service billing provider. The document is
632 used as detailed below:

633   1. To provide the financial settlement of the net positions;

634   2. To provide the congestion income;

635   3. To provide the negative congestion income due to the imposition of constraints on
636   interconnectors;

637   4. To provide the rounding error.

638

639   **Table 16 – Energy account market document dependency table (submission of**
640   **Invoicing and financial data to party responsible for TSO invoicing)**

		Use	XSD requirements
EnergyAccount_MarketDocument			
mRID	Unique identification of the Energy Account market Document	Used	Mandatory
revisionNumber	Initial transmission shall equal "1"	Used	Mandatory
type	A12 = Imbalance report	Used	Mandatory
docStatus	A02 = Final	Used	Mandatory
process.processType	A60 = mFRR with scheduled activation A61 = mFRR with direct activation	Used	Mandatory
process.ClassificationType	A01 = Detail type	Used	Mandatory
sender_MarketParticipant.mRID	EIC of the common platform Operator: 10X1001C--00009H	Used	Mandatory
sender_MarketParticipant.marketRole.type	A35 = MOL responsible	Used	Mandatory
receiver_MarketParticipant.mRID	EIC of the settlement billing agent	Used	Mandatory
receiver_MarketParticipant.marketRole.type	A10 = Billing agent	Used	Mandatory
createdDateTime	Date and time of document creation	Used	Mandatory
period.timeInterval	The duration of the settlement period: calendar month in CET/CEST	Used	Mandatory
domain.mRID	EIC of the region	Used	Conditional

641

TimeSeries			
mRID	Unique identification of the time series	Used	Mandatory
businessType	B09 = Net positions B10 = Congestion income B77 = Financial compensation or penalties C56 = Rounding error C48 = Intended energy with positive price C49 = Intended energy with negative price B09 applicable only for process type A60. C48 and C49 shall be used to describe the net positions for direct activations and are therefore applicable only for process type A61. B77 used when negative congestion income. Applicable only for process type A60.	Used	Mandatory

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product	8716867000016 = Active power	Used	Mandatory
objectAggregation	A01 = Area	Used	Mandatory
area_Domain.mRID	EIC identification of the control area EIC identification of the interconnector may be used when business type B10 = congestion income	Used	Mandatory
marketParticipant.mRID	identification of TSO responsible for the area identification of the organisation responsible for the interconnector may be used when business type B10 = congestion income	Used	Conditional
marketAgreement.mRID	Identification of the reserve contract	Not used	Conditional
measure_Unit.name	MWH = Megawatts hours	Used	Mandatory
currency_Unit.name	EUR = Euro	Used	Conditional
marketEvaluationPoint.mRID	Identification of an accounting point	Not used	Conditional

642

Series_Period			
timeInterval	When process type = A61 and business type C48 or C49: 30 minutes length (corresponding to MTU0 and MTU1) and iterated for all MTU periods within period.timeInterval In all other cases: A time interval equal to period.timeInterval	Used	Mandatory
resolution	PT15M	Used	Mandatory

Point			
position	Position within the time interval	Used	Mandatory
in_Quantity.quantity	Quantity going into an area	Used	Mandatory
in_Quantity.quality	The quality of the quantity	Not used	Conditional
out_Quantity.quantity	Quantity going out of an area	Used	Mandatory
out_Quantity.quality	The quality of the quantity	Not used	conditional
price.amount	settlement amount. This represents the total financial value for the point in respect to the time series businessType. The value may be negative.	Used	conditional

643 Note: The in quantity and out quantity represent a netted value consequently one of the values
644 must always be equal to zero.

Reason (associated with Point)		Not used	Conditional

645

5.3.13   Financial amount table

647 Table 17 indicates the domain owner that should pay the amount indicated.

648   **Table 17 – financial amount table**

price.amount	Settlement amount	>0	<0
Which party pays		TSO	common platform

649

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650 **5.4   Signalling**

651 As indicated in chapters 5.2.7 and 5.2.8, the resulting XB flows and net positions may be
652 communicated as a real-time signal with intervals of 4 seconds. Depending on configuration
653 in the mFRR platform, the signals may reflect ramping or not. When reflecting ramping, the
654 signal at any given second will be linearly interpolated between the two surrounding points in
655 the corresponding Schedule documents described in chapter 5.3.8, following the gradient.
656 During ramping, each 4 second value will follow the gradient and not have the same value for
657 a whole minute.

658 The following protocols shall be supported: IEC 60870-6 (also referred to as TASE.2 or ICCP)
659 and IEC 60870-5-101/104 (also referred to as IEC 101 and IEC 104).

660

661

662