

Business Service

Exchange of revision requests

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Document management

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0.1	28-08-2020	Initial version Prepared on based on BRS Measurement Data and Reclamations Measurement Data GV[1] and message definition MeasurementSeries	EDSN
0.3	31-08-2020	Version for review	EDSN
0.6	14-09-2020	Review comments working group on measurement data GV processed	EDSN
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1.0	27-10-2020	Version for information Reference to allocation data message changed to dependent (A) Footnote included with reason for claim after allocation data check Check 657 redundant and deleted Text control 733, 738 and 755 amended Volume changed from "Volume in whole numbers, with one 0 after the decimal point" to "Volume in whole numbers"	EDSN
1.1	13-01-2021	Control 200 and 999 added Reference to TenneT Technical Guide - Measurements & Allocations Documents added Table of service features completed in sections 6.1 and 6.2	EDSN
1.3	25-01-2021	Review on v1.1 processed	EDSN
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2.6	08-07-2021	Review on 2.3 processed	EDSN
2.9	22-07-2021	Review on 2.6 processed	EDSN
3.0	26-07-2021	Version for information	EDSN

Distribution history

Version	Dissemination date	Receivers
0.1	28-08-2020	EDSN Service Design
0.3	31-08-2020	GV measurement data working group, EDSN internal
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0.61	08-10-2020	GV measurement data working group, NEDU
0.9	22-10-2020	GV measurement data working group, NEDU
1.0	27-10-2020	GV measurement data working group, NEDU
1.1	13-01-2021	GV measurement data working group, EDSN internal
1.3	25-01-2021	GV measurement data working group, NEDU
1.6	15-02-2021	GV measurement data working group, NEDU, EDSN
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2.6	08-07-2021	Working group Business Services A2.0, TenneT, EDSN
2.9	22-07-2021	SR NEDU
3.0	26-07-2021	NEDU, TenneT, EDSN

Referenced documents

Requirements model

No.	Description	Version	Date	Author
1.	BRS Meetgegevens en reclamaties meetgegevens GV	4.0	26-07-2021	NEDU

Design frameworks and guidelines

No.	Description	Version	Date	Author
2.	NEDU EDSN Ontwerpkeuzes	3.9	15-04-2021	NEDU/EDSN
3.	TenneT Web Services guide	N/A	April 2020	TenneT
8.	Technical Guide - Measurements & Allocations Documents	1.0	31-05-2021	TenneT

Service descriptions and data model

No.	Description	Version	Date	Author
4.	EDSN Complex Data Type Specificatie	2.2	27-05-2020	EDSN
5.	EDSN Logical Data Type Specificatie	2.7	27-05-2020	EDSN
6.	ebIX® Code list	1.0A	June 2019	ebIX TC
7.	ISO 8601 for date and time stamping	1:2019	2019	ISO

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1 Introduction

1.1 Service description

The service description describes the agreements on the exchange of revision requests for measurement data in daily messages for a telemetrically metered

- Allocation point for large-scale electricity consumption with allocation method TMT
- Allocation point system balance electricity with allocation method TMT

To give the reader a good idea of the exchange, a detailed process description is included as well as an indication of the messages to be used. For a functional description of the process that supports this exchange, please refer to the *Business Requirement Specification Measuring Data and Complaints Measuring Data GV*[1].

1.2 Reading guide

This document describes the following aspects, including:

- Process of *exchanging revision requests*
- The exchange of these revision requests via TenneT's MMC-hub
- The syntactic validations by the MMC hub, the confirmation/rejection by the MMC hub
- The checks on the revision requests by the consumers (TSO, MRP, DSO)
- The confirmation/rejection of the revision requests by the consumers (TSO, MRP, DSO)
- XML message definitions

For the functionality of the MMC hub, please refer to *TenneT Web Services guide*[3].

1.3 Starting points

The following principles were used in designing the *Exchange of Revision Requests* service:

- Date/time notation in XML messages according to *NEDU EDSN Design Choices*[2]
- The start and end date are in UTC and in accordance with the notation: YYYY-MM-DDThh:mm:ssZ
Example of start and end date calendar day electricity (winter)
2020-02-08T23:00:00Z / 2020-02-09T23:00:00Z;
Example of electricity calendar day start and end date (summer)
2020-06-08T22:00:00Z / 2020-06-09T22:00:00Z
- Wherever reference is made in this service description to "large scale" or "GV" connection/allocation point, this shall be understood to mean a telemetered large-scale connection/allocation point with allocation method TMT or a telemetered Article 1 section 2 and 3 connection/allocation point with allocation method TMT(A1)
- Where this service description refers to "regional grid operator" or "DSO", this can also be read as "GDS owner" insofar as it concerns electricity wholesale connections.

1.4 Use of the *Exchange of Revision Requests* service

The table below shows which types of revision requests may be sent by which market roles and what deadlines apply¹. In addition, the table contains a reference to the relevant use cases from the BRS[1].

Source	Possible reasons for complaint	Claim period	BRS Use case	Code ²
Revision requests from BRP to MRP				
Measurement data time series	Measurement data expected but not received (do not send measurement data) Zero values measured for more than 7 calendar days (original and proposal measurement data to be included)	First calendar day up to the eighth working day	UC A20.101	N90
Measurement data time series	Measurement data contested (original and proposal measurement data to be included) Measurement data estimated too long (original and proposal measurement data to be included)	First calendar day up to the eighth working day If the indication of origin is "calculated" and the repair method is "estimated" (BRS Appendix A ranking 6), complaints may only be made from the 6th calendar day onwards.	UC A20.101	N90
Revision requests from DSO to MRP				
Measurement data time series	Measurement data expected but not received (do not send measurement data) Measurement data do not match the delivery direction (do not send measurement data) Measurement data do not match the registered capacity (send original measurement data) ³	First calendar day up to the eighth working day	UC A20.111	N90
Revision requests from TSO to MRP				
Measurement data time series	Measurement data expected but not received (do not send measurement data) Measurement data do not match the delivery direction (do not send measurement data) Measurement data do not match the registered capacity (original measurement data to be attached) ¹	First calendar day up to the eighth working day	UC A20.112	N90
Revision requests from BRP to DSO				
Allocation data	Allocation data allocation point received but not expected	First calendar day up to the tenth working day 16:00	UC A20.121	N91

1 For revision requests for measurement data, IC248 (section 3.5) contains the table with status measurement data and possibilities for complaints for TSO, BRP and DSO.

2 See section 3.6 Application ProcessTypeID.

3 A message with a volume greater than 150% and less than or equal to 200% of what may be expected based on the physical capacity of the connection may be claimed via a revision request. The MRP operator will need to deal with it and assess whether the volume was correct after all (and possibly the registered physical capacity incorrect) or send a new measurement data message.

Source	Possible reasons for complaint	Claim period	BRS Use case	Code ²
	Allocation data allocation point expected but not received			
Revision requests from BRP to TSO				
Allocation data	Allocation data allocation point received but not expected Allocation data allocation point expected but not received	First calendar day up to the tenth working day 16:00	UC A20.131	N91

1.5 List of abbreviations

Abbreviation	Description
A1	A connection which falls within the definition of Article 1 of the Electricity Act. This connection is treated as a large-scale consumption, while technically the connection is a small-scale consumption connection
EDSN	Energie Data Services Nederland B.V.
GDS	Closed distribution system
GV	Wholesale
TSO	Transmission System Operator
MMC hub	Market-Market-Communication hub
MRP	Measurement Responsible Party
BRP	Balance Responsible Party
DSO	Distribution System Operator
SO	System Operator (TSO or DSO)
NB	System operator, can be either national or regional system operator.
TMT	Telemetry (abbreviation used to distinguish between connections/allocation points with allocation method PRF and connections/allocation points with allocation method TMT)

1.6 Disclaimer

The terms of this disclaimer apply to this English service description.

In the event of any conflict between this English service description and the Dutch version of this service description, the Dutch service description will prevail.

2 Roles and responsibilities

2.1 Consumer

This service description describes how the consumers (TSO, MRP, DSO) receive the revision requests.

2.2 Provider

This service description describes how the providers (TSO, BRP, DSO) offer the revision requests.

2.3 RACI

The RACI below shows the roles and responsibilities for this service:

R (Responsible)	EDSN Business Integratie
A (Accountable)	To be determined!
C (Consulted)	NEDU-ICWE, ebIX Technical Committee, TenneT
I (Informed, NL: Inform)	ALV NEDU, EDSN

3 BPMN Exchange of Revision Requests

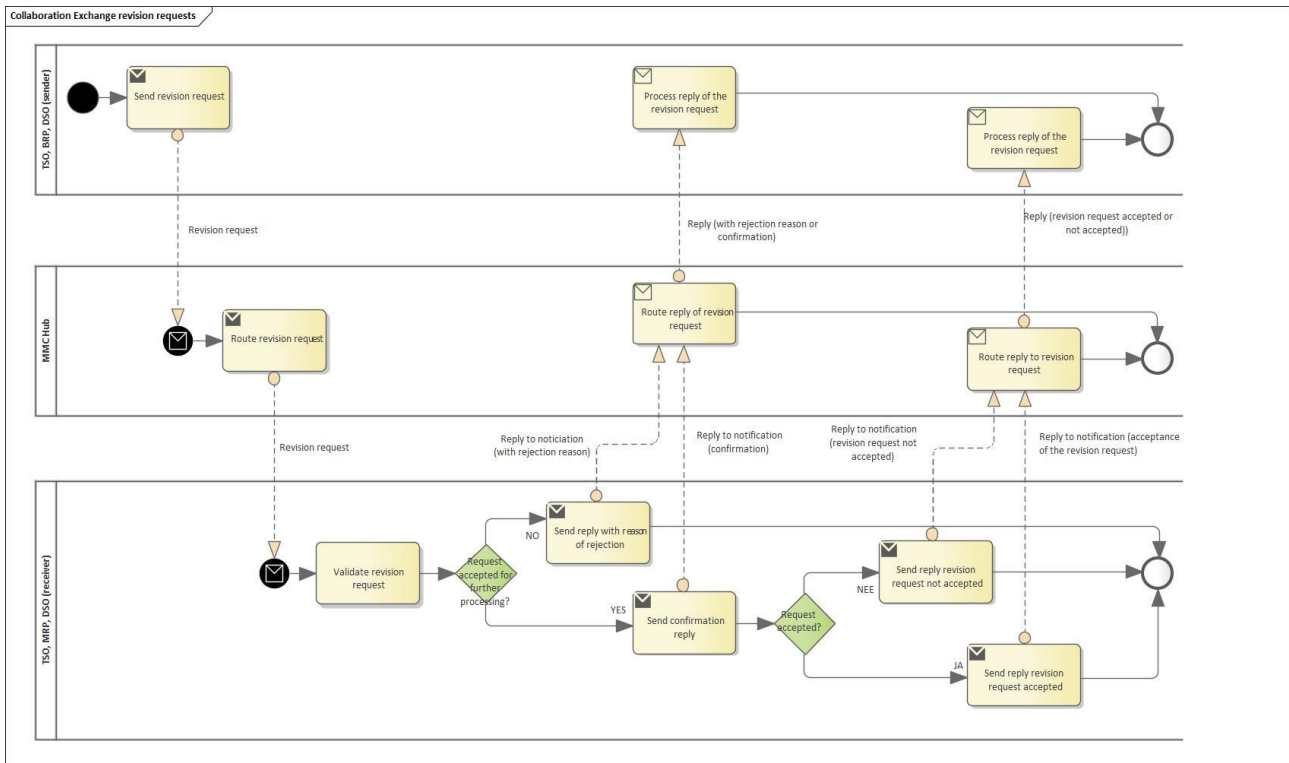


Figure 1 For detailed information on this process see BRS Measurement data and complaints GV[1].

3.1 Exchange of revision requests

The process for exchanging revision requests follows the following scenario:

1. The broadcaster (BRP or SO) sends the "Revision Request" message to the MMC-hub
2. The MMC-hub processes⁴ the received message "Revision Request" and routes the message to the receiver
3. The recipient checks the "Revision Request" message
4. The receiver sends the first response message "Confirmation/rejection of revision request" to the MMC hub:
 - a confirmation reply, or
 - a response with one or more rejections following the checks in sections 3.3, 3.4 or 3.5
5. The MMC-hub processes⁵ the received first response message and routes the message to the sender
6. The recipient sends the second response message "Revision request accepted/not accepted" to the MMC hub if the "Revision request" was not rejected in the first response message:
 - an answer: request for revision granted, or
 - An answer: request for revision not accepted
7. The MMC-hub processes⁶ the received second reply message and routes the message to the sender.

4 A non-valid message is rejected by the MMC hub, see section 3.2.

5 A non-valid message is rejected by the MMC hub, see section 3.2.

6 A non-valid message is rejected by the MMC hub, see section 3.2.

3.2 Validations MMC-hub

Following the received message "Revision request" and received message "Revision request confirmation/rejection", the MMC hub performs the following validations:

Validation	Error message
XSD Validation: The message must comply with the XSD rules	TEN-500001: [Error detail].
Unreadable message: The message must be a valid XML layout	TEN-500001: [Error detail].
Others: All other faults	TEN-999999: Unhandled exception

If a message is rejected by the MMC-hub, the MMC-hub sends the error code and text to the submitter of the message concerned. For the functionality of the MMC hub, please refer to the *TenneT Web Services guide*[3].

3.3 Checks on receiver

Following the received message "Revision request" and the received message "Conformation/rejection revision request" the recipient may perform the following checks⁷:

Validation	Error message in the SOAP response
The received XML message complies with the W3C XML 'well-formedness' specification.	TEN-500001: [Error detail]
The received XML message complies with the XML schema definition (XSD) of the receiver	TEN-500001: [Error detail]

Following the received message "Notification measurement data volumes installation" the receiver performs the following checks:

Validation	Error message in the Acknowledgement
The integrity and/or confidentiality of the XML message is guaranteed (signing check).	Error code: 999 Error message: TEN-500021 – Incorrect message signing
The technicalMessageld in the SOAP header is unique.	Error code: 999 Error message: TEN-500023 – Unique identifier not unique or already processed

3.4 Checks on receiver for message "Exchange of revision requests after measurement data check".

In response to the message "Exchange of revision requests after measurement data check", the following checks and error messages are available to the recipient. The recipient performs these checks to the extent that they are mandatory or relevant for the processing by the recipient:

Control	Error message	Role	Code
Connection			
The EAN code-18 of the connection is a valid EAN code.	EAN code-18 is not valid.	MRP	650
The EAN code-18 of the connection is administered in the connection register during the entire message period.	The connection does not appear in the connection register.	MRP	653
According to the connection register, the BRP is registered as a BRP on the connection during the entire message period.	The PRP is not registered as a PRP on the connection.	MRP	656
The product type in the message corresponds to the product type of the connection in the connection register.	The product type does not correspond to the product type of the connection.	MRP	659
The connection is a GV allocation point electricity with allocation method telemetry.	The connection is not a GV allocation point with allocation method telemetry.	MRP	730
The message contains a valid reason for complaint ⁸ .	Invalid reason for complaint.	MRP	731
For a revision request with reason "longer than 7 calendar days with measured zero values", actually 7 consecutive calendar days with measured zero values have preceded.	No 7 consecutive calendar days measured zero values.	MRP	757

⁷ The MMC-hub performs these checks. The recipient can choose to perform these checks as well.

⁸ For reason for complaint, see section 1.4.

The message contains a reference ID referring to a measurement data message except for a revision request with reason EOT (measurement data expected but not received).	Reference ID missing.	MRP	732
The period of the complaint message corresponds to the period of the message to which the reference ID refers.	The period of the complaint message does not correspond to the period of the message to which the reference ID refers.	MRP	734
The message was received within the complaint period ⁹ .	The message was received outside the complaint period.	MRP	735
The period covered by the revision request is exactly one calendar day.	Invalid period.	MRP	746
A recipient of measurement data message may submit a revision request only once for a specific measurement data message.	Complaint already submitted.	MRP	737
A recipient of measurement data message may submit a revision request only on the last measurement data message sent.	The claim was not made before the last measurement data message sent.	MRP	749
Time Series			
The resolution corresponds to the resolution of the message on which a claim is made.	The resolution does not correspond to the resolution of the message being complained about.	MRP	736
All products match the product type.	One or more products do not fit the product type.	MRP	667
All energy units match the products.	One or more energy units do not fit the product(s).	MRP	668
The positions within a time series are delivered in order from low to high.	The order of the positions is incorrect.	MRP	672
Each position in a time series occurs exactly once in the respective time series.	Double delivery of positions.	MRP	673
A time series for a product in combination with a direction of delivery occurs only once in the message.	Multiple delivery of time series of a product combination in combination with delivery direction.	MRP	675
The volume does not exceed the maximum number of agreed decimal places.	Incorrect number of decimal places.	MRP	677
All volumes in the message are positive numbers (or zero).	Volume with negative value.	MRP	686
In case of the reason for complaint "Measurement data disputed", an original volume and a proposal volume are included in the message.	No original and/or proposal volume.	MRP	711
In case of the reason for complaint "Metering data do not match recorded capacity", an original volume is included in the message.	No original volume available.	MRP	712
In case of the reason for complaint "Zero values measured for more than 7 calendar days", an original volume and a proposal volume are included in the message.	No original and/or proposal volume.	MRP	750
In case of the reason for complaint "Measurement data estimated too long", an original volume and a proposal volume are included in the message.	No original and/or proposal volume.	MRP	751
In case of the reason for complaint "Measurement data expected but not received", no original volume and/or a proposal volume are included in the message.	Invalid delivery of original and/or proposal volume.	MRP	752
In case of the reason for complaint "Metering data do not match delivery direction", no original volume and/or a proposal volume are included in the message.	Invalid delivery of original and/or proposal volume.	MRP	753
Per imbalance settlement period and per delivery direction, each proposed volume is unequal to the original volume.	Proposed volume is equal to original volume.	MRP	738
All original volumes per delivery direction and imbalance settlement period in the message correspond to the volumes per delivery direction and imbalance settlement period in the metering data message on which a claim is made.	Original volume is incorrect.	MRP	739
Message header			

⁹ For deadline for complaints, see section 1.4.

The MessageID in the SOAP header is unique.	A previous message has already been received with the same MessageID.	MRP	669
The ProcessTypeID in the message header is filled with the correct code.	Incorrect or missing ProcessTypeID.	MRP	681
No message with a more recent creation date/time stamp has been received.	A message has already been received with a more recent creation date/time stamp.	MRP	704
The senderID in de SOAP Header equals the SenderID in the Business Document Header.	senderID in de SOAP Header is niet gelijk aan SenderID in de Business Document Header.	MRP	701
The receiverID in de SOAP Header equals the ReceiverID in the Business Document Header.	receiverID in de SOAP Header does not equal the ReceiverID in the Business Document Header.	MRP	745
The contentType ¹⁰ in de SOAP Header is consistent with the ProcessTypeID in the Business Document Header.	contentType in the SOAP is not consistent with ProcessTypeID in the Business Document Header.	MRP	754
Entire message			
Message is complete, correct and addressed to the correct recipient ¹¹ .	free text field ¹²	MRP	999

¹⁰ See Technical Guide - Measurements & Allocations Documents[8] for further information how to fill the contentType.

¹¹ Check and error message if a received message is not correct or not intended for that recipient and cannot be caught by one of the above checks.

¹² An explanation of error code 999 should be entered in this text field.

3.5 Checks receiver for message "Exchange revision requests after allocation data check".

In response to the message "Exchange of revision requests after allocation data check", the following checks and error messages are available to the recipient. The recipient performs these checks to the extent that they are mandatory or relevant for the processing by the recipient:

Control	Error message	Role	Code
Connection			
The EAN code-18 of the connection is a valid EAN code.	EAN code-18 is not valid.	SO	650
The EAN code-18 of the connection is registered with the grid operator during the entire message period.	The connection does not appear in the records of the grid operator.	SO	652
According to the connection register, the BRP is registered as a BRP on the connection during the entire message period.	The PRP is not registered as a PRP on the connection.	SO	656
The product type in the message corresponds to the product type of the connection in the connection register.	The product type does not correspond to the product type of the connection.	SO	659
The connection is a GV allocation point electricity with allocation method telemetry.	The connection is not a GV allocation point with allocation method telemetry.	SO	730
The connection is in operation during the entire message period.	The connection is not in operation.	SO	755
The message contains a valid reason for complaint ¹³ .	Invalid reason for complaint.	SO	731
The message contains a reference ID referring to an allocation data message except for a revision request with reason E0B (Allocation data allocation point expected but not received).	Reference ID missing.	SO	733
The period of the complaint message corresponds to the period of the message to which the reference ID refers.	The period of the complaint message does not correspond to the period of the message to which the reference ID refers.	SO	734
A recipient of allocation data message may submit a revision request only on the last allocation data message sent for a specific message period.	The claim was not made before the last allocation data message sent for a specific message period.	SO	748
An allocation data message recipient may submit a revision request once for a unique connection/reference ID combination.	A claim has already been made for the specific connection/reference ID combination.	SO	756
The message was received within the complaint period ¹⁴ .	The message was received outside the complaint period.	SO	735
The period covered by the revision request is exactly one calendar day.	Invalid period.	SO	746
Message header			
The MessageID in the SOAP header is unique.	A previous message has already been received with the same MessageID.	SO	669
The ProcessTypeID in the message header is filled with the correct code.	Incorrect or missing ProcessTypeID.	SO	681
No message with a more recent creation date/time stamp has been received.	A message has already been received with a more recent creation date/time stamp.	SO	704
The senderID in de SOAP Header equals the SenderID in the Business Document Header.	senderID in de SOAP Header is niet gelijk aan SenderID in de Business Document Header.	SO	701
The receiverID in de SOAP Header equals the ReceiverID in the Business Document Header.	receiverID in de SOAP Header does not equal the ReceiverID in the Business Document Header.	SO	745
The contentType ¹⁵ in de SOAP Header is consistent with the ProcessTypeID in the Business Document Header.	contentType in the SOAP is not consistent with ProcessTypeID in the Business Document Header.	SO	754

¹³ For reason for complaint, see section 1.4.

¹⁴ For deadline for complaints, see section 1.4.

¹⁵ See Technical Guide - Measurements & Allocations Documents[8] for further information how to fill the contentType.

Entire message			
Message is complete, correct and addressed to the correct recipient ¹⁶ .	free text field ¹⁷	SO	999

¹⁶ Check and error message if a received message is not correct or not intended for that particular recipient and cannot be caught by one of the above checks.

¹⁷ An explanation of error code 999 should be entered in this text field.

3.6 Application ProcessTypeID for exchanging revision requests

As described in the *BRS Measurement Data and Reclamations GV*[1], the scheme for the revision requests can be used for several applications. In the EDSNBusinessDocumentHeader (functional header) in the message, it should be specified at ProcessTypeID which application it concerns. Further explanation of the use of the EDSNBusinessDocumentHeader is included in the *NEDU EDSN Design Choices*[2].

Application	Code
Exchange of revision requests after verification of measurement data	N90
Exchange of revision requests after verification of allocation data	N91

4 Functional parameters

4.1 Request for revision after verification of measurement data

The following functional parameters shall be applied in the case of *Exchange of revision request* after measurement data check:

Given	Gas ¹⁸	Elek	1/n	Note	XML code
Message Reference	N/A	V	1	A UUID as a unique identifier of the message.	
EAN code connection	N/A	V	1	EAN 18 electricity allocation point.	
EAN code involved party	N/A	V	1	EAN 13 of the programme responsible party, national grid manager or regional grid manager.	
Market role	N/A	V	1	Allowed values (from ebIX Code list[6]): National Grid Operator Programme Officer Regional grid operator	EZ DDK DDM
Product type	N/A	V	1	Allowed values (from ebIX Code list[6] and including a leading zero): Electricity	023
Reference to message measurement data	N/A	A	1	Reference to related message measurement data time series. Mandatory if reason for claim other than 'Measured data expected but not received' (code E0T).	
Reason for complaint	N/A	V	1	Allowed values (from ebIX Code list[6]): BRP/DSO/TSO: Measurement data expected but not received (do not send measurement data). BRP: Measurement data estimated too long (original and proposal measurement data to be included). DSO/TSO: Measurement data do not match delivery direction (do not send measurement data). DSO/TSO: Measurement data do not match the registered capacity (original measurement data to be sent). BRP: Measurement data disputed (please enclose original and proposal measurement data). BRP: Zero values measured for more than 7 calendar days (original and proposal measurement data to be included).	E0T E0C E0V E0U E0A E0W
Explanation of claim	N/A	O	1	Further explanation as to why the request for revision has been made.	
Start date period	N/A	V	1	Start date time to which the revision request refers. Start date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ	
End date period	N/A	V	1	End date time to which the revision request refers. End date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ	
Energy type			0/n		
Imbalance settlement period (electricity)/measurement period (electricity)/PTE (gas)	N/A	A	1	Resolution is according to ISO 8601 notation[7] for Duration. This resolution shall correspond to the resolution in the related measurement data message. Permissible values electricity: 5 minutes 15 minutes Only obligatory for BRP in case of complaint: • Measurement data estimated too long (code E0C)	PT5M PT15M

¹⁸ For the time being, this message is not intended for gas, but it has been technically prepared for use with gas at a later date.

				- Measurement data disputed (code E0A) - Zero values measured for longer than 7 calendar values (code E0W) Only compulsory for DSO/TSO in case of reason for complaint: - Measurement data do not match the registered capacity (code E0U)	
Product ID ¹⁹	N/A	A	1	Allowed values (from ebIX Code list[6]): Electricity: Active energy Only obligatory for BRP in case of complaint: - Measurement data estimated too long (code E0C) - Measurement data disputed (code E0A) - Zero values measured for longer than 7 calendar values (code E0W) Only compulsory for DSO/TSO in case of reason for complaint: - Measurement data do not match the registered capacity (code E0U)	8716867000030
Energy unit	N/A	A	1	Permissible active energy value: kWh Only obligatory for BRP in case of complaint: - Measurement data estimated too long (code E0C) - Measurement data disputed (code E0A) - Zero values measured for longer than 7 calendar values (code E0W) Only compulsory for DSO/TSO in case of reason for complaint: - Measurement data do not match the registered capacity (code E0U)	KWH
Energy direction	N/A	A	1	Allowed values (from ebIX Code list[6]): Decrease Feed Only obligatory for BRP in case of complaint: - Measurement data estimated too long (code E0C) - Measurement data disputed (code E0A) - Zero values measured for longer than 7 calendar values (code E0W) Only compulsory for DSO/TSO in case of reason for complaint: - Measurement data do not match the registered capacity (code E0U)	E17 E18
Original Volume per position			0/n		
Position	N/A	A	1	Position in the series in whole numbers. Only obligatory for BRP in case of complaint: - Measurement data estimated too long (code E0C) - Measurement data disputed (code E0A) - Zero values measured for longer than 7 calendar values (code E0W) Only compulsory for DSO/TSO in case of reason for complaint: - Measurement data do not match the registered capacity (code E0U)	
Volume	N/A	A	1	Volume in whole numbers.	

¹⁹ For the time being, this message is not intended for reactive energy, but it has been technically prepared for use with reactive energy at a later date.

				Only obligatory for BRP in case of complaint: - Measurement data estimated too long (code EOC) - Measurement data disputed (code EOA) - Zero values measured for longer than 7 calendar values (code EOW) Only compulsory for DSO/TSO in case of reason for complaint: - Measurement data do not match the registered capacity (code EOU)	
Proposal Volume per position			0/n		
Position	N/A	A	1	Position in the series in whole numbers. Only obligatory for BRP in case of complaint: - Measurement data estimated too long (code EOC) - Measurement data disputed (code EOA) - Zero values measured for longer than 7 calendar values (code EOW)	
Volume	N/A	A	1	Volume in whole numbers. Only obligatory for BRP in case of complaint: - Measurement data estimated too long (code EOC) - Measurement data disputed (code EOA) - Zero values measured for longer than 7 calendar values (code EOW)	

Mandatory fields (V) are always filled; optional fields (O) or dependent fields (A) if required for the context of the revision request message concerned.

4.2 Request for revision after verification of allocation data

The following functional parameters shall be applied in the *Exchange of Revision Request* after allocation data check:

Given	Gas	Elek	1/n	Note	XML code
Message Reference	N/A	V	1	A UUID as a unique identifier of the message.	
EAN code connection	N/A	V	1	EAN 18 electricity allocation point.	
EAN code Programme Manager	N/A	V	1	EAN 13 of the programme manager.	
Market role	N/A	V	1	Allowed values: Programme Officer	DDK
Product type	N/A	V	1	Allowed values (from ebIX Code list[6] and including a leading zero): Electricity	023
Reference to allocation data message	N/A	A	1	Reference to the related allocation data message ²⁰ . Mandatory if reason for claim 'Allocation data allocation point received but not expected' (code EOD).	
Reason for complaint	N/A	V	1	Allowed values (from ebIX Code list[6]): Allocation data allocation point received but not expected. Allocation data allocation point expected but not received ²¹ .	EOD EOB
Explanation of claim	N/A	O	1	Further explanation as to why the request for revision has been made.	
Start date period	N/A	V	1	Start date time to which the revision request refers. Start date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ	

²⁰ The MSCONS message also has a unique ID: *BGM 1004 Document/message number. Unique ID for the message, given by the sender.* This unique ID must be given as reference in case of an MSCONS message.

²¹ This reason for complaint is not intended to complain about the absence of the current allocation data message. As a rule, the absence of the current allocation data message is communicated to all PRPs in advance.

Given	Gas	Elek	1/n	Note	XML code
End date period	N/A	V	1	End date time to which the revision request refers. End date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ	

4.3 First Response Exchange of revision request

The response consists of a confirmation or a rejection of the revision request:

Given	Gas	Elek	1/n	Note	XML code
Message Reference	N/A	V	1	A UUID as a unique identifier of the message.	
Reference of the revision request Message	N/A	A ²²	1	A UUID as a unique identifier of the confirmed or rejected revision request message ²³ .	
Date/time response message	N/A	V	1	Date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ	
Confirmation/rejection code	N/A	V	n	If confirmed (not rejected!), code "000" must be returned in the response. If rejected, at least one code for rejection must be returned in the response (see section 3.3 and section 3.4).	000 Code for rejection: see section 3.3, 3.4 and 3.5.
Explanation of the rejection	N/A	O	n	Optional explanation of the rejection.	

4.4 Second Response Exchange of revision request

The response consists of an answer as to whether the request for revision has been granted or not:

Given	Gas	Elek	1/n	Note	XML code
Message Reference	N/A	V	1	A UUID as a unique identifier of the message.	
Reference of the revision request Message	N/A	A ²⁴	1	A UUID as a unique identifier of the confirmed or rejected revision request message ²⁵ .	
Date/time response message	N/A	V	1	Date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ	
Confirmation/rejection code	N/A	V	1	If the request for revision is granted, code "001" must be returned in the response. If revision request is not successful, code "900" must be returned in the response.	001 900
Explanation of the rejection	N/A	O	1	Optional explanation of the rejection.	

Mandatory fields (V) are always filled; optional fields (O) or dependent fields (A) if required for the context of the revision request message concerned.

4.4.1 Explanation of the correlation of the response to the request

Correlation on following levels:

1. Through the EDSNBusinessDocumentHeader, the technical correlation between Request and Response is established if this information is provided by the requester²⁶;
2. Via the message attribute (UUID), the mandatory process correlation between Request and Response.

Additionally, a correlation may apply on the level of the SOAP header, see the document MMC Technical Guide – Measurements & Allocations Documents [8].

²² If the integrity and/or confidentiality of the XML message cannot be guaranteed, the recipient must be able to send a rejection to the sender of the corresponding message without the reference of the received message. Due to compromised integrity or confidentiality there is no proper way to retrieve this information.

²³ Is the Measurement_Series.mRID of the MeasurementSeriesRevisionRequest/AllocationVolumeRevisionRequest message.

²⁴ If the integrity and/or confidentiality of the XML message cannot be guaranteed, the recipient must be able to send a rejection to the sender of the corresponding message without the reference of the received message. Due to compromised integrity or confidentiality there is no proper way to retrieve this information.

²⁵ Is the Measurement_Series.mRID of the MeasurementSeriesRevisionRequest/AllocationVolumeRevisionRequest message.

²⁶ CorrelationID can be filled by the provider of the revision request. If filled, the receiving party (consumer) must specify this CorrelationID in the response to the provider. See Deign Choices [2] for an explanation of the use of CorrelationID.

5 Sequence Diagram

5.1 Note

The sequence diagram shows the parties and services as an object with a so-called "lifeline". The interaction between these objects is shown by arrows as one or more messages between objects. The messages in the sequence diagram are explained in more detail in the chapter Information Model. Further details on message standards and application methods are described in *NEDU EDSN Design Choices*[2].

5.2 Exchange of revision requests

The sequence diagram below concerns the offering of *Exchange of Revision Requests* by the programme responsible party or grid operator to the MMC-hub:

1. Exchange of revision request after measurement data verification (MeasurementSeriesRevision)
2. Exchange of revision request after AllocationVolumeRevision

The MMC-hub takes care of routing, preparing and forwarding the relevant revision request to the recipient.

Exchange of revision request after measurement data check (MeasurementSeriesRevision)

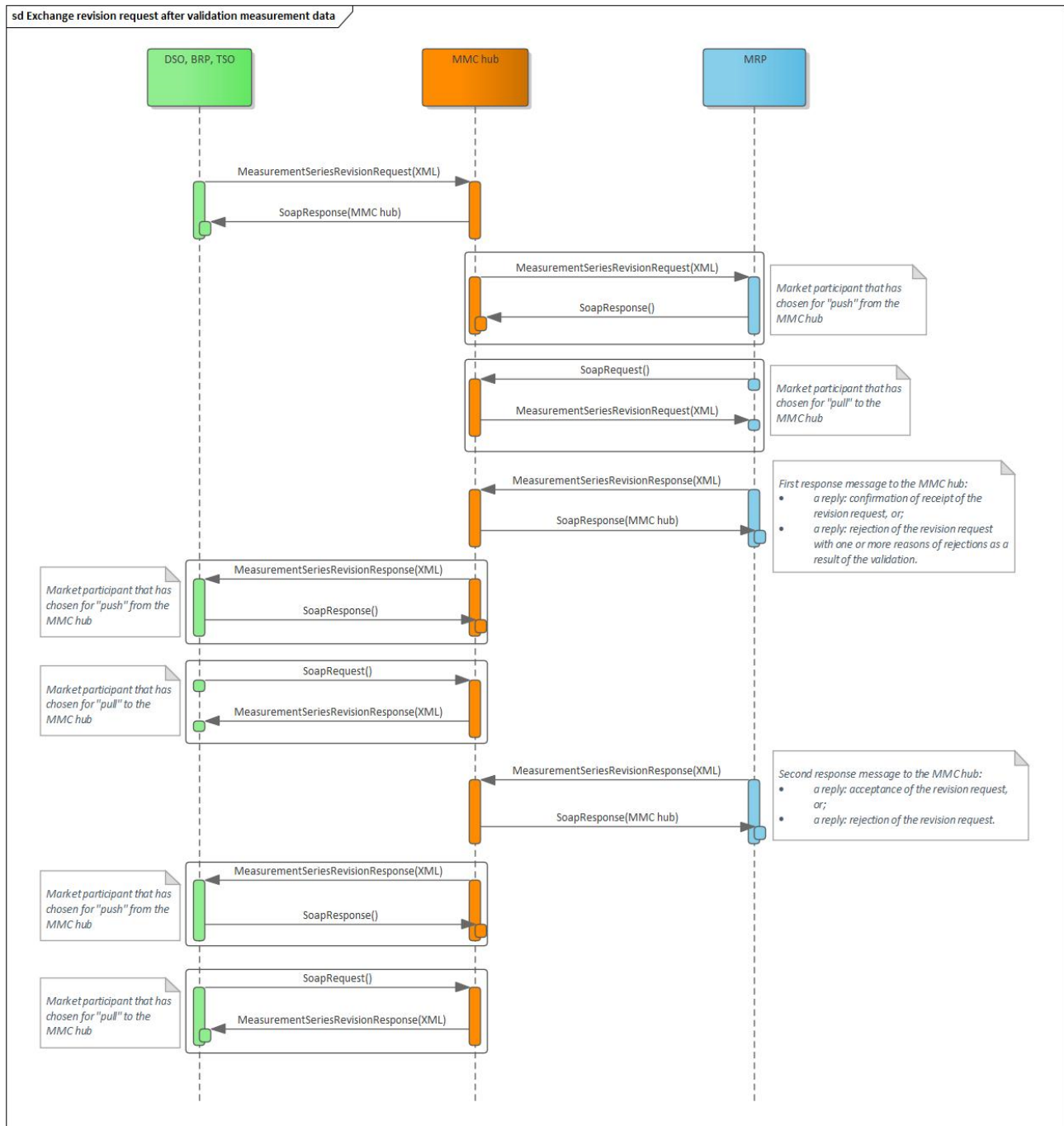


Figure 23 The sequence diagram for exchanging revision requests after verification of measurement data between TSO, BRP or DSO and the MRP via the MMC-hub

Exchange of revision request after allocation data check (AllocationVolumeRevision)

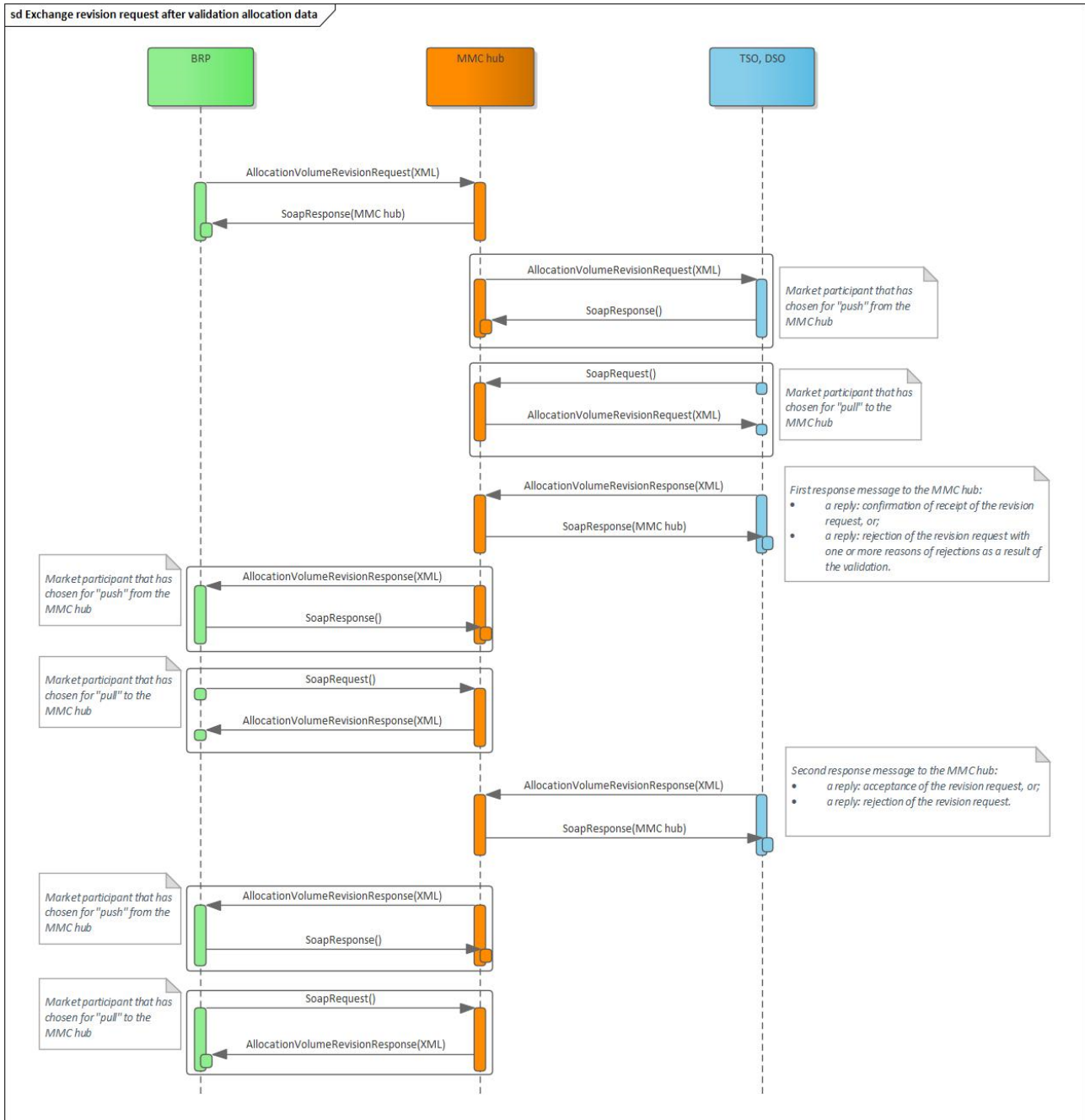


Figure 4The sequence diagram for exchanging revision requests after allocation data check between BRP and the TSO or DSO via the MMC-hub

6 Service Features *Exchange of Revision Requests*

6.1 Service features Exchange of revision requests after checking measurement data

Exchange of MeasurementSeriesRevision Request	
Service	MeasurementSeriesRevision - Exchange of revision request after verification of measurement data
DSO service ID	BSCMF0064
Description	Exchanging revision requests measurement data between TSO, BRP or DSO (provider) and the MRP (consumer).
Service transaction pattern	Request/Response
Precondition(s)	The <i>measurement data revision request</i> shall be submitted by a party that is authorised and authenticated for this purpose.
Trigger	Party provides the <i>revision request measurement data</i> to the MMC-hub.
Post condition(s)	• <i>Revision request for measurement data rejected</i> - or • <i>Measurement data revision request implemented</i>
Service use ²⁷	
Pattern of use	N/a
Average load	N/a.
Peak load	N/a.
Period peak load	N/a.
Period of inactivity	N/a.
Max. consumer response time	95% of incoming Requests must be answered by the consumer within 60 minutes. For the second response message: see Metering Code article 5.5.
Max. response time Soap response MMC hub	See MMC Technical Guide - Measurements & Allocations Documents[8].
Time-out	See MMC Technical Guide - Measurements & Allocations Documents[8].
Retry	The sender (provider of the measurement data) only performs a 'retry' if he did not receive a positive HTTP response from de MMC-hub. If the recipient (consumer of the measurement data) after the max. response time still did not receive a response, we advise to contact the recipient to find out the reason behind. If necessary after that the administrator of the MMC-hub can be contacted. After coordination, a resend of the Notification can be chosen as a follow-up action.
Webservice	
WSDL	See MMC Technical Guide - Measurements & Allocations Documents[8].
Version	See MMC Technical Guide - Measurements & Allocations Documents[8].
Date	See MMC Technical Guide - Measurements & Allocations Documents[8].
Soap address	See MMC Technical Guide - Measurements & Allocations Documents[8].

²⁷ To be agreed with TenneT.

Operation		
User	MRP-er	
Function	Submission of <i>measurement data revision request</i>	
Soap action	See WSDL	
Input message	MeasurementSeriesRevisionRequest	
XSD	MeasurementSeriesRevisionRequest_1p0	
Output message	MeasurementSeriesRevisionResponse	
XSD	MeasurementSeriesRevisionResponse_1p1	

6.2 Service features Exchange of revision requests after allocation data check

Exchange of allocation data revision request (AllocationVolumeRevision)	
Service	AllocationVolumeRevision - Exchange of revision request after allocation data check
DSO service ID	BSCMF0065
Description	The exchange of revision requests allocation data between BRP (provider) and the TSO or DSO (consumer).
Service transaction pattern	Request/Response
Precondition(s)	The <i>allocation data revision request</i> shall be submitted by a party that is authorised and authenticated for this purpose.
Trigger	Party offers the <i>revision request allocation data</i> to the MMC hub.
Post condition(s)	• <i>Revision request for allocation data rejected</i> - or • <i>Revision request for allocation data carried out</i>
Service use ²⁸	
Pattern of use	N/a
Average load	N/a
Peak load	N/a
Period peak load	N/a
Period of inactivity	N/a
Max. consumer response time	95% of incoming Requests must be answered by the consumer within 60 minutes. For the second response message: see Network Code article 10.16.
Max. response time Soap response MMC hub	See MMC Technical Guide - Measurements & Allocations Documents[8].
Time-out	See MMC Technical Guide - Measurements & Allocations Documents[8].
Retry	The sender (provider of the measurement data) only performs a 'retry' if he did not receive a positive HTTP response from de MMC-hub. If the recipient (consumer of the measurement data) after the max. response time still did not receive a response, we advise to contact the recipient to find out the reason behind. If necessary after that the administrator of the MMC-hub can be contacted. After coordination, a resend of the Notification can be chosen as a follow-up action.
Webservice	
WSDL	See MMC Technical Guide - Measurements & Allocations Documents[8].
Version	See MMC Technical Guide - Measurements & Allocations Documents[8].
Date	See MMC Technical Guide - Measurements & Allocations Documents[8].
Soap address	See MMC Technical Guide - Measurements & Allocations Documents[8].

²⁸ To be agreed with TenneT.

Operation		
User	MRP-er	
Function	Submission of <i>allocation data revision request</i>	
Soap action	See WSDL	
	Input message	AllocationVolumeRevisionRequest
	XSD	AllocationVolumeRevisionRequest_1p0
	Output message	AllocationVolumeRevisionResponse
	XSD	AllocationVolumeRevisionResponse_1p1

7 Information model

7.1 Note

The information model is shown as a class diagram. Each class diagram is followed by a table with the description of the elements, except for the class diagrams of "empty" messages exchanged for acknowledgement.

Multiplicities are indicated with the elements. Notation 0..1 means that the element optionally occurs once, 1..1 means that the element occurs once (mandatory). Notation 0...* means that the element may optionally occur more than once. Notation 1..* means that the element may occur one or more times (mandatory).

Data types determine which type of value an element can contain. The data types are subdivided into:

- **Composite data types (CDT):** a composition of several (fixed) elements, which are reused more often (e.g. address)[4].
- **Logical data types (LDT):** a defined set of properties of the element such as minimum length, maximum length, pattern[5].

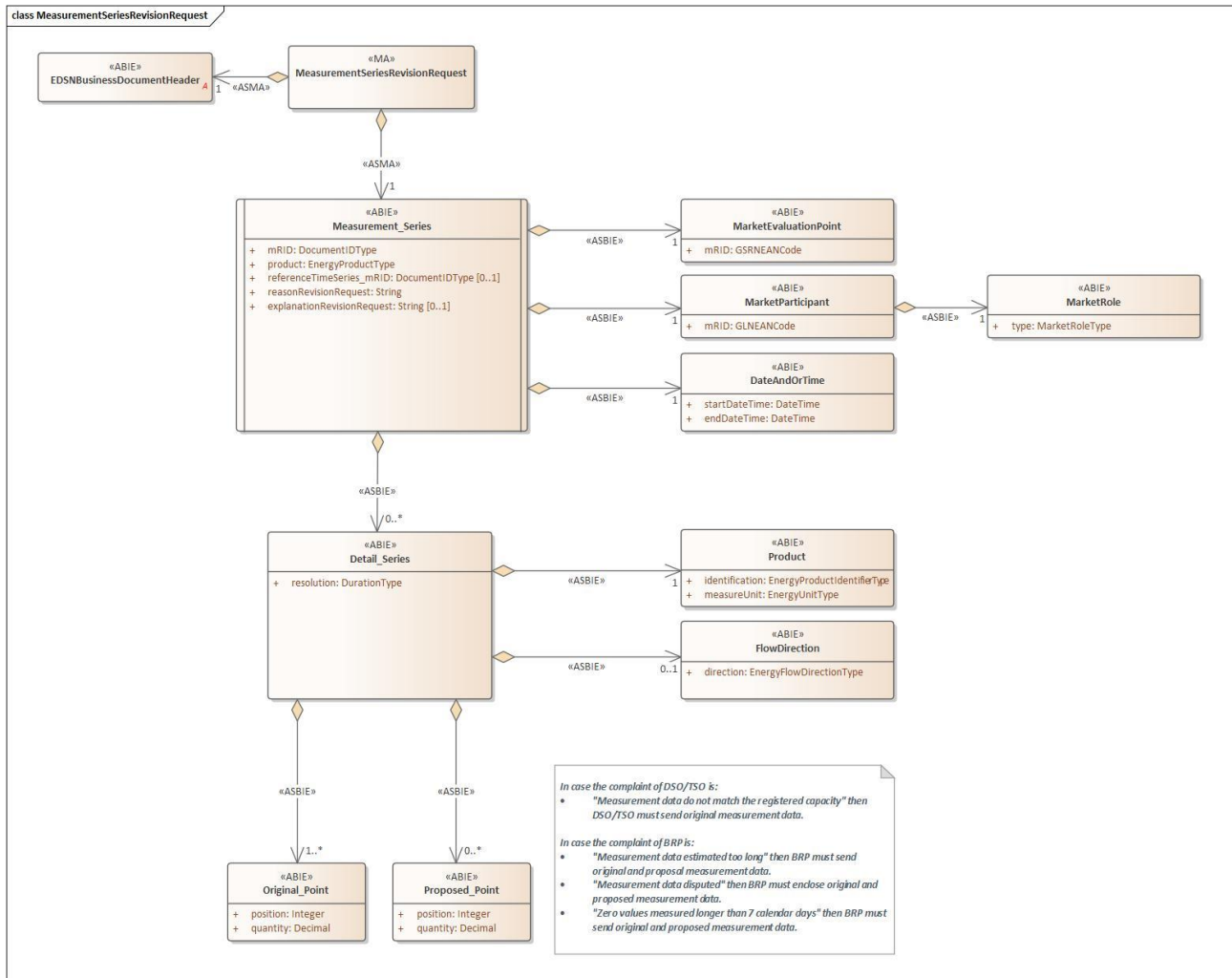
For more information on data types, please refer to *NEDU EDSN Design Choices*[2].

Detailed information on the values of the data types is available as a PDF document on myEDSN:

- EDSN Complex Data Type Specification (CDT).
- EDSN Logical Data Type Specification (LDT).

These documents also describe the values of the data types used in other information models.

7.2 Revision request after measurement data verification (MeasurementSeriesRevisionRequest)



DateAndOrTime

XML element	Data type	Multiplicity	Description	Functional parameter
startDateTime	DateTime	1..1	Start date/time of the period as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.	Start date period
endDateTime	DateTime	1..1	End date/time of the period as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.	End date period

Detail_Series

XML element	Data type	Multiplicity	Description	Functional parameter
resolution	DurationType	1..1	The definition of the number of units of time that compose an individual step within a period.	Imbalance settlement period (electricity)/measurement period (electricity)/PTE (gas)

FlowDirection

XML element	Data type	Multiplicity	Description	Functional parameter
direction	EnergyFlowDirectionType	1..1	The identification of the direction.	Energy direction

MarketEvaluationPoint

XML element	Data type	Multiplicity	Description	Functional parameter
mRID	GSRNEANCode	1..1	The identification of the evaluation point.	EAN code connection

MarketParticipant

XML element	Data type	Multiplicity	Description	Functional parameter
mRID	GLNEANCode	1..1	The identification of a party in the energy market.	EAN code involved party

MarketRole

XML element	Data type	Multiplicity	Description	Functional parameter
type	MarketRoleType	1..1	The identification of the role played by a market player.	Market role

Measurement_Series

XML element	Data type	Multiplicity	Description	Functional parameter
mRID	DocumentIDType	1..1	A unique identification of the time series.	Message Identifier (UUID)
product	EnergyProductType	1..1	The identification of the energy product (electricity, gas etc.)	Product type
referenceTimeSeries_mRID	DocumentIDType	0..1	Reference to earlier received time series	Reference to measurement data
reasonRevisionRequest	String	1..1	Reason for this revision request	Reason for complaint
explanationRevisionRequest	String	0..1	Explanation for this revision request	Explanation of claim

Original_Point

XML element	Data type	Multiplicity	Description	Functional parameter
position	Integer	1..1	A sequential value representing the relative position within a given time interval.	Position
quantity	Decimal	1..1	The principal quantity or the accepted offer quantity identified for a point.	Volume

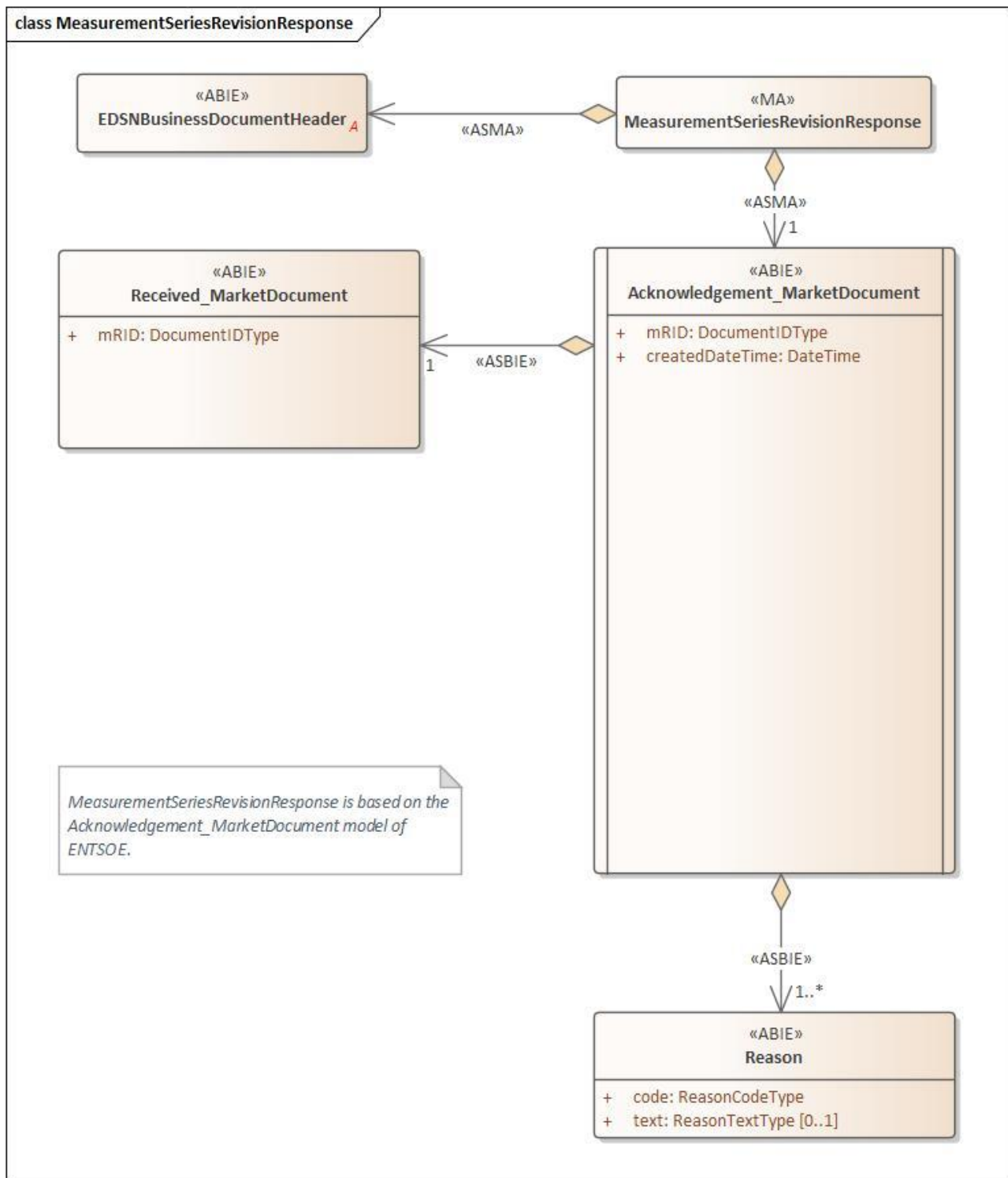
Product

XML element	Data type	Multiplicity	Description	Functional parameter
identification	EnergyProductIdentifierType	1..1	The unique identification of the product.	Product ID
measureUnit	EnergyUnitType	1..1	The identification of the measure unit.	Energy unit

Proposed_Point

XML element	Data type	Multiplicity	Description	Functional parameter
position	Integer	1..1	A sequential value representing the relative position within a given time interval.	Position
quantity	Decimal	1..1	The principal quantity or the accepted offer quantity identified for a point.	Volume

7.3 Confirmation/rejection of revision request after measurement data check (MeasurementSeriesRevisionResponse)



Acknowledgement_MarketDocument

XML element	Data type	Multiplicity	Description	Functional parameter
mRID	DocumentIDType	1..1	The unique identification of the document being exchanged within a business process flow.	Message Identifier (UUID)

XML element	Data type	Multiplicity	Description	Functional parameter
createdDateTime	DateTime	1..1	The date and time of the creation of the document.	Date/time message

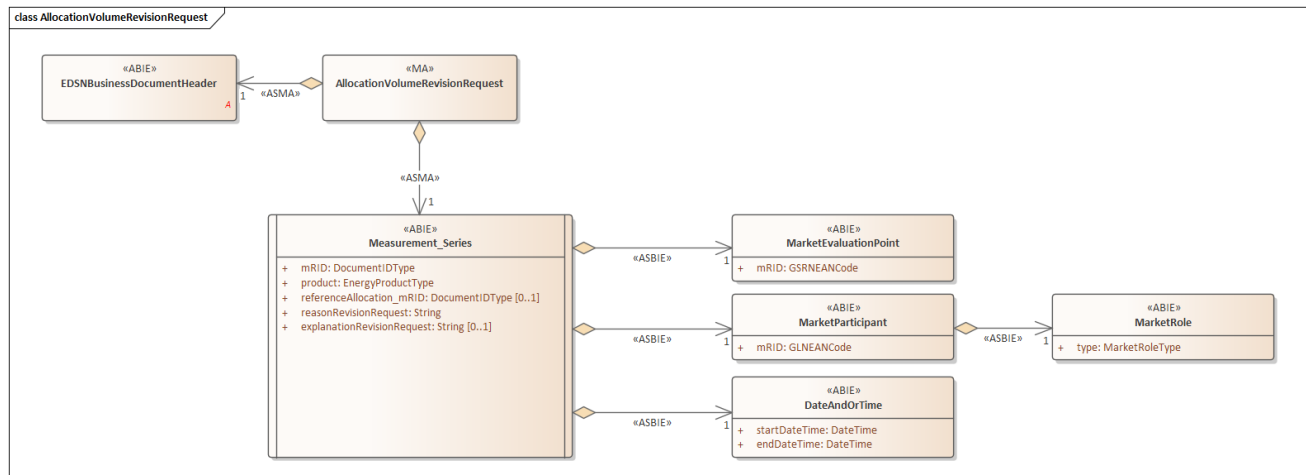
Reason

XML element	Data type	Multiplicity	Description	Functional parameter
code	ReasonCodeType	1..1	The motivation of an act in coded form.	Confirmation/rejection code
text	ReasonTextType	0..1	The textual explanation corresponding to the reason code.	Explanation of confirmation/rejection

Received_MarketDocument

XML element	Data type	Multiplicity	Description	Functional parameter
mRID	DocumentIDType	1..1	The unique identification of the document being exchanged within a business process flow.	Revision request message reference (UUID)

7.4 Revision request after allocation data check (AllocationVolumeRevisionRequest)



DateAndOrTime

XML element	Data type	Multiplicity	Description	Functional parameter
startDateTime	DateTime	1..1	Start date/time of the period as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.	Start date period
endDateTime	DateTime	1..1	End date/time of the period as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.	End date period

MarketEvaluationPoint

XML element	Data type	Multiplicity	Description	Functional parameter
mRID	GSRNEANCode	1..1	The identification of the evaluation point.	EAN code connection

MarketParticipant

XML element	Data type	Multiplicity	Description	Functional parameter
mRID	GLNEANCode	1..1	The identification of a party in the energy market.	EAN code Programme Manager

MarketRole

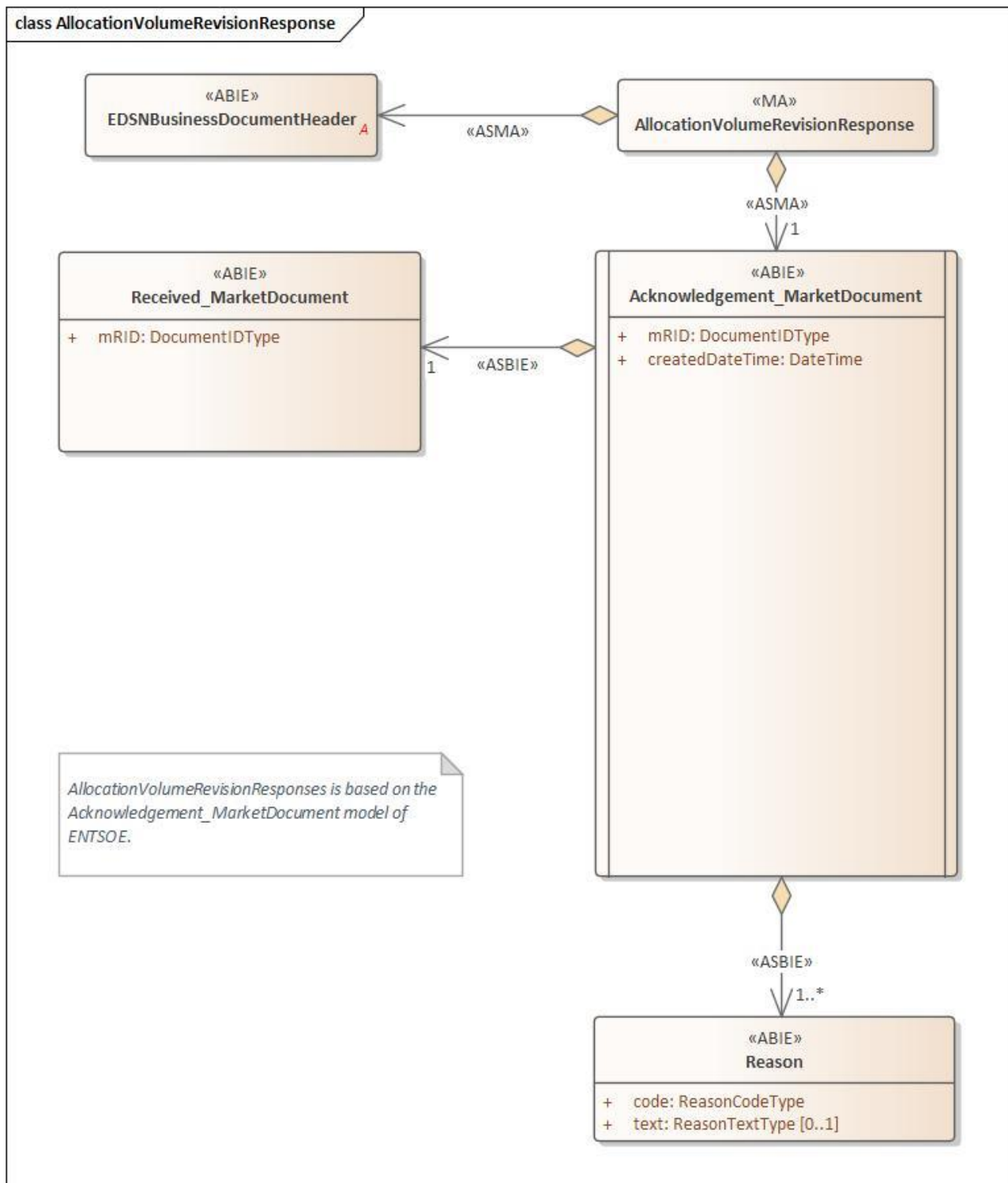
XML element	Data type	Multiplicity	Description	Functional parameter
type	MarketRoleType	1..1	The identification of the role played by a market player.	Market role

Measurement_Series

XML element	Data type	Multiplicity	Description	Functional parameter
mRID	DocumentIDType	1..1	A unique identification of the revision request.	Message Identifier (UUID)
product	EnergyProductType	1..1	The identification of the energy product (electricity, gas etc.)	Product type
referenceAllocation_mRID	DocumentIDType	0..1	Reference to earlier received allocation information	Reference to allocation data
reasonRevisionRequest	String	1..1	Reason for this revision request	Reason for complaint

XML element	Data type	Multiplicity	Description	Functional parameter
explanationRevisionRequest	String	0..1	Explanation for this revision request	Explanation of claim

7.5 Confirmation/rejection of revision request after allocation data check (AllocationVolumeRevisionResponse)



Acknowledgement_MarketDocument

XML element	Data type	Multiplicity	Description	Functional parameter
mRID	DocumentIDType	1..1	The unique identification of the document being exchanged within a business process flow.	Message Identifier (UUID)

XML element	Data type	Multiplicity	Description	Functional parameter
createdDateTime	DateTime	1..1	The date and time of the creation of the document.	Date/time message

Reason

XML element	Data type	Multiplicity	Description	Functional parameter
code	ReasonCodeType	1..1	The motivation of an act in coded form.	Confirmation/rejection code
text	ReasonTextType	0..1	The textual explanation corresponding to the reason code.	Explanation of confirmation/rejection

Received_MarketDocument

XML element	Data type	Multiplicity	Description	Functional parameter
mRID	DocumentIDType	1..1	The unique identification of the document being exchanged within a business process flow.	Revision request message reference (UUID)