

Minutes EBG meeting	 European forum for energy Business Information eXchange
June 7 th , 2023	EBG (ebIX® Business Group)

Date: Monday June 5th, 2023

Time: 14:00 to 15:30

Place: GoToMeeting

Present: Gerrit, EDSN
Jan (SE), Svenska kraftnät
Ove, Edisys

Appendix A: Status for update of BRSS

Appendix B: EBG project and survey list

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

Attachments: None

1 Approval of agenda

The agenda was approved.

During this item, Ove informed that the HG meeting scheduled for September 12 is moved, hence it is possible to move the September face-to-face meeting back to Tuesday September 12th and Wednesday September 13th (instead of Thursday September 14th and Friday September 15th).

Action:

- Ove will send a mail to Bostjan and Joachim, asking if we should change back to September 12th and 13th.
- If OK, Ove will send a mail to the rest of EBG and ask if OK.

2 Approval of minutes from previous meetings

The item was postponed.

3 Resolve matters from ebIX Forum meeting May 30th (review of ending plan for ebIX®)

Item 6.1 (Inform HGRM/HEMRM wg of the suggestion to add Aggregated Reception Station, Calorific Value Area and Temperature Area to HGRM) was removed from the close down plan of ebIX® before the meeting, since the task is included in item 6. The item is already added to Appendix B (item G). Ove will try to mention it for HGRM/HEMRM group at their next meeting, June 30th.

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 plan for close down of ebIX® was reviewed and three reasons for closing down ebIX® were added.

From the ebIX® Forum minutes from May 30th:

The ebIX® groups (ETC and EBG) are working on a memo; Consequences of closure of ebIX®, which is expected to be published at the next ebIX® Forum meeting September 20th. Among others, the memo may be used by national ebIX® member when informing nationally of the closure of ebIX®

The “Memo - consequences of closure of ebIX®” was reviewed and updated.

Action:

- Ove will suggest for the HGRM group to add Aggregated Reception Station, Calorific Value Area and Temperature Area to HGRM at the next HGRM/HEMRM group meeting June 30th.
- Regarding the plan for close down of ebIX®:
 - Ove will send it to Kees for verification of the new second statement.
 - Thereafter, Ove will send it to Anne Stine, Gerrit, Jan, Kees, Lucy and Vlatka and ask for comments before sending it to the ebIX® Forum, preferably before summer.
- Ove will do some more updates on the “Memo - consequences of closure of ebIX®” and distribute it to EBG before next meeting.

4 Status for establishment of a German datahub (Joachim)

The item was postponed.

5 “Sub-metering” discussion, if needed (Bostjan)

The item was postponed.

6 Status for common ETC and EBG review of the memo “ebIX® comments to HEMRM”

The item was postponed.

7 Status for handover of “Alignment of master data for areas project” to ENTSO-E

The item was postponed.

8 CIM issues

The item was postponed.

9 Update of BRs

The item was postponed.

10 Review of CIM definitions for classes and attributes based on mapping from ebIX® class diagrams for Validated measured data for continuous metered AP to CIM

The item was postponed.

11 Review of ebIX domain model (low priority item)

The item was postponed.

12 Meeting schedule

GoToMeetings:

- Every Monday until (including) July 3rd, 2023, except for holydays. And from August 21 onwards.

Physical meeting:

- Thursday September 14th and Friday September 15th, in Slovenia (?)
- Tuesday December 12th, Wednesday December 13th and Thursday December 14th, in Oslo

13 AOB

13.1 How to link the physical grid and the market

During the common ETC and EBG meeting Monday May 15th, the justification for addition of a Grid Connection was discussed:

The “Reason for request” part of the MR was updated with a better justification:

There is a need to link together multiple Accounting Points, e.g. within the same “address”, in a proper way. Today this is done differently in different countries, among others by using sub-Accounting Points linked to a main Accounting Points or by using linked Accounting Points, mother/child Accounting Points etc. However, we believe that the correct way is to link these Accounting Points to the same Grid Connection. Furthermore the administration at the Grid Access Provider becomes very complex with multiple Accounting Points at the “same address”, hence the Grid connection (a point in the physical grid, which may have coordinates) seems the solution for this too.

There is a need to have a link from the energy market to the physical grid (as physical energy is delivered).

Conclusion from ETC meeting May 16th:

- EBG will be asked to review the updated MR and if ok, submit it to the HG.

Related to this discussion, a mail was sent to Svein (Statnett) and Chavdar (ENTSO-E),

During an ebIX® meeting today we discussed how the physical grid is linked to the market. More precise, what term is used for the “element” that links the “physical grid” and the “market” and what class from the CGM part of CIM will be used for this “element”?

Do you have any views on this?

With the following response from Svein:

Sorry for the late reply, but I have been waiting for the publication of CSA/NC ENTSOE extension to CGMES on ENTSO-E website [CSA/NC specifications v2.2 are now published \(entsoe.eu\)](https://www.entsoe.eu/Document/CSA_NC_specifications_v2.2_are_now_published)

The EAP file is also available https://www.entsoe.eu/Documents/CIM_documents/Grid_Model_CIM/CIM100_CGMES31v01_501-20v02_NC22v95_MM10v01.zip

From my side the question is not that easy to answer. As you know we have a North American and a European style market. I would not be able to give any good answer based on the North American market, but since you write "from the CGM part of CIM" I assume you mean European style market. The European style market is not really a [Canonical information model](#) but rather a message structure that has arrived from CIM Canonical information model.

In ENTSOE CIM Working group (WG) we are working hard to create a [Canonical information model](#) as an extension of IEC 61970 that would meet the requirement from the European style market. It does not mean that we will create message exchanges that will replace the existing market messages, but rather complement them so that exchanges between party with the same information model can be more efficient.

We have incorporated Bidding Zone, Registered resource (ScheduleResource) into the NC extension more detail can be found in https://eepublicdownloads.entsoe.eu/clean-documents/CIM_documents/Grid_Model_CIM/EquipmentReliability_Profile_Specification_v2.2.pdf

We have also added classes to deal with fuel source and customer flexibility. I am planning to go though this at Statnett on 5th June.

I hope this helped a bit.

During the HG meeting May 31st, Kees mentioned that we would need an answer within September to be able to use it in the IAs. As a consequence, the CIM WG was asked to put the topic on their agenda for June 21st and 22nd.

The information above was briefly gone through and the updated justification was agreed.

Action:

- Ove will inform ETC at their meeting June 16th that EBG agrees to the updated justification and thereafter send it to the HG.

Appendix A Status for update of BRSs

A.1 Structure BRSs

#	BRS	Shall we:	Status
		<ul style="list-style-type: none"> • Rename the class “Reconciliation information” to “Energy volume information”? • Add attribute “Consumption detail” to “Energy volume information” class? • Add Metered Data Administrator ID and/or Metering Point Administrator ID? • Add Accounting Point level and Grid Connection ID to the root class? • Other additions? 	
1.	BRS for administration of consent	Not applicable.	
2.	BRS for Alignment of AP characteristics	Already updated.	
3.	BRS for Alignment of Area characteristics	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Updated the definition of the role Market Operator. • Updated introduction (chapter A). • Updated Appendix A.
4.	BRS for Alignment of characteristics of a Customer at an AP	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Updated introduction (chapter A). • Updated Appendix A.
5.	BRS for Alignment of metering configuration characteristics	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Addition of clarifying text in chapter A • Hiding attributes from the root class in Appendix A, to make the class diagrams more readable. • Update of spelling errors
6.	BRS for bulk change of BRP		Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Harmonised the introduction with other ebIX® BRSs. • Correction of spelling errors.

#	BRS	Shall we: <ul style="list-style-type: none"> • Rename the class “Reconciliation information” to “Energy volume information”? • Add attribute “Consumption detail” to “Energy volume information” class? • Add Metered Data Administrator ID and/or Metering Point Administrator ID? • Add Accounting Point level and Grid Connection ID to the root class? • Other additions? 	Status
7.	BRS for Bulk change of Shipper	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Harmonised the introduction with other ebIX® BRSs. • Moved Reference to requesting Transaction ID to Async Additions. • Correction of spelling errors. • Update of roles to be in line with HEMRM (renamed Balance Supplier to Energy Supplier, incl. update of the definition).
8.	BRS for Change of BRP	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Harmonised the introduction with other ebIX® BRSs. • Moved Reference to requesting Transaction ID to Async Additions. • Correction of spelling errors. • Update of roles to be in line with HEMRM (renamed Balance Supplier to Energy Supplier, incl. update of the definition).
9.	BRS for Change of Metered Data Responsible	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Harmonised the introduction with other ebIX® BRSs. • Moved Reference to requesting Transaction ID to Async Additions. • Correction of spelling errors. • Update of roles to be in line with HEMRM (renamed Balance Supplier to Energy Supplier, incl. update of the definition).

#	BRS	Shall we: <ul style="list-style-type: none"> • Rename the class “Reconciliation information” to “Energy volume information”? • Add attribute “Consumption detail” to “Energy volume information” class? • Add Metered Data Administrator ID and/or Metering Point Administrator ID? • Add Accounting Point level and Grid Connection ID to the root class? • Other additions? 	Status
10.	BRS for Change of Shipper	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Harmonised the introduction with other ebIX® BRSs. • Moved Reference to requesting Transaction ID to Async Additions. • Correction of spelling errors. • Update of roles to be in line with HEMRM (renamed Balance Supplier to Energy Supplier, incl. update of the definition).
11.	BRS for Change of supplier	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Updated role definitions incl. update of Energy Supplier to fit gas. • Hiding attributes from the root class in Appendix A, to make the class
12.	BRS for Combined grid and supply billing	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Harmonised the introduction with other ebIX® BRSs. • Hiding attributes from the root class in Appendix A, to make the class. • Correction of spelling and grammatical errors.
13.	BRS for Consented request for Accounting Point characteristics	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Harmonised the introduction with other ebIX® BRSs. • Hiding attributes from the root class in Appendix A, to make the class.
14.	BRS for Customer move	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Harmonised the introduction with other ebIX® BRSs. • Hiding attributes from the root class in Appendix A, to make the class.

#	BRS	Shall we:	Status
15.	BRS for End of Metered Data Responsible	Not applicable. <ul style="list-style-type: none"> • Rename the class “Reconciliation information” to “Energy volume information”? • Add attribute “Consumption detail” to “Energy volume information” class? • Add Metered Data Administrator ID and/or Metering Point Administrator ID? • Add Accounting Point level and Grid Connection ID to the root class? • Other additions? 	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Harmonised the introduction with other ebIX® BRSs. • Moved Reference to requesting Transaction ID to Async Additions. • Update of roles to be in line with the ebIX®, EFET and ENTSO-E Harmonised Electricity Market Role Model version 2022-01. • Updated attribute sequence in class diagrams. • Hiding attributes from the root class in Appendix A.
16.	BRS for End of supply	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Harmonised the introduction with other ebIX® BRSs. • Moved Reference to requesting Transaction ID to Async Additions. • Update of roles to be in line with the ebIX®, EFET and ENTSO-E Harmonised Electricity Market Role Model version 2022-01. • Hiding attributes from the root class in Appendix A.
17.	BRS for Manage APs	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Harmonised the introduction with other ebIX® BRSs. • Update of roles to be in line with the ebIX®, EFET and ENTSO-E Harmonised Electricity Market Role Model version 2022-01. • Hiding attributes from the root class in Appendix A.

#	BRS	Shall we:	Status
		<ul style="list-style-type: none"> • Rename the class “Reconciliation information” to “Energy volume information”? • Add attribute “Consumption detail” to “Energy volume information” class? • Add Metered Data Administrator ID and/or Metering Point Administrator ID? • Add Accounting Point level and Grid Connection ID to the root class? • Other additions? 	
18.	BRS for Rearrange MPs between grids	Not applicable.	<p>Earlier agreed, but not yet, published:</p> <ul style="list-style-type: none"> • Harmonised the introduction with other ebIX® BRSs. • Update of roles to be in line with the ebIX®, EFET and ENTSO-E Harmonised Electricity Market Role Model version 2022-01. • Hiding attributes from the root class in Appendix A

A.2 Measure BRSs

#	BRS	shall we add Consumption detail and/or move Fuel and Technology?	Status
1.	BRS for Measure for Billing	Not applicable.	<p>Earlier agreed, but not yet, published:</p> <ul style="list-style-type: none"> • However, the sequence of attributes in “Series characteristics” in “Validated measured data for billing” has been updated (Moved Resolution to the Product, unit cluster) and the layout in Appendix A have been updated. • Exchange UCs has been renamed to Notify. • Updated Appendix A.
2.	BRS for Measure for Collected Data	Not applicable.	Already aligned with latest HEMRM.
3.	BRS for Measure for determine and notify validated meter read	Not applicable.	<p>Earlier agreed, but not yet, published:</p> <ul style="list-style-type: none"> • Exchange UCs and documents has been renamed to Notify. • The BRS is renamed from “BRS for Measure for determine and exchange validated meter read” to “BRS for Measure for determine and notify validated meter read”.

#	BRS	shall we add Consumption detail and/or move Fuel and Technology?	Status
4.	BRS for Measure for Imbalance Settlement	Already added and the BRS is published.	Already aligned with latest HEMRM.
5.	BRS for Measure for Reconciliation	Not applicable.	Already aligned with latest HEMRM.
6.	BRS for Measure for renewable energy certificates	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Moved Resolution to the Product, unit cluster in all class diagrams. • Updated Appendix A
7.	BRS for Validate and notify measured data	Not applicable.	Earlier agreed, but not yet, published: <ul style="list-style-type: none"> • Moved Resolution to the Product, unit cluster in all class diagrams. • Exchange UCs and documents has been renamed to Notify. • The BRS is renamed from “BRS for Validate and exchange measured data” to “BRS for Validate and notify measured data”

A.3 Distributed Flexibility BRSs

#	BRS	Status	Comments
1.	BRS for Flexibility register administration	The published version: <ul style="list-style-type: none"> • Is already aligned with latest HEMRM. • Grid Connection ID is already added. 	
2.	BRS for Prepare and aggregate Resources for flexibility services	The published version: <ul style="list-style-type: none"> • Is already aligned with latest HEMRM. • Grid Connection ID is already added. 	
3.	BRS for Quantification and settlement of flexibility services	The published version: <ul style="list-style-type: none"> • Is already aligned with latest HEMRM. • Grid Connection ID is already added. 	

A.4 Settlement and reconciliation BRSs

#	BRS	Status	Comments
1.	BRS for Settle for Reconciliation	TBD autumn 2024	

Appendix B EBG project and survey list

B.1 Potential projects

#	Project description	Priority	Start
A)	Review what attributes to send in a confirmation (e.g. all from the request, only approve/disapprove or some core attributes, such as AP)	High	20230206: <ul style="list-style-type: none"> Started February 2023
B)	Efficient data alignment, including the possibility to request historical and/or future master data. See “very general” data act from EU: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13045-Data-Act-amended-rules-on-the-legal-protection-of-databases_en . EBG should start with a survey for the need of such a project.	To be decided by ebIX® Forum	20230417: <ul style="list-style-type: none"> Not achievable.
C)	Discuss differentiation of data sets per Entitled Role when aligning master data (e.g. when referencing notification of AP master data in a BRS) based on GDPR	High	20230417: <ul style="list-style-type: none"> Not achievable.
D)	Making a BRS for alignment of Exchange Point characteristics	High	20230417: <ul style="list-style-type: none"> Not achievable.
E)	Making an introduction to the ebIX® BRSs, including an overview of the BRSs and a short description.	In finalising Rtr	20230417: <ul style="list-style-type: none"> Is on next EBG agenda
F)	It is assumed that the EC will decide to use IEC basic CIM as the reference Information Model, hence we should bring our definitions in line with IEC CIM. This can be done by changing our definitions, or by submitting maintenance requests to IEC TC57/wg16 (eventually to be forwarded by wg16 to wg14).	Medium	20230417: <ul style="list-style-type: none"> If time item
G)	Update of Gas Role Model with addition of Aggregated Reception Station, Calorific Value Area and Temperature Area for gas.	Low	20230417: <ul style="list-style-type: none"> Inform the HGRM wg of the suggested domains.
H)	Investigate if exchange of measured data from “ebIX BRS for Quantification and settlement of flexibility services” should be moved to a separate “Measure for quantification BRS”.	This is a to-remember item	20230417: <ul style="list-style-type: none"> TBD
I)	Verify extensions to the definitions of roles with the group harmonising the electricity and gas markets role models before adding the extension to the role definitions in a BRS to include gas.	Continuous	20230417: <ul style="list-style-type: none"> When updating role definitions in BRSs
J)	Review of BRS for Settle for Reconciliation, ref. minutes from EBG meeting October 10 th , 2022.	Low	20230417: <ul style="list-style-type: none"> At least to consider during handover to EU DSO Entity.

#	Project description	Priority	Start
K)	Uniform the way of using attributes in “Addition” and “Async addition” classes, see memo: “Usage of attributes in confirm and reject documents in ebIX BRSs”	Low	20230426: • If time

B.2 Approved (and running) projects

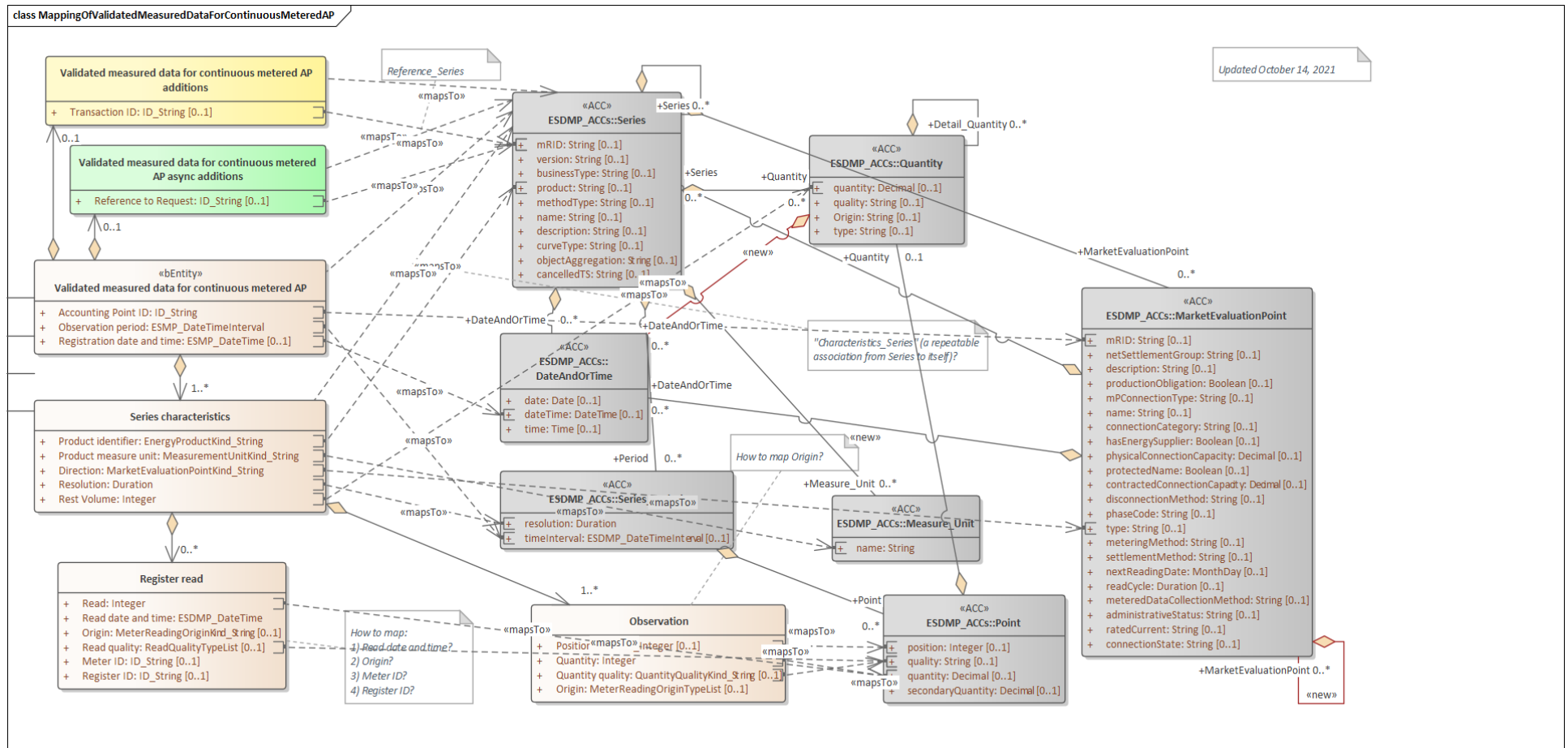
#	Project	Members	Status	Start	End
A)	Common energy market area project	EBG: Bartosz, Boštjan (?), Gerrit, Kees and Ove. “External”: Douglas (ENTSOG), Jon-Egil (ENTSO-E/CIM EG) and ? from EU DSO Entity	Hopefully start October 2022	Dependent on ENTSO-E	?

B.3 Surveys

#	Survey	Status
A)	None.	

Appendix C 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	<p>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).</p> <p>The Observation Period must contain a whole number of observations as derived from the resolution.</p> <p>The resolution is expressed in compliance with ISO 8601 in the following format:</p> <p style="text-align: center;">PnYnMnDTnHnMnS.</p> <p>For example PT15M for 15 minutes resolution.</p>	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	<p>The quantity value.</p> <p>The association role provides the information about what is expressed.</p>
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 ¹	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	

¹ 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	<p>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.</p> <p>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.</p>
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	<p>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.</p> <p>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.</p>

class MappingOfValidatedMeasuredDataForContinuousMeteredAP

Target \ Source	1 DateAndOrTime	2 MarketEvaluationPoint	3 Measure_Unit	4 Point	5 Quantity	6 Series	7 Series_Period
1 Observation				Maps To Quant... → quantity Maps To Position → position Maps To Quantity → quantity			
2 Register read				Maps To Read → quantity Maps To Read ... → quantity			
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	