

## Business Service

### Exchange volumes reconciliation electricity

**This version of the Service Description is effective from the implementation of *TS046 IC280L Reconciliation Messages PRF to XML*.**

**Please note: the Dutch version is leading.**

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |                           |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------|
| <b>Name</b> | SD030 – Exchange volumes for reconciliation electricity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Version</b> | 4.0                       |
| <b>Code</b> | BSCMF0081 - Exchange aggregated volumes for reconciliation per grid area<br>BSCMF0082 - Exchange volumes for reconciliation per individual allocation point<br>BSCMF0083 - Exchange aggregated OVP volumes for reconciliation per grid area<br>BSCMF0084 - Exchange OVP volumes for reconciliation per individual allocation point<br>BSCMF0085 - exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area<br>BSCMF0086 - Exchange allocated volumes and determined volumes for reconciliation per individual allocation point | <b>Status</b>  | Dutch version approved    |
| <b>Date</b> | 23 December 2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Author</b>  | EDSN Business Integration |

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## Document management

| Version | Version date      | Changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Author |
|---------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 0.1     | 20 July 2020      | Initial version<br>Prepared on the basis of BRS Reconciliation electricity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | EDSN   |
| 0.2     | 18 August 2022    | Version after processing review WG C1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EDSN   |
| 0.3     | 07 September 2022 | Controls tightened                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EDSN   |
| 0.4     | 10 October 2022   | Version after review WG C1<br>Data exchange of volumes for reconciliation per individual allocation point of the allocation points with allocation method SMA removed from the service description<br><br>Message definitions for reconciliation volumes (allocation group SMA and TMT) and reconciliation volumes (allocation group PRF) modelled separately <sup>1</sup><br><br>Register receipt specification for volumes for reconciliation (allocation group PRF) per individual allocation point added                                                  | EDSN   |
| 0.5     | 18 October 2022   | Version after processing review WG C1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EDSN   |
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| 0.7     | 12 December 2022  | Version after processing review sector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | EDSN   |
| 0.9     | 02 January 2023   | Version for approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | EDSN   |
| 0.91    | 23 January 2023   | Version after processing subsequent review sector<br><br>The format for notification <i>Exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area</i> (BSCMF0085) is separated into two data exchanges for the BRP:<br>1. For BRP per grid area per SUP (ProcessTypeID N221);<br>2. For BRP Net Loss (BRP designated by the DSO as BRP for the grid loss for the grid area) (ProcessTypeID N223)<br><br>House style changed to MFF BAS                                                                         | EDSN   |
| 1.0     | 03 February 2023  | Approved version                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | EDSN   |
| 1.1     | 20 April 2023     | Modified due to:<br><ul style="list-style-type: none"> <li>RFC A2.0-TR3-2 Specification definition and review reconciliation (result) run ID</li> <li>RFC A2.0 TR3-3 Simplification reviews reconciliation volumes</li> </ul>                                                                                                                                                                                                                                                                                                                                 | EDSN   |
| 1.9     | 04 May 2023       | Version following review Messaging team MFFBAS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | EDSN   |
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| 2.1     | 07 December 2023  | Modified due to:<br><ul style="list-style-type: none"> <li>RFC-005-A2.0-TR3 IC280L Scope change: <ul style="list-style-type: none"> <li>Aggregated allocated volumes and aggregated determined volumes per SA (N221) expired</li> <li>Grid loss change per SA (N223) expired</li> <li>Description and specification of BSCMF0085 removed</li> </ul> </li> <li>RFC 280L.1 Register receipt electricity per BRP-SUP</li> <li>RFC-006-A2.0-TR3 New codes for volumes</li> <li>general change: term <i>settlement</i> changed to <i>reconciliation</i></li> </ul> | EDSN   |
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<sup>1</sup> By separately modelling message definitions for volumes for reconciliation (allocation group PRF), possible changes to message definitions for volumes for reconciliation (allocation group PRF) due to IC280 have no impact on the message definitions for volumes for reconciliation (allocation group SMA and TMT).

| Version | Version date     | Changes                                                                                                                                                                                                                                                                                                                                                          | Author |
|---------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 3.0     | 19 January 2024  | Approved version                                                                                                                                                                                                                                                                                                                                                 | EDSN   |
| 3.1     | 21 October 2024  | Modified due to: <ul style="list-style-type: none"> <li>• IC280L Scope change (changes due to RFC-005-A2.0-TR3 IC280L Scope change will be reversed because IC280L is back in scope);</li> <li>• RFC-020-A2.0 IC280L Measurement month in reconciliation notifications;</li> <li>• Add explanatory note (as footnote) during check 780 (from backlog)</li> </ul> | EDSN   |
| 3.3     | 24 October 2024  | Version after discussion in Messaging team MFFBAS                                                                                                                                                                                                                                                                                                                | EDSN   |
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## Distribution history

| Version | Dissemination date | Receivers                                                                                                                                                          |
|---------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.1     | 10 August 2022     | Working group C1<br>EDSN Business Integration                                                                                                                      |
| 0.2     | 18 August 2022     | Working group C1                                                                                                                                                   |
| 0.3     | 07 September 2022  | Working group C1                                                                                                                                                   |
| 0.4     | 10 October 2022    | Working group C1                                                                                                                                                   |
| 0.5     | 18 October 2022    | Working group C1                                                                                                                                                   |
| 0.6     | 07 November 2022   | Working group C1<br>Issue leads and central coordinator working groups IC257, IC275, IC252 and IC279<br>Members sound board group IC280 Light<br>MFF BAS           |
| 0.7     | 07 December 2022   | Working group C1                                                                                                                                                   |
| 0.7     | 12 December 2022   | Working group C1<br>Issue leads and central coordinator working groups IC257, IC275, IC252 and IC279<br>Members sound board group IC280 Light<br>MFF BAS           |
| 0.9     | 02 January 2023    | Working group C1<br>Issue leads and central coordinator working groups IC257, IC275, IC252 and IC279<br>SI MFF BAS<br>Design Authority MFF BAS<br>SSG A2.0 MFF BAS |
| 0.91    | 23 January 2023    | Working group C1<br>Design Authority MFF BAS<br>SSG A2.0 MFF BAS                                                                                                   |
| 1.0     | 03 February 2023   | Working group C1<br>MFF BAS                                                                                                                                        |
| 1.1     | 20 April 2023      | Messaging team MFFBAS                                                                                                                                              |
| 1.9     | 04 May 2023        | Messaging team MFFBAS<br>Implementation Steering Committee MFF BAS<br>SSG A2.0 MFF BAS                                                                             |
| 2.0     | 12 May 2023        | Messaging team MFFBAS<br>MFF BAS                                                                                                                                   |
| 2.1     | 07 December 2023   | Messaging team MFFBAS                                                                                                                                              |
| 2.6     | 21 December 2023   | Messaging team MFFBAS                                                                                                                                              |
| 2.9     | 04 January 2024    | IISO<br>PFSG<br>Messaging team MFFBAS                                                                                                                              |
| 3.0     | 19 January 2024    | MFF BAS<br>Messaging team MFFBAS                                                                                                                                   |
| 3.1     | 21 October 2024    | Messaging team MFFBAS                                                                                                                                              |
| 3.3     | 24 October 2024    | Messaging team MFFBAS                                                                                                                                              |
| 3.6     | 11 November 2024   | MFF BAS<br>Messaging team MFFBAS                                                                                                                                   |
| 3.9     | 29 November 2024   | BOSO<br>IISO<br>PFSG<br>Messaging team MFFBAS                                                                                                                      |
| 4.0     | 23 December 2024   | MFF BAS<br>Messaging team MFFBAS                                                                                                                                   |

## Referenced documents

### *Requirements model*

| No. | Description                                                                                               | Version | Date              | Author                |
|-----|-----------------------------------------------------------------------------------------------------------|---------|-------------------|-----------------------|
| 1.  | BRS Reconciliatiegegevens (BRS Reconciliation data)                                                       | 3.0     | 23 December 2024  | Messaging team MFFBAS |
| 11. | BRS Meetgegevens en reclamaties meetgegevens GV (BRS Measurement data and objections measurement data GV) | 10.0    | 25 September 2024 | Messaging team MFFBAS |

### *Design frameworks and guidelines*

| No. | Description                                            | Version | Date           | Author    |
|-----|--------------------------------------------------------|---------|----------------|-----------|
| 2.  | NEDU EDSN Ontwerpkeuzes (NEDU EDSN Design choices)     | 3.9     | 15 April 2021  | NEDU/EDSN |
| 3.  | TenneT Web Services guide                              | N/A     | September 2024 | TenneT    |
| 8.  | Technical Guide - Measurements & Allocations Documents | 1.94    | 21 May 2024    | TenneT    |

### *Service descriptions and data model*

| No. | Description                                                                 | Version | Date             | Author  |
|-----|-----------------------------------------------------------------------------|---------|------------------|---------|
| 4.  | EDSN Complex Data Type Specificatie (EDSN Complex Data Type Specification)  | 2.4     | 07 June 2023     | EDSN    |
| 5.  | EDSN Logisch Data Type Specificatie (EDSN Logical Data Type Specification)  | 3.0     | 07 June 2023     | EDSN    |
| 6.  | ebIX® Code list                                                             | 1.4A    | 23 November 2023 | ebIX TC |
| 7.  | ISO 8601 voor datum- en tijdnnotatie (ISO 8601 for date and time stamping)  | 1:2019  | 2019             | ISO     |
| 9.  | Business Service Uitwisseling datasets (Business Service Exchange datasets) | 14.0    | 01 June 2022     | EDSN    |
| 10. | ENTSO-E code list                                                           | V84     | 27 October 2022  | ENTSO-E |

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# 1 Introduction

## 1.1 Service description

The service description describes:

1. the arrangements for exchange by the DSOs of volumes for reconciliation SMA:
  - a. the aggregated volumes for allocation points with allocation method SMA relating to one full calendar month per grid area, to the BRP, TSO and SUP for the provisional or final reconciliation;
2. the arrangements for exchange by the SO of volumes for reconciliation TMT:
  - a. the aggregated volumes for allocation points with allocation method TMT relating to one full calendar month per grid area, to the BRP and TSO for the provisional or final reconciliation;
  - b. the aggregated OVP volumes for allocation points with allocation method TMT relating to one full calendar month per grid area, to the BRP and TSO for the provisional or final reconciliation;
  - c. the volumes per allocation point for allocation points with allocation method TMT relating to one full calendar month, to the BRP and SUP for the provisional or final reconciliation;
  - d. the OVP the volumes per allocation point for allocation points with allocation method TMT relating to one full calendar month, to the BRP for the provisional or final reconciliation;
3. and the arrangements for exchange by the DSO of volumes for reconciliation PRF:
  - a. the aggregated allocated volumes and aggregated determined volumes for allocation points with allocation method PRF for a period of one to maximum 17 full calendar months per grid area, to the BRP and the TSO for the reconciliation;
  - b. the allocated volumes and determined volumes per allocation point for allocation points with allocation method PRF for a period of one to seventeen full calendar months, to the BRP for reconciliation (Register receipt)<sup>2</sup>;
  - c. the grid loss change determined by the DSO based on the sum of the active energy volumes PRF for all BRPs per grid area, to the BRP Grid loss and the TSO for reconciliation.

To give the reader a good insight into the exchange, a detailed process description has been included as well as an indication of the notifications to be used. For a functional description of the process that supports this exchange, please refer to the *Business Requirement Specification Reconciliation electricity* [1].

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<sup>2</sup> The allocated volumes and determined volumes per allocation point for allocation points with allocation method PRF are exchanged via the Register receipt. See Business Service Exchange datasets[9] for an explanation about the Register receipt exchange.

## 1.2 Reading guide

This document describes the following aspects, including:

- Process *Exchange volumes for reconciliation*;
- Exchange of these volumes for reconciliation via TenneT's MMC-hub<sup>3</sup>;
- The syntactic validations by the MMC-hub, the confirmation/rejection by the MMC-hub
- Checks on the volumes for reconciliation by consumers (BRP, TSO, SUP);
- Confirmation/rejection of the volumes for reconciliation by the consumers (BRP, TSO, SUP)
- XML message definitions.

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

## 1.3 Starting points

The following principles were used when designing the service *Exchange volumes for reconciliation*:

- Date/time notation in XML notifications 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 start and end date time calendar month (November 2024, winter time):  
2024-10-31T23:00:00Z / 2024-11-30T23:00:00Z;
  - Example start and end date time calendar month (June 2024, summer time):  
2024-05-31T22:00:00Z / 2024-06-30T22:00:00Z;
  - Example start and end date calendar day (9 February 2024, winter time):  
2024-02-08T23:00:00Z / 2024-02-09T23:00:00Z;
  - Example start and end date calendar day (31 March 2024, change winter time to summer time):  
2024-03-30T23:00:00Z / 2024-03-31T22:00:00Z;
  - Example start and end date calendar day (09 June 2024, summer time):  
2024-06-08T22:00:00Z / 2024-06-09T22:00:00Z;
  - Example start and end date calendar day (27 October 2024, change summer time to winter time):  
2024-10-26T22:00:00Z / 2024-10-27T23:00:00Z;
- Wherever this service description refers to "System operator" or "SO", this can also be read as "GDS owner" if it involves electricity connections large consumers;
- A set of volumes for reconciliation that are generated in a reconciliation run for a given calendar month per grid area per allocation group will be assigned an identical reconciliation run identification in order to enable consumers can use this identification to match the set of reconciliation volumes for a given calendar month, grid area and allocation group. This reconciliation run identification is identical for all receivers;
- All volumes are positive numbers (or zero) except volumes for Allocation group PRF. Negative numbers are only allowed for this Allocation group;
- The notifications with volumes for reconciliation SMA and TMT will always relate to one full calendar month, while the notifications with volumes for reconciliation PRF will relate to a period of one to maximum 17 full calendar months;
- The specification for the Register receipt <sup>4</sup> (VolumeSettlementSeries) is described in this service description. The exchange of this Register receipt is handled by the service *Exchange datasets*[9] and therefore not described in the service description *Volumes for reconciliation electricity*;
- If a party will supply data on behalf of another party (via the MMC-hub), the Carrier ID should be used for this in the SOAP header. For use CarrierID, see *TenneT Web Services guide*[3];

## 1.4 Use of the service *Exchange volumes for reconciliation*

<sup>3</sup> Excluding the allocated volumes and determined volumes per allocation point for allocation points with allocation method PRF (the Register receipt). See Business Service *Exchange datasets*[9] for an explanation about the Register receipt exchange.

<sup>4</sup> NEDU issues IC011d (Register receipt reconciliation results) and IC133 (Improving the performance of IC011d) specify the rules and implementation regarding the transparency of the volumes reconciled by the system operator. The result of this execution is the Register receipt.

The tables below indicate the reconciliation volumes that must be sent by the System Operator (SO) or Distribution System Operator (DSO) to the balance responsible party (BRP), Transmission System Operator (TSO) or supplier (SUP). The table also contains a reference to the relevant use cases from the BRS[1].

### Overview table

| From | Data<br>GA = grid area<br>AP=allocation point<br>OVP=imbalance settlement period  | To        |            |            |               |            |     |           |            |           |           |     |            |
|------|-----------------------------------------------------------------------------------|-----------|------------|------------|---------------|------------|-----|-----------|------------|-----------|-----------|-----|------------|
|      |                                                                                   | BRP       |            |            | BRP Grid loss |            |     | TSO       |            |           | SUP       |     |            |
|      |                                                                                   | SMA       | PRF        | TMT        | SMA           | PRF        | TMT | SMA       | PRF        | TMT       | SMA       | PRF | TMT        |
| SO   | Aggregated volumes per GA (BSCMF0081)                                             | <b>1.</b> |            | <b>7.</b>  |               |            |     | <b>2.</b> |            | <b>8.</b> | <b>3.</b> |     |            |
| SO   | Aggregated OVP volumes per GA (BSCMF0083)                                         |           |            | <b>5.</b>  |               |            |     |           |            | <b>6.</b> |           |     |            |
| SO   | OVP volumes per AP (BSCMF0084)                                                    |           |            | <b>10.</b> |               |            |     |           |            |           |           |     |            |
| SO   | Volumes per AP (BSCMF0082)                                                        |           |            | <b>11.</b> |               |            |     |           |            |           |           |     | <b>12.</b> |
| SO   | Aggregated allocated volumes and aggregated determined volumes per GA (BSCMF0085) |           | <b>13.</b> |            |               |            |     |           | <b>16.</b> |           |           |     |            |
| SO   | Allocated volumes and determined volumes per AP (BSCMF0086)                       |           | <b>14.</b> |            |               |            |     |           |            |           |           |     |            |
| SO   | Grid loss change per GA (BSCMF0085)                                               |           |            |            |               | <b>15.</b> |     |           | <b>17.</b> |           |           |     |            |

The numbers shown in bold in the table above refer to the numbers shown in bold in the table below.

### Detailed overview

| Exchange                                                                                                                                                                                                                                                          | Provider of volumes reconciliation | Consumer of volumes for reconciliation | Type allocation point    | BRS Use case     | Business Service                                                                                                              | Code <sup>5</sup> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------|--------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Allocation points with allocation method smart meter allocation (SMA);</b>                                                                                                                                                                                     |                                    |                                        |                          |                  |                                                                                                                               |                   |
| <b>1.</b><br>Aggregated reconciliation volumes for allocation points with allocation method SMA for one full calendar month per grid area, BRP/SUP combination, energy direction, price period.                                                                   | DSO                                | BRP                                    | Allocation point ELK SMA | UC A20.301 (BRP) | BSCMF0081 - Exchange aggregated volumes for reconciliation per grid area (AggregatedVolume SettlementSeries, volume type MRP) | N201              |
| <b>2.</b><br>Aggregated reconciliation volumes for allocation points with allocation method SMA for one full calendar month per grid area, BRP, energy direction, price period (incl. EAN13 of the responsible BRP for the grid loss for the relevant grid area). | DSO                                | TSO                                    | Allocation point ELK SMA | UC A20.311 (TSO) | BSCMF0081 - Exchange aggregated volumes for reconciliation per grid area (AggregatedVolume SettlementSeries, volume type MRP) | N201              |
| <b>3.</b><br>Aggregated reconciliation volumes for allocation points with allocation method SMA for one full calendar month per grid area, BRP/SUP combination, energy direction, price period.                                                                   | DSO                                | SUP                                    | Allocation point ELK SMA | UC A20.331 (SUP) | BSCMF0081 - Exchange aggregated volumes for reconciliation per grid area (AggregatedVolume SettlementSeries, volume type MRP) | N201              |
| <b>4.</b><br>Expired.                                                                                                                                                                                                                                             |                                    |                                        |                          |                  |                                                                                                                               |                   |

<sup>5</sup> Code for the ProcessTypeID.

| Exchange                                                                                                                                                                                                                                                          | Provider of volumes reconciliation | Consumer of volumes for reconciliation | Type allocation point                            | BRS Use case     | Business Service                                                                                                             | Code <sup>5</sup> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------|--------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Allocation points with allocation method telemetry (TMT)</b>                                                                                                                                                                                                   |                                    |                                        |                                                  |                  |                                                                                                                              |                   |
| <b>5.</b><br>Aggregated reconciliation OVP volumes for allocation points with allocation method TMT for one full calendar month per grid area, BRP/SUP combination, energy direction.                                                                             | SO                                 | BRP                                    | Allocation point ELK TMT (excluding NVL and DIM) | UC A20.302 (BRP) | BSCMF0083 - Exchange aggregated OVP volumes for reconciliation per grid area (AggregatedSettlementSeries, volume type ORP)   | N211              |
| <b>6.</b><br>Aggregated reconciliation OVP volumes for allocation points with allocation method TMT for one full calendar month per grid area, BRP, energy direction.                                                                                             | SO                                 | TSO                                    | Allocation point ELK TMT (excluding NVL and DIM) | UC A20.312 (TSO) | BSCMF0083 - Exchange aggregated OVP volumes for reconciliation per grid area (AggregatedSettlementSeries, volume type ORP)   | N211              |
| <b>7.</b><br>Aggregated reconciliation volumes for allocation points with allocation method TMT for one full calendar month per grid area, BRP/SUP combination, energy direction, price period.                                                                   | SO                                 | BRP                                    | Allocation point ELK TMT (excluding NVL and DIM) | UC A20.302 (BRP) | BSCMF0081 - Exchange aggregated volumes for reconciliation per grid area (AggregatedVolumeSettlementSeries, volume type MRP) | N212              |
| <b>8.</b><br>Aggregated reconciliation volumes for allocation points with allocation method TMT for one full calendar month per grid area, BRP, energy direction, price period (incl. EAN13 of the responsible BRP for the grid loss for the relevant grid area). | SO                                 | TSO                                    | Allocation point ELK TMT (excluding NVL and DIM) | UC A20.312 (TSO) | BSCMF0081 - Exchange aggregated volumes for reconciliation per grid area (AggregatedVolumeSettlementSeries, volume type MRP) | N212              |
| <b>9.</b><br>Expired.                                                                                                                                                                                                                                             |                                    |                                        |                                                  |                  |                                                                                                                              |                   |
| <b>10.</b><br>OVP volumes for reconciliation per individual allocation point for allocation points with allocation method TMT for one full calendar month per energy direction.                                                                                   | SO                                 | BRP                                    | Allocation point ELK TMT (excluding NVL and DIM) | UC A20.302 (BRP) | BSCMF0084 - Exchange OVP volumes for reconciliation per individual allocation point (SettlementSeries, volume type ORP)      | N213              |
| <b>11.</b><br>Volumes for reconciliation per individual allocation point for allocation points with allocation method TMT for one full calendar month per energy direction, price period.                                                                         | SO                                 | BRP                                    | Allocation point ELK TMT (excluding NVL and DIM) | UC A20.302 (BRP) | BSCMF0082 - Exchange volumes for reconciliation per individual allocation point (VolumeSettlementSeries, volume Type MRP)    | N214              |
| <b>12.</b>                                                                                                                                                                                                                                                        | SO                                 | SUP                                    | Allocation                                       | UC A20.332       | BSCMF0082 - Exchange                                                                                                         | N214              |

| Exchange                                                                                                                                                                    | Provider of volumes reconciliation | Consumer of volumes for reconciliation | Type allocation point                 | BRS Use case | Business Service                                                                                      | Code <sup>5</sup> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------|---------------------------------------|--------------|-------------------------------------------------------------------------------------------------------|-------------------|
| Volumes for reconciliation per individual allocation point for allocation points with allocation method TMT for one full calendar month per energy direction, price period. |                                    |                                        | point ELK TMT (excluding NVL and DIM) | (SUP)        | volumes for reconciliation per individual allocation point (VolumeSettlement Series, volume Type MRP) |                   |

| Exchange                                                                                                                                                                                                                                                                                                                                                    | Provider of volumes reconciliation | Consumer of volumes for reconciliation | Type allocation point    | BRS Use case     | Business Service                                                                                                                                            | Code <sup>6</sup> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------|--------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Allocation points with allocation method profile (PRF)</b>                                                                                                                                                                                                                                                                                               |                                    |                                        |                          |                  |                                                                                                                                                             |                   |
| <b>13.</b><br>Aggregated allocated volumes and aggregated determined volumes for reconciliation of allocation points with allocation method PRF for a period of one to maximum 17 full calendar months per grid area, BRP/SUP combination, profile category, energy direction, price period; based on determined consumption.                               | DSO                                | BRP                                    | Allocation point ELK PRF | UC A20.303 (BRP) | BSCMF0085 - Exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area (AggregatedVolumeReconciliationSeries) | N221              |
| <b>14.</b><br>Allocated volumes and determined volumes for reconciliation per allocation point for allocation points with allocation method PRF for a period of one to maximum 17 full calendar months per profile category, energy direction, price period; based on determined consumption (separate Register receipt per grid area/BRP/SUP combination). | DSO                                | BRP                                    | Allocation point ELK PRF | UC A20.303 (BRP) | BSCMF0086 – Exchange allocated volumes and determined volumes for reconciliation per individual allocation point (VolumeReconciliationSeries)               | N/A               |
| <b>15.</b><br>Grid loss change PRF for a period of one to maximum seventeen full calendar months per grid area, energy direction, price period; determined by the DSO based on the sum of the aggregated active energy PRF volumes of all BRPs.                                                                                                             | DSO                                | BRP Grid loss                          | Allocation point ELK PRF | UC A20.303 (BRP) | BSCMF0085 - Exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area (AggregatedVolumeReconciliationSeries) | N223              |
| <b>16.</b><br>Aggregated allocated volumes and determined volumes for reconciliation of allocation points with allocation method PRF for a period of one to maximum 17 full calendar months per grid area, BRP, profile category, energy direction, price period; based on determined consumption.                                                          | DSO                                | TSO                                    | Allocation point ELK PRF | UC A20.313 (TSO) | BSCMF0085 - Exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area (AggregatedVolumeReconciliationSeries) | N221              |
| <b>17.</b><br>Grid loss change PRF for a period of one to maximum seventeen full calendar months per grid area, energy direction, price period; determined by the DSO based on the reconciliation                                                                                                                                                           | DSO                                | TSO                                    | Allocation point ELK PRF | UC A20.313 (TSO) | BSCMF0085 - Exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area (AggregatedVolumeReconciliationSeries) | N223              |

<sup>6</sup> Code for the ProcessTypeID.

| Exchange             | Provider of volumes reconciliation | Consumer of volumes for reconciliation | Type allocation point | BRS Use case | Business Service | Code <sup>6</sup> |
|----------------------|------------------------------------|----------------------------------------|-----------------------|--------------|------------------|-------------------|
| results of all BRPs. |                                    |                                        |                       |              |                  |                   |

## 1.5 List of terms and abbreviations

| Term                                   | Description                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Allocation point                       | Virtual point at the transfer point of a connection, where the energy exchange between an installation and the grid is administratively allocated to a market party as if measurement had taken place at the transfer point of the connection (Grid code Electricity Glossary 1.1).                                                                               |
| AMI                                    | Consumption with production                                                                                                                                                                                                                                                                                                                                       |
| AP                                     | Allocation point                                                                                                                                                                                                                                                                                                                                                  |
| AZI                                    | Consumption without production                                                                                                                                                                                                                                                                                                                                    |
| BPMN                                   | BPMN (Business Process Modelling and Notation)                                                                                                                                                                                                                                                                                                                    |
| BRP                                    | Balance responsible party (formerly PV (Program responsible party))                                                                                                                                                                                                                                                                                               |
| BRS                                    | Business Requirements Specification                                                                                                                                                                                                                                                                                                                               |
| DIM                                    | Unmeasured connections for which profiles are drawn up in accordance with Appendix 16 of the Net code dimensioned (DIM) profiles.                                                                                                                                                                                                                                 |
| EDSN                                   | Energy Data Services Netherlands                                                                                                                                                                                                                                                                                                                                  |
| ELK                                    | Electricity                                                                                                                                                                                                                                                                                                                                                       |
| GDS                                    | Closed distribution system                                                                                                                                                                                                                                                                                                                                        |
| Aggregated volumes                     | Aggregation of volumes determined based on volumes determined by the DSO per allocation point in the measurement and change processes.                                                                                                                                                                                                                            |
| GV                                     | Large consumption                                                                                                                                                                                                                                                                                                                                                 |
| KV                                     | Small consumption                                                                                                                                                                                                                                                                                                                                                 |
| TSO                                    | Transmission system operator                                                                                                                                                                                                                                                                                                                                      |
| SUP                                    | Supplier                                                                                                                                                                                                                                                                                                                                                          |
| MMC-hub                                | Market-Market-Communication hub                                                                                                                                                                                                                                                                                                                                   |
| MRP                                    | Metering responsible party                                                                                                                                                                                                                                                                                                                                        |
| SO                                     | System operator<br>All references to SO can also be read as distribution system operator, transmission system operator or Closed Distribution System Operator.                                                                                                                                                                                                    |
| NG                                     | Grid area                                                                                                                                                                                                                                                                                                                                                         |
| NVL                                    | Grid loss                                                                                                                                                                                                                                                                                                                                                         |
| Imbalance settlement period            | The unit of time used to calculate the imbalance of BRPs. In the past, this Imbalance Settlement Period (ISP) was also known as the Program Time Unit (PTE). The OVP is set at 15 minutes (TenneT Imbalance system).                                                                                                                                              |
| OVP                                    | Imbalance settlement period                                                                                                                                                                                                                                                                                                                                       |
| Periodic meter readings                | The determined meter readings.                                                                                                                                                                                                                                                                                                                                    |
| PRF                                    | Profile<br>Identifier for KV or GV allocation points that are not allocated via measured quarter values, but via profile fractions, RCF and an SII/SJA.                                                                                                                                                                                                           |
| Profile category                       | Profile category year 2021: A classification as registered in the Connection Register.<br><br>Profile category from go live Allocatie 2.0 tranche 2: A classification for connections based on objectively determined characteristics such as connection value, switching times, contracted transport capacity, determined energy consumption and operating time. |
| DSO                                    | Distribution system operator                                                                                                                                                                                                                                                                                                                                      |
| SMA                                    | Smart Meter Allocation<br>Identifier for KV allocation points that are allocated with quarter values obtained from the smart meter.                                                                                                                                                                                                                               |
| Price period                           | A continuous period of normal hours or low hours.<br>The periodic volumes are fixed per price period.                                                                                                                                                                                                                                                             |
| TMT                                    | Telemetry<br>Identifier for GV allocation points that are allocated with quarter values that are supplied by the MRP or calculated by the SO.                                                                                                                                                                                                                     |
| Determined energy consumption          | Indication per connection whether there is consumption with production (AMI) or consumption without production (AZI).                                                                                                                                                                                                                                             |
| Volume                                 | A volume relating to a period of at least one calendar day. This may also include the terms "periodic volume" and "determined volume".                                                                                                                                                                                                                            |
| Volume per imbalance settlement period | A volume relating to one imbalance settlement period.                                                                                                                                                                                                                                                                                                             |

## 2 Roles and responsibilities

### 2.1 Consumer

This service description describes how the consumers (BRP, TSO, SUP) receive the volumes for reconciliation.

### 2.2 Provider

This service description describes how the provider (SO) supplies the volumes for reconciliation.

### 2.3 RACI

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

|                                           |                                                                                                 |
|-------------------------------------------|-------------------------------------------------------------------------------------------------|
| R (Responsible, NL: Verantwoordelijk)     | EDSN Business Integration                                                                       |
| A (Accountable, NL: Eindverantwoordelijk) | To be determined!                                                                               |
| C (Consulted, NL: Raadplegen)             | Core team system operators, BAS, A2.0 Working Group C1, EDSN, ebIX Technical Commission, TenneT |
| I (Informed, NL: Informeren)              | BAS, MFF, EDSN                                                                                  |

### 3 BPMN Exchange volumes for reconciliation

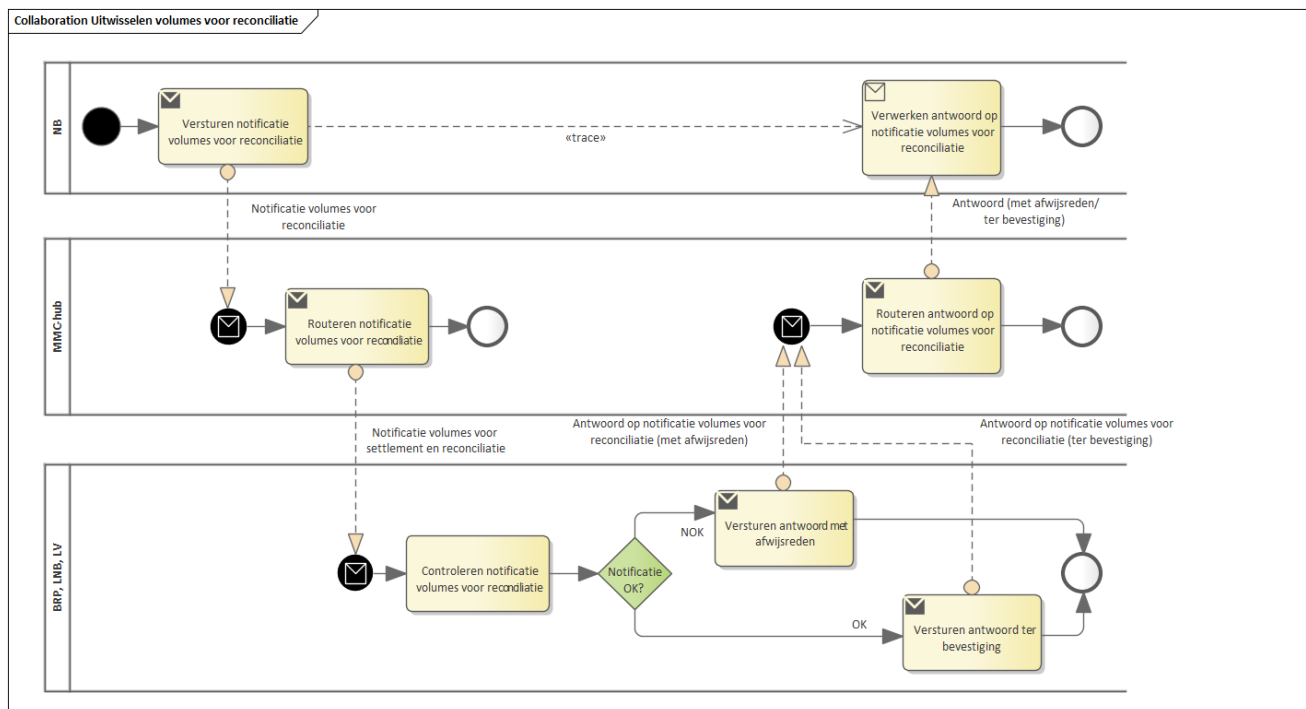


Figure 1 For detailed information about this process, see BRS Reconciliation data[1]

#### 3.1 Exchange volumes for reconciliation<sup>7</sup>

The process for exchange of volumes for reconciliation follows the following scenario:

1. The system operator sends the notification "Notification volumes for reconciliation"<sup>8</sup> to the MMC-hub;
2. The MMC-hub processes<sup>9</sup> the received "Notification volumes for reconciliation" notification and routes the notification to the receiver<sup>10</sup>;
3. The recipient checks the notification "Notification volumes for reconciliation";
4. The receiver sends the response "Confirmation/rejection notification volumes for reconciliation" to the MMC-hub:
  - a confirmation reply, or
  - an answer with one or more rejections
5. The MMC-hub processes<sup>11</sup> the response and routes the notification to the recipient.

<sup>7</sup> This process does not apply to the notification "Allocated volumes and determined volumes for reconciliation per individual allocation point" (the Register receipt). The exchange of the Register receipt is handled by the service Exchange datasets[9].

<sup>8</sup> A notification with volumes for reconciliation.

<sup>9</sup> A non-valid notification is rejected by the MMC-hub, see section 3.2.

<sup>10</sup> Is the consumer (BRP, TSO, SUP) of volumes for reconciliation.

<sup>11</sup> A non-valid notification is rejected by the MMC-hub, see section 3.2.

### 3.2 Validations MMC-hub

Following the received "Notification volumes for reconciliation" notification and received "Confirmation/rejection notification volumes for reconciliation" notification, the MMC-hub performs the following validations:

| Validation                                                            | Error notification              |
|-----------------------------------------------------------------------|---------------------------------|
| XSD Validation: The notification shall comply to the XSD rules        | TEN-500001: [Error detail]      |
| Unreadable notification: The notification shall be a valid XML layout | TEN-500001: [Error detail]      |
| Others: All other faults                                              | TEN-999999: Unhandled exception |

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

### 3.3 Checks on receiver

After receiving the "Notification volumes for reconciliation" notification and the "Confirmation/rejection notification volumes for reconciliation" notification, the receiver can perform the following validations<sup>12</sup>:

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

Following the received notification "Notification volumes for reconciliation" the receiver performs the following checks:

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

<sup>12</sup> The MMC-hub performs these checks. The recipient can choose to perform these checks as well.

### 3.4 Checks receiver for notification "Aggregated volumes for reconciliation per grid area" (BSCMF0081)

Following the "Aggregated volumes for reconciliation per grid area" notification, the receiver has the following checks and error notifications at his disposal, and performs these checks if they are mandatory or relevant for processing by the receiver:

| Control                                                                                                                                                                                  | Error notification                                                                                                                                         | Role            | Code |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------|
| <b>Volumes for reconciliation</b>                                                                                                                                                        |                                                                                                                                                            |                 |      |
| The EAN code-18 of the grid area is a valid EAN code.                                                                                                                                    | EAN code-18 is not valid.                                                                                                                                  | BRP/TSO/<br>SUP | 651  |
| The BRP was registered in the concerned grid area for at least one allocation point within this allocation group and for minimum one calendar day.                                       | The BRP is not active as BRP in the grid area for this allocation group.                                                                                   | BRP             | 832  |
| All products match the product type.                                                                                                                                                     | One or more products do not fit the product type.                                                                                                          | BRP/TSO/<br>SUP | 667  |
| All energy units match the products.                                                                                                                                                     | One or more energy units do not fit the product(s).                                                                                                        | BRP/TSO/<br>SUP | 668  |
| The volume has a correct number of decimal places.                                                                                                                                       | Volume has an incorrect number of decimal places.                                                                                                          | BRP/TSO/<br>SUP | 776  |
| All volumes in the notification are positive numbers (or zero).                                                                                                                          | Volume with negative value.                                                                                                                                | BRP/TSO/<br>SUP | 686  |
| The type of volumes matches the notification.                                                                                                                                            | The type of volumes does not match the notification.                                                                                                       | BRP/TSO/<br>SUP | 810  |
| The EAN code-18 of the grid area or the allocation point together with the system operator is active and administered to the transmission system operator.                               | The grid area or the allocation point, in combination with the system operator, is not included in the administration of the transmission system operator. | TSO             | 777  |
| The notification contains the EAN 13 for a market party and the expected market role exactly once.                                                                                       | Missing or incorrect EAN13.                                                                                                                                | BRP/SUP         | 758  |
| The notification contains the EAN13 of the market party exactly once with market role BRP and exactly once the EAN13 of the responsible BRP for grid loss with the expected market role. | Missing or incorrect EAN13.                                                                                                                                | TSO             | 834  |
| The BRP is known and certified according the BRP certification register.                                                                                                                 | The BRP is not known and certified according the BRP certification register.                                                                               | TSO             | 765  |
| The combination of BRP/SUP for the grid area or the allocation point is correct.                                                                                                         | The combination of BRP/SUP for the grid area or the allocation point is not correct.                                                                       | BRP/SUP         | 786  |
| The period to which the notification relates is exactly one calendar month.                                                                                                              | Invalid period.                                                                                                                                            | BRP/TSO/<br>SUP | 789  |
| Each combination of volume, product, energy unit, energy direction and price period occurs exactly once in the notification.                                                             | Multiple delivery of volumes.                                                                                                                              | BRP/TSO/<br>SUP | 799  |
| The notification was not delivered too early.                                                                                                                                            | The notification was delivered too early, not expected earlier than in month M+2.                                                                          | BRP/TSO         | 792  |
| The notification was not delivered too early.                                                                                                                                            | The notification was delivered too early, not expected earlier than in month M+5.                                                                          | SUP             | 798  |
| The reconciliation results identifier is unique.                                                                                                                                         | A volumes notification with the same reconciliation run identification has already been received.                                                          | TSO             | 784  |
| The reference in the notification is unique.                                                                                                                                             | A notification with this reference has been received in the past.                                                                                          | BRP/TSO/<br>SUP | 670  |
| <b>Notification header</b>                                                                                                                                                               |                                                                                                                                                            |                 |      |
| The MessageID in the SOAP header is unique.                                                                                                                                              | A previous notification has already been received with the same MessageID.                                                                                 | BRP/TSO/<br>SUP | 669  |
| The ProcessTypeID in the notification header matches the content of the notification.                                                                                                    | ProcessTypeID does not match the content of the notification.                                                                                              | BRP/TSO/<br>SUP | 681  |

| Control                                                                                                                              | Error notification                                                                                         | Role            | Code |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------|------|
| The ProcessTypeID in the notification header matches the recipient of the notification.                                              | ProcessTypeID does not match the recipient of the notification.                                            | BRP/TSO/<br>SUP | 747  |
| No notification with a more recent creation date/time stamp has been received ("latest and greatest").                               | A notification has already been received with a more recent creation date/time stamp.                      | BRP/TSO/<br>SUP | 704  |
| The senderID in the SOAP Header equals the SenderID in the Business Document Header.                                                 | senderID in the SOAP Header does not equal SenderID in the Business Document Header.                       | BRP/TSO/<br>SUP | 701  |
| The receiverID in the SOAP Header equals the ReceiverID in the Business Document Header.                                             | receiverID in the SOAP Header does not equal the ReceiverID in the Business Document Header.               | BRP/TSO/<br>SUP | 745  |
| The contentType <sup>13</sup> in the SOAP Header is consistent with the ProcessTypeID in the Business Document Header.               | contentType in the SOAP Header is not consistent with ProcessTypeID in the Business Document Header.       | BRP/TSO/<br>SUP | 754  |
| The CorrelationID in the Business Document Header, if filled in, is the same as the correlationID in the SOAP Header <sup>14</sup> . | The CorrelationID in the Business Document Header is not the same as the correlationID in the SOAP Header. | BRP/TSO/<br>SUP | 780  |
| <b>Entire notification</b>                                                                                                           |                                                                                                            |                 |      |
| Notification is complete, correct and directed to the correct recipient <sup>15</sup> .                                              | [free text field] <sup>16</sup>                                                                            | BRP/TSO/<br>SUP | 999  |

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

14 If the response error code 780 is returned, the recipient can ignore the content of the CorrelationID in the BusinessDocumentHeader because this content is not relevant. The CorrelationID in the SOAP header is leading.

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

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

### 3.5 Checks Receiver for “Volumes for reconciliation per individual allocation point” notification (BSCMF0082)

The following checks and error notifications are available to the receiver in response to the notification "Volumes for reconciliation per individual allocation point" and shall be carried out insofar as they are mandatory or relevant for the processing by the receiver:

| Control                                                                                                                    | Error notification                                                                           | Role    | Code |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------|------|
| <b>Volumes for reconciliation</b>                                                                                          |                                                                                              |         |      |
| The EAN code-18 of the connection is a valid EAN code.                                                                     | EAN code-18 is not valid.                                                                    | BRP/SUP | 650  |
| All products match the product type.                                                                                       | One or more products do not fit the product type.                                            | BRP/SUP | 667  |
| All energy units match the products.                                                                                       | One or more energy units do not fit the product(s).                                          | BRP/SUP | 668  |
| The volume has a correct number of decimal places.                                                                         | Volume has an incorrect number of decimal places.                                            | BRP/SUP | 776  |
| All volumes in the notification are positive numbers (or zero).                                                            | Volume with negative value.                                                                  | BRP/SUP | 686  |
| The type of volumes matches the notification.                                                                              | The type of volumes does not match the notification.                                         | BRP/SUP | 810  |
| According to the connection register, the BRP is registered on the connection during the concerned consumption period.     | The BRP is not registered as a BRP on the connection.                                        | BRP     | 787  |
| According to the connection register, the SUP is registered on the connection during the concerned consumption period.     | The SUP is not registered as an SUP on the connection.                                       | SUP     | 788  |
| The period to which the notification relates is exactly one calendar day.                                                  | Invalid period.                                                                              | BRP/SUP | 789  |
| There is no overlap between consumption periods per product combined with energy direction and pricing period.             | Overlapping consumption periods.                                                             | BRP/SUP | 791  |
| The consumption period per product combined with energy direction and pricing period falls within the notification period. | Consumption period does not fall within the notification period.                             | BRP/SUP | 793  |
| The notification was not delivered too early.                                                                              | The notification was delivered too early, not expected earlier than in month M+2.            | BRP     | 792  |
| The notification was not delivered too early.                                                                              | The notification was delivered too early, not expected earlier than in month M+5.            | SUP     | 798  |
| The reference in the notification is unique.                                                                               | A notification with this reference has been received in the past.                            | BRP/SUP | 670  |
| <b>Notification header</b>                                                                                                 |                                                                                              |         |      |
| The MessageID in the SOAP header is unique.                                                                                | A previous notification has already been received with the same MessageID.                   | BRP/SUP | 669  |
| The ProcessTypeID in the notification header matches the content of the notification.                                      | ProcessTypeID does not match the content of the notification.                                | BRP/SUP | 681  |
| The ProcessTypeID in the notification header matches the recipient of the notification.                                    | ProcessTypeID does not match the recipient of the notification.                              | BRP/SUP | 747  |
| No notification with a more recent creation date/time stamp has been received (“latest and greatest”).                     | A notification has already been received with a more recent creation date/time stamp.        | BRP/SUP | 704  |
| The senderID in the SOAP Header equals the SenderID in the Business Document Header.                                       | senderID in the SOAP Header does not equal SenderID in the Business Document Header.         | BRP/SUP | 701  |
| The receiverID in the SOAP Header equals the ReceiverID in the Business Document Header.                                   | receiverID in the SOAP Header does not equal the ReceiverID in the Business Document Header. | BRP/SUP | 745  |

| Control                                                                                                                              | Error notification                                                                                         | Role    | Code |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------|------|
| The contentType <sup>17</sup> in the SOAP Header is consistent with the ProcessTypeID in the Business Document Header.               | contentType in the SOAP Header is not consistent with ProcessTypeID in the Business Document Header.       | BRP/SUP | 754  |
| The CorrelationID in the Business Document Header, if filled in, is the same as the correlationID in the SOAP Header <sup>18</sup> . | The CorrelationID in the Business Document Header is not the same as the correlationID in the SOAP Header. | BRP/SUP | 780  |
| <b>Entire notification</b>                                                                                                           |                                                                                                            |         |      |
| Notification is complete, correct and directed to the correct recipient <sup>19</sup> .                                              | [free text field] <sup>20</sup>                                                                            | BRP/SUP | 999  |

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

18 If the response error code 780 is returned, the recipient can ignore the content of the CorrelationID in the BusinessDocumentHeader because this content is not relevant. The CorrelationID in the SOAP header is leading.

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

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

### 3.6 Checks receiver for "Aggregate OVP volumes for reconciliation per grid area" notification (BSCMF0083)

Following the "Aggregate OVP volumes for reconciliation per grid area" notification, the receiver has the following checks and error notifications at his disposal, and performs these checks if they are mandatory or relevant for processing by the receiver:

| Control                                                                                                                                                    | Error notification                                                                                                                                         | Role    | Code |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|
| <b>Volumes for reconciliation</b>                                                                                                                          |                                                                                                                                                            |         |      |
| The EAN code-18 of the grid area is a valid EAN code.                                                                                                      | EAN code-18 is not valid.                                                                                                                                  | BRP/TSO | 651  |
| The BRP was registered in the concerned grid area for at least one allocation point within this allocation group and for minimum one calendar day.         | The BRP is not active as BRP in the grid area for this allocation group.                                                                                   | BRP     | 832  |
| All products match the product type.                                                                                                                       | One or more products do not fit the product type.                                                                                                          | BRP/TSO | 667  |
| All energy units match the products.                                                                                                                       | One or more energy units do not fit the product(s).                                                                                                        | BRP/TSO | 668  |
| The number of positions of all time series matches the period and the resolution.                                                                          | The number of positions is incorrect.                                                                                                                      | BRP/TSO | 671  |
| The first position in a time series is '1'.                                                                                                                | First position does not start with '1'.                                                                                                                    | BRP/TSO | 676  |
| The positions within a time series increase with an increment of '1'.                                                                                      | The increment of a time series is not '1'.                                                                                                                 | BRP/TSO | 782  |
| The volume has a correct number of decimal places.                                                                                                         | Volume has an incorrect number of decimal places.                                                                                                          | BRP/TSO | 776  |
| All volumes in the notification are positive numbers (or zero).                                                                                            | Volume with negative value.                                                                                                                                | BRP/TSO | 686  |
| The type of volumes matches the notification.                                                                                                              | The type of volumes does not match the notification.                                                                                                       | BRP/TSO | 810  |
| The EAN code-18 of the grid area or the allocation point together with the system operator is active and administered to the transmission system operator. | The grid area or the allocation point, in combination with the system operator, is not included in the administration of the transmission system operator. | TSO     | 777  |
| The notification contains the EAN 13 for a market party and the expected market role exactly once.                                                         | Missing or incorrect EAN13.                                                                                                                                | BRP/TSO | 758  |
| The BRP is known and certified according the BRP certification register.                                                                                   | The BRP is not known and certified according the BRP certification register.                                                                               | TSO     | 765  |
| The combination of BRP/SUP for the grid area or the allocation point is correct.                                                                           | The combination of BRP/SUP for the grid area or the allocation point is not correct.                                                                       | BRP     | 786  |
| The period to which the notification relates is exactly one calendar day.                                                                                  | Invalid period.                                                                                                                                            | BRP/TSO | 789  |
| The number of time series in the notification matches the allocation group.                                                                                | The number of time series in the notification does not match the allocation group.                                                                         | BRP/TSO | 764  |
| The notification was not delivered too early.                                                                                                              | The notification was delivered too early, not expected earlier than in month M+2.                                                                          | BRP/TSO | 792  |
| The reconciliation results identifier is unique.                                                                                                           | A volumes notification with the same reconciliation run identification has already been received.                                                          | TSO     | 784  |
| The reference in the notification is unique.                                                                                                               | A notification with this reference has been received in the past.                                                                                          | BRP/TSO | 670  |
| <b>Notification header</b>                                                                                                                                 |                                                                                                                                                            |         |      |
| The MessageID in the SOAP header is unique.                                                                                                                | A previous notification has already been received with the same MessageID.                                                                                 | BRP/TSO | 669  |
| The ProcessTypeID in the notification header matches the content of the notification.                                                                      | ProcessTypeID does not match the content of the notification.                                                                                              | BRP/TSO | 681  |
| The ProcessTypeID in the notification header matches the recipient of the notification.                                                                    | ProcessTypeID does not match the recipient of the notification.                                                                                            | BRP/TSO | 747  |

| Control                                                                                                                              | Error notification                                                                                         | Role    | Code |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------|------|
| No notification with a more recent creation date/time stamp has been received ("latest and greatest").                               | A notification has already been received with a more recent creation date/time stamp.                      | BRP/TSO | 704  |
| The senderID in the SOAP Header equals the SenderID in the Business Document Header.                                                 | senderID in the SOAP Header does not equal SenderID in the Business Document Header.                       | BRP/TSO | 701  |
| The receiverID in the SOAP Header equals the ReceiverID in the Business Document Header.                                             | receiverID in the SOAP Header does not equal the ReceiverID in the Business Document Header.               | BRP/TSO | 745  |
| The contentType <sup>21</sup> in the SOAP Header is in keeping with the ProcessTypeID in the Business Document Header.               | contentType in the SOAP Header is not consistent with ProcessTypeID in the Business Document Header.       | BRP/TSO | 754  |
| The CorrelationID in the Business Document Header, if filled in, is the same as the correlationID in the SOAP Header <sup>22</sup> . | The CorrelationID in the Business Document Header is not the same as the correlationID in the SOAP Header. | BRP/TSO | 780  |
| <b>Entire notification</b>                                                                                                           |                                                                                                            |         |      |
| Notification is complete, correct and directed to the correct recipient <sup>23</sup> .                                              | [free text field] <sup>24</sup>                                                                            | BRP/TSO | 999  |

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

22 If the response error code 780 is returned, the recipient can ignore the content of the CorrelationID in the BusinessDocumentHeader because this content is not relevant. The CorrelationID in the SOAP header is leading.

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

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

### 3.7 Checks receiver for “OVP volumes for reconciliation per individual allocation point” notification (BSCMF0084)

The following checks and error notifications are available to the receiver in response to the "OVP volumes for reconciliation per individual allocation point" notification and shall be carried out insofar as they are mandatory or relevant for processing by the receiver:

| Control                                                                                                                | Error notification                                                                                    | Role | Code |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------|------|
| <b>Volumes for reconciliation</b>                                                                                      |                                                                                                       |      |      |
| The EAN code-18 of the connection is a valid EAN code.                                                                 | EAN code-18 is not valid.                                                                             | BRP  | 650  |
| All products match the product type.                                                                                   | One or more products do not fit the product type.                                                     | BRP  | 667  |
| All energy units match the products.                                                                                   | One or more energy units do not fit the product(s).                                                   | BRP  | 668  |
| The number of positions of all time series matches the period and the resolution.                                      | The number of positions is incorrect.                                                                 | BRP  | 671  |
| The first position in a time series is '1'.                                                                            | First position does not start with '1'.                                                               | BRP  | 676  |
| The positions within a time series increase with an increment of '1'.                                                  | The increment of a time series is not '1'.                                                            | BRP  | 782  |
| The volume has a correct number of decimal places.                                                                     | Volume has an incorrect number of decimal places.                                                     | BRP  | 776  |
| All volumes in the notification are positive numbers (or zero).                                                        | Volume with negative value.                                                                           | BRP  | 686  |
| The type of volumes matches the notification.                                                                          | The type of volumes does not match the notification.                                                  | BRP  | 810  |
| According to the connection register, the BRP is registered on the connection during the concerned consumption period. | The BRP is not registered as a BRP on the connection.                                                 | BRP  | 787  |
| The combination of origin indication, validation status and repair method is a valid combination <sup>25</sup> .       | The combination of origin indication, validation status and repair method is not a valid combination. | BRP  | 683  |
| The period to which the notification relates is exactly one calendar day.                                              | Invalid period.                                                                                       | BRP  | 789  |
| There is no overlap between consumption periods <sup>26</sup> .                                                        | Overlapping consumption periods.                                                                      | BRP  | 795  |
| The period of consumption is equal to or falls within the calendar month.                                              | Consumption period does not equal or fall within the calendar month.                                  | BRP  | 796  |
| Each consumption period has a time series for production and a time series for consumption.                            | The number of time series in the consumption period is not correct.                                   | BRP  | 797  |
| The notification was not delivered too early.                                                                          | The notification was delivered too early, not expected earlier than in month M+2.                     | BRP  | 792  |
| The reference in the notification is unique.                                                                           | A notification with this reference has been received in the past.                                     | BRP  | 670  |
| <b>Notification header</b>                                                                                             |                                                                                                       |      |      |
| The MessageID in the SOAP header is unique.                                                                            | A previous notification has already been received with the same MessageID.                            | BRP  | 669  |
| The ProcessTypeID in the notification header matches the content of the notification.                                  | ProcessTypeID does not match the content of the notification.                                         | BRP  | 681  |
| The ProcessTypeID in the notification header matches the recipient of the notification.                                | ProcessTypeID does not match the recipient of the notification.                                       | BRP  | 747  |
| No notification with a more recent creation date/time stamp has been received (“latest and greatest”).                 | A notification has already been received with a more recent creation date/time stamp.                 | BRP  | 704  |
| The senderID in the SOAP Header equals the SenderID in the Business Document Header.                                   | senderID in the SOAP Header does not equal SenderID in the Business Document Header.                  | BRP  | 701  |

<sup>25</sup> See BRS Measurement data GV Appendix a for valid combinations of origin indication, validation status and repair methodology[11].

<sup>26</sup> Per calendar month and per allocation point, the BRP will receive one notification with one or more consumption periods for the part (or parts) of the calendar month for which the BRP is registered on the connection.

| Control                                                                                                                              | Error notification                                                                                         | Role | Code |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|------|------|
| The receiverID in the SOAP Header equals the ReceiverID in the Business Document Header.                                             | receiverID in the SOAP Header does not equal the ReceiverID in the Business Document Header.               | BRP  | 745  |
| The contentType <sup>27</sup> in the SOAP Header is consistent with the ProcessTypeID in the Business Document Header.               | contentType in the SOAP Header is not consistent with ProcessTypeID in the Business Document Header.       | BRP  | 754  |
| The CorrelationID in the Business Document Header, if filled in, is the same as the correlationID in the SOAP Header <sup>28</sup> . | The CorrelationID in the Business Document Header is not the same as the correlationID in the SOAP Header. | BRP  | 780  |
| <b>Entire notification</b>                                                                                                           |                                                                                                            |      |      |
| Notification is complete, correct and directed to the correct recipient <sup>29</sup> .                                              | [free text field] <sup>30</sup>                                                                            | BRP  | 999  |

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

28 If the response error code 780 is returned, the recipient can ignore the content of the CorrelationID in the BusinessDocumentHeader because this content is not relevant. The CorrelationID in the SOAP header is leading.

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

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

### 3.8 Checks receiver for notification “Aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area” (BSCMF0085)

Following the notification "Aggregate allocated volumes and aggregated determined volumes for reconciliation per grid area", the receiver has the following checks and error notifications at his disposal, and performs these checks if they are mandatory or relevant for processing by the receiver:

| Control                                                                                                                                                                                                                                                            | Error notification                                                                                                                                         | Role    | Code |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|
| <b>Volumes for reconciliation</b>                                                                                                                                                                                                                                  |                                                                                                                                                            |         |      |
| The EAN code-18 of the grid area is a valid EAN code.                                                                                                                                                                                                              | EAN code-18 is not valid.                                                                                                                                  | BRP/TSO | 651  |
| The BRP was registered in the concerned grid area for at least one allocation point within this allocation group and for minimum one calendar day.                                                                                                                 | The BRP is not active as BRP in the grid area for this allocation group.                                                                                   | BRP     | 832  |
| All products match the product type.                                                                                                                                                                                                                               | One or more products do not fit the product type.                                                                                                          | BRP/TSO | 667  |
| All energy units match the products.                                                                                                                                                                                                                               | One or more energy units do not fit the product(s).                                                                                                        | BRP/TSO | 668  |
| The volume has a correct number of decimal places.                                                                                                                                                                                                                 | Volume has an incorrect number of decimal places.                                                                                                          | BRP/TSO | 776  |
| The number of supplied volumes per calendar month is in keeping with the notification.                                                                                                                                                                             | The number of volumes is not in keeping with the notification.                                                                                             | BRP/TSO | 813  |
| The type of volumes matches the notification.                                                                                                                                                                                                                      | The type of volumes does not match the notification.                                                                                                       | BRP/TSO | 810  |
| The EAN code-18 of the grid area or the allocation point together with the system operator is active and administered to the transmission system operator.                                                                                                         | The grid area or the allocation point, in combination with the system operator, is not included in the administration of the transmission system operator. | TSO     | 777  |
| The notification contains the EAN 13 for a market party and the expected market role exactly once.                                                                                                                                                                 | Missing or incorrect EAN13.                                                                                                                                | TSO     | 758  |
| The measurement period to which the notification relates is exactly one calendar day.                                                                                                                                                                              | Invalid measurement period.                                                                                                                                | BRP/TSO | 946  |
| The end date time of the measurement period is equal to or after the end date time of the notification period.                                                                                                                                                     | Invalid end date time measurement period.                                                                                                                  | BRP/TSO | 948  |
| The notification with grid loss volume does not contain EAN13 code and market role.                                                                                                                                                                                | Invalid EAN13.                                                                                                                                             | BRP     | 801  |
| The notification with aggregated allocated volumes and aggregated determined volumes contains exactly once the EAN13 of the market party and the expected market role.                                                                                             | Missing or incorrect EAN13.                                                                                                                                | BRP     | 818  |
| The BRP is known and certified according the BRP certification register.                                                                                                                                                                                           | The BRP is not known and certified according the BRP certification register.                                                                               | TSO     | 765  |
| The combination of BRP/SUP for the grid area or the allocation point is correct.                                                                                                                                                                                   | The combination of BRP/SUP for the grid area or the allocation point is not correct.                                                                       | BRP     | 786  |
| The BRP has rightly received the notification with grid loss volumes.                                                                                                                                                                                              | Incorrect BRP for grid loss volumes.                                                                                                                       | BRP     | 835  |
| The period to which the notification relates is at least one calendar month and maximum 17 calendar months.                                                                                                                                                        | Invalid period.                                                                                                                                            | BRP/TSO | 790  |
| All calendar months fall within the notification period.                                                                                                                                                                                                           | Calendar month is not within the notification period.                                                                                                      | BRP/TSO | 802  |
| The notification with aggregated volumes contains every combination of calendar month, product, volume type, profile category, determined energy consumption <sup>31</sup> , energy direction and tariff period maximum once in the concerned notification period. | Multiple delivery of volumes.                                                                                                                              | BRP/TSO | 800  |
| The notification with volumes grid loss contains every combination of calendar month, product, volume type, energy direction and tariff period maximum once in the concerned notification period.                                                                  | Multiple delivery of volumes.                                                                                                                              | BRP/TSO | 845  |

<sup>31</sup> Determined energy consumption only applies to the profile categories E1x and E2x.

| Control                                                                                                                              | Error notification                                                                                           | Role    | Code |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------|------|
| The period from start date/time Calendar month to end date/time Calendar month is exactly 1 calendar month.                          | Period is not equal to a calendar month.                                                                     | BRP/TSO | 804  |
| The notification was not delivered too early.                                                                                        | The notification was delivered too early, not expected earlier than in month M+4.                            | BRP/TSO | 833  |
| The reconciliation results identifier is unique.                                                                                     | A volumes notification with the same reconciliation run identification has already been received.            | TSO     | 784  |
| The reference in the notification is unique.                                                                                         | A notification with this reference has been received in the past.                                            | BRP/TSO | 670  |
| <b>Notification header</b>                                                                                                           |                                                                                                              |         |      |
| The MessageID in the SOAP header is unique.                                                                                          | A previous notification has already been received with the same MessageID.                                   | BRP/TSO | 669  |
| The ProcessTypeID in the notification header matches the content of the notification.                                                | ProcessTypeID does not match the content of the notification.                                                | BRP/TSO | 681  |
| The ProcessTypeID in the notification header matches the recipient of the notification.                                              | ProcessTypeID does not match the recipient of the notification.                                              | BRP/TSO | 747  |
| No notification with a more recent creation date/time stamp has been received ("latest and greatest").                               | A notification has already been received with a more recent creation date/time stamp.                        | BRP/TSO | 704  |
| The senderID in the SOAP Header equals the SenderID in the Business Document Header.                                                 | senderID in the SOAP Header does not equal SenderID in the Business Document Header.                         | BRP/TSO | 701  |
| The receiverID in the SOAP Header equals the ReceiverID in the Business Document Header.                                             | receiverID in the SOAP Header does not equal the ReceiverID in the Business Document Header.                 | BRP/TSO | 745  |
| The contentType <sup>32</sup> in the SOAP Header is consistent with the ProcessTypeID in the Business Document Header.               | contentType in the SOAP Header is not consistent with ProcessTypeID in the Business Document Header.         | BRP/TSO | 754  |
| The CorrelationID in the Business Document Header, if filled in, is the same as the correlationID in the SOAP Header <sup>33</sup> . | The Correlation ID in the Business Document Header is not the same as the Correlation ID in the SOAP Header. | BRP/TSO | 780  |
| <b>Entire notification</b>                                                                                                           |                                                                                                              |         |      |
| Notification is complete, correct and directed to the correct recipient <sup>34</sup> .                                              | [free text field] <sup>35</sup>                                                                              | BRP/TSO | 999  |

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

33 If the response error code 780 is returned, the recipient can ignore the content of the CorrelationID in the BusinessDocumentHeader because this content is not relevant. The CorrelationID in the SOAP header is leading.

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

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

### 3.9 Checks receiver for notification “Allocated volumes and determined volumes for reconciliation per individual allocation point” (BSCMF0086)

The exchange of notification “Allocated volumes and determined volumes for reconciliation per individual allocation point” (the Register receipt) is handled by the service *Exchange datasets*[9] and therefore not described in the service description *Volumes for reconciliation electricity*.

### 3.10 Application ProcessTypeID for exchange volumes for reconciliation

As described in *the BRS Reconciliation data*[1], the notification specifications for reconciliation results are used for various applications. In the EDSNBusinessDocumentHeader (functional header) of the notification, the application should be specified under ProcessTypeID. Further explanation about the use of the EDSNBusinessDocumentHeader is included in *the NEDU EDSN Design Choices*[2].

See paragraph 1.4 for the overview of ProcessTypeID for volumes for reconciliation.

## 4 Functional parameters

### 4.1 Notification for Exchange aggregated volumes for reconciliation per grid area (BSCMF0081)

*Exchange aggregated volumes for reconciliation per grid area* is an exchange of aggregated volumes for reconciliation of the following:

1. SMA allocation group per calendar month per grid area per BRP/SUP combination for exchange with BRP and SUP (one aggregate in one notification);
2. TMT allocation group per calendar month per grid area per BRP/SUP combination for exchange with BRP (one aggregate in one notification);
3. SMA or TMT allocation group per calendar month per grid area per BRP for exchange with the TSO (one aggregate in one notification).

The following information is exchanged per aggregate:

| Entry                                  | Elec | 1/n | Note                                                                                                                                                                                                                                                                                                                       | XML code                  |
|----------------------------------------|------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Notification identification            | V    | 1   | A UUID as a unique identifier of the notification.                                                                                                                                                                                                                                                                         |                           |
| EAN code and market role               | V    | 1   | For aggregated volumes for reconciliation to the TSO:<br>EAN13 of the BRP.<br><br>For aggregated reconciliation volumes to the BRP:<br>EAN13 of the SUP.<br><br>For aggregated volumes for reconciliation to the SUP:<br>EAN13 of the BRP.                                                                                 |                           |
|                                        | V    | 1   | For aggregated volumes for reconciliation to the TSO:<br>Market role of the BRP <sup>36</sup> .<br><br>For aggregated reconciliation volumes to the BRP:<br>Market role of the SUP <sup>36</sup> .<br><br>For aggregated volumes for reconciliation to the SUP:<br>Market role of the BRP <sup>36</sup> .                  | DDK<br><br>DDQ<br><br>DDK |
|                                        | A    | 1   | EAN13 of the responsible BRP for the grid loss of the concerned grid area, reconciliation month and allocation group.<br><br><u>Required</u> if it is a volumes for reconciliation notification for the TSO.<br><u>Must be empty</u> if it is a volumes for reconciliation notification for the SUP or BRP <sup>37</sup> . |                           |
| EAN code and market role for grid loss | A    | 1   | Market role of the BRP Grid loss <sup>36</sup> .                                                                                                                                                                                                                                                                           | DDX                       |
| EAN code grid area                     | V    | 1   | The identifying EAN18 code of the grid area.                                                                                                                                                                                                                                                                               |                           |
| Product type                           | V    | 1   | Allowed values (from ebIX Code list[6] and including a leading zero):<br>Electricity                                                                                                                                                                                                                                       | 023                       |
| Allocation group                       | V    | 1   | An identifier for the group to which the concerned volumes for reconciliation belong.<br><br>Allowed values:<br>Allocation points aggregated (allocation method SMA)<br>Allocation points aggregated (allocation method TMT)                                                                                               | SMA<br><br>TMT            |
| Reconciliation run identification      | V    | 1   | Unique identifier (UUID) for the reconciliation run.<br><br>Based on this identification, consumers may                                                                                                                                                                                                                    |                           |

<sup>36</sup> Market role as defined in ebIX Code list[6].

<sup>37</sup> Must be empty means that the appropriate field is missing from the notification. Empty fields in the XML notification are not allowed based on the UN/CEFACT NDR.

| Entry                      | Elec | 1/n      | Note                                                                                                                                                                                                                                                           | XML code      |
|----------------------------|------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
|                            |      |          | compare the set of volumes for reconciliation for a given calendar month per grid area per allocation group. This reconciliation run identification is identical for all receivers.                                                                            |               |
| Start date time period     | V    | 1        | Start date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ                                                                                                                                                                    |               |
| End date time period       | V    | 1        | End date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ<br><br>Notification period from start date/time to end date/time is the calendar month to which the reconciliation relates; this period is exactly 1 calendar month. |               |
| <b>Volume<sup>38</sup></b> |      | <b>n</b> |                                                                                                                                                                                                                                                                |               |
| Volume                     | V    | 1        | Volume in whole numbers.                                                                                                                                                                                                                                       |               |
| Type volume                | V    | 1        | Type of volume.<br><br>Allowed values:<br>Volume submitted in reconciliation process                                                                                                                                                                           | MRP           |
| Product ID                 | V    | 1        | Allowed values (from ebIX Code list[6]):<br>Electricity:<br>Active energy                                                                                                                                                                                      | 8716867000030 |
| Energy unit                | V    | 1        | Permissible active energy value:<br>kWh                                                                                                                                                                                                                        | KWH           |
| Energy direction           | V    | 1        | Allowed values (from ebIX Code list[6]):<br>Consumption<br>Production                                                                                                                                                                                          | E17<br>E18    |
| Price period               | V    | 1        | Allowable values for electricity (from ebIX Code list[6]):<br>Low<br>Normal                                                                                                                                                                                    | E10<br>E11    |

Mandatory fields (V) are always filled; optional fields (O) or dependent fields (A) if required for the context of the related reconciliation data notification.

<sup>38</sup> Number of volumes in a consumption period for allocation method SMA or TMT is: 4 (per energy direction, price period).

#### 4.2 Notification for Exchange volumes for reconciliation per individual allocation point (BSCMF0082)

*Exchanging volumes for reconciliation per individual allocation point* is an exchange of volumes for reconciliation per:

1. TMT allocation point per calendar month per allocation point for exchange with BRP and SUP (one allocation point in one notification).

The following information is exchanged per allocation point:

| Entry                              | Elec | 1/n      | Note                                                                                                                                                                                                                                                                                        | XML code      |
|------------------------------------|------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Notification identification        | V    | 1        | A UUID as a unique identifier of the notification.                                                                                                                                                                                                                                          |               |
| EAN code connection                | V    | 1        | EAN18 allocation point electricity.                                                                                                                                                                                                                                                         |               |
| Product type                       | V    | 1        | Allowed values (from ebIX Code list[6]) and including a leading zero):<br>Electricity                                                                                                                                                                                                       | 023           |
| Allocation group                   | V    | 1        | An identifier for the group to which the concerned volumes for reconciliation belong.<br><br>Allowed values:<br>Individual allocation points (allocation method TMT)                                                                                                                        | TMT           |
| Reconciliation run identification  | V    | 1        | Unique identifier (UUID) for the reconciliation run.<br><br>Based on this identification, consumers may compare the set of volumes for reconciliation for a given calendar month per grid area per allocation group. This reconciliation run identification is identical for all receivers. |               |
| Start date time period             | V    | 1        | Start date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ                                                                                                                                                                                                 |               |
| End date time period               | V    | 1        | End date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ<br><br>Notification period from start date/time to end date/time is the calendar month to which the reconciliation relates; this period is exactly 1 calendar month.                              |               |
| <b>Volume<sup>39</sup></b>         |      | <b>n</b> |                                                                                                                                                                                                                                                                                             |               |
| Start date time consumption period | V    | 1        | Start date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ                                                                                                                                                                                                 |               |
| End date time consumption period   | V    | 1        | End date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ<br><br>Use period from start date time to end date time is less than or equal to the notification period.                                                                                         |               |
| Volume                             | V    | 1        | Volume in whole numbers.                                                                                                                                                                                                                                                                    |               |
| Type volume                        | V    | 1        | Type of volume.<br>Allowed values:<br>Volume submitted in reconciliation process                                                                                                                                                                                                            | MRP           |
| Product ID                         | V    | 1        | Allowed values (from ebIX Code list[6]):<br>Electricity:<br>Active energy                                                                                                                                                                                                                   | 8716867000030 |
| Energy unit                        | V    | 1        | Permissible active energy value:<br>kWh                                                                                                                                                                                                                                                     | KWH           |
| Energy direction                   | V    | 1        | Allowed values (from ebIX Code list[6]):<br>Consumption<br>Production                                                                                                                                                                                                                       | E17<br>E18    |
| Price period                       | V    | 1        | Allowable values for electricity (from ebIX Code list[6]):<br>Low<br>Normal                                                                                                                                                                                                                 | E10<br>E11    |

Mandatory fields (V) are always filled; optional fields (O) or dependent fields (A) if required for the context of the related reconciliation data notification.

<sup>39</sup> Number of volumes in a consumption period for allocation method TMT is: 4 (per energy direction, price period).

#### 4.3 Notification for Exchange aggregated OVP volumes for reconciliation per grid area (BSCMF0083)

Exchange aggregated OVP volumes for reconciliation per grid area is an exchange of aggregated volumes for reconciliation of a:

1. TMT allocation group per calendar month per grid area per BRP/SUP combination for exchange with BRP (one aggregate in one notification);
2. TMT allocation group per calendar month per grid area per BRP for exchange with the TSO (one aggregate in one notification).

The following information is exchanged per aggregate:

| Entry                             | Elec | 1/n      | Note                                                                                                                                                                                                                                                                                        | XML code       |
|-----------------------------------|------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Notification identification       | V    | 1        | A UUID as a unique identifier of the notification.                                                                                                                                                                                                                                          |                |
| EAN code and market role          | V    | 1        | For aggregated volumes for reconciliation to the TSO:<br>EAN13 of the BRP.<br><br>For aggregated reconciliation volumes to the BRP:<br>EAN13 of the SUP.                                                                                                                                    |                |
|                                   | V    | 1        | For aggregated volumes for reconciliation to the TSO:<br>Market role of the BRP <sup>40</sup> .<br><br>For aggregated reconciliation volumes to the BRP:<br>Market role of the SUP <sup>40</sup> .                                                                                          | DDK<br><br>DDQ |
| EAN code grid area                | V    | 1        | The identifying EAN18 code of the grid area.                                                                                                                                                                                                                                                |                |
| Product type                      | V    | 1        | Allowed values (from ebIX Code list[6] and including a leading zero):<br>Electricity                                                                                                                                                                                                        | 023            |
| Allocation group                  | V    | 1        | An identifier for the group to which the concerned volumes for reconciliation belong.<br><br>Allowed values:<br>Allocation points aggregated (allocation method TMT)                                                                                                                        | TMT            |
| Reconciliation run identification | V    | 1        | Unique identifier (UUID) for the reconciliation run.<br><br>Based on this identification, consumers may compare the set of volumes for reconciliation for a given calendar month per grid area per allocation group. This reconciliation run identification is identical for all receivers. |                |
| Start date time period            | V    | 1        | Start date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ                                                                                                                                                                                                 |                |
| End date time period              | V    | 1        | End date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ<br><br>Notification period from start date/time to end date/time is the calendar month to which the reconciliation relates; this period is exactly 1 calendar month.                              |                |
| <b>Volume<sup>41</sup></b>        |      | <b>n</b> |                                                                                                                                                                                                                                                                                             |                |
| OVP (electricity)                 | V    | 1        | Resolution is in accordance with ISO 8601 notation[7] for <i>Duration</i> .<br><br>Permissible values electricity:<br>15 minutes                                                                                                                                                            | PT15M          |
| Type volume                       | V    | 1        | Type of volume.<br><br>Allowed values:<br>OVP volume supplied in reconciliation process                                                                                                                                                                                                     | ORP            |
| Product ID                        | V    | 1        | Allowed values (from ebIX Code list[6]):<br>Electricity:                                                                                                                                                                                                                                    |                |

<sup>40</sup> Market role as defined in ebIX Code list[6].

<sup>41</sup> Number of complete time series: 2 (time series for consumption and a time series for production).

| Entry                      | Elec | 1/n      | Note                                                                  | XML code      |
|----------------------------|------|----------|-----------------------------------------------------------------------|---------------|
|                            |      |          | Active energy                                                         | 8716867000030 |
| Energy unit                | V    | 1        | Permissible active energy value:<br>kWh                               | KWH           |
| Energy direction           | V    | 1        | Allowed values (from ebIX Code list[6]):<br>Consumption<br>Production | E17<br>E18    |
| <b>Volume per position</b> |      | <b>n</b> |                                                                       |               |
| Position                   | V    | 1        | Position in the series in whole numbers.                              |               |
| Volume                     | V    | 1        | Volume as a decimal number, always to 3 decimal places.               |               |

Mandatory fields (V) are always filled; optional fields (O) or dependent fields (A) if required for the context of the related reconciliation data notification.

#### 4.4 Notification for Exchange OVP volumes for reconciliation per individual allocation point (BSCMF0084)

*Exchanging OVP volumes for reconciliation per individual allocation point* is an exchange of OVP volumes for reconciliation per:

1. TMT allocation point per calendar month per allocation point for exchange with BRP (one allocation point in one notification).

The following information is exchanged per allocation point:

| Entry                              | Elec | 1/n      | Note                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | XML code      |
|------------------------------------|------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Notification identification        | V    | 1        | A UUID as a unique identifier of the notification.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |
| EAN code connection                | V    | 1        | EAN18 allocation point electricity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               |
| Product type                       | V    | 1        | Allowed values (from eblX Code list[6] and including a leading zero):<br>Electricity                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 023           |
| Allocation group                   | V    | 1        | An identifier for the group to which the concerned volumes for reconciliation belong.<br><br>Allowed values:<br>Individual allocation points (allocation method TMT)                                                                                                                                                                                                                                                                                                                                                                                   | TMT           |
| Reconciliation run identification  | V    | 1        | Unique identifier (UUID) for the reconciliation run.<br><br>Based on this identification, consumers may compare the set of volumes for reconciliation for a given calendar month per grid area per allocation group. This reconciliation run identification is identical for all receivers.                                                                                                                                                                                                                                                            |               |
| Start date time period             | V    | 1        | Start date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |
| End date time period               | V    | 1        | End date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ<br><br>Notification period from start date/time to end date/time is the calendar month to which the reconciliation relates; this period is exactly 1 calendar month.                                                                                                                                                                                                                                                                                         |               |
| <b>Volume<sup>42</sup></b>         |      | <b>n</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |
| Start date time consumption period | V    | 1        | Start date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |
| End date time consumption period   | V    | 1        | End date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ<br><br>Use period from start date time to end date time is less than or equal to the notification period.<br><br>If the BRP was only registered at the allocation point for a part of the calendar month, the times series with volumes for reconciliation will only be supplied for that part of the calendar month. For that part of the calendar month when the BRP was not registered to the connection, a time series with zeros will not be delivered. |               |
| OVP (electricity)                  | V    | 1        | Resolution is in accordance with ISO 8601 notation[7] for <i>Duration</i> .<br><br>Permissible values electricity:<br>15 minutes                                                                                                                                                                                                                                                                                                                                                                                                                       | PT15M         |
| Type volume                        | V    | 1        | Type of volume.<br><br>Allowed values:<br>OVP volume supplied in reconciliation process                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ORP           |
| Product ID                         | V    | 1        | Allowed values (from eblX Code list[6]):<br>Electricity:<br>Active energy                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 8716867000030 |

<sup>42</sup> Number of full time series in a consumption period is: 2 (time series for consumption and a time series for production).

| Entry                      | Elec | 1/n      | Note                                                                                                                                                                                                                                                                                                                                                                        | XML code                                                                  |
|----------------------------|------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Energy unit                | V    | 1        | Permissible active energy value:<br>kWh                                                                                                                                                                                                                                                                                                                                     | KWH                                                                       |
| Energy direction           | V    | 1        | Allowed values (from ebIX Code list[6]):<br>Consumption<br>Production                                                                                                                                                                                                                                                                                                       | E17<br>E18                                                                |
| <b>Volume per position</b> |      | <b>n</b> |                                                                                                                                                                                                                                                                                                                                                                             |                                                                           |
| Position                   | V    | 1        | Position in the series in whole numbers.                                                                                                                                                                                                                                                                                                                                    |                                                                           |
| Volume                     | V    | 1        | Volume as a decimal number, always to 3 decimal places.                                                                                                                                                                                                                                                                                                                     |                                                                           |
| Origin indicator           | V    | 1        | Allowed values:<br>Measured<br>Measured update<br>Calculated<br>Unmeasured 'zero' <sup>43</sup><br>See BRS Appendix A Status of measurement data and meter readings [11].                                                                                                                                                                                                   | MSR<br>UMS<br>CLC<br>NMS                                                  |
| Validation status          | A    | 1        | Allowed values:<br>Valid<br>Not Valid<br>Manually approved<br>See BRS Appendix A Status of measurement data and meter readings [11].                                                                                                                                                                                                                                        | VLD<br>NVL<br>MNL                                                         |
| Repair method              | A    | 1        | Allowed values:<br>Meter check<br>Correction factor error<br>Correction build-in error<br>Interpolation at meter change<br>Zero data for loss of power<br>Correction based on meter readings<br>Extra information<br>Objection BRP<br>Objection SO<br>Estimated<br>Calculated by SO <sup>44</sup><br>See BRS Appendix A Status of measurement data and meter readings [11]. | VMT<br>CFF<br>CIN<br>IMC<br>NCD<br>CMR<br>ENF<br>RBR<br>RGR<br>GMR<br>CBD |

Mandatory fields (V) are always filled; optional fields (O) or dependent fields (A) if required for the context of the related reconciliation data notification.

<sup>43</sup> "Unmeasured 'zero'" (NMS) is used as Origin indicator status for zeros during production if this is not measured.  
<sup>44</sup> If repair method is "Calculated by SO" (CBD), then Origin indicator is "Calculated" (CLC) and Validation status is not entered.

#### 4.5 Notification for exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area (BSCMF0085)

*Exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area* is an exchange of aggregated allocated volumes, aggregated determined volumes and volumes of grid loss for reconciliation of a:

1. PRF allocation group per one to a maximum of seventeen calendar months per grid area per BRP/SUP combination for exchange with the BRP and BRP Grid Loss<sup>45</sup> (one aggregate in one notification);
2. PRF allocation group per one to maximum seventeen calendar months per grid area per BRP for exchange with the TSO<sup>46</sup> (one aggregate in one notification).

The following information is exchanged per aggregate:

| Entry                             | Elec | 1/n | Note                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | XML code                  |
|-----------------------------------|------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Notification identification       | V    | 1   | A UUID as a unique identifier of the notification.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                           |
| EAN code and market role          | A    | 1   | For aggregated allocated volumes and aggregated determined volumes for reconciliation to the TSO: EAN13 of the BRP.<br><br>For aggregated allocated volumes and aggregated determined volumes for reconciliation to the BRP: EAN13 of the SUP.<br><br>For grid loss change to the TSO: EAN13 of the BRP Grid loss.<br><br>An EAN13 of the concerned BRP grid loss is not included for grid loss change to the BRP grid loss.                                                                         |                           |
|                                   | A    | 1   | For aggregated allocated volumes and aggregated determined volumes for reconciliation to the TSO: Market role of the BRP <sup>47</sup> .<br><br>For aggregated allocated volumes and aggregated determined volumes for reconciliation to the BRP: Market role of the SUP <sup>47</sup> .<br><br>For grid loss change to the TSO: Market role of the BRP Grid loss <sup>47</sup> .<br><br>For grid loss change to BRP grid loss, a market role has not been included for the concerned BRP grid loss. | DDK<br><br>DDQ<br><br>DDX |
| EAN code grid area                | V    | 1   | The identifying EAN18 code of the grid area.                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                           |
| Product type                      | V    | 1   | Allowed values (from ebIX Code list[6] and including a leading zero): Electricity                                                                                                                                                                                                                                                                                                                                                                                                                    | 023                       |
| Allocation group                  | V    | 1   | An identifier for the group to which the concerned volumes for reconciliation belong.<br><br>Allowed values:<br>Allocation points aggregated (allocation method PRF)                                                                                                                                                                                                                                                                                                                                 | PRF                       |
| Reconciliation run identification | V    | 1   | Unique identifier (UUID) for the reconciliation run.<br><br>Based on this identification, consumers may compare the set of volumes for reconciliation for a given period per grid area per allocation group. This reconciliation run identification is identical for all receivers.                                                                                                                                                                                                                  |                           |
| Start date time period            | V    | 1   | Start date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ                                                                                                                                                                                                                                                                                                                                                                                                          |                           |

<sup>45</sup> If a BRP is also designated as a BRP for grid loss the grid area, the concerned BRP will receive notification(s) per BRP/SUP combination with aggregated allocated volumes and aggregated determined volumes , and a separate notification with volumes grid loss .

<sup>46</sup> If a BRP has also been designated as a BRP for grid loss for the grid area, the TSO will then receive a notification with aggregated allocated volumes and aggregated determined volumes and a separate notification with grid loss volumes for the concerned BRP.

<sup>47</sup> Market role as defined in ebIX Code list[6].

| Entry                              | Elec | 1/n      | Note                                                                                                                                                                                                                                                                                                                                     | XML code                                             |
|------------------------------------|------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| End date time period               | V    | 1        | End date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ<br><br>Notification period from start date/time to end date/time is maximum 17 calendar months.                                                                                                                                                |                                                      |
| Start date time measurement period | V    | 1        | Start date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ                                                                                                                                                                                                                                              |                                                      |
| End date time measurement period   | V    | 1        | End date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ<br><br>The measurement period refers to the start date time to the end date time of a calendar month, over which the measurement data to which reconciliation relates has been determined. The measurement period is exactly 1 calendar month. |                                                      |
| <b>Volume<sup>48,49</sup></b>      |      | <b>n</b> |                                                                                                                                                                                                                                                                                                                                          |                                                      |
| Start date/time calendar month     | V    | 1        | Start date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ                                                                                                                                                                                                                                              |                                                      |
| End date time calendar month       | V    | 1        | End date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ<br><br>Period from start date time to end date time is exactly 1 calendar month.                                                                                                                                                               |                                                      |
| Volume                             | V    | 1        | Volume in whole numbers.                                                                                                                                                                                                                                                                                                                 |                                                      |
| Type volume                        | V    | 1        | Type of volume.<br><br>Volume submitted in reconciliation process<br>Sum of the OVP volumes used in final imbalance determination:<br><br>Grid loss change:                                                                                                                                                                              | MRP<br>SDO<br><br>MNM                                |
| Product ID                         | V    | 1        | Allowed values (from ebIX Code list[6]):<br>Electricity:<br>Active energy                                                                                                                                                                                                                                                                | 8716867000030                                        |
| Energy unit                        | V    | 1        | Permissible active energy value:<br>kWh                                                                                                                                                                                                                                                                                                  | KWH                                                  |
| Energy direction                   | V    | 1        | Allowed values (from ebIX Code list[6]):<br>Consumption<br>Production                                                                                                                                                                                                                                                                    | E17<br>E18                                           |
| Price period                       | V    | 1        | Allowable values for electricity (from ebIX Code list[6]):<br>Low<br>Normal                                                                                                                                                                                                                                                              | E10<br>E11                                           |
| Profile category                   | A    | 1        | Profile category identifier.<br><br><u>Required</u> if it is an aggregated allocated volume or an aggregated determined volume and the concerned profile category is encountered in the grid area.<br><u>Must be empty</u> if it is a grid loss volume <sup>50</sup> .                                                                   | E1A<br>E1B<br>E1C<br>E2A<br>E2B<br>E3A<br>E3B<br>E3C |

48 Number of volumes per calendar month for aggregated allocated volumes/aggregated determined volumes notification to the BRP or TSO maximum 120:

- E1A: always 16 volumes (per type volume, determined energy consumption, energy direction, price period);
- E1B: always 16 volumes (per type volume, determined energy consumption, energy direction, price period);
- E1C: always 16 volumes (per type volume, determined energy consumption, energy direction, price period);
- E2A: always 16 volumes (per type volume, determined energy consumption, energy direction, price period);
- E2B: always 16 volumes (per type volume, determined energy consumption, energy direction, price period);
- E3A: always 8 volumes (per type volume, energy direction, price period);
- E3B: always 8 volumes (per type volume, determined energy consumption, energy direction, price period);
- E3C: always 8 volumes (per type volume, energy direction, price period);
- E3D: always 8 volumes (per type volume, energy direction, price period);
- E4A: always 8 volumes (per type volume, energy direction, price period).

49 Number of volumes per calendar month for grid loss notification to TSO and BRP Grid loss is always 4 (per energy direction, price period).

50 Must be empty means that the appropriate field is missing from the notification. Empty fields in the XML notification are not allowed based on the UN/CEFACT NDR.

| Entry                         | Elec | 1/n | Note                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | XML code   |
|-------------------------------|------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
|                               |      |     | If a profile category is not encountered in the grid area, the concerned profile category is not included in the notification for the concerned grid area.                                                                                                                                                                                                                                                                                                                                                                                                     | E3D<br>E4A |
| Determined energy consumption | A    | 1   | <p>Indicates whether there is consumption with production or consumption without production.</p> <p><u>Required</u> if it is a volume notification for profile category E1A, E1B, E1C, E2A or E2B<sup>51</sup>.</p> <p><u>Must be empty</u> if it is a volume notification for profile category E3A, E3B, E3C, E3D or E4A<sup>50</sup>.</p> <p><u>Must be empty</u> if it is a grid loss volume<sup>50</sup>.</p> <p>Permitted values for profile category E1A, E1B, E1C, E2A or E2B:<br/> Consumption with production<br/> Consumption without production</p> | AMI<br>AZI |

Mandatory fields (V) are always filled; optional fields (O) or dependent fields (A) if required for the context of the related reconciliation data notification.

<sup>51</sup> This obligation does not apply for volumes relating to a period before the functional go live of IC273 (Tranche 2 Allocated 2.0).

#### 4.6 Notification for Exchange allocated volumes and determined volumes for reconciliation per individual allocation point (BSCMF0086)

Exchange allocated volumes and determined volumes for reconciliation per individual allocation point is an exchange of:

1. PRF allocation points for the BRP (a separate register receipt per grid area/BRP/SUP combination containing all the allocation points included in that reconciliation run with that BRP/SUP combination in the respective grid area).

The following information is exchanged per allocation point<sup>52</sup>:

| Entry                                | Elec | 1/n | Note                                                                                                 |
|--------------------------------------|------|-----|------------------------------------------------------------------------------------------------------|
| Run Month                            | V    | 1   | According to the notation: YYYYMM.                                                                   |
| Delivery month                       | V    | 1   | According to the notation: YYYYMM.                                                                   |
| EAN code Connection                  | V    | 1   | EAN18 for the allocation point electricity.                                                          |
| EAN code BRP                         | V    | 1   | EAN13 of the BRP.                                                                                    |
| EAN code Supplier                    | V    | 1   | EAN13 of the SUP.                                                                                    |
| EAN code grid area                   | V    | 1   | EAN18 of the grid area.                                                                              |
| Allocation volume Normal Consumption | V    | 1   | Imputed allocation volume consumption during normal hours (in kWh, no decimal places).               |
| Allocation volume Normal Production  | V    | 1   | Imputed allocation volume production during normal hours (in kWh, no decimal places).                |
| Allocation volume Low Consumption    | V    | 1   | Imputed allocation volume consumption during low hours (in kWh, no decimal places).                  |
| Allocation volume Low Production     | V    | 1   | Imputed allocation volume production during low hours (in kWh, no decimal places).                   |
| Actual Volume Normal Consumption     | V    | 1   | The volume consumption during normal hours determined for reconciliation(in kWh, no decimal places). |
| Actual Volume Normal Production      | V    | 1   | The volume production during normal hours determined for reconciliation (in kWh, no decimal places). |
| Actual Volume Low Consumption        | V    | 1   | The volume consumption during low hours determined for reconciliation(in kWh, no decimal places).    |
| Actual Volume Low Production         | V    | 1   | The volume production during low hours determined for reconciliation (in kWh, no decimal places).    |
| Start date Consumption period        | V    | 1   | Start date of the consumption period according to the notation: YYYYMMDD.                            |
| End Date Consumption Period          | V    | 1   | End date of the consumption period according to the notation: YYYYMMDD.                              |

Mandatory fields (V) are always filled; optional fields (O) or dependent fields (A) if required for the context of the related reconciliation data notification.

<sup>52</sup> Exchange via the Register receipt.

#### 4.7 Response to notifications for Exchange volumes for reconciliation

In this case<sup>53</sup>, the response for all notifications has the same structure. The response consists of an acknowledgement or a rejection:

| Entry                           | Elec            | 1/n | Note                                                                                                                                                                                      | XML code                                      |
|---------------------------------|-----------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Notification identification     | V               | 1   | A UUID as a unique identifier of the notification.                                                                                                                                        |                                               |
| Notification reference          | A <sup>54</sup> | 1   | A UUID as unique identifier for the acknowledged or rejected notification <sup>55</sup> .                                                                                                 |                                               |
| Date/time response notification | V               | 1   | Date time is in UTC and in accordance with ISO 8601 notation[7]: YYYY-MM-DDThh:mm:ssZ                                                                                                     |                                               |
| Confirmation/rejection code     | V               | n   | If confirmed (not rejected!), code "000" must be returned in the response.<br><br>If rejected, at least one code for rejection must be returned in the response (see section 3.3 to 3.8). | Code for rejection: see paragraph 3.3 to 3.8. |
| Explanation of the rejection    | O               | n   | 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 concerned notification.

#### 4.8 Explanation of the correlation of the response to the notification

Correlation on the following levels:

1. CorrelationID in the EDSNBusinessDocumentHeader shows the technical correlation between Notification and Acknowledgement if entered into the Notification by the provider<sup>56</sup>;
2. Via the notification attribute (both UUID), the obligatory process correlation between Notification and Acknowledgement is established

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

<sup>53</sup> This response does not apply to the notification "Allocated volumes and determined volumes for reconciliation per individual allocation point" (the Register receipt). The exchange of the Register receipt is handled by the service Exchange datasets[9].

<sup>54</sup> If the integrity and/or confidentiality of the XML notification cannot be guaranteed, the recipient must be able to send a rejection to the sender of the corresponding notification without the reference of the received notification. The XML notification is also compromised and the attribute may no longer be reliable or possible to obtain.

<sup>55</sup> Is the ...\_Series.mRID of the concerned Notification notification.

<sup>56</sup> CorrelationID can be filled by the supplier of volumes (provider). If filled, the receiving party (consumer) must specify this CorrelationID in the response to the provider. See Design 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 notifications between objects. The notifications in the sequence diagram are explained in more detail in the chapter Information Model. Further details about notification standards and application methods are described in *NEDU EDSN Design Choices*[2].

## 5.2 Exchange aggregated volumes for reconciliation per grid area (BSCMF0081)

The sequence diagram below relates to the supply of *aggregated volumes for reconciliation per grid area* by the system operator to the MMC-hub. The MMC-hub takes care of routing, preparing and forwarding the relevant volumes to the receiver.

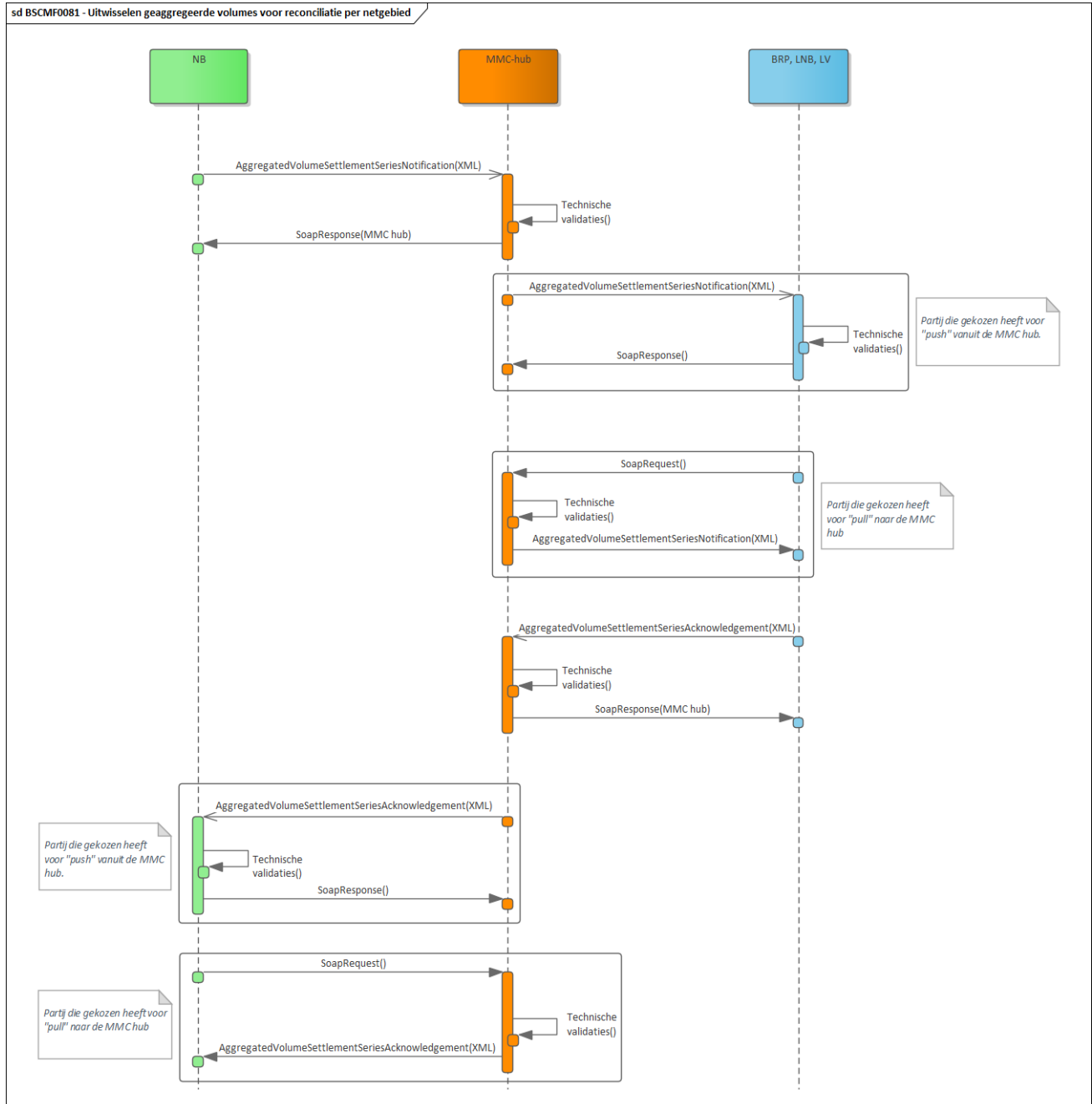


Figure 2 The sequence diagram for exchange volumes for reconciliation between SO and BRP, TSO and SUP via the MMC-hub

### 5.3 Exchange volumes for reconciliation per individual allocation point (BSCMF0082)

The sequence diagram below relates to the supply of *volumes for reconciliation per individual allocation point* by the system operator to the MMC-hub. The MMC-hub takes care of routing, preparing and forwarding the relevant volumes to the receiver.

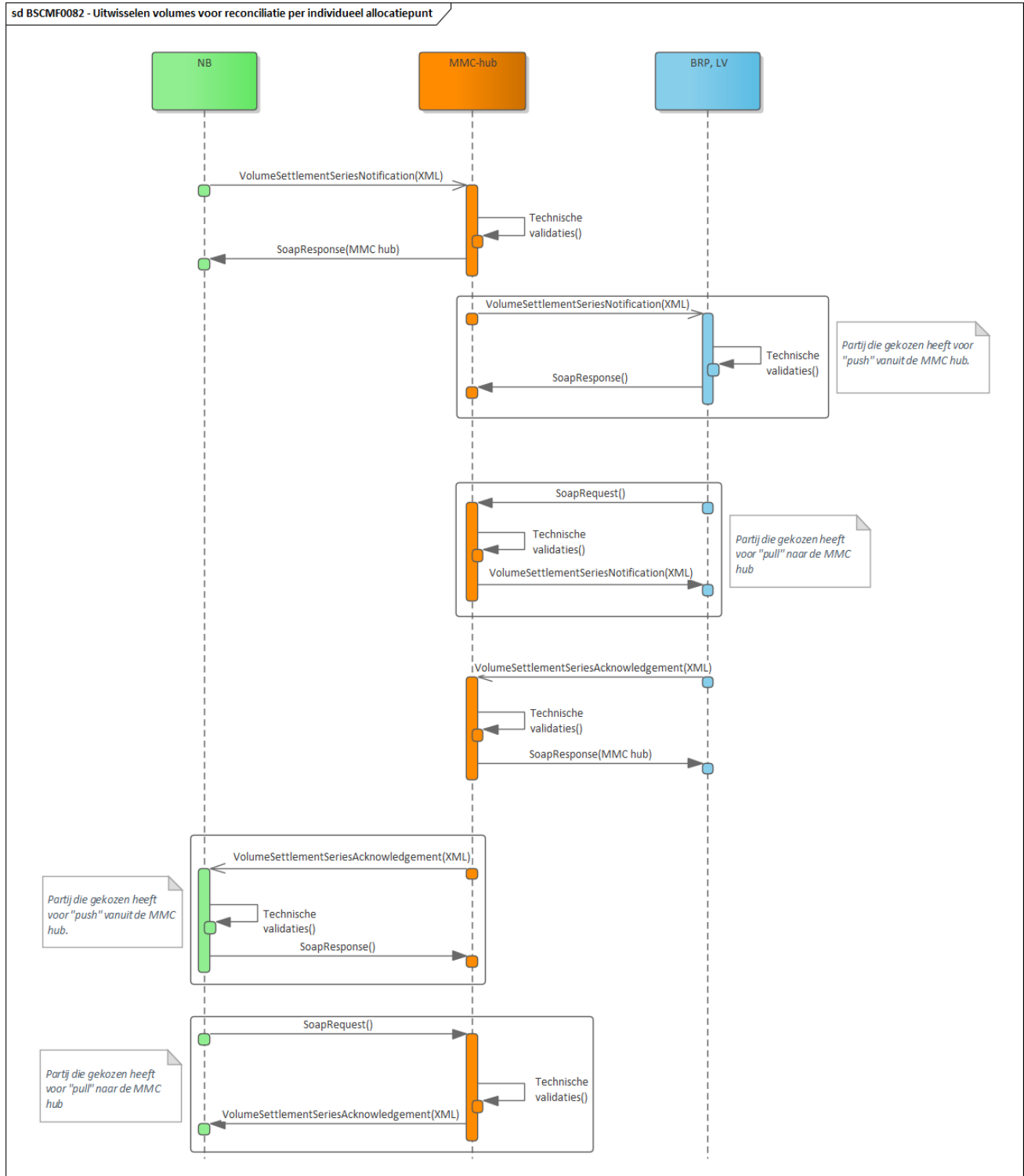


Figure 3 The sequence diagram for exchange volumes for reconciliation between SO and BRP and SUP via the MMC-hub



## 5.5 Exchange OVP volumes for reconciliation per individual allocation point (BSCMF0084)

The sequence diagram below relates to the supply of *volumes per OVP for reconciliation per individual allocation point* by the system operator to the MMC-hub. The MMC-hub takes care of routing, preparing and forwarding the relevant volumes to the receiver.

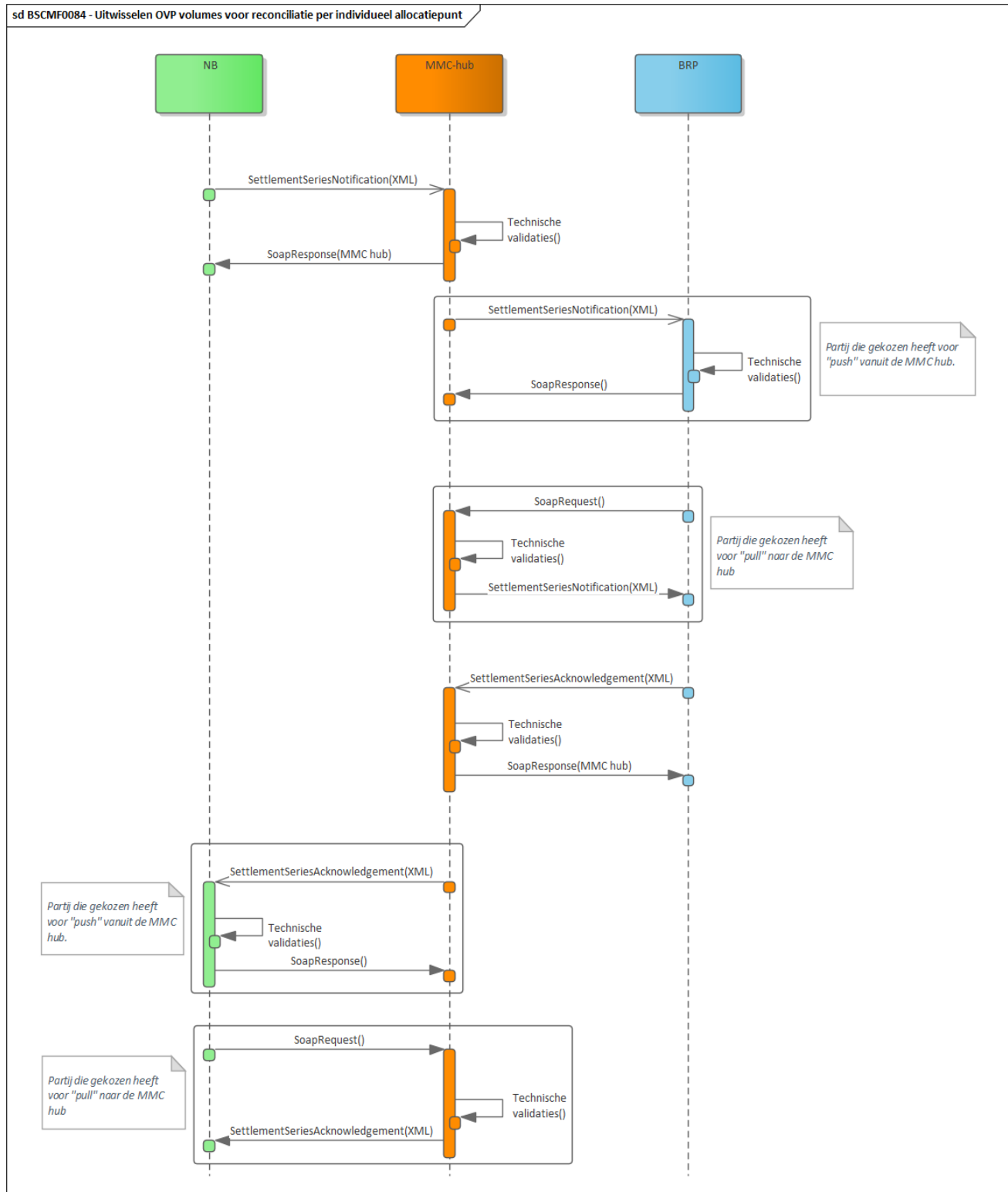


Figure 5 The sequence diagram for exchange volumes for reconciliation between SO and BRP via the MMC-hub

## 5.6 Exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area BSCMF0085

The sequence diagram below relates to supplying *aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area* by the system operator to the MMC-hub. The MMC-hub takes care of routing, preparing and forwarding the relevant volumes to the receiver.

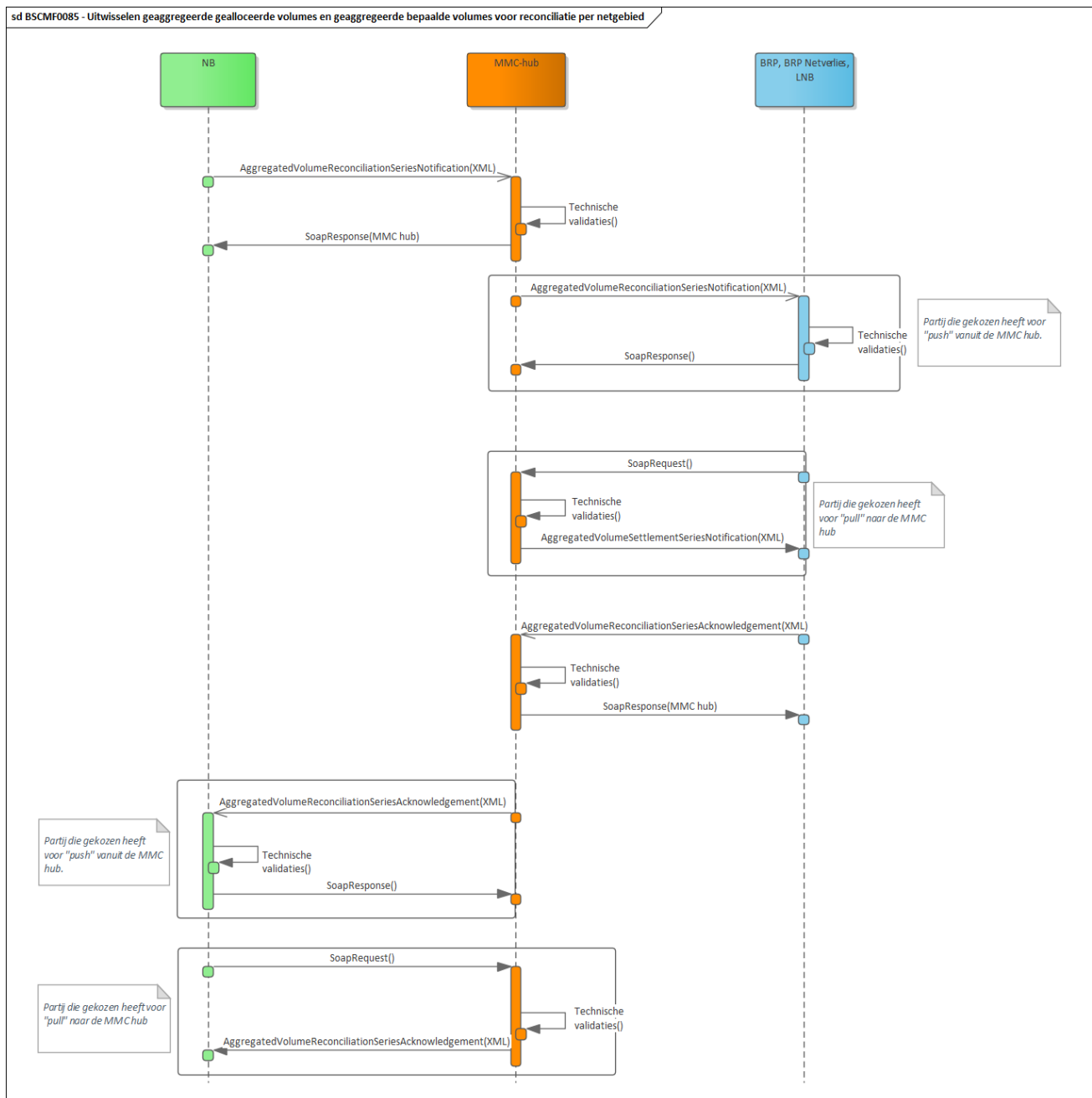


Figure 6 The sequence diagram for exchange volumes for reconciliation between SO and BRP and TSO via the MMC-hub

## 5.7 Exchange allocated volumes and determined volumes for reconciliation per individual allocation point BSCMF0086

The sequence diagram below relates to supplying *allocated volumes and determined volumes for reconciliation per individual allocation point* by the system operator via the Register receipt. The exchange of the Register receipt is handled by the service Exchange datasets[9].

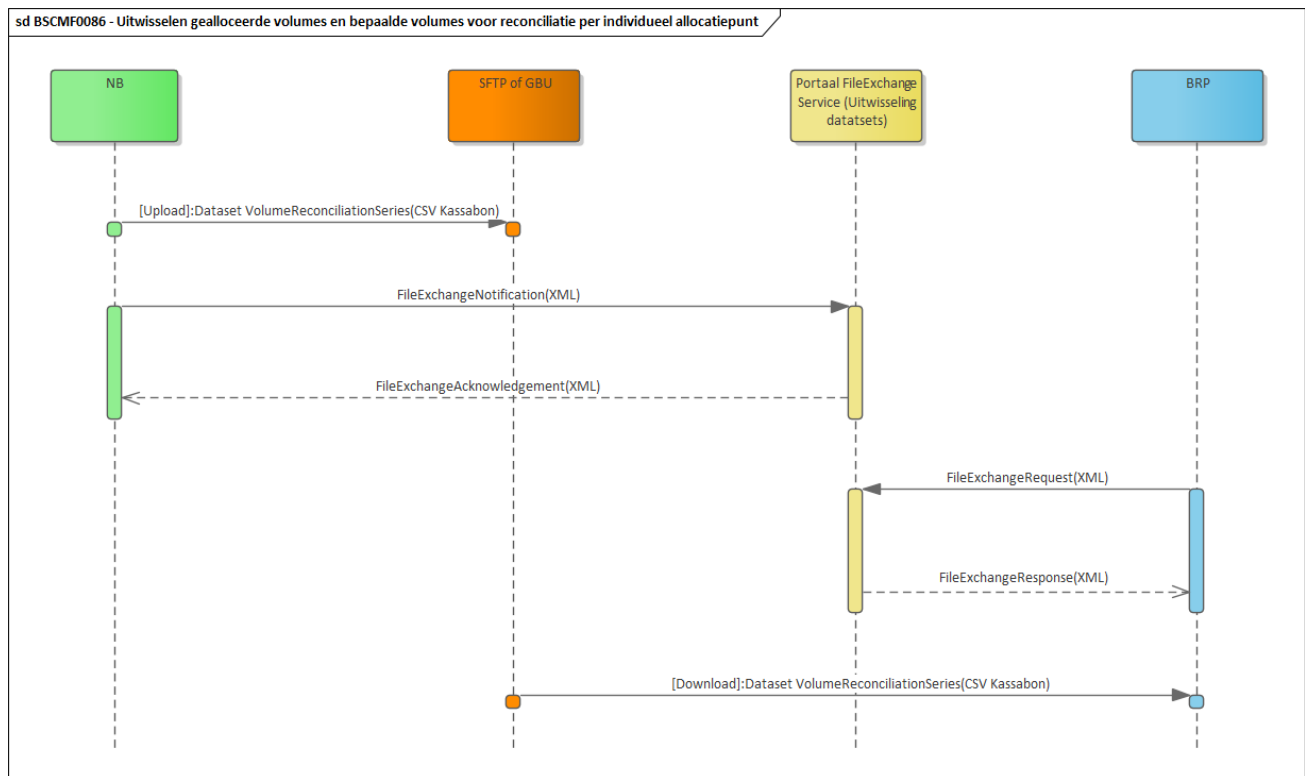


Figure 7 The sequence diagram for exchange volumes for reconciliation between SO and BRP

## 6 Properties service volumes for reconciliation electricity

### 6.1 Exchange aggregated volumes for reconciliation per grid area (BSCMF0081)

| Exchange aggregated volumes for reconciliation per grid area (AggregatedVolumeReconciliationSeries) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Service                                                                                             | AggregatedVolumeReconciliationSeries – Exchange aggregated volumes for reconciliation by grid area                                                                                                                                                                                                                                                                                                                                                                                |
| DSO service ID                                                                                      | BSCMF0081                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Description                                                                                         | The exchange of volumes for reconciliation between SO (provider) and the BRP, TSO, SUP (consumer)                                                                                                                                                                                                                                                                                                                                                                                 |
| Service transaction pattern                                                                         | Notification/Acknowledgement                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Precondition(s)                                                                                     | <i>Notification with volumes for reconciliation</i> is submitted by a party that is authorized and authenticated to do so.                                                                                                                                                                                                                                                                                                                                                        |
| Trigger                                                                                             | DSO supplies <i>Notification with volumes for reconciliation</i> to MMC-hub.                                                                                                                                                                                                                                                                                                                                                                                                      |
| Post condition(s)                                                                                   | <ul style="list-style-type: none"> <li>Notification with volumes for reconciliation rejected;</li> <li>or</li> <li>Notification with volumes for reconciliation executed.</li> </ul>                                                                                                                                                                                                                                                                                              |
| Service use <sup>57</sup>                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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                                                                         | 100% of the incoming Notifications must be answered by the consumer by means of an Acknowledgement within 15 minutes.                                                                                                                                                                                                                                                                                                                                                             |
| 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                                                                                               | <p>The sender (provider of the data) only performs a 'retry' if he did not receive a positive HTTP response from de MMC-hub.</p> <p>If the recipient (consumer of the 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.</p> |
| Web service                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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].                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operation                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

<sup>57</sup> To be agreed with TenneT.

|                     |                                                                                |
|---------------------|--------------------------------------------------------------------------------|
| User                | SO                                                                             |
| Function            | Submit notification <i>Aggregated volumes for reconciliation per grid area</i> |
| Soap action         | See WSDL                                                                       |
| Input notification  | AggregatedVolumeSettlementSeriesNotification                                   |
| XSD                 | AggregatedVolumeSettlementSeriesNotification_1p0                               |
| Output notification | AggregatedVolumeSettlementSeriesAcknowledgement                                |
| XSD                 | AggregatedVolumeSettlementSeriesAcknowledgement_1p0                            |

## 6.2 Exchange volumes for reconciliation per individual allocation point (BSCMF0082)

| Exchange volumes for reconciliation per individual allocation point (VolumeReconciliationSeries) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Service                                                                                          | VolumeReconciliationSeries– Exchange volumes for reconciliation per individual allocation point                                                                                                                                                                                                                                                                                                                                                                                   |
| DSO service ID                                                                                   | BSCMF0082                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Description                                                                                      | The exchange of volumes for reconciliation between SO (provider) and the BRP, SUP (consumer)                                                                                                                                                                                                                                                                                                                                                                                      |
| Service transaction pattern                                                                      | Notification/Acknowledgement                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Precondition(s)                                                                                  | <i>Notification with volumes for reconciliation</i> is submitted by a party that is authorized and authenticated to do so.                                                                                                                                                                                                                                                                                                                                                        |
| Trigger                                                                                          | DSO supplies <i>Notification with volumes for reconciliation</i> to MMC-hub.                                                                                                                                                                                                                                                                                                                                                                                                      |
| Post condition(s)                                                                                | <ul style="list-style-type: none"> <li>Notification with volumes for reconciliation rejected;</li> <li>or</li> <li>Notification with volumes for reconciliation executed.</li> </ul>                                                                                                                                                                                                                                                                                              |
| Service use <sup>58</sup>                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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                                                                      | 100% of the incoming Notifications must be answered by the consumer by means of an Acknowledgement within 15 minutes.                                                                                                                                                                                                                                                                                                                                                             |
| 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                                                                                            | <p>The sender (provider of the data) only performs a 'retry' if he did not receive a positive HTTP response from de MMC-hub.</p> <p>If the recipient (consumer of the 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.</p> |
| Web service                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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].                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operation                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| User                                                                                             | SO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

<sup>58</sup> To be agreed with TenneT.

|                     |                                                                                       |
|---------------------|---------------------------------------------------------------------------------------|
| Function            | Submit notification <i>Volumes for reconciliation per individual allocation point</i> |
| Soap action         | See WSDL                                                                              |
| Input notification  | VolumesSettlementSeriesNotification                                                   |
| XSD                 | VolumeSettlementSeriesNotification_1p0                                                |
| Output notification | VolumeSettlementSeriesAcknowledgement                                                 |
| XSD                 | VolumeSettlementSeriesAcknowledgement_1p0                                             |

### 6.3 Exchange aggregated OVP volumes for reconciliation per grid area (BSCMF0083)

| Exchange aggregated OVP volumes for reconciliation per grid area (AggregatedSettlementSeries) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Service                                                                                       | AggregatedSettlementSeries – Exchange aggregated OVP volumes for reconciliation per grid area                                                                                                                                                                                                                                                                                                                                                                                     |
| DSO service ID                                                                                | BSCMF0083                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Description                                                                                   | The exchange of volumes for reconciliation between SO (provider) and the BRP, TSO (consumer)                                                                                                                                                                                                                                                                                                                                                                                      |
| Service transaction pattern                                                                   | Notification/Acknowledgement                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Precondition(s)                                                                               | <i>Notification with volumes for reconciliation</i> is submitted by a party that is authorized and authenticated to do so.                                                                                                                                                                                                                                                                                                                                                        |
| Trigger                                                                                       | DSO supplies <i>Notification with volumes for reconciliation</i> to MMC-hub.                                                                                                                                                                                                                                                                                                                                                                                                      |
| Post condition(s)                                                                             | <ul style="list-style-type: none"> <li>Notification with volumes for reconciliation rejected;</li> <li>or</li> <li>Notification with volumes for reconciliation executed.</li> </ul>                                                                                                                                                                                                                                                                                              |
| Service use <sup>59</sup>                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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                                                                   | 100% of the incoming Notifications must be answered by the consumer by means of an Acknowledgement within 15 minutes.                                                                                                                                                                                                                                                                                                                                                             |
| 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                                                                                         | <p>The sender (provider of the data) only performs a 'retry' if he did not receive a positive HTTP response from de MMC-hub.</p> <p>If the recipient (consumer of the 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.</p> |
| Web service                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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].                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operation                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| User                                                                                          | SO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

<sup>59</sup> To be agreed with TenneT.

|                     |                                                                                    |
|---------------------|------------------------------------------------------------------------------------|
| Function            | Submit notification <i>Aggregated OVP volumes for reconciliation per grid area</i> |
| Soap action         | See WSDL                                                                           |
| Input notification  | AggregatedSettlementSeriesNotification                                             |
| XSD                 | AggregatedSettlementSeriesNotification_1p0                                         |
| Output notification | AggregatedSettlementSeriesAcknowledgement                                          |
| XSD                 | AggregatedSettlementSeriesAcknowledgement_1p0                                      |

#### 6.4 Exchange OVP volumes for reconciliation per individual allocation point (BSCMF0084)

| Exchange OVP volumes for reconciliation per individual allocation point (SettlementSeries) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Service                                                                                    | SettlementSeries – Exchange OVP volumes for reconciliation per individual allocation point                                                                                                                                                                                                                                                                                                                                                                                        |
| DSO service ID                                                                             | BSCMF0084                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Description                                                                                | The exchange of volumes for reconciliation between SO (provider) and the BRP (consumer)                                                                                                                                                                                                                                                                                                                                                                                           |
| Service transaction pattern                                                                | Notification/Acknowledgement                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Precondition(s)                                                                            | <i>Notification with volumes for reconciliation</i> is submitted by a party that is authorized and authenticated to do so.                                                                                                                                                                                                                                                                                                                                                        |
| Trigger                                                                                    | DSO supplies <i>Notification with volumes for reconciliation</i> to MMC-hub.                                                                                                                                                                                                                                                                                                                                                                                                      |
| Post condition(s)                                                                          | <ul style="list-style-type: none"> <li>Notification with volumes for reconciliation rejected;</li> <li>or</li> <li>Notification with volumes for reconciliation executed.</li> </ul>                                                                                                                                                                                                                                                                                              |
| Service use <sup>60</sup>                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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                                                                | 100% of the incoming Notifications must be answered by the consumer by means of an Acknowledgement within 15 minutes.                                                                                                                                                                                                                                                                                                                                                             |
| 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                                                                                      | <p>The sender (provider of the data) only performs a 'retry' if he did not receive a positive HTTP response from de MMC-hub.</p> <p>If the recipient (consumer of the 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.</p> |
| Web service                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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].                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operation                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| User                                                                                       | SO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

<sup>60</sup> To be agreed with TenneT.

|                     |                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------|
| Function            | Submit notification <i>OVP volumes for reconciliation per individual allocation point</i> |
| Soap action         | See WSDL                                                                                  |
| Input notification  | SettlementSeriesNotification                                                              |
| XSD                 | SettlementSeriesNotification_1p0                                                          |
| Output notification | SettlementSeriesAcknowledgement                                                           |
| XSD                 | SettlementSeriesAcknowledgement_1p0                                                       |

## 6.5 Exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area BSCMF0085

| Exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area (AggregatedVolumeReconciliationSeries) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Service                                                                                                                                         | AggregatedVolumeReconciliationSeries – Exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area                                                                                                                                                                                                                                                                                                                                   |
| DSO service ID                                                                                                                                  | BSCMF0085                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Description                                                                                                                                     | The exchange of volumes for reconciliation between SO (provider) and BRP, BRP Grid loss and TSO (consumer)                                                                                                                                                                                                                                                                                                                                                                        |
| Service transaction pattern                                                                                                                     | Notification/Acknowledgement                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Precondition(s)                                                                                                                                 | <i>Notification with aggregated allocated volumes and aggregated determined volumes for reconciliation</i> is submitted by a party authorized and authenticated for this purpose.                                                                                                                                                                                                                                                                                                 |
| Trigger                                                                                                                                         | DSO supplies <i>Notification with volumes for reconciliation</i> to MMC-hub.                                                                                                                                                                                                                                                                                                                                                                                                      |
| Post condition(s)                                                                                                                               | <ul style="list-style-type: none"> <li>Notification with volumes for reconciliation rejected;</li> <li>or</li> <li>Notification with volumes for reconciliation executed.</li> </ul>                                                                                                                                                                                                                                                                                              |
| <b>Service use<sup>61</sup></b>                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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                                                                                                                     | 100% of the incoming Notifications must be answered by the consumer by means of an Acknowledgement within 15 minutes.                                                                                                                                                                                                                                                                                                                                                             |
| 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                                                                                                                                           | <p>The sender (provider of the data) only performs a 'retry' if he did not receive a positive HTTP response from de MMC-hub.</p> <p>If the recipient (consumer of the 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.</p> |
| <b>Web service</b>                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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].                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Operation</b>                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

<sup>61</sup> To be agreed with TenneT.

|                     |                                                                                                                            |
|---------------------|----------------------------------------------------------------------------------------------------------------------------|
| User                | SO                                                                                                                         |
| Function            | Submit notification <i>Aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area</i> |
| Soap action         | See WSDL                                                                                                                   |
| Input notification  | AggregatedVolumeReconciliationSeriesNotification                                                                           |
| XSD                 | AggregatedVolumeReconciliationSeriesNotification_2p0                                                                       |
| Output notification | AggregatedVolumeReconciliationSeriesAcknowledgement                                                                        |
| XSD                 | AggregatedVolumeReconciliationSeriesAcknowledgement_1p0                                                                    |

## 6.6 Exchange allocated volumes and determined volumes for reconciliation per individual allocation point BSCMF0086

| Exchange allocated volumes and determined volumes for reconciliation per individual allocation point (VolumeReconciliationSeries) |                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Service                                                                                                                           | VolumeReconciliationSeries– Exchange allocated volumes and determined volumes for reconciliation per individual allocation point via the Register receipt |
| DSO service ID                                                                                                                    | BSCMF0086                                                                                                                                                 |
| Description                                                                                                                       | The exchange of volumes for reconciliation between SO (provider) and the BRP (consumer)                                                                   |
| Service transaction pattern                                                                                                       | See service description Exchange datasets[9]                                                                                                              |

## 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" notifications 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].

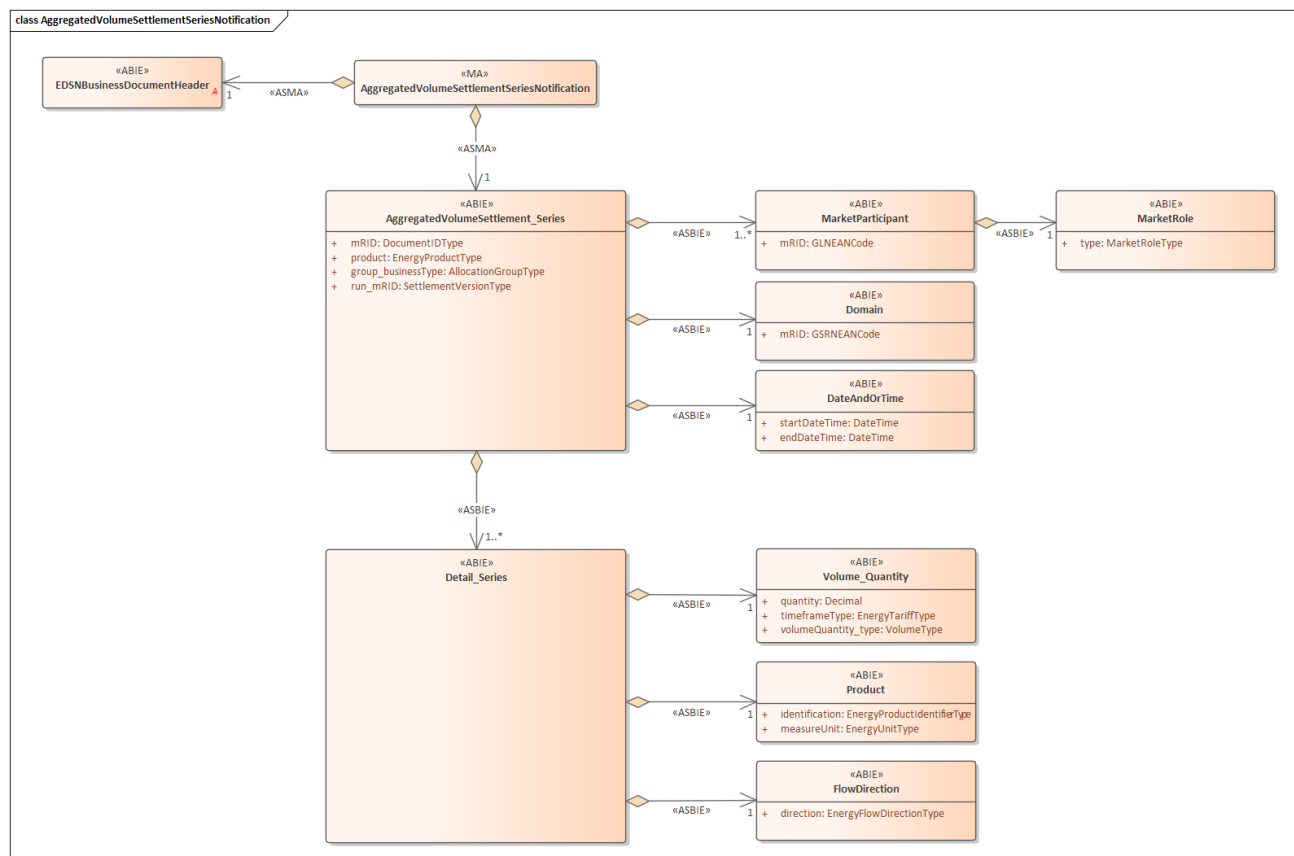
For more information on data types, please refer to *NEDU EDSN Design Choices*[2].

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

- 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 Notification Exchange aggregated volumes for reconciliation per grid area (AggregatedVolumeSettlementSeriesNotification)



### AggregatedVolumeSettlement\_Series

| XML element        | Data type             | Multiplicity | Description                                                      | Functional parameter              |
|--------------------|-----------------------|--------------|------------------------------------------------------------------|-----------------------------------|
| mRID               | DocumentIDType        | 1..1         | A unique identification of the time series.                      | Notification identifier (UUID)    |
| product            | EnergyProductType     | 1..1         | The identification of the energy product (electricity, gas etc.) | Product type                      |
| group_businessType | AllocationGroupType   | 1..1         | The identification of the nature of the time series.             | Allocation group                  |
| run_mRID           | SettlementVersionType | 1..1         | The identification of the version of the time series.            | Reconciliation run identification |

### 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 time period |
| endDateTime   | DateTime  | 1..1         | End date time of the period as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.   | End date time period   |

### Detail\_Series

| XML element | Data type | Multiplicity | Description | Functional parameter |
|-------------|-----------|--------------|-------------|----------------------|
|-------------|-----------|--------------|-------------|----------------------|

#### Domain

| XML element | Data type   | Multiplicity | Description                              | Functional parameter |
|-------------|-------------|--------------|------------------------------------------|----------------------|
| mRID        | GSRNEANCode | 1..1         | The unique identification of the domain. | EAN code grid area   |

#### FlowDirection

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

#### MarketParticipant

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

#### 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          |

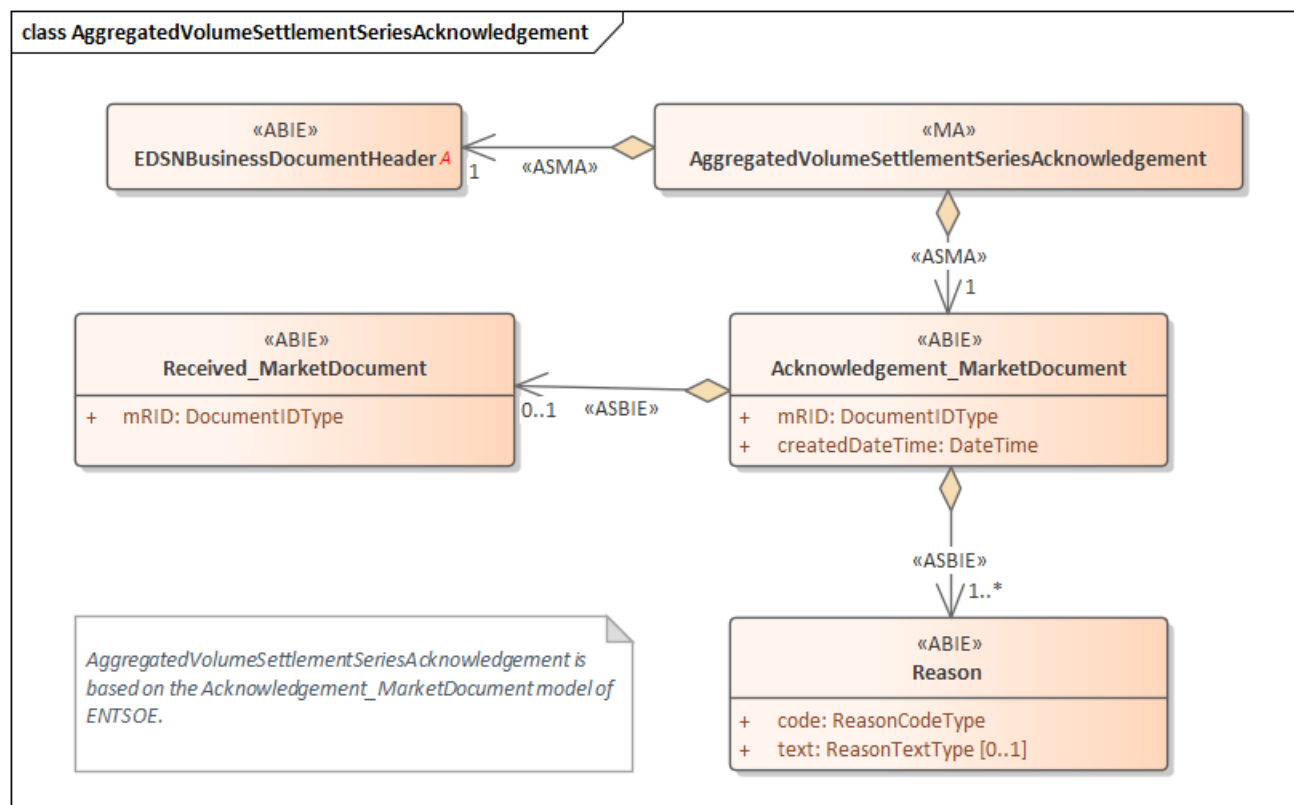
#### Product

| 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          |

#### Volume\_Quantity

| XML element         | Data type        | Multiplicity | Description                                                                                   | Functional parameter |
|---------------------|------------------|--------------|-----------------------------------------------------------------------------------------------|----------------------|
| quantity            | Decimal          | 1..1         | The quantity value.<br>The association role provides the information about what is expressed. | Volume (electricity) |
| timeframeType       | EnergyTariffType | 1..1         | The coded identification of the timeframe.                                                    | Price period         |
| volumeQuantity_type | VolumeType       | 1..1         | The description of the type of the quantity.                                                  | Type volume          |

### 7.3 Confirmation/rejection notification Exchange aggregated volumes for reconciliation per grid area (AggregatedVolumeSettlementSeriesAcknowledgement)



#### 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. | Notification identifier (UUID) |
| createdDateTime | DateTime       | 1..1         | The date and time of the creation of the document as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.   | Date/time notification         |

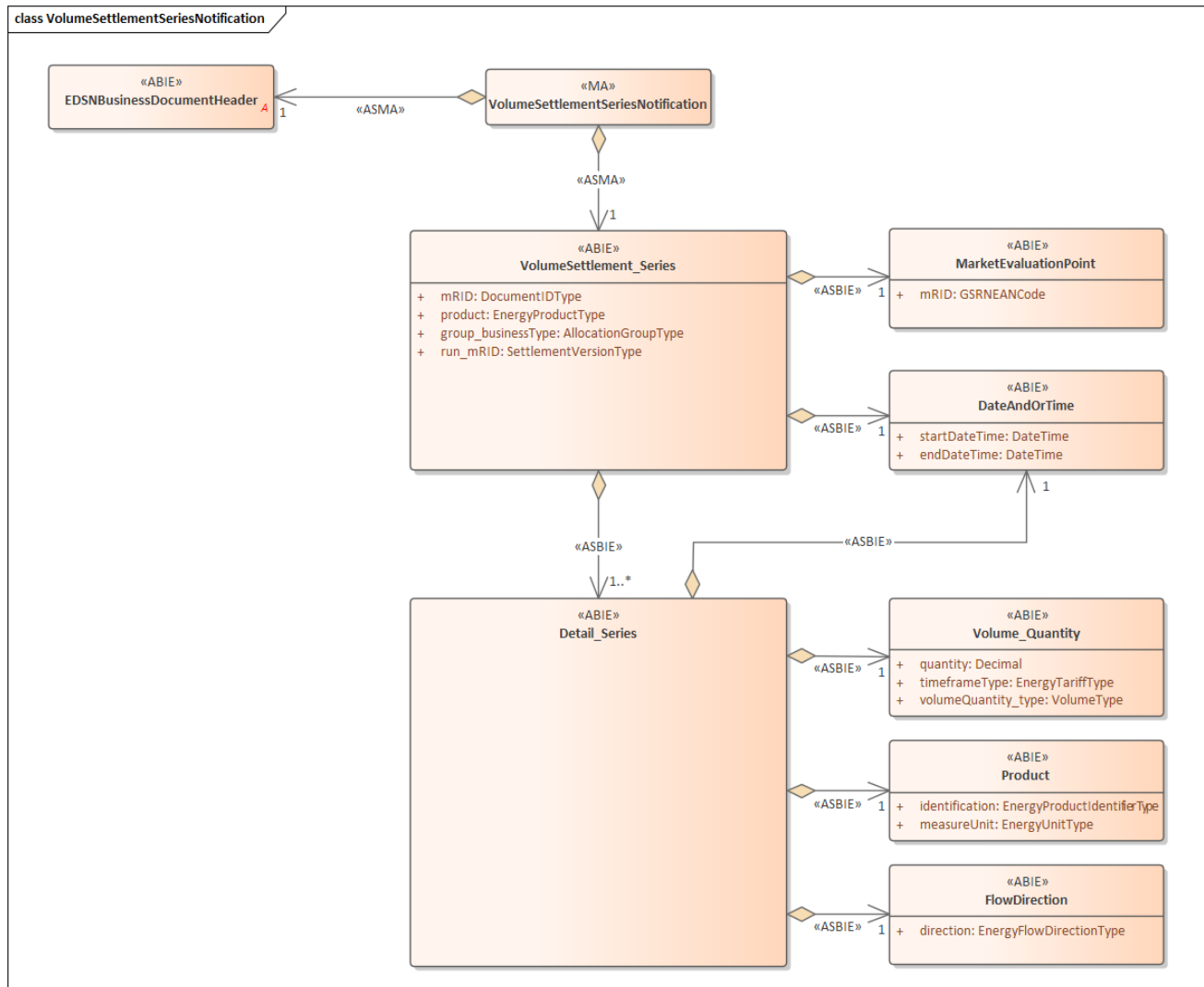
#### Reason

| 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. | Notification identifier (UUID) |

## 7.4 Notification Exchange volumes for reconciliation per individual allocation point (VolumeSettlementSeriesNotification)



### 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 time period |
| endDateTime   | DateTime  | 1..1         | End date time of the period as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.   | End date time period   |

### Detail\_Series

| XML element | Data type | Multiplicity | Description | Functional parameter |
|-------------|-----------|--------------|-------------|----------------------|
|-------------|-----------|--------------|-------------|----------------------|

### 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  |

#### 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          |

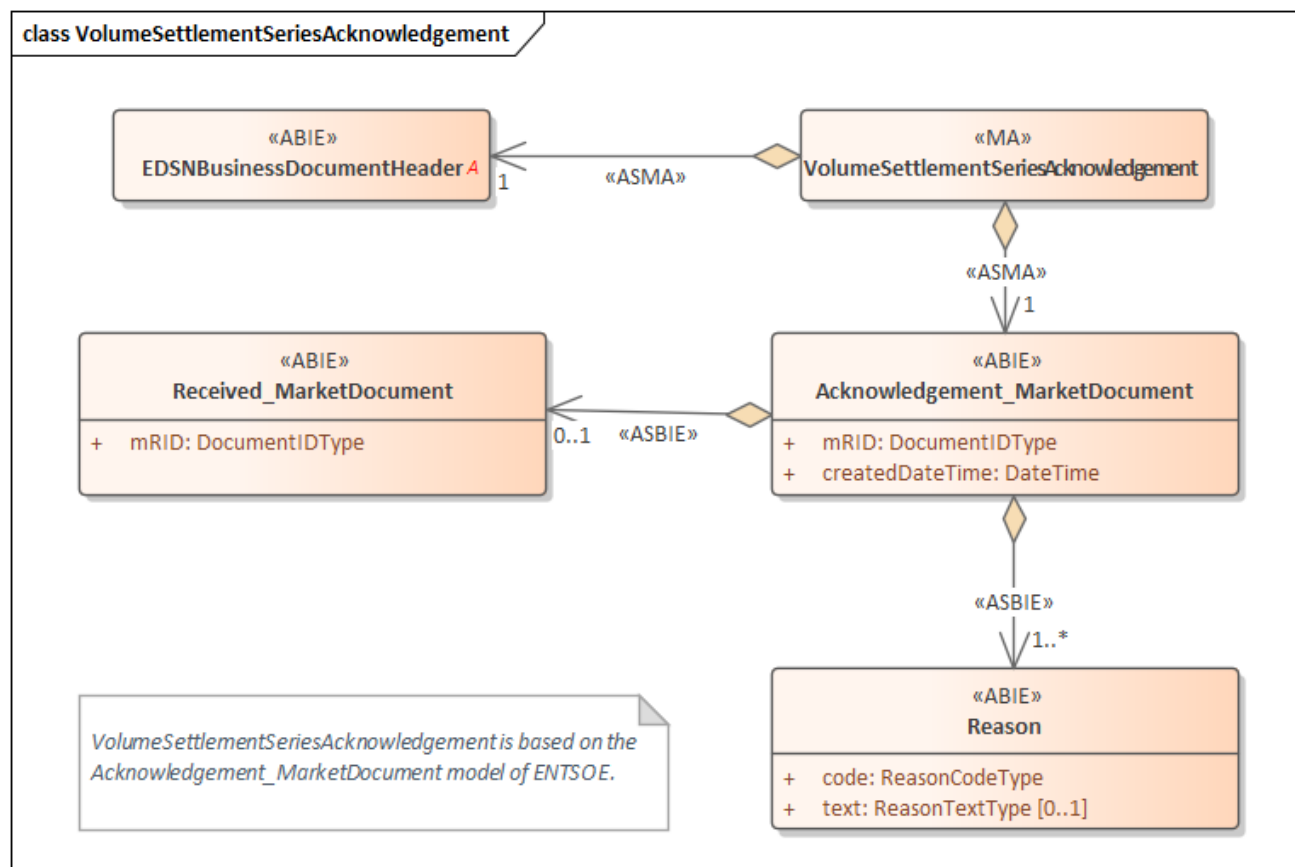
#### Volume\_Quantity

| XML element         | Data type        | Multiplicity | Description                                                                                   | Functional parameter |
|---------------------|------------------|--------------|-----------------------------------------------------------------------------------------------|----------------------|
| quantity            | Decimal          | 1..1         | The quantity value.<br>The association role provides the information about what is expressed. | Volume (electricity) |
| timeframeType       | EnergyTariffType | 1..1         | The coded identification of the timeframe.                                                    | Price period         |
| volumeQuantity_type | VolumeType       | 1..1         | The description of the type of the quantity.                                                  | Type volume          |

#### VolumeReconciliation\_Series

| XML element        | Data type             | Multiplicity | Description                                                      | Functional parameter              |
|--------------------|-----------------------|--------------|------------------------------------------------------------------|-----------------------------------|
| mRID               | DocumentIDType        | 1..1         | A unique identification of the time series.                      | Notification identifier (UUID)    |
| product            | EnergyProductType     | 1..1         | The identification of the energy product (electricity, gas etc.) | Product type                      |
| group_businessType | AllocationGroupType   | 1..1         | The identification of the nature of the time series.             | Allocation group                  |
| run_mRID           | SettlementVersionType | 1..1         | The identification of the version of the time series.            | Reconciliation run identification |

## 7.5 Confirmation/rejection notification Exchange volumes for reconciliation per individual allocation point (VolumesSettlementSeriesAcknowledgement)



### 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. | Notification identifier (UUID) |
| createdDateTime | DateTime       | 1..1         | The date and time of the creation of the document.                                        | Date/time notification         |

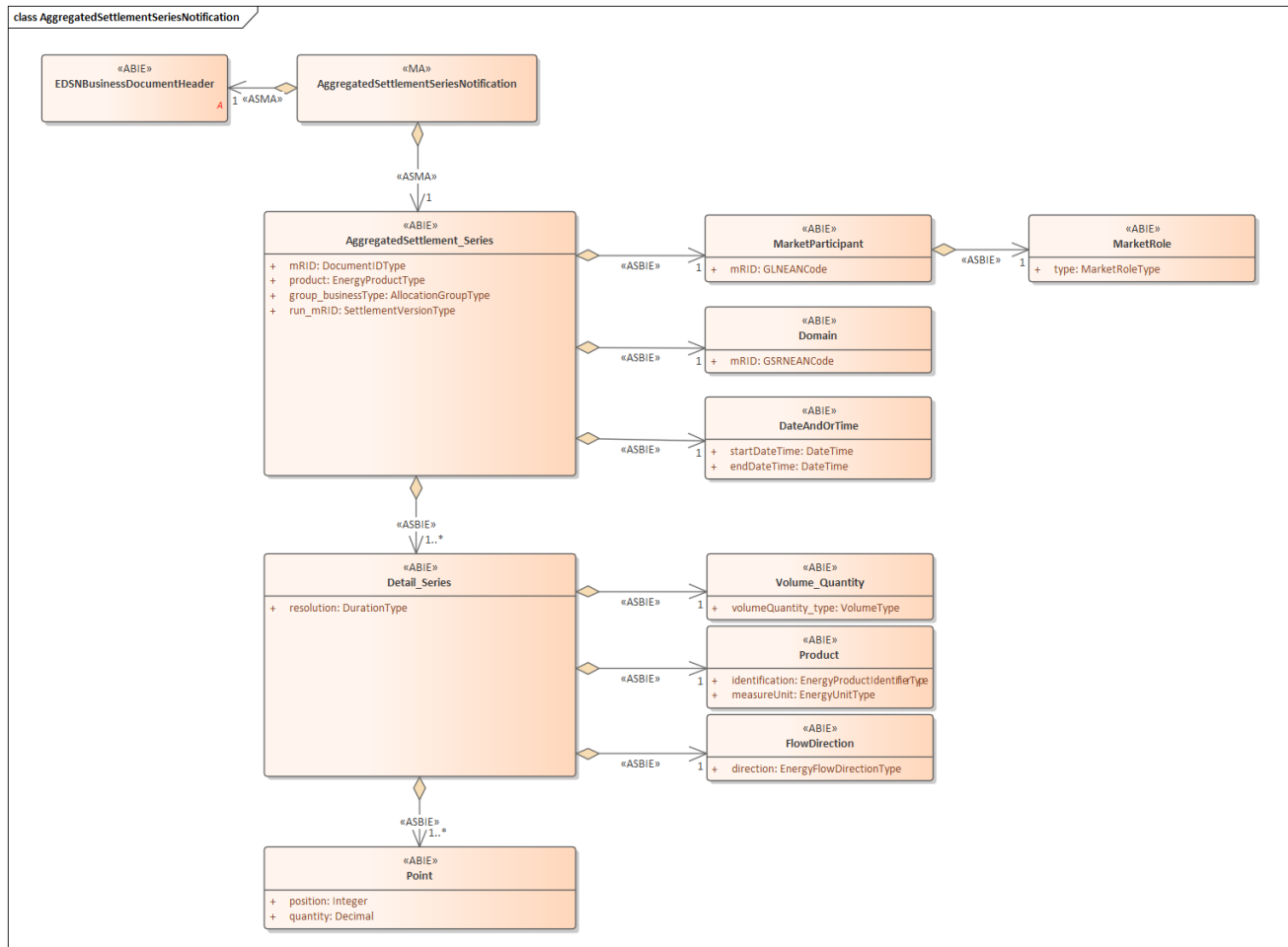
### Reason

| 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. | Notification identifier (UUID) |

## 7.6 Notification Exchange aggregated OVP volumes for reconciliation per grid area (AggregatedSettlementSeriesNotification)



### AggregatedSettlement\_Series

| XML element        | Data type             | Multiplicity | Description                                                       | Functional parameter              |
|--------------------|-----------------------|--------------|-------------------------------------------------------------------|-----------------------------------|
| mRID               | DocumentIDType        | 1..1         | A unique identification of the time series.                       | Notification identifier (UUID)    |
| product            | EnergyProductType     | 1..1         | The identification of the energy product (electricity, gas etc.). | Product type                      |
| group_businessType | AllocationGroupType   | 1..1         | The identification of the nature of the time series.              | Allocation group                  |
| run_mRID           | SettlementVersionType | 1..1         | The identification of the version of the time series.             | Reconciliation run identification |

### 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 time period |
| endDateTime   | DateTime  | 1..1         | End date time of the period as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.   | End date time 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. | OVP (electricity)    |

#### Domain

| XML element | Data type   | Multiplicity | Description                              | Functional parameter |
|-------------|-------------|--------------|------------------------------------------|----------------------|
| mRID        | GSRNEANCode | 1..1         | The unique identification of the domain. | EAN code grid area   |

#### FlowDirection

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

#### MarketParticipant

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

#### 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               |

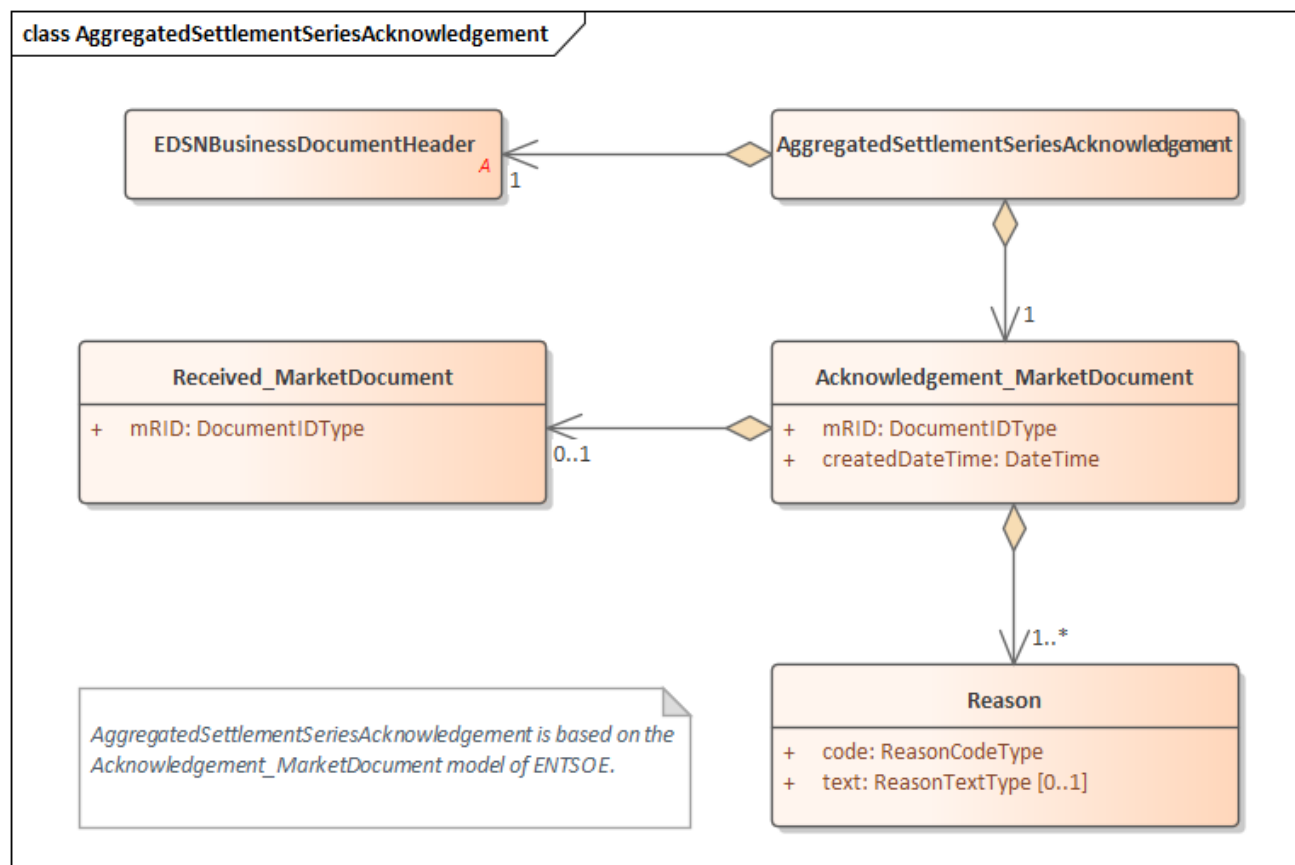
#### Product

| 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          |

#### Volume\_Quantity

| XML element         | Data type  | Multiplicity | Description                                  | Functional parameter |
|---------------------|------------|--------------|----------------------------------------------|----------------------|
| volumeQuantity_type | VolumeType | 1..1         | The description of the type of the quantity. | Type volume          |

## 7.7 Confirmation/rejection notification Exchange aggregated OVP volumes for reconciliation per grid area (AggregatedSettlementSeriesAcknowledgement)



### 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. | Notification identifier (UUID) |
| createdDateTime | DateTime       | 1..1         | The date and time of the creation of the document as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.   | Date/time notification         |

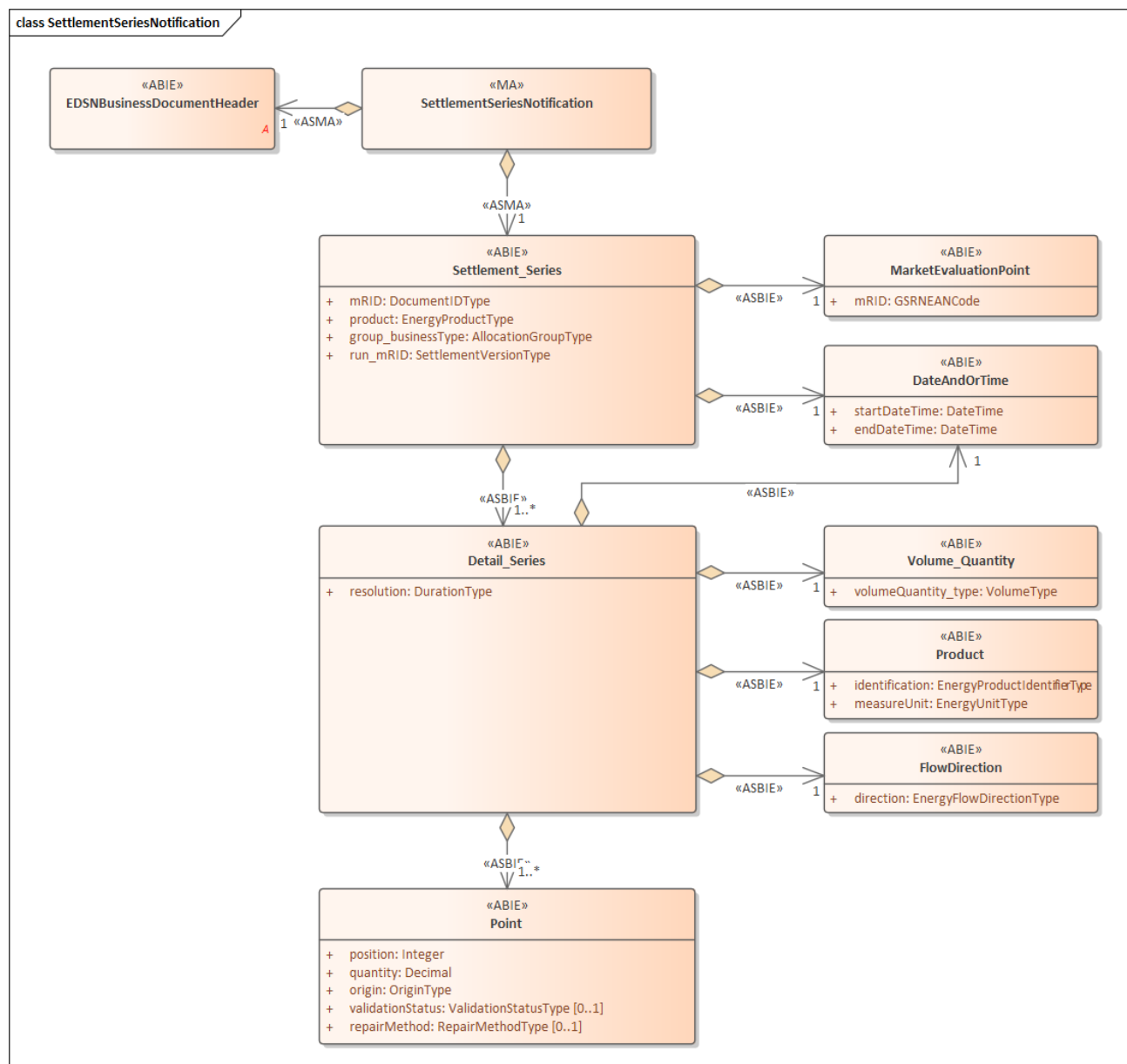
### Reason

| 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. | Notification identifier (UUID) |

## 7.8 Notification Exchange OVP volumes for reconciliation per individual allocation point (SettlementSeriesNotification)



### 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 time period |
| endDateTime   | DateTime  | 1..1         | End date time of the period as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.   | End date time 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. | OVP (electricity)    |

#### 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  |

#### 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               |
| origin           | OriginType           | 1..1         | The identification of the origin.                                                   | Origin indicator     |
| validationStatus | ValidationStatusType | 0..1         | The identification of the validation status.                                        | Validation status    |
| repairMethod     | RepairMethodType     | 0..1         | The identification of the repair method.                                            | Repair method        |

#### 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          |

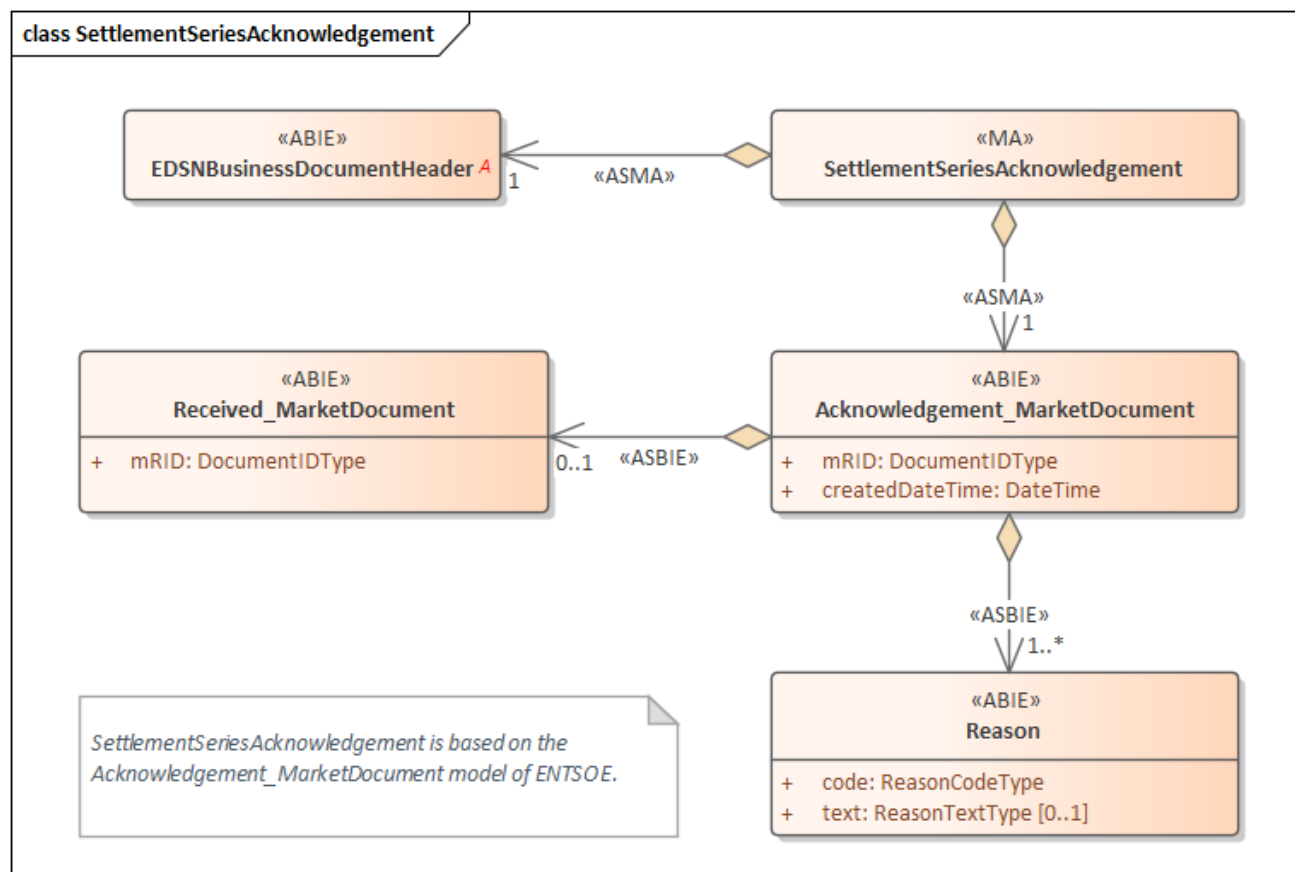
#### Reconciliation\_Series

| XML element        | Data type             | Multiplicity | Description                                                       | Functional parameter              |
|--------------------|-----------------------|--------------|-------------------------------------------------------------------|-----------------------------------|
| mRID               | DocumentIDType        | 1..1         | A unique identification of the time series.                       | Notification identifier (UUID)    |
| product            | EnergyProductType     | 1..1         | The identification of the energy product (electricity, gas etc.). | Product type                      |
| group_businessType | AllocationGroupType   | 1..1         | The identification of the nature of the time series.              | Allocation group                  |
| run_mRID           | SettlementVersionType | 1..1         | The identification of the version of the time series.             | Reconciliation run identification |

# Volume\_Quantity

| XML element         | Data type  | Multiplicity | Description                                  | Functional parameter |
|---------------------|------------|--------------|----------------------------------------------|----------------------|
| volumeQuantity_type | VolumeType | 1..1         | The description of the type of the quantity. | Type volume          |

## 7.9 Confirmation/rejection notification Exchange OVP volumes for reconciliation per individual allocation point (SettlementSeriesAcknowledgement)



### 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. | Notification identifier (UUID) |
| createdDateTime | DateTime       | 1..1         | The date and time of the creation of the document as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.   | Date/time notification         |

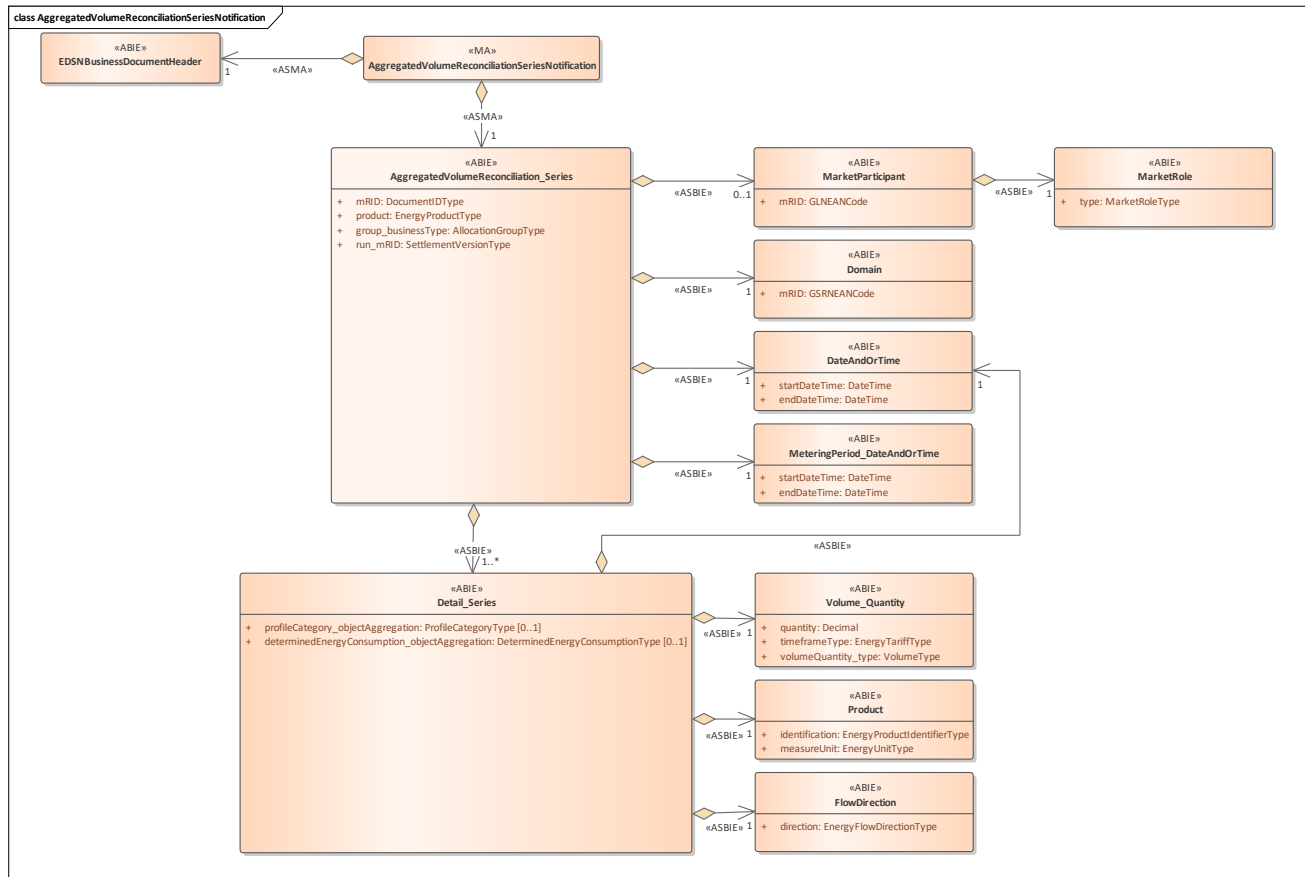
### Reason

| 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. | Notification identifier (UUID) |

## 7.10 Notification Exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area (AggregatedVolumeReconciliationSeriesNotification)



### AggregatedVolumeReconciliation\_Series

| XML element        | Data type             | Multiplicity | Description                                                      | Functional parameter              |
|--------------------|-----------------------|--------------|------------------------------------------------------------------|-----------------------------------|
| mRID               | DocumentIDType        | 1..1         | A unique identification of the time series.                      | Notification identifier (UUID)    |
| product            | EnergyProductType     | 1..1         | The identification of the energy product (electricity, gas etc.) | Product type                      |
| group_businessType | AllocationGroupType   | 1..1         | The identification of the nature of the time series.             | Allocation group                  |
| run_mRID           | SettlementVersionType | 1..1         | The identification of the version of the time series.            | Reconciliation run identification |

### 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 time period |
| endDateTime   | DateTime  | 1..1         | End date time of the period as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.   | End date time period   |

#### Detail\_Series

| XML element                                   | Data type                       | Multiplicity | Description                                                                                                       | Functional parameter          |
|-----------------------------------------------|---------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------|
| profileCategory_objectAggregation             | ProfileCategoryType             | 0..1         | The identification of the profile category that is the common denominator used to aggregate volumes.              | Profile category              |
| determinedEnergyConsumption_objectAggregation | DeterminedEnergyConsumptionType | 0..1         | The identification of the determined energy consumption that is the common denominator used to aggregate volumes. | Determined energy consumption |

#### Domain

| XML element | Data type   | Multiplicity | Description                              | Functional parameter |
|-------------|-------------|--------------|------------------------------------------|----------------------|
| mRID        | GSRNEANCode | 1..1         | The unique identification of the domain. | EAN code grid area   |

#### FlowDirection

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

#### MarketParticipant

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

#### 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          |

#### MeteringPeriod\_DateAndOrTime

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

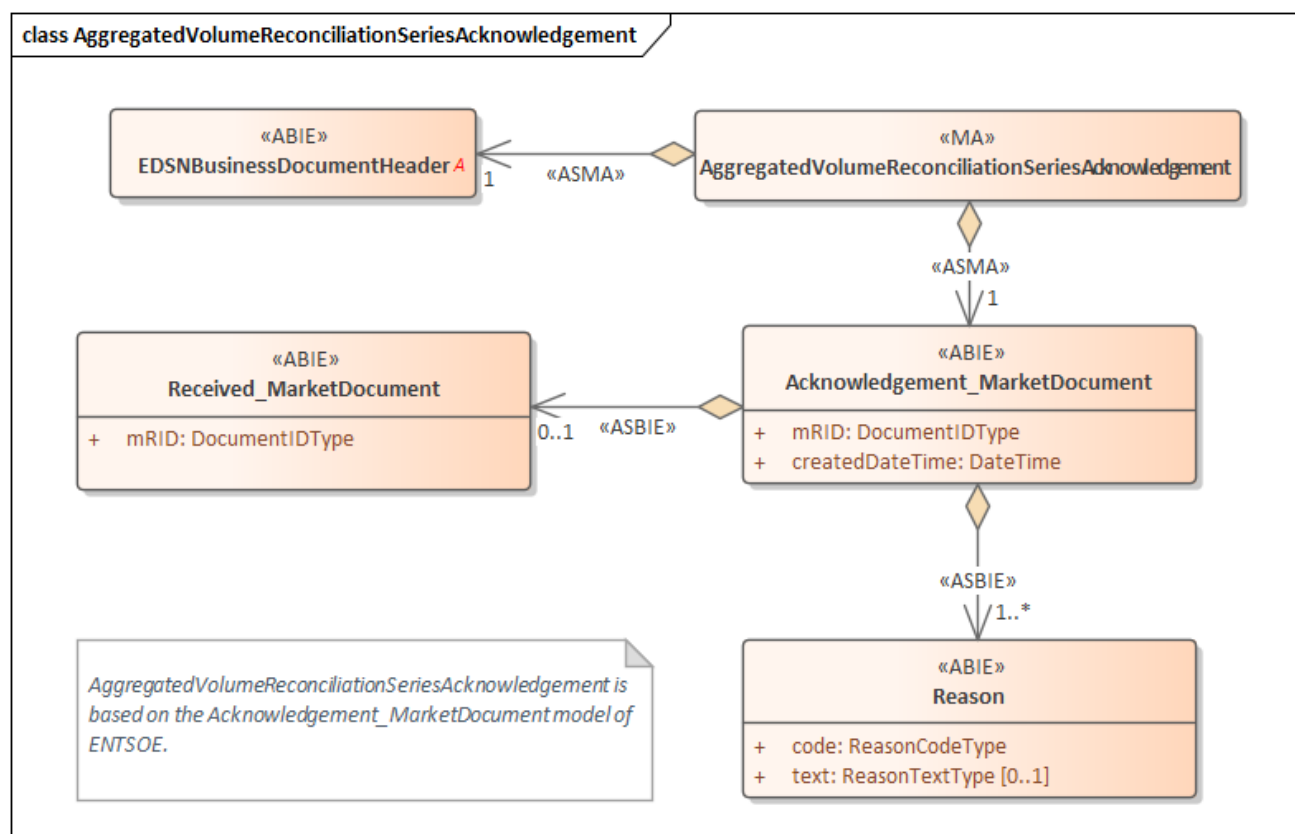
#### Product

| 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          |

## Volume\_Quantity

| XML element         | Data type        | Multiplicity | Description                                                                                   | Functional parameter |
|---------------------|------------------|--------------|-----------------------------------------------------------------------------------------------|----------------------|
| quantity            | Decimal          | 1..1         | The quantity value.<br>The association role provides the information about what is expressed. | Volume (electricity) |
| timeframeType       | EnergyTariffType | 1..1         | The coded identification of the timeframe.                                                    | Price period         |
| volumeQuantity_type | VolumeType       | 1..1         | The description of the type of the quantity.                                                  | Type volume          |

### 7.11 Confirmation/rejection notification Exchange aggregated allocated volumes and aggregated determined volumes for reconciliation per grid area (AggregatedVolumeReconciliationSeriesAcknowledgement)



#### 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. | Notification identifier (UUID) |
| createdDateTime | DateTime       | 1..1         | The date and time of the creation of the document as per ISO 8601 YYYY-MM-DDThh:mm:ssZ.   | Date/time notification         |

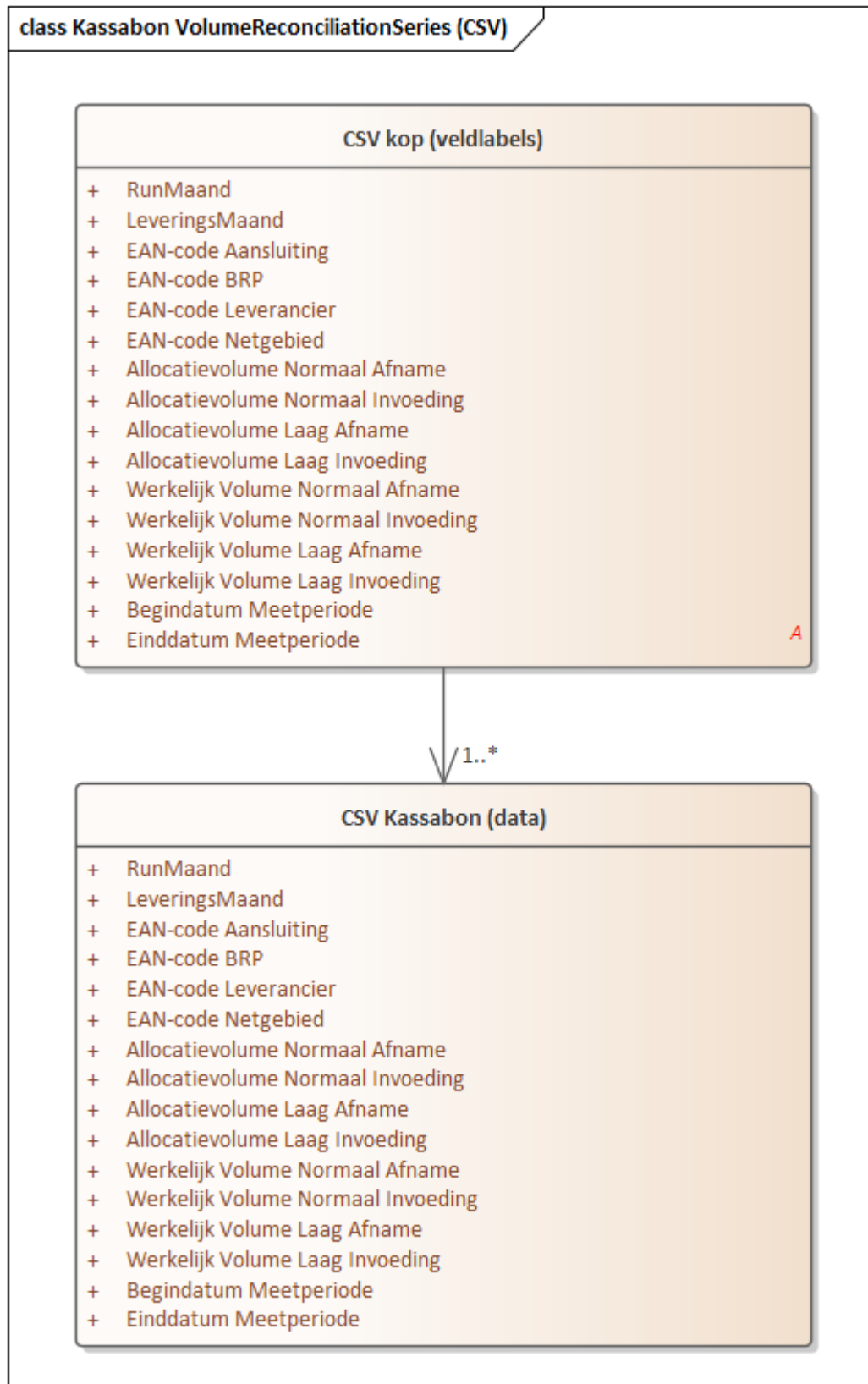
#### Reason

| 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. | Notification identifier (UUID) |

## 7.12 Register receipt specification allocated volumes and determined volumes for reconciliation per individual allocation point (VolumeReconciliationSeries)



The table below is the overview of the implementation of the functional parameters in the message definition<sup>62</sup>.

#### Header (labels)

| Entry                                | Data type | Multiplicity | Description                                           |
|--------------------------------------|-----------|--------------|-------------------------------------------------------|
| Run Month                            | String    | 1..1         | Text label field Run Month                            |
| Delivery month                       | String    | 1..1         | Text label field Delivery month                       |
| EAN code Connection                  | String    | 1..1         | Text label field EAN-code Connection                  |
| EAN code BRP                         | String    | 1..1         | Text label field EAN code BRP                         |
| EAN code Supplier                    | String    | 1..1         | Text label field EAN code Supplier                    |
| EAN code grid area                   | String    | 1..1         | Text label field EAN code grid area                   |
| Allocation volume Normal Consumption | String    | 1..1         | Text label field Allocation Volume Normal Consumption |
| Allocation volume Normal Production  | String    | 1..1         | Text label field Allocation Volume Normal Production  |
| Allocation volume Low Consumption    | String    | 1..1         | Text label field Allocation volume Low Consumption    |
| Allocation volume Low Production     | String    | 1..1         | Text label field Allocation volume Low Production     |
| Actual Volume Normal Consumption     | String    | 1..1         | Text label field Actual Volume Normal Consumption     |
| Actual Volume Normal Production      | String    | 1..1         | Text label field Actual Volume Normal Production      |
| Actual Volume Low Consumption        | String    | 1..1         | Text label field Actual Volume Low Consumption        |
| Actual Volume Low Production         | String    | 1..1         | Text label field Actual Volume Low Production         |
| Start date of Measurement period     | String    | 1..1         | Text label field Start date Measurement period        |
| End date of Measurement period       | String    | 1..1         | Text label field End date Measurement period          |

#### Register receipt (data VolumeReconciliationSeries)

| Entry                                | Data type | Multiplicity | Description                                                                            |
|--------------------------------------|-----------|--------------|----------------------------------------------------------------------------------------|
| Run Month                            | Date      | 1..1         | According to the notation: YYYYMM.                                                     |
| Delivery month                       | Date      | 1..1         | According to the notation: YYYYMM.                                                     |
| EAN code Connection                  | String    | 1..1         | EAN18 for the allocation point electricity.                                            |
| EAN code BRP                         | String    | 1..1         | EAN13 of the BRP.                                                                      |
| EAN code Supplier                    | String    | 1..1         | EAN13 of the SUP.                                                                      |
| EAN code grid area                   | String    | 1..1         | EAN18 of the grid area.                                                                |
| Allocation volume Normal Consumption | Integer   | 1..1         | Imputed allocation volume consumption during normal hours (in kWh, no decimal places). |
| Allocation volume Normal Production  | Integer   | 1..1         | Imputed allocation volume production during normal hours (in kWh, no decimal places).  |
| Allocation volume Low Consumption    | Integer   | 1..1         | Imputed allocation volume consumption during low hours (in kWh, no decimal places).    |

<sup>62</sup> Concerns the structure of the current Register receipt. The format of this Register receipt is different from RFC 4180 which is used as the CSV format for the Dutch energy market

| Entry                            | Data type | Multiplicity | Description                                                                                          |
|----------------------------------|-----------|--------------|------------------------------------------------------------------------------------------------------|
| Allocation volume Low Production | Integer   | 1..1         | Imputed allocation volume production during low hours (in kWh, no decimal places).                   |
| Actual Volume Normal Consumption | Integer   | 1..1         | The volume consumption during normal hours determined for reconciliation(in kWh, no decimal places). |
| Actual Volume Normal Production  | Integer   | 1..1         | The volume production during normal hours determined for reconciliation (in kWh, no decimal places). |
| Actual Volume Low Consumption    | Integer   | 1..1         | The volume consumption during low hours determined for reconciliation(in kWh, no decimal places).    |
| Actual Volume Low Production     | Integer   | 1..1         | The volume production during low hours determined for reconciliation (in kWh, no decimal places).    |
| Start date of Measurement period | Date      | 1..1         | Start date of the consumption period according to the notation: YYYYMMDD.                            |
| End date of Measurement period   | Date      | 1..1         | End date of the consumption period according to the notation: YYYYMMDD.                              |

## Structure and example (Comma Separated Value)

### Structure Register receipt

| Line         | Structure                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 (labels)   | Run Month;Delivery Month;EAN code Connection;EAN code BRP;EAN code Supplier;EAN code grid area;Allocation volume Normal Consumption;Allocation volume Normal Production;Allocation volume Low Consumption;Allocation volume Low Production;Actual Volume Normal Consumption;Actual Volume Normal Production;Actual Volume Low Consumption;Actual Volume Low Production;Start date Measurement period;End date Measurement period |
| 2.. n (data) | Run Month;Delivery Month;EAN code Connection;EAN code BRP;EAN code Supplier;EAN code grid area;Allocation volume Normal Consumption;Allocation volume Normal Production;Allocation volume Low Consumption;Allocation volume Low Production;Actual Volume Normal Consumption;Actual Volume Normal Production;Actual Volume Low Consumption;Actual Volume Low Production;Start date Measurement period;End date Measurement period |

### Example Certificate

| Line   | Example                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Run Month;Delivery Month;EAN code Connection;EAN code BRP;EAN code Supplier;EAN code grid area;Allocation volume Normal Consumption;Allocation volume Normal Production;Allocation volume Low Consumption;Allocation volume Low Production;Actual Volume Normal Consumption;Actual Volume Normal Production;Actual Volume Low Consumption;Actual Volume Low Production;Start date Measurement period;End date Measurement period |
| 2      | 202408;202305;871690930000400000;7609999151408;8719328014201;871690910000025589;61;12;80;19;344;24;450;39;20230501;20240501                                                                                                                                                                                                                                                                                                      |
| 3      | 202408;202306;871690930000400000;7609999151408;8719328014201;871690910000025589;59;6;59;7;330;46;329;134;20230501;20240501                                                                                                                                                                                                                                                                                                       |
| 4      | 202408;202307;871690930000400000;7609999151408;8719328014201;871690910000025589;61;0;63;0;341;0;352;0;20230501;20240501                                                                                                                                                                                                                                                                                                          |
| 5 .. n |                                                                                                                                                                                                                                                                                                                                                                                                                                  |