

Minutes EBG meeting	 European forum for energy Business Information eXchange
June 13 th , 2022	EBG (ebIX® Business Group)

Date: Wednesday and Thursday, June 8th and 9th, 2022

Time: 09:00 –17:00

Place: Varso Place, Chmielna 73, Warsaw

Present: Andrzej, PSE
Bartosz, PSE
Gerrit, EDSN
Jan, Svenska kraftnät (GoToMeeting day 2)
Joachim, Westnetz
Kees, Sparconsult (GoToMeeting)

Appendix A: Status for BRS review

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 with the following additions:

- Flexibility and master data, see item 11.1 under AOB.
- MRs approved by WG16 - remaining updates for AccountingPoint in IEC 62325-351 (ESMP), see item 11.2 under AOB.

2 Approval of minutes from previous meeting

The minutes from previous meeting were approved.

3 Status for “Alignment of master data for areas project”

Status for invitation of the EFET, EASEE-gas, ENTSO-E (CIM EG), ENTSOG and EU DSO Entity to participate in the “Alignment of master data for areas” project.

Jon-Egil has informed that he will be the CIM EG member in the project.

Action:

- Ove will inform ENTSOG and the EU DSO Entity that Jon-Egil will participate from ENTSO-E.

4 Datahub survey and update of German discussion

Sylvia and Joachim have sent a request for update of the original “datahub survey” made summer 2019. The request is based on a question from the German regulator who wants to know the overall status for other European datahubs. We should update the published survey when this new one is finished.

Joachim had asked for a clarification in this face-to-face meeting, which processes are carried out directly in the hub and which processes are supported by the hub (Detail for column 6).

From discussion:

- Gerrit explained that one of the reasons for storing data in the datahub is that the data need to have a high degree of availability (99,9%) and this is difficult for small DSOs with small data knowledge.
- Bartosz informed that the Polish datahub will start up in 2024, however without historical data. Historical data must be distributed bilaterally between the actors - like today.
- There is a discussion in Germany if they shall start by making a datahub having only a few processes or if a datahub shall have all processes from the beginning.
 - Andrzej thinks it is difficult starting with only a limited number of processes, since most processes are interconnected, like all the processes from the Metering Point Administration (moves, switches etc).
- Gerrit stressed that it is important to spend time on the governance model. For instance, in the Nordic countries and in Poland the regulator has decided the host of the datahubs (the TSOs or a TSO owned company) and have regulated the datahubs in detail, while in other countries, such as the Netherlands, the hub is mainly governed by the market players, especially the grid companies
- Some videos explaining presenting the datahubs in Finland, Norway and Poland:
 - https://www.youtube.com/watch?v=7l_jle9kJDU (Finish datahub)
 - <https://www.youtube.com/watch?v=uYVo1MHBFvc> (Norwegian datahub)
 - <https://www.youtube.com/watch?v=uYVo1MHBFvc> (Polish datahub)

5 Review project list (Appendix B) for priorities and possible next actions

The project list (Appendix B) was reviewed and updated.

Regarding row C), Jan informed of the coming data act from EU, see https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13045-Data-Act-amended-rules-on-the-legal-protection-of-databases_en - very general.

Regarding row F), Joachim informed that Gateway Operator and Gateway Administrator will NOT be market roles in Germany, hence row F) related to making MRs to the HG and a BRS for definition for and relations between Gateway, Gateway Operator and Gateway Administrator was removed from the project list.

Action:

- (Low priority) Ove will make an overview of what attributes are sent in confirmations in different BRSs, e.g. to see if all from the request, only approve/disapprove or some core attributes, such as AP are there, ref. first line in Appendix B.
- (Low priority) Ove will make an introduction to the ebIX® BRSs (separate document), including an overview of the BRSs and a short description.

6 Finalise review of BRS for Measure for imbalance settlement

The BRS for Measure for imbalance settlement was reviewed and all comments in the draft version were handled.

NMEG (Nordic Market Expert Group) had as action item to re-review the MR NMEG 2020/1 (to ebIX®), e.g.:

- Rename the “Regulation Type” to “Technology Type” and rename the code Z07 to something else than “Consumption” (find a name that fits a Technology Type Code List).

Conclusion from NMEG:

- Changed to “Technology type”.

Conclusion from EBG:

- Energy Label class added to BRS

Energy Label	A class indicating the origin of energy produced
Technology	An indication of the technology of energy production.
Fuel	An indication of the fuel used for energy production.

- Rename the “Production Category” to “Metering Point Size” and maybe add a code for “Large” (in addition to the two existing “Normal” and “Minor”).

Conclusion from NMEG:

- Changed to “Resource size”

Conclusion from EBG:

- Added to BRS:

Resource size	A code for indicating the size of a resource, used as an aggregation criterium.
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- Find a better solution for the Business Type Codes – It seems it should have been split into several code lists.

Conclusion from NMEG:

- NMEG suggested to add a new attribute (code list) “Business type details” to be used for all used codes except for “A01 Production” and “A04 Consumption” (to be kept in the “Business type” attribute). The rest of the codes were suggested moved to the new attribute (code list) “Business type details”.

Conclusion from EBG:

- This doesn’t solve the problem; hence this item needs a better suggestion from NMEG. I.e. the request will be returned to NMEG.

Action:

- Ove will send the BRS for Measure for imbalance settlement for approval to EBG and ebIX® Forum for four weeks before publication.

7 Continue review of BRS for Measure for reconciliation

The BRS for Measure for reconciliation was also reviewed and all comments in the draft version were handled also.

Action:

- Gerrit will draft some text for the overview chapter.
- Ove will send the BRS for Measure for reconciliation for approval to EBG and ebIX® Forum for four weeks before publication.

8 Start review of BRS for Settle for Reconciliation (if time item)

It was started on a review of the BRS, but the BRS seems quite extended and complicated and difficult to understand for people that were not part of the creation of it. Hence, it was agreed to ask all participants at the EBG meeting to send the BRS to national reconciliation experts, asking if they can understand the BRS and if the content still is valid.

Action:

- All are asked to send the BRS for Settle for Reconciliation to their national reconciliation experts, asking if they can understand the BRS and if the content still is valid.

9 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

See Appendix C.

10 Meeting schedule

GoToMeetings:

- Every Monday from 14:00 to 15:30, scheduled until July 4th, 2022, continuing August 29th until December 19th, 2022, except for holydays.

Physical meeting:

- Tuesday and Wednesday December 6th and 7th, 2022, in Germany (?)

11 AOB

11.1 Flexibility and master data

Kees is trying to “sell” the ebIX® BRS to the EU SGTF/EG1 and is missing master data for flexibility, hence he asked for an update of the “Structure” UseCase at the top level of our UML model. The UseCase diagram is missing some UCs, like for Customer consent and flexibility.

Action:

- Ove will update the Structure UC, including rename of “Energy flexibility services Phase 2” to “Flexibility administration”.

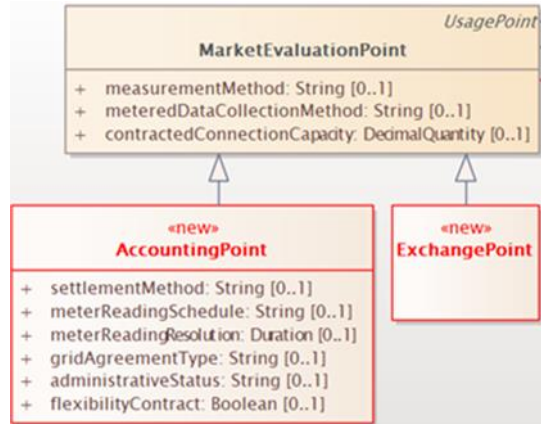
11.2 MRs approved by WG16 - remaining updates for AccountingPoint in IEC 62325-351 (ESMP)

This item is an information item from Jan (SE).

The MRs regarding MktActivityRecord sent from ebIX® were approved at the WG16 modelling team meeting yesterday. Alvaro will now update the MarketManagement package and, I presume, ESMP. I suggested him (as he did with the previous updates around MarketEvaluationPoint) to send the model to me for QA before sending it to Becky (model manager of WG16).

What remains from the earlier MRs regarding AccountingPoint are updates of IEC 62325-351 (ESMP). Those are described in the MRs, but not all of them added to ESMP. There are some issues there to be discussed before that update could be done. The issues are some attributes to be found in AccountingPoint in IEC 62325-351, i.e. inherited attributes from UsagePoint. And their datatypes.

But let me first bring up one issue regarding IEC 62325-301 to be discussed at the next(?) WG16 modelling team meeting. We now almost have this in CIM:



But meterReadingSchedule is not (yet) an attribute in AccountingPoint.

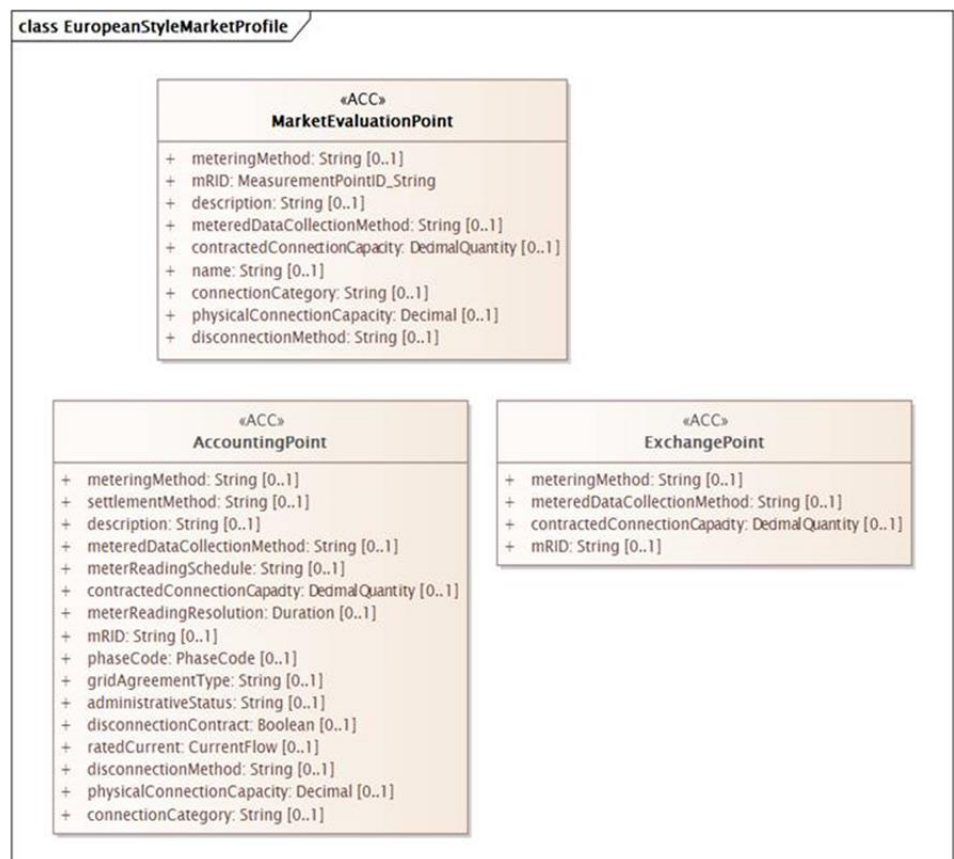
Should we wait for issue <https://redmine.ucaiug.org/issues/5345> to be solved with WG14 or should we add it, and rename it, and remove it from AccountingPoint if “nextReadingSchedule” is added to UsagePoint?

Over to IEC 62325-351:

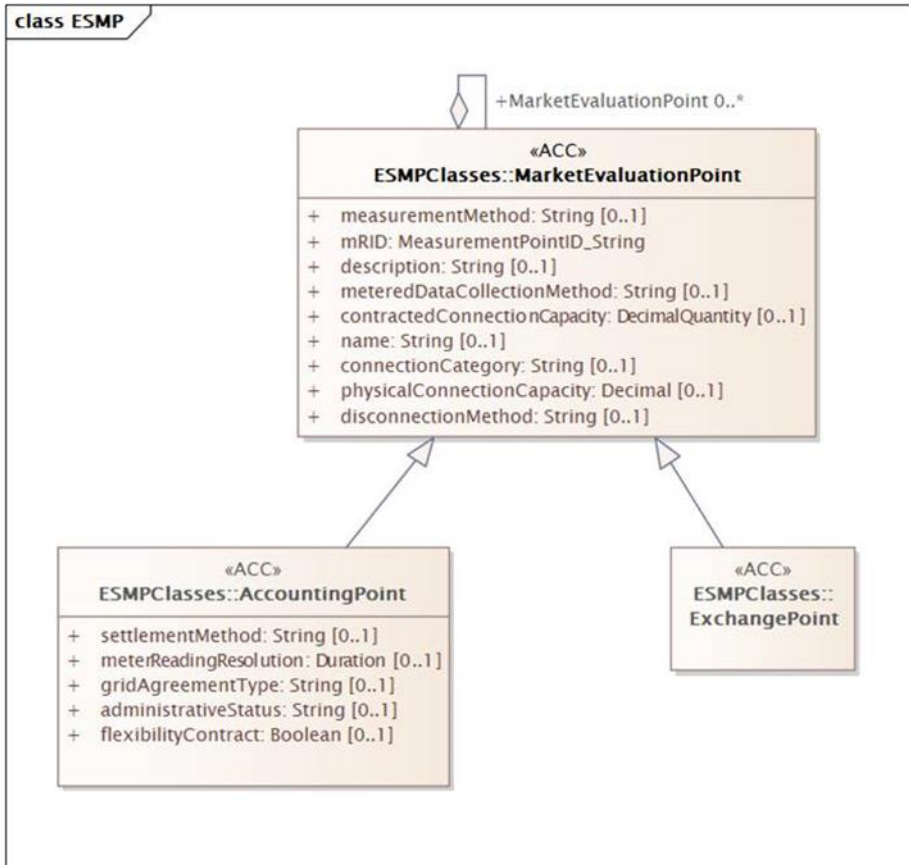
In the MR we expected this to be the result in the ACCs

With the following changes noted in a footnote:

The attribute meteringMethod is now changed to measurementMethod and the attribute disconnectionContract in the figure is now changed to flexibilityContract.

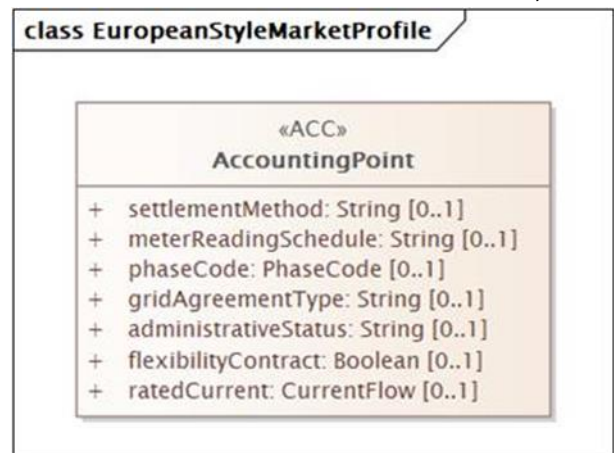


But it now looks like this in ESMP:



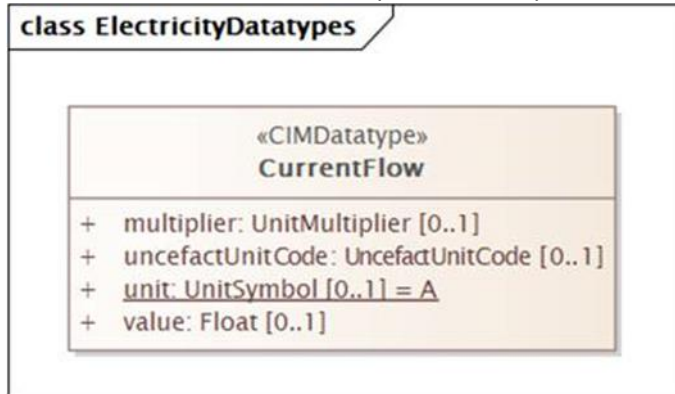
Comments so far

- 1) Good with the self-association for MarketEvaluationPoint.
- 2) All attributes are missing in Exchange Point.
 - a. But those would be inherited with the above model and can then still be taken from MarketEvaluationPoint.
- 3) Several attributes are missing in AccountingPoint.
 - a. Some could be inherited, as for ExchangePoint.
 - b. Some are to be inherited from UsagePoint, and are not needed in MarketEvaluationPoint, and should then only be found in AccountingPoint.
 - c. AccountingPoint in ESMP should then rather look like this:

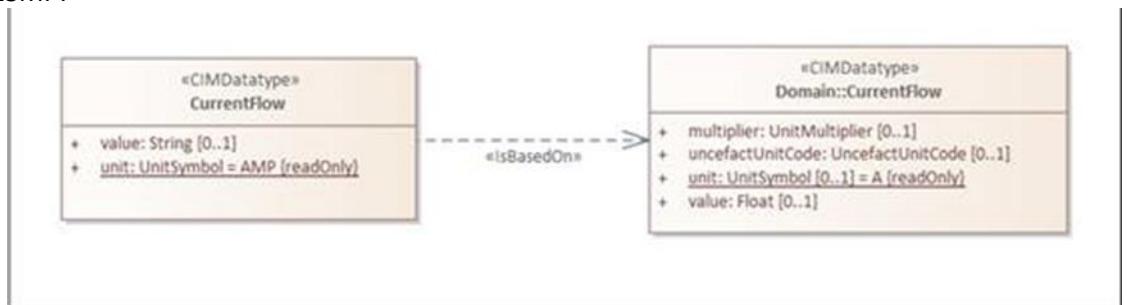


Further comments

- 4) phaseCode and ratedCurrent are missing. The issue to be discussed regards their data types.
 - a. There are no datatypes “PhaseCode” and “CurrentFlow” in ESMP
 - b. In IEC61970 (package Base > Core) there is an enumeration for PhaseCode that we perhaps can’t/will not use
 - c. In IEC61970 (package Base > Domain) there is a CIMDataType for CurrentFlow that looks like below, but we don’t use “multiplier” in Europe, and we will use the unit “AMP”



- d. I suggest we make a specific MR for IEC 62325-351 describing how we would like to handle the datatypes PhaseCode and CurrentFlow. For CurrentFlow we could there suggest having it like this in ESMP:



I.e. only with the value and with the unit AMP, found in the ENTSO-E code list, taken from UN/Recommendation 20. But how PhaseCode should be handled I think we need to discuss a bit more in ETC. Are there existing enumerations that will tell “one phase” or “three phase”? Or shall we suggest specific ESMP enumerations?

11.3 Review of HEMRM (Harmonised Electricity Market Role Model) roles

At the end of the meeting, proposed additions from the OneNet Project to the HEMRM were reviewed:

OneNet roles not in HEMRM	EBG comment
a) Transmission System Operator (TSO)	Exists as an actor (Party) – System Operator is one of the roles for this party
b) Distribution System Operator	Exists as an actor (Party) – System Operator is one of the roles for this party
c) Prosumer	This is the Party Connected to the Grid (with specialisations to Producer and Consumer)

d) Flexibility Service Provider (FSP)	Currently only the BSP is part of the HEMRM. EBG suggest adding the FSP with the BSP as a specialisation of the FSP
e) Platform	
f) Unit/Flexibility Provider	This is probably the same as the FSP
g) Distributed Energy Resource	This is probably the same as the Resource
h) Weather Forecast Provider	This is outside of the scope of the HEMRM. If added it is probably the same as the Data Provider or eventually a specialisation of the Data Provider
i) Flexibility Register Operator	EBG has introduced the Flexibility Register Administrator, who covers much of this role.
j) Local Management System (LMS)	
k) Independent Market Operator (IMO)	
l) Optimisation Operator	
m) Aggregator	

There was not enough time to finalise the review, hence the review will be continued at coming ENG GoToMeetings.

Appendix A Status for BRS review

Structure BRSs			
#	BRS	Status	Comment
1.	Administer Customer Consent	Published at www.ebix.org	Finished
2.	Alignment of Accounting Point characteristics	Published at www.ebix.org	<p>Finished</p> <p>To remember: Review of MR NMEG 2021/2 – Addition of a Supply Start Date to the AP Administrative Characteristics class,</p> <p>To remember: Review of MR NMEG 2021/3 – Addition of a Reporting resolution and Reporting Interval to the AP Administrative Characteristics class.</p> <p>To remember (20210913): Sub Accounting Points have been introduced in the BRS for Prepare and aggregate Resources, hence EBG should introduce references to parent and child APs, or another way of handling Sub Accounting Points, in the BRS for Alignment of AP characteristics BRS (parent and child APs are for instance used in Denmark)? Sub Accounting Points.</p>
3.	Alignment of Area Characteristics	Published at www.ebix.org	
4.	Alignment of characteristics for a Customer linked to an AP	Published at www.ebix.org	Finished
5.	Alignment of Metering Configuration Characteristics	Published at www.ebix.org	Finished
6.	Bulk change of BRP	Published at www.ebix.org	Finished
7.	Bulk change of Shipper	Published at www.ebix.org	Finished
8.	Change of BRP	Published at www.ebix.org	Finished
9.	Change of Metered Data Responsible	Published at www.ebix.org	Finished
10.	Change of Shipper	Published at www.ebix.org	Finished
11.	Change of supplier	Published at www.ebix.org	Finished

Structure BRSs			
#	BRS	Status	Comment
12.	Combined grid and supply billing	Published at www.ebix.org	Finished
13.	Consented (earlier Upfront) request for Metering Point Characteristics	Published at www.ebix.org	Finished
14.	Customer move	Published at www.ebix.org	Finished. To remember (20210913): A Flexibility Register Administrator has been introduced in the BRS for Quantify and settle flexibility services, hence the EBG should introduce the Flexibility Register Administrator to the BRS for Customer Move.
15.	End of Metered Data Responsible	Published at www.ebix.org	Finished
16.	End of supply	Published at www.ebix.org	Finished
17.	Manage Accounting Points	Published at www.ebix.org	Finished
18.	Rearrange MPs between grids	Published at www.ebix.org	Finished

Measure BRSs			
#	BRS	Status	Comment
1.	BRS for Measure Calorific Value	Finished	<ul style="list-style-type: none"> The content of the BRS is moved to a separate UseCase in BRS for Measure for Billing
2.	BRS for Measure for Billing	Finished	20211209: <ul style="list-style-type: none"> Published at www.ebix.org
3.	BRS Validated measured data	Finished	20220221: <ul style="list-style-type: none"> Published at www.ebix.org

Measure BRs			
#	BRS	Status	Comment
4.	BRS for Measure for Collected Data	Finished	<p>20200402:</p> <ul style="list-style-type: none"> Published at www.ebix.org. <p>20200608:</p> <ul style="list-style-type: none"> “Collected Data” should be renamed to “Collected <i>Measured</i> Data” <p>20220104:</p> <ul style="list-style-type: none"> The BRS need a layout update, incl. renaming of the term “negative response” to “Rejection”.
5.	BRS for Measure for determine and exchange validated meter read	Finished	<p>20220310:</p> <ul style="list-style-type: none"> Published at www.ebix.org.
6.	BRS for Measure for Imbalance Settlement	<p>20220609:</p> <ul style="list-style-type: none"> Will be sent for four weeks of approval to ebIX® Forum. 	
7.	BRS for measure for renewable energy certificates	Finished	<p>20220221:</p> <p>Published at www.ebix.org</p>
8.	BRS for Measure for Reconciliation	<p>20220609:</p> <p>Will be sent for four weeks of approval to ebIX® Forum.</p>	<p>20210125:</p> <ul style="list-style-type: none"> Investigate the need for addition of MDR and MGA in the “root class”, ref Dutch requirements.
9.	BRS for Settle for Reconciliation	To be reviewed	<p>20210125:</p> <ul style="list-style-type: none"> Investigate the need for addition of MDR and MGA in the “root class”, ref Dutch requirements.

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	After finalising RtR
B)	Review and propose update to the HEMRM, based on new procedures from ETC and EBG, ref minutes from ebIX® Forum meeting March 24 th , 2020, including: <ul style="list-style-type: none"> Update definition of Accounting Point in the HRM based on the flex project. Make a preproposal for update of the definition of the «Harmonised Role» Resource Provider. Among others we think it is the BRP that sends schedules and not the Resource Provider and we think the term “manages” could be clarified. 	High	After finalising RtR
C)	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	Not prioritised	EBG must do a survey for the need of such a project
D)	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	After A) and B)
E)	Making a BRS for alignment of Exchange Point characteristics	High	Hopefully a part of the common energy market area project
F)	Making an introduction to the ebIX® BRSs, including an overview of the BRSs and a short description.	In finalising RtR	TBD
G)	Review of MR NMEG 2021/2 (to ebIX®) – Addition of a Supply Start Date to the AP Administrative Characteristics class in Alignment of AP characteristics BRS	Medium	After finalising RtR
H)	Review of MR NMEG 2021/3 – Addition of a Reporting resolution and Reporting Interval to the AP Administrative Characteristics class. in Alignment of AP characteristics BRS	Medium	After finalising RtR
I)	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	After A), B), G) and H)

#	Project description	Priority	Start
J)	Update of Gas Role Model with addition of Aggregated Reception Station, Calorific Value Area and Temperature Area for gas.	Low	When the Gas Role Model starts adding domains.
K)	Investigate if services, such as flex-services should be added to BRS for Measure for billing. If so, we need to add a Resource ID to the class diagram(s) and extend the Basic assumption chapter.	This is a to-remember item	When the flex project is finalised
L)	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	When updating role definitions in BRSs

B.2 Approved (and running) projects

#	Project	Members	Status	Start	End
A)	RtR, Role-to-Role (hub)	All EBG	Start October 2018	Q4 2018	Q4 2021
B)	Common energy market area project	Bartosz, Boštjan (?), Gerrit, Jan (?), Kees, Ove Douglas (ENTSOG), Jon-Egil (ENTSO-E/CIM EG) and ? from EU DSO Entity	Hopefully start October 2022	October 2022?	?

B.3 Surveys

#	Survey	Status
A)	Datahub	20220609: Third version sent to ebIX® members for update

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.

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
Meter ID	The unique identification of the Meter linked to the Accounting Point, which contains the register that has been read.	N/A	
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.

BRS attribute	BRS definition	CIM attribute	CIM definition
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>

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