Date: Friday June 16th and Monday June 26th, 2023
Time: 09:00 – 11:00 and 10:00 – 12:00
Place: GoToMeeting

Present: Jan (NL), EDSN
                Jan (SE), Svenska kraftnät
                Kees, ebIX®
                Ove, ebIX®

Appendix A: ebIX® rules for how to make MRs to WG16
Appendix B: Mapping from ebIX® class diagrams for Validated measured data for continuous metered AP to CIM

Attachment:

1. Appendixes for ETC minutes (docx)
2. ETC workplan (see ebIX® file manager at https://filemanager.ebix.org/#)

1   Approval of agenda

The agenda was approved.

Priorities:

1) Resolve matters related to ebIX® ending plan, see item 3.
2) Review of MRs related to addition of Register master data - focus item, see item 6.1.3.
3) Review of non-submitted MRs from the ETC Excel sheet - focus item, see item 6.1.5.
4) Not yet mapped attributes from the BRS for Alignment of metering configuration characteristics, see item 6.1.6.
5) MRs to be followed up after review by CIM for retail market WG, see item 6.2.1.
6) MRs to discuss, see item 6.2.2.
7) Status for submission of HG MR for the new domain (or CIM object) Grid Connection, see item 9.5.

2   Approval of minutes from previous meetings

The minutes from previous meeting were approved.

3   Resolve matters related to ebIX® ending plan

From Anne Stine:

> And thank you for today's meeting, albeit a quite sad one.

> I remember my first ebIX meeting in Brussels in 2013, and all the detailed and yet very informative discussions we have had since! And not to mention the dedication many of you have shown over all these years! I think you have significantly contributed to moving the end user industry forward in a coordinated fashion. We discussed briefly in Elhub just now; I'm certain that ebIX' absence will be felt at some point, and really hope that ENTSO-E or one of the groups associated will see the benefit of at least keeping ebIX documents in good storage, available for later continued work. The decision made was however and after

all the right one, even though it leaves concerns. The plan for finishing/ handing over the ongoing work seems good.

Could I suggest one thing about the plan for close down, though? That you add one or two brief sentences in the introduction, describing why ebIX is closed down? Would be good to have handy for any national bodies asking.

The ending plan was reviewed and updated. ETC thinks we should write the document with a positive mindset and avoid negative comments in the document.

The document will be forwarded to EBG for commenting.

3.1   Memo: Consequences of closure of ebIX®

Jan (NL) had made comments to the Consequences of closure of ebIX® document, which were reviewed, updated and agreed.

The intention is to present the document on the ebIX® Forum meeting September 20th, hence a new review will be put on the agenda for the next ETC meeting.

4   Exporting the ebIX® MD model to EA format

Jan (NL) had asked some colleagues from India if they have any good ideas with the response that it should be possible. Should be done on your own disk, without migration of the diagrams - and let it take time.

It was noted that this currently is a low-prioritised task, i.e. we should not spend too much time on it.

Continued actions:
- Ove will continue trying to migrate the ebIX® MD model to EA format, to get an idea of how much work it will be.
- Ove will ask Sparx if they can help with the task of migrating the ebIX® MD model to EA format.

5   Status for a common ebIX®, EU DSO Entity, ENTSO-E (CIM EG) and ENTSOG Area project

No news reported.

6   Resolve ebIX®/IEC issues

6.1   Making a European Style Downstream Market Profile (ESDMP)

6.1.1   MRs to WG16 CIM modelling team and Information from IEC meetings

MRs to WG16 and their status are found in a separate common ETC Excel sheet that all ETC members may get access to. In addition, Jan (SE) is maintaining a similar spreadsheet located at the ENTSO-E extranet. The ENTSO-E spreadsheet is however not containing the older MRs. Hence, for the time being we continue maintaining two spreadsheets.

Minutes from WG16 meetings can be found at: WG16 / Modelling-Team-Minutes.

Jan (SE) informed that there was a joint WG13, WG14 and WG16 meeting in Oslo earlier this week. He presented some of the Redmine issues related to ebIX® with focus on issues related to timing of meter read, such as next reading date and resolution. He also presented some ideas related to the interpretation of GPS positions in the PositionPoint class.

6.1.2   Status and possible review of MRs where CIM for retail market wg need more information - focus item

Ove had as action (May 30th) updated the code figure in the ebIX® MR 2023-004-v3 (Add connectionCategory to Meter in ESMP) – and Jan (SE) has resubmitted the MR to the CIM for retail market wg.

Ove has drafted all the MRs related to the Register class in BRS for Metering configuration characteristics. These MRs will be reviewed as part of item 6.1.3.

6.1.3   Review of MRs related to addition of Register master data - focus item

Ove had as action made the following MRs:

- **ebIX® 2023-012:** Change the cardinality of the association from EndDevice to UsagePoint from [0..1] to [0..*] at the UsagePoint in the IEC 61968/Metering package. Further Add the association from Meter to MarketEvaluationPoint in IEC 62325-351 (ESMP).

    Comment:
    - o   What is the justification for this MR? According the ebIX® BRS for Metering configuration characteristics, a MP can have [0..*] Registers, but the opposite is not specified.

    Status:
    - o   The justification was updated. The MR is ready for submission to ENTSO-E CIM for retail market wg.

- **ebIX® 2023-013:** Add EndDeviceFunction and associations from Meter to EndDeviceFunction and from EndDeviceFunction to Register in IEC 62325-351 (ESMP) and add a reference to this MR in MR ebIX® 2023-002.

    Comment:
    - o   Shall we keep the enabled: Boolean attribute in the EndDeviceFunction class?

    Conclusion:
    - o   We keep the enabled: Boolean attribute.

    Status:
    - o   Proposed new definitions reviewed. Ready for submission to CIM for retail market wg.

- **ebIX® 2023-014:** Add the attribute touTierName to Register in IEC 62325-351 (ESMP).

    Comment:
    - o   Shall we also add the enumeration? I.e.:

Name	Code Name
E10	Night, WE
E11	Working Day
E12	PeakPeriod
E29	No meter timeframe

    Conclusion:
    - o   We do not ask for addition of an enumeration.

    Status:
    - o   Proposed new definitions reviewed. Ready for submission to CIM for retail market wg.

- **ebIX® 2023-015:** Add the energyFlowCategory to the Register class in IEC 61968 and to the Register class in IEC 62325-351 (ESMP).

    Conclusion:

- o Ove will rewrite the MR 2023-015, i.e. instead of asking for addition of energyFlowCategory to Register, we will ask for addition of the Channel class and the ReadingType classes, with the attribute flowDirection from IEC 61968/Metering to IEC 62325-351 (ESMP), including the associations between the Register class and the new Channel Class, and between the new Channel class and the new ReadingType class in IEC 62325-351 (ESMP), ref. MR 2023-018. We will use the existing enumerations for the flowDirection attribute: forward (consumption), reverse (production) and total (combined).
  - o We will note that it is an option to add codes to the enumeration in Europe.

  Status:
  - o Proposed new definitions reviewed. Ready for submission to CIM for retail market wg.

- **ebIX® 2023-016:** Add a RegisterMultiplier class and associated it to the Register the IEC 61968/Metering package. Further Add the RegisterMultiplier class and associated it to the Register in IEC 62325-351 (ESMP).

  From discussion during ETC meeting June 26th:
  - o Jan (SE) and Ove has asked EBG if we should add a link from Register to MeterMultiplier in the ebIX® BRS for Metering configuration characteristics, with the following conclusion:

    There is no need for adding a link from Register to MeterMultiplier in the ebIX® BRS for Metering configuration characteristics. The reason being that we already have a Constant in the Register class, which is used for a multiplier on Register level.

  - o However, it may be a need for the RegisterMultiplier class from the upstream market (for large installations).
  - o It is also good using the same principles for the multiplier for both Meter and Register.

  Status:
  - o To be re-reviewed by ETC.

- **ebIX® 2023-017:** Add an association from the Register class in the IEC 61968/Metering package to the MktPSRType class IEC 62325/MarketManagement package. Further, add the association from the Register class to the MktPSRType class in IEC 62325-351 (ESMP).

  Status:
  - o The MR is ready for submission to ENTSO-E CIM for retail market wg.

- **ebIX® 2023-018:** Add the Channel class and the ReadingType classes from IEC 61968/Metering to IEC 62325-351 (ESMP), including the associations between the Register class and the new Channel Class, and between the new Channel class and the new ReadingType class in IEC 62325-351 (ESMP).

  Comment:
  - o What shall we do with the AccumulationKind enumeration?
  - o The definitions in 4.2.4.1 are taken from CIM, hence must be reviewed!

  Conclusion:
  - o Ove will rewrite the MR, i.e. we use the AccumulationKind enumeration with the codes none and cumulative.

  Status:
  - o To be re-reviewed by ETC.

Actions:

- Jan (NL) will verify if ebIX® MR 2021/035 (new Product class), ebIX® MR 2021/036 (measureUnit attribute) and ebIX® MR 2021/044 (Addition of association from Register to Product) still is valid.

Item closed.

6.1.4   MRs based on Dutch requirements

The item was postponed.

6.1.5   Review of non-submitted MRs from the ETC Excel sheet - focus item

The following MRs have been submitted to ENTSO_E CIM for retail market wg (agreed by both EBG and ETC).

- ebIX® 2022/020 v1: Add ChargeType to ESMP
- ebIX® 2022/021 v1: Add ChargeComponent with attribute equation and association to ChargeType
- ebIX® 2022/022 v1: Add an association from Series to ChargeType
- ebIX® 2022/023 v1: Add an association from ChargeType to MarketParticipant
- ebIX® 2022/024 v1: Add association from ChargeGroup to ChargeType
- ebIX® 2022/025 v1: Add association from ChargeType to Period (Series_Period)
- ebIX® 2022/026 v1: Add VATObliged attribute to ChargeType
- ebIX® 2022/035 v1: Add VATLevel attribute to ChargeType

The following MRs, which have been drafted by Ove and reviewed by Jan (SE), will be submitted after this meeting:

- ebIX 2023-007-v1: Add numberOfRegisters to Meter in 61968 and ESMP.
  - Jan (SE) has done some minor changes:
    - A) Changed the headings in 4.1.2 and 4.1.3
    - B) Added a suggested definition of the new attribute in 4.1.3.
    - C) Corrected the text before the definition in 4.2.4.1.
- ebIX 2023-008-v1: Link pressureCompensation to Meter in ESMP.
  - Jan (SE) has done some minor editorial updates, but also added "*For the same update, but with another attribute in the Compound, see ebIX® MR 2023/009.*"
- ebIX 2023-009-v1: Link temperatureCompensation to Meter in ESMP.
  - Jan (SE) has done some minor editorial updates, but also added "*For the same update, but with another attribute in the Compound, see ebIX® MR 2023/009.*"
- ebIX 2023-011-v1 - Add an association from Meter to UsagePointLocation in ESMP.
  - Jan (SE) has done some minor changes.

The following MRs, which were reviewed during this meeting, will be submitted after this meeting:

- ebIX® 2023-012: Change the cardinality of the association from EndDevice to UsagePoint from [0..1] to [0..*] at the UsagePoint in the IEC 61968/Metering package. Further Add the association from Meter to MarketEvaluationPoint in IEC 62325-351 (ESMP).
- ebIX® 2023-013: Add EndDeviceFunction and associations from Meter to EndDeviceFunction and from EndDeviceFunction to Register in IEC 62325-351 (ESMP) and add a reference to this MR in MR ebIX® 2023-002.
- ebIX® 2023-014: Add the attribute touTierName to Register in IEC 62325-351 (ESMP).
- ebIX® 2023-015: Add the energyFlowCategory to the Register class in IEC 61968 and to the Register class in IEC 62325-351 (ESMP).

- ebIX® 2023-017: Add an association from the Register class in the IEC 61968/Metering package to the MktPSRType class IEC 62325/MarketManagement package. Further, add the association from the Register class to the MktPSRType class in IEC 62325-351 (ESMP).

To be reviewed at next ETC:

- ebIX 2023-010-v1 - Add altitudeCompensation to EndDeviceInfo and link it to Meter in ESMP.
  - o Jan (SE) has added some comments. The suggested addition of altitudeCompensation is unclear, probably it follows alternative 3 that then should be stated.
  - o Jan (SE) will not submit this MR before we have discussed it in ETC.

- ebIX® 2023-016: Add a RegisterMultiplier class and associated it to the Register the IEC 61968/Metering package. Further Add the RegisterMultiplier class and associated it to the Register in IEC 62325-351 (ESMP).
  From discussion during ETC meeting June 26ᵗʰ:
  - o Jan (SE) and Ove has asked EBG if we should add a link from Register to MeterMultiplier in the ebIX® BRS for Metering configuration characteristics, with the following conclusion:

    There is no need for adding a link from Register to MeterMultiplier in the ebIX® BRS for Metering configuration characteristics. The reason being that we already have a Constant in the Register class, which is used for a multiplier on Register level.

  - o However, it may be a need for the RegisterMultiplier class from the upstream market (for large installations).
  - o It is also good using the same principles for the multiplier for both Meter and Register.

  Status:
  - o To be re-reviewed by ETC.

- ebIX® 2023-018: Add the Channel class and the ReadingType classes from IEC 61968/Metering to IEC 62325-351 (ESMP), including the associations between the Register class and the new Channel Class, and between the new Channel class and the new ReadingType class in IEC 62325-351 (ESMP).
  Comment:
  - o What shall we do with the AccumulationKind enumeration?
  - o The definitions in 4.2.4.1 are taken from CIM, hence must be reviewed!

  Conclusion:
  - o Ove will rewrite the MR, i.e. we use the AccumulationKind enumeration with the codes none and cumulative.

  Status:
  - o To be re-reviewed by ETC.

6.1.6   Not yet mapped attributes from the BRS for Alignment of metering configuration characteristics

We have made MRs for all attributes from BRS for Alignment of metering configuration characteristics not found in IEC/CIM.

Item closed.

6.2   Status for ENTSO-E CIM EG Retail market workgroup (follow-up item on the agenda)

6.2.1   MRs to be followed up after review by CIM for retail market WG

The item was postponed.

6.2.2   MRs to discuss

The item was postponed.

6.3   Preparations for coming WG16 meetings

The item was postponed.

7   EG1 status

The item was postponed.

8   Update of ebIX® code list

Ove had as action item published the code list.

Continued action:
- Jan (SE) will try finding time do some QA on the code list as homework

9   Resolve HG issues - Prioritised item on ETC meeting September 27th

9.1   Review of HEMRM update suggestions from EBG

The document has been submitted to the HG.

Item closed.

9.2   BRP vs Energy Trader

The item was postponed.

9.3   Status for harmonisation of the electricity and gas markets role models

The item was postponed.

9.4   Suggestions for HEMRM extensions

The item was postponed.

9.5   Status for submission of HG MR for the new domain (or CIM object) Grid Connection

The item was postponed.

10 ebIX® Business Information Model 2022.A

The item was postponed.

11 Next meetings[1]

- Thursday September 7th, 11:00 – 16:00, 2023, GoToMeeting
- Tuesday September 26th (09:00 – 17:00) and Wednesday September 27th (09:00 – 15:00) in Svenska kraftnäts offices in Sundbyberg (Stockholm).
- Friday October 20th, 10:00 – 15:00, 2023, GoToMeeting
- Wednesday November 22nd, 10:00 – 15:00, 2023, GoToMeeting
- Friday December 8th, 10:00 – 15:00, 2023, GoToMeeting
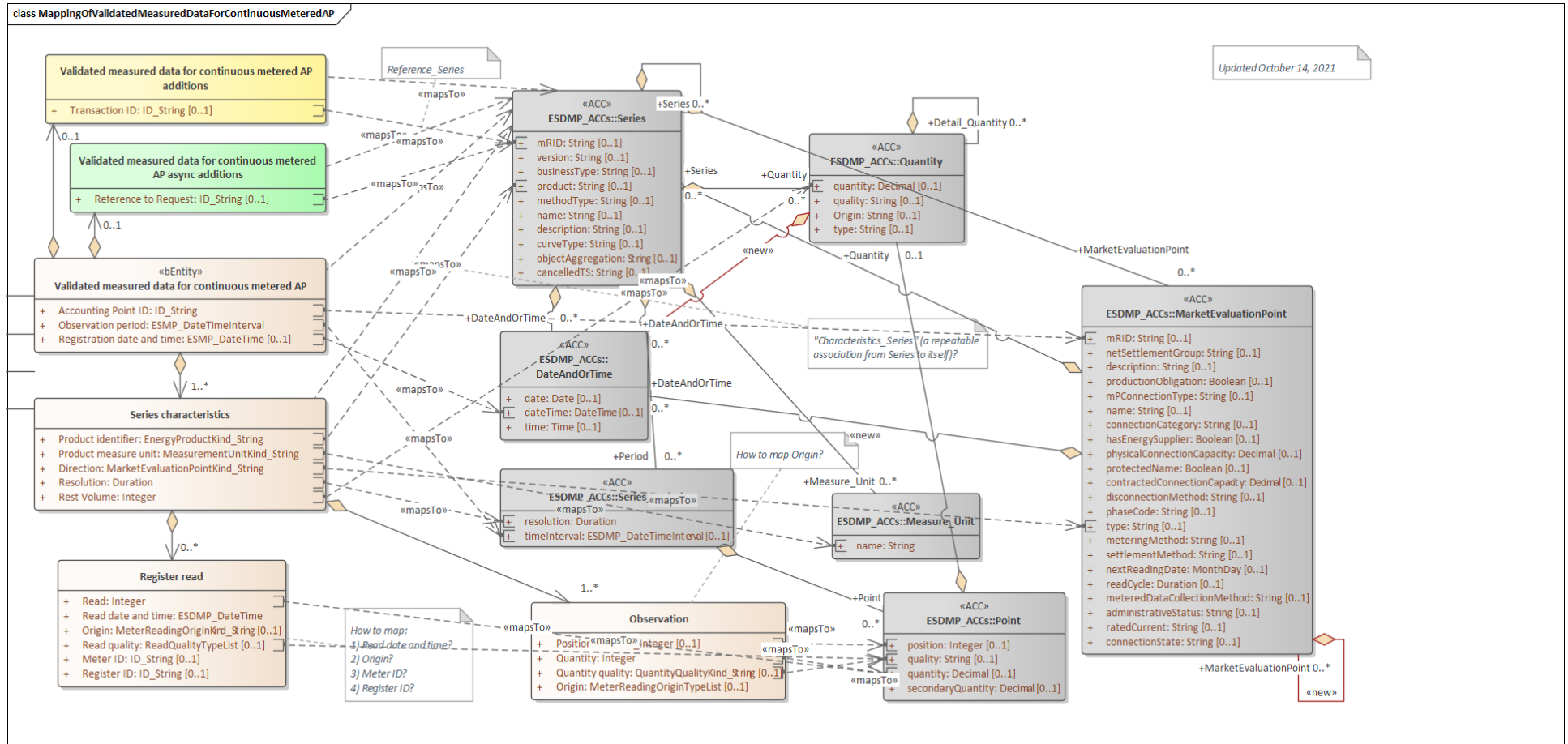
12 AOB

No items.

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[1] All Face-to-face meeting starts 09:00 the first day and end at 16:00 unless otherwise explicitly stated.

Appendix A   ebIX® rules for how to make MRs to WG16

1) Artefacts used for MRs to WG16 shall be stored as separate packages in the common cloud EA model.

2) Always review existing definitions of attributes, classes etc. that are related to the MR in question and if needed propose updates to these definitions.

3) First investigate basic CIM to see if the object we intend to send an MR for already is available there.

   If yes, we should make a MR for 62325-351 (ESMP), if not we make a MR for both basic CIM and ESMP.

Appendix B Mapping from ebIX® class diagrams for Validated measured data for continuous metered AP to CIM

The mapping will be reviewed by ETC, while EBG will look into the definitions of classes and attributes to see if we need to update the ebIX® definitions or if we should send maintenance requests to IEC for update of the CIM definitions.

BRS attribute	BRS definition	CIM attribute	CIM definition
«Business entity» Validated measured data for continuous metered AP	The information set sent by a Metered Data Responsible to the Metered Data Administrator when exchanging validated measured data for continuous metered AP	Series	A set of similar physical or conceptual objects defined for the same period or point of time.
Accounting Point ID	The unique identification of the Accounting Point to which the validated measured data are attributed.	MarketEvaluationPoint / mRID	Master resource identifier issued by a model authority. The mRID is unique within an exchange context. Global uniqueness is easily achieved by using a UUID, as specified in RFC 4122, for the mRID. The use of UUID is strongly recommended. For CIMXML data files in RDF syntax conforming to IEC 61970-552, the mRID is mapped to rdf:ID or rdf:about attributes that identify CIM object elements.
Observation period	The specific period of time the validated measured data have been measured, calculated or estimated for.	Series_Period / timeInterval	The start and end date and time for a given interval.
Registration date and time	The date and time of the validation (and storage in the database) of this set of validated measured data.	DateAndOrTime / dateTime	Date and time as per ISO 8601 YYYY-MM-DDThh:mm:ss.sssZ.
Series characteristics	The characteristics of this set of validated measured data, i.e., the product and flow direction.	Series	A set of similar physical or conceptual objects defined for the same period or point of time.
Product identifier	A code specifying the energy product for the quantities in this set of validated measured data.	Series / product	The type of the product such as Power, energy, reactive power, transport capacity that is the subject of the time series.
Product measure unit	The unit of measure used for the quantities in this set of validated measured data.	Measure_Unit / name	The coded representation of the unit.
Direction	A code specifying the direction of the energy flow that was measured with this validated measured data. A flow from the Accounting Point into the Metering Grid Area is defined as production and a flow from the Metering Grid Area into the Accounting Point is defined as consumption.	MarketEvaluationPoint / type	Specifies if the Market Evaluation Point is an Exchange Point or an Accounting Point.

BRS attribute	BRS definition	CIM attribute	CIM definition
Resolution	The resolution is the time between two observations, leading to the number of observations in this timeseries (calculated from the Observation Period divided by the Resolution). The Observation Period must contain a whole number of observations as derived from the resolution. The resolution is expressed in compliance with ISO 8601 in the following format: PnYnMnDTnHnMnS. For example **PT15M** for 15 minutes resolution.	Series / resolution	The number of units of time that compose an individual step within a period.
Rest Volume	The Rest Volume is used for a volume that cannot be related to the 'normal' measured time series observations, i.e., the difference, for the Observation Period, between the start- and end meter read and the aggregated volume from the exchanged time series.	Quantity / quantity	The quantity value. The association role provides the information about what is expressed.
Register read	A read from the register of the Meter linked to the Accounting Point and characteristics of the read. This read is at the basis of the validated measured data in the Observation.	N/A	
Read[2]	The value as read from or calculated for the register, for this Read date and time in the Observation period.	Point / quantity	Principal quantity identified for a point.
Read date and time	The timestamp of the moment in time when the value was registered in the Register of the Meter or the value was calculated for.	N/A	
Origin	A code specifying the role of the party that has retrieved or calculated the read.	N/A	
Read quality	The quality of this read, such as estimated, remotely read or physically read.	Point / quality	The quality of the information being provided. This quality may be estimated, not available, as provided, etc.
Meter ID	The unique identification of the Meter linked to the Accounting Point, which contains the register that has been read.	N/A	

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[2] If the Register read is missing, the Meter Reading Origin Code shall be "**E28** From Metered Data Responsible" and the Quantity Quality Code shall be "**56** Estimated".

BRS attribute	BRS definition	CIM attribute	CIM definition
Register ID	The unique identification of the Register within the Meter, where this data has been read from or is estimated for.	N/A	
Observation	One validated measured value within a timeseries.	N/A	
Position	The ordinal position of this Observation in this Observation Period for this set of validated measured data.	Point / position	A sequential value representing the relative position within a given time interval.
Quantity	The validated quantity of energy for this Observation.	Point / quantity	Principal quantity identified for a point.
Quantity quality	The quality of this quantity (volume), such as validated (default value, hence not sent), estimated, or temporary.	Point / quality	The quality of the information being provided. This quality may be estimated, not available, as provided, etc.
Origin	A code specifying the role of the party delivering the Quantity.	N/A	
Validated measured data for continuous metered AP additions	Additional information, related to validated measured data, the use of which may be agreed on a national level.	Series	A set of similar physical or conceptual objects defined for the same period or point of time.
Transaction ID	The unique identification of this set of information as given by the Metered Data Responsible.	Series / mRID	Master resource identifier issued by a model authority. The mRID is unique within an exchange context. Global uniqueness is easily achieved by using a UUID, as specified in RFC 4122, for the mRID. The use of UUID is strongly recommended. For CIMXML data files in RDF syntax conforming to IEC 61970-552, the mRID is mapped to rdf:ID or rdf:about attributes that identify CIM object elements.
Validated measured data for continuous metered AP async additions	Additional information related to validated measured data needed when using asynchronous communication.	Series	A set of similar physical or conceptual objects defined for the same period or point of time.
Reference to request	Information about the request for this set of validated measured data for continuous metered AP which uniquely identifies it.	Series / mRID	Master resource identifier issued by a model authority. The mRID is unique within an exchange context. Global uniqueness is easily achieved by using a UUID, as specified in RFC 4122, for the mRID. The use of UUID is strongly recommended. For CIMXML data files in RDF syntax conforming to IEC 61970-552, the mRID is mapped to rdf:ID or rdf:about attributes that identify CIM object elements.

class MappingOfValidatedMeasuredDataForContinuousMeteredAP

Source \ Target	1 DateAndOrTime	2 MarketEvaluationPoint	3 Measure_Unit	4 Point	5 Quantity	6 Series	7 Series_Period
1 Observation				Maps To: Quant... → quality; Maps To: Position → position; Maps To: Quantity → quantity			
2 Register read				Maps To: Read → quantity; Maps To: Read ... → quality			
3 Series characteristics		Maps To: Direct... → type	Maps To: Produ... → name		Maps To: Rest V... → quantity	Maps To: Produ... → product; Maps To: →	Maps To: Resol... → resolu...
4 Validated measured dat...	Maps To: Regist... → dateTi...	Maps To: Accou... → mRID				Maps To: →	Maps To: Obser... → timel...
5 Validated measured dat...						Maps To: Trans... → mRID; Maps To: →	
6 Validated measured dat...						Maps To: →; Maps To: Refer... → mRID	