Minutes – CuS project meeting

Date: Wednesday and Thursday,
Time: 09:00 – 17:00 and 9:00 – 15:30
Place: Berlin
Present: Christian Odgaard, Energinet.dk
Gerrit Fokkema (Convenor), EDSN, NL
Grazyna Hańderek, Tauron Dystrybucja, PL
Joachim (Joe) Schlegel, RWE, DE
Kees Sparreboom, TenneT, NL
Minna Arffman, Fingrid, FI
Ove Nesvik (Secretary), EdiSys, NO
Preben Høj Larsen, Energinet.dk
Stefan De Schouwer, Atrias, BE
Appendix A CuS Work plan
Appendix B Member list
Appendix C Change proposal from ETC for Alignment of Customer master data
Appendix D Linking of Metering Point, Parties and Validity Date
Attachments: None

1 Approval of agenda

The agenda was approved with the following additions:

- Issues from ebIX® IEC TR project see 13.1 under AOB
- Master data for areas see 13.2 under AOB
- Gas Role Model see 13.3 under AOB
- Flexibility see 13.4 under AOB

2 Approval of minutes from previous meeting

The minutes from previous meeting were approved.

3 Review of discussions and actions from the March Forum meeting

- **Decision: CuS will start thinking about modelling customer master data, and takes EU legislation as a generic starting point for privacy aspects.**
  BRS customer master data is currently on hold because of privacy discussions. Fines are high and there's a lot of discussion on how to interpret the new EU privacy legislation. But still, this data is needed and needs to be exchanged (and thus modelled), privacy issues are primarily on how to store and use the data.

  Conclusion:
  - It seems that the customer master data can be exchanged if there is a "real need" for it and if the security measures are adequate.
  - CuS will resume modelling, we put it on the agenda for next meeting.

- **<u>Decision:</u> combined grid and supply billing will be modelled by both working groups. The master data part will be modelled in CuS, the time series part in EMD.**

  Conclusion:
  - CuS will model the master data part of the combined billing process when needed by EMD, see also the item below.

- **<u>Action Item 2016a-09:</u> Gerrit and Eva will align on working plan, EMD gives priority to modelling commercial prepayment and will involve CuS members where necessary.**

  Conclusion:
  - There is no schedule for when EMD will start on the combined billing yet, see also the item above.

4 How to model the Metering Point, Parties and Validity Date in the CuS documents?

The linking of Metering Point, Parties and Validity Date are modelled differently in different BRSs. The question has turned up during mapping of the CuS model to CIM. See examples in Appendix D and item L) under Appendix A, CuS Work plan.

Action:
- Ove will make a list over inconsistencies.

5 BRS for alignment of Meter Characteristics

Gerrit had as action from previous meeting found the following information related to the factor:

> "Conversion factor for a meter, we modelled in the convertor at the Meter. Dependent on the complete installation there can be various conversion factors applicable, as there are for a bypass measurement, a current transformer factor, a voltage transformer factor. All these factors together determine the measured value of the meter like: consumption = (read2 – read1) * factor (measurement) * factor (current transformer) * factor (voltage transformer)….. Here read1 and read 2 could be calculated by de number of the register multiplied by the constant of the register."

The Converter was redefined to:

Conversion factor		A value that specifies a conversion factor for this specific meter configuration, such as for voltage, current, pressure, temperature.
Type		A code representing the type of Conversion Factor
Factor		The conversion factor used in the calculation of a volume from the reading of register(s) of this Meter

Ove had as action from previous meeting changed the type of the coded attributes to be the enumeration itself, instead of the BDT (….Type) for all diagrams in the Structure module of the ebIX® model.

The BRS was reviewed and unclear parts were cleaned up, including addition of a new code list for Conversion Factor:

E01 Current
E02 Voltage
E03 Pressure
E04 Temperature
E05 Altitude
E06 Measurement

Kees added the new code list for Conversion Factors to the ebIX® model during the meeting.

Information from after the meeting:

For gas also a "calorific correction factor" is needed. This will be added as

E07 Calorific correction

The latest working draft can be found at: CuS documents for review.

Action:

- Gerrit will verify the usage of the added code "E06 Measurement";
- Ove will:
  - Rename *Alignment of Meter characteristics* to *Alignment of Metering configuration characteristics*, including in the class names;
  - Rename the process name from *Meter* to *Metering Configuration Characteristics*, where relevant (the business entity Meter will be kept);
  - Update diagrams and definitions related to Gateway and Gateway Operator:
    - Make a note that the Gateway and Gateway Operator are not yet agreed to be added to the HRM;
    - Make sure that it is stated that the BRS is meant for a Metering configuration at a MP.
  - Send the BRS on circulation for comments to CuS for 14 days before publishing the BRS at www.ebix.org.

6 BRS for alignment of Metering Point Characteristics

Gerrit had as actions from previous meeting found extra information (use, definition, examples) for next version of the BRS for:

- *Max Consumption (for large users)*: Max consumption is used for gas: it is the max gas flow (m3/hr) of the last three years used for gas transport tariffing. Potentially a typical Dutch field, used for logging the peak consumption rate (m3/hr) of the last 3 years for a Metering Point in order to calculate a fee/contribution for the transport fee;
- *Type of connection*: we use normal for the MP's used in the (normal) processes and Special to enable the use of the MP register and messaging for for instance Linking points, Connectors (with measurements) or even more virtual points for calculation purposes;
- Together with the type we have a differentiation by sort of connection where you can indicate what kind of connection/usage there is as for lightning, Telecom poles, water pumps, etc., etc.

Stefan informed that Belgium are using comparable data elements, however implemented in a different way (historical time series).

For the time being, the new elements from Gerrit above are seen as Dutch specialties, hence not added to the ebIX model.

Ove had as homework "cleaned up" the class diagrams in the BRS.

Action:

- Ove will:
  - Clean up the document, such as verify the diagrams;
  - Send the BRS on circulation for comments to CuS for 14 days before publishing the BRS at www.ebix.org.

The latest working draft can be found at: CuS documents for review.

7 BRS for alignment of Customer master data

Conclusion from previous meeting:

- There is a need for additional common Customer information. For Customer identification a unique ID is needed, preferably from an official register. A Customer is linked to the Metering Point, using the ID from the common Customer register;
- When there is a unique Customer ID, there are no basic differences between Customer master data and "party master data";
- Mandates should be registered, where there is a link between the MP and the Customer, i.e. either in the MP register or in a separate contract register. This conclusion is most relevant for the MP Characteristics and will be further discussed under BRS for alignment of MP characteristics;
  - A Customer can mandate a party, earliest from the move-in date.
- For clustering of MPs belonging to one Customer, we use the MP register, but it does not seem to be needed to exchange this information in any document exchange.

Ove had as action from previous meeting investigated the privacy issues, including asked his colleagues for what is done in other markets:

- The *General Data Protection Regulation* was adopted by the EU Council and the Parliament in April 2016. The regulation will take effect after a two-year transition period and, unlike the *Data Protection Directive*, it does not require any enabling legislation to be passed by governments;
- Under the *Data Protection Directive*, the interpretation of which data that are sensitive diverged between the EU states;
- In Norway, customer name and address are exchanged in the customs declarations process. I.e. a Consignors name and address is sent in the declaration to the customs, and a potential corrected name and address is returned in the answer.

See also Change proposal from ETC for Alignment of Customer master data in Appendix C.

Conclusion:

- We carry on with the modelling.

Action:

- All are asked to review the current proposal as preparation for discussion at the next meeting

The latest working draft can be found at: CuS documents for review.

8 Request change of attributes connected to a MP

Actions from previous meeting:

- All are asked to review the list of attributes wanted from the Netherlands, i.e. to see if there is a national need for a request to change:
    - Settlement method (BS);
    - Scheduled Meter Reading Date (BS);
    - Physical Status Of Metering Point (BS);
    - Metered data collection method (BS);
    - Estimated annual Volume and related Meter Time Frame Type (BS).

Polish Balance Suppliers can in addition change:

- Contracted Connection Capacity (BS);
- Capacity of the Metering Point (BS);
- Safe Power (guaranteed power if rationing), however not yet part of the ebIX® model.

The intention with change of Physical Status Of Metering Point is connect/disconnect of a MP. This is also relevant for the Nordic countries and will be added to the BRS.

Ove had as actions from previous meeting updated the BRS:

- There will be separate request for the four attributes;
- There will be a confirmation without the changed attributes;
- There will be MP characteristics to the requestor and other affected roles;
- The following attributes can for the time being be changed:
    - Metering Point Address (MDR/BS);
    - Geographical Coordinate (MDR/BS);
    - Metering Method (BS);
    - Meter Reading Periodicity (BS).

Ove asked if we should combine the BRS for alignment of Metering Point Characteristics and the BRS for Request change of attributes connected to a MP. However, the decision was to keep it as two separate BRSs, where the BRS for Request change of attributes connected to a MP will reference the BRS for alignment of Metering Point Characteristics for distribution of MP characteristics to relevant parties.

It was agreed to describe a generic process for Request change of attributes connected to a MP, before the detailed description of request change of the following Metring Point characteristics:

Metring Point characteristics:	**Initiator:**	**Responsible role**
Metering Point Address	• Metered Data Responsible • Balance Supplier	• Grid Access Provider
Geographical Coordinate	• Metered Data Responsible • Balance Supplier	• Grid Access Provider
Metering Method	• Balance Supplier	• Grid Access Provider
Meter Reading Periodicity	• Balance Supplier	• Grid Access Provider
Physical Status Of Metering Point	• Balance Supplier	• Grid Access Provider

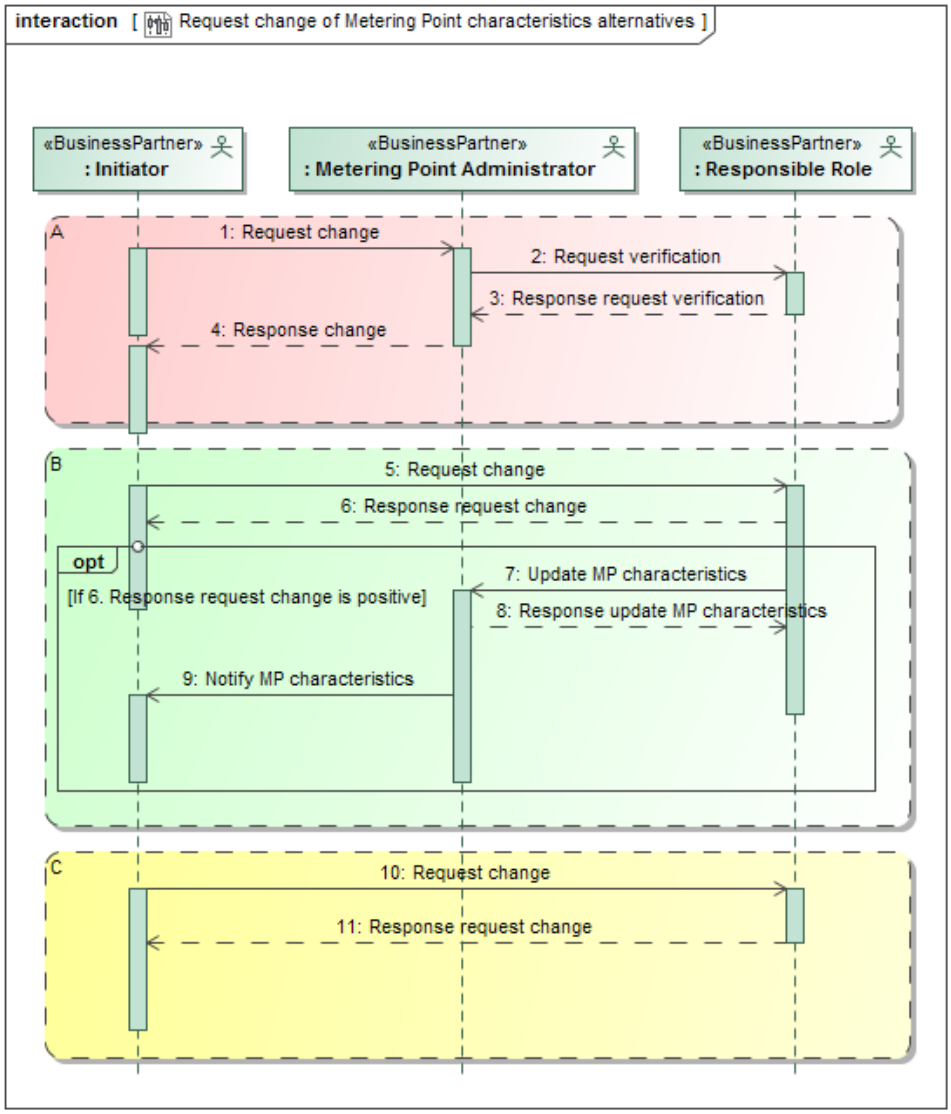
Possible extensions:

- Proposed by NL:

- Settlement method (BS);
- Scheduled Meter Reading Date (BS);
- Metered data collection method (BS);
- Estimated annual Volume and related Meter Time Frame Type (BS).

- Proposed by PL:
  - Contracted Connection Capacity (BS)
  - Capacity of the Metering Point (BS)
  - Safe Power (guaranteed power if rationing), however not yet part of the ebIX® model

Different alternatives for "verification of a request" by the Responsible role was discussed. The chosen principle was alternative B from the sequence diagram below.



Action:

- Ove will add Request change of Physical Status Of Metering Point to the BRS;
- Ove will add some text to the introduction that the BRS only should be used for changes that not triggers other processes, such as change of name for the customer, which should be a Customer Move;
- Ove will split the first part of the BRS into a generic part and a specific part:

- The generic part will have one UseCase, including all possible roles and one generic activity diagram with one Request change of MP characteristics business entity;
- The specific part will have one UseCase per attribute to change, each with relevant roles and one activity diagram;
- The BRS will be based on alternative B above.

The latest working draft can be found at: CuS documents for review.

9 Combined grid and supply billing

Awaiting input from EMD. See also item 3 above.

10 Preparations for start of "interfering processes"

Actions from previous meeting:

- All are asked to review the Dutch proposal and make comments and additions to it based on national rules and needs.

Documents related to Intersecting processes can be found at: CuS documents for review (in the Intersecting processes directory).

Action:

- The homework from previous meeting will be continued.

11 Preparations for start of "Switch of grid"

Ove had as actions from previous meeting made a first draft of a new BRS for change of Metering Grid Area for Metering Points. A request/confirm process sent from the Old GAP to the Metering Point Administrator (MPA) with a notification (MP characteristics) to affected roles.

The document was briefly discussed, based on comments from Gerrit. It was agreed to add a notification of change of grid to the New GAP and the affected roles.

Action:

- Ove will update the BRS with a notification of change of grid to the New GAP and the affected roles;
- Emma will make a list over events that can happen, such as a merger of two companies, and show which processes (BRSs) that are affected by the event.

12 Meeting schedule

- Wednesday September 7th and Thursday September 8th in Poland (Gdansk);
  Grazyna has informed that the meeting will take place in Energa Operator headoffice (one of the DSO's);
- Tuesday November 22nd and Wednesday November 23rd. Denmark (preceding next ebIX® Forum meeting, Thursday November 24th, with a common dinner ebIX® Forum and CuS dinner the evening of November 23rd). **Note:** this meeting may be rescheduled.

13 AOB

13.1 Issues from ebIX® IEC TR project

Kees reported from the ebIX® IEC TR project:

- The project is mapping the ebIX® model to IEC CIM;
- The project has spent a lot of time deciding which CIM data elements the CuS data elements should be mapped to. For instance, if the Metering Point (or Accounting Point) shall be mapped to Market Evaluation Point (a CIM class added for by ENTSO-E for the European market extension) or the CIM Usage Point, which is a more related to physical objects in an electricity grid;
- The current proposal is making an association between CIM Market Evaluation Point and the CIM Meter. The CIM Meter in turn is associated to a CIM Register;
- The TR is expected finalised during summer 2016

13.2 Master data for areas

From Kees:

- Till now ebIX® has limited its efforts on defining master data to metering point (MP), party and meter. We assume that information on areas we use is available somehow. And we refer to the ID of an area in the master data MP;
- In ebIX we try to avoid to create areas just for the aggregation of data. The exception is at the moment the Balance Group. But this one just recently has changed into an account (and is according to the role model update not an area anymore). ENTSO-E WG EDI at the moment knows some areas just for the sake of aggregation, but is about to change its position on this (to a position in line with the present ebIX practice). This will lead to the need for master data for areas;
- I see in ENTSO-E also other developments regarding area, that may or will lead to the need for master data for areas and/or to the need for alignment of the area concept for markets and the area concept for operations. For markets areas are being defined as composites (they are an aggregation of the underlying smaller objects) whilst for operations areas are defined by their boundaries (such as tielines). In IEC this is reflected in the approach of wg16 (markets) as opposed to the approach of wg13 (operations). When I assume that both approaches have relevance and their logical basis, it will be difficult to choose one of these approaches as the right one for everybody. So we probably have to live with two different approaches. But especially then it will be vital to make sure that both concepts are aligned in real life. And I think this starts with master data. And continues with a procedure/business process for the alignment between the real life content of both concepts.
- All in all: I think we better prepare for our ebIX contribution in solving these issues. And I think the ebIX contribution will be in the concept for the definition of master data for areas and the use of areas for aggregations (1a and 1b) and the actual specification of master for areas and the linked process for alignment between the operations-area and the market-area on the various levels (2a and 2b). I suggest to start this exercise in ebIX ETC (on the concepts we think we can/have to use) and continue this in ebIX Cus for the actual specifications.

Master data for Areas, such as MGA, will be put on the next CuS agenda.

Action:

- All are asked to come up with ideas of the content of the MGA Master Data;
- Ove will make a first draft class diagram for the MGA based on Nordic needs and input from the bullet above.

13.3 Gas Role Model

Kees gave a short presentation of a new draft for a Gas Role Model, see attached pdf-document.

Some Nordic comments:

- The name should be the same in the gas and the electricity role model for roles with the same function
- The four roles with a "System Operator" extension (not including the TSO) should probably be specialisations of a generic System Operator.

From discussion:

- It was noted that the GRM (Gas Role Model) is using UML dependencies instead of associations, as used in the HRM (Harmonised Electricity Market Role Model);
- Further, there are no Domains in the model;
- Joachim will send the German comments that are in preparation.

13.4 Flexibility

Brief overview:

- Norway:
  - The regulator published a report "Theoretical approach to a market solution for local flexibility". The report highlights what is required for a DSO that will use local flexibility as an alternative to net investment, what various providers of flexibility can contribute and how a market solution can be designed;
  - On short time, the report suggests small scale test projects.
- Denmark:
  - Several projects have looked into the area, but so far without any active markets;
  - All MPs will be hourly metered within end of 2020 and the flexibility may by then become more interested;
  - A lot is arranged in the so called Regulated Power;
  - Conversion of electricity to heat (v.v.) is quite hot at the moment.
- Finland:
  - **Increasing flexibility in the electricity market**
    - focus on getting also flexibility from small & medium size enterprises to the market as well as from households (electrical heating). Large scale industry takes part already quite well;
    - a lot of interested aggregator companies, internal and external, small start up companies and large ones as well, search for opportunity to enter into market => already some new small participants and new types of reserve loads (for example large scale freezer and water boilers for FCR-N reserve) have entered into market;
    - some steps taken on market side, for example smaller bid size to the balancing power market has introduced => from 10 MW to 5 MW;
    - a project is going on to explore possibilities to third party aggregator to take part, roles of different market players are still a little bit unclear;
    - increased co-operation between Nordic and Baltic TSO's on demand response, separate group is going to start.
- Germany:
  - New law:
    - New meters (smart meters using a gateway for intelligence and communication) can be introduced from next year (2017);
    - Installation will be required in steps, dependent on the annual consumption, with all MPs having new meters within the beginning of 2030: >10.000kWh mandatory and between (6000 – 10.000) kWH optionally.

- Poland:
    - Several projects and test projects on a DSO level;
    - Discussions at the regulator level.
- Belgium:
    - Some years ago there was a political focus on renewable energy, including subsidies, leading to a lot of local production (solar panels)
    - Currently the political focus is lowered, the subsidies are stopped and the amount of local production is not expected to increase in the foreseeable future. The market model including flexibility (role of aggregator has failed).
    - The household's possibility to participate in a flexibility is limited, as the roll out of the smart meter is cancelled;
    - The TSO wants to set up a 'flex-hub' to make data for flexibility available;
    - There are discussions for information exchange between TSO and DSO.
- Netherlands:
    - Formally there is currently no flexibility market;
    - Within ten years' time there is a need expected, due to increased use of electrical cars, solar PV, etc.
    - There are however some areas, such as for green houses, where there is a sort of flexibility active in bilateral agreements

Appendix A CuS Work plan

#	Activity	Priority	Start	End
A)	Master data for parties, both for the actors in the energy industry, such as BRPs and BSs, and the PCG, including how to handle the different attributes related to the Consumer, such as consumer contact information (e.g. address and invoice address).	1st	Q4/2014	Q4/2015
B)	Request change of attributes connected to a MP, such as Closing and Reopening MPs, Change of Metering Method and Change of time frames	2nd	Q1/2015	Q4/2015
C)	Combined grid and supply billing (invoicing), including MD for products, such as; grid fees, grid subscriptions, …	3rd	Q2/2015	Q2/2016
D)	Interfering processes – a matrix of processes with priorities, when a given process is interfered by another, such as when a customer move comes in the middle of a change of supplier process.	4th	Q2/2015	Q3/2016
E)	"Switch of grid", for instance a part of a Metering Grid Area (MGA), such as a village, that is transferred from one GAP and MGA to another	**5th**	Q3/2015	Q2/2016
F)	MPs having multiple parties with similar roles, e.g. a MP with different BRPs for production and consumption	**6th**	Q4/2015	Q4/2016
G)	Change of BRP in Metering Grid Area, "Price Area" or country (not at MP level) (Proposed by DK), i.e. a "bulk change of BRP (and/or BS?)"	7th	TBD	TBD
H)	Efficient data alignment, including the possibility to request historical and/or future master data.	8th	TBD	TBD
I)	Master data for domains, such as which MGAs that belongs to a MBA and related characteristics of these domains	Awaiting network codes from ENTSO-E	TBD	TBD
J)	New processes for "demand/response", which may add new tasks for the MDA	Awaiting EMD survey and ebIX® Forum decision	TBD	TBD
K)	Combined switch documents and related customer master data	Awaiting "Master data for parties"	TBD	TBD
L)	Review of published BRSs: • The MP parties will be linked to the MP instead of the "document", to be in line with BIM and CIM	TBD	TBD	TBD
M)	Handling of "Installation Metering Points" and/or fields (may be related to the item above)	TBD	TBD	TBD
N)	"Life cycle of a MP", including how technical events interact with administrative processes and responsibilities	TBD	TBD	TBD
O)	Request for services. The item concerns chargeable requests from the BS to the DSO for changes to a MP or a Meter, such as: • Request for metered data	TBD	TBD	TBD
P)	The possible role of a datahub in the processes (Proposed by DK) • Seen from the supplier side	TBD	TBD	TBD

	• Seen from the DSO side • Seen from the metering side When adding a datahub to a market the datahub will replace the DSOs, to a large extend, i.e. the MPA will be the datahub. Among others, the proposal include processes between the GAP and the MPA.			
Q)	QA of the CuS model and consistency of the CuS and EMD models	TBD	TBD	TBD
R)	New (enhanced) processes for labelling	TBD	TBD	TBD
S)	Review the need for extension of the BRS for cancellation with: • Reason for cancellation attribute • Cancelation of master- and measured data	TBD	TBD	TBD

Appendix B Member list

Members:

Name		Company	Telephone	Mobile	E-mail
Chris de Jonge	BE	Atrias			chris.dejonge@atrias.be
Thibaut Hellin	BE	Atrias		+32 476 52 07 78	thibaut.hellin@atrias.be
Joachim (Joe) Schlegel	DE	RWE	+49 231 438-1787	+49 1722364396	Joachim.Schlegel@westnetz.de
Christian Odgaard	DK	Energinet.dk	+45 76 22 44 63	+45 23 33 85 55	cco@energinet.dk
Preben Høj Larsen	DK	Energinet.dk		+45 23 33 88 66	PHQ@energinet.dk
Minna Arffman	FI	Fingrid		+358 40 648 3015	Minna.Arffman@fingrid.fi
Gerrit Fokkema (Convenor)	NL	EDSN	+31 355 480 180	+31 622907787	gerrit.fokkema@edsn.nl
Kees Sparreboom	NL	TenneT		+31 622 66 7911	kees.sparreboom@capgemini.com
Christian Valland	NO	Norgesenergi			Christian.Valland@norgesenergi.no
Ove Nesvik (Secretary)	NO	EdiSys	+47 22 42 13 80	+47 928 22 908	ove.nesvik@edisys.no
Torleif Korneliussen	NO	Hafslund		+47 908 47 285	Torleif.Korneliussen@hafslund.no
Grazyna Hańderek	PL	Tauron Dystrybucja	+48 32 303 52 01	+48 508 006 285	Grazyna.Handerek@tauron-dystrybucja.pl
Waldemar Lonczak	PL	Energa-Operator SA	+48 58 778 80 47	+48 691 960 129	waldemar.lonczak@energa.pl
Emma Lindgren	SE	Vattenfall	+46 8 687 3112	++46 70 311 0957	emma.lindgren@vattenfall.com
Boštjan Topolovec	SI	Represent Section IPET		+38 641 768 799	bostjan.topolovec@sodo.si

Observers:

Gordon Brown	UK	AMT-Sybex	+44 2 890 781 616	+44 7 808 901 219	Gordon.Brown@AMT-Sybex.com

CC:

Tor Heiberg	NO	Statnett			tor.heiberg@statnett.no
Jan Owe	SE	SvK			Jan.Owe@svk.se
Oscar Ludwigs	SE	SvK			Oscar.Ludwigs@svk.se
Erik Gustavsen	NO	Edisys			Erik.gustavsen@edisys.no

It is expected that cc receivers are reading the CuS minutes and actively responds to these when they have comments to them. It is further expected that the CuS information is actively used in the national data exchange standardisation work.

Appendix C Change proposal from ETC for Alignment of Customer master data

From latest ETC meeting:

We need to add code list for "Communication channel", "Contact Type" and "Address Type" to be used in BRS for Customer characteristics.

Conclusions:

- We will add an enumeration "Communication channel", ebIX® subset with the following literals:
  - AL Cellular phone
  - EM Electronic mail
  - FX Telefax
  - TE Telephone

  and in addition we will add a new ABIE "Communication
- We will ask CuS if we should add a new enumeration "Contact function code" based on "3139 Contact function code".
- We will add an enumeration "Communication channel", ebIX® subset, based on 3131 Address type, code with the following literals:
  - 1 Postal address: The address is representing a postal address
  - 3 Physical address; The address represents an actual physical location.

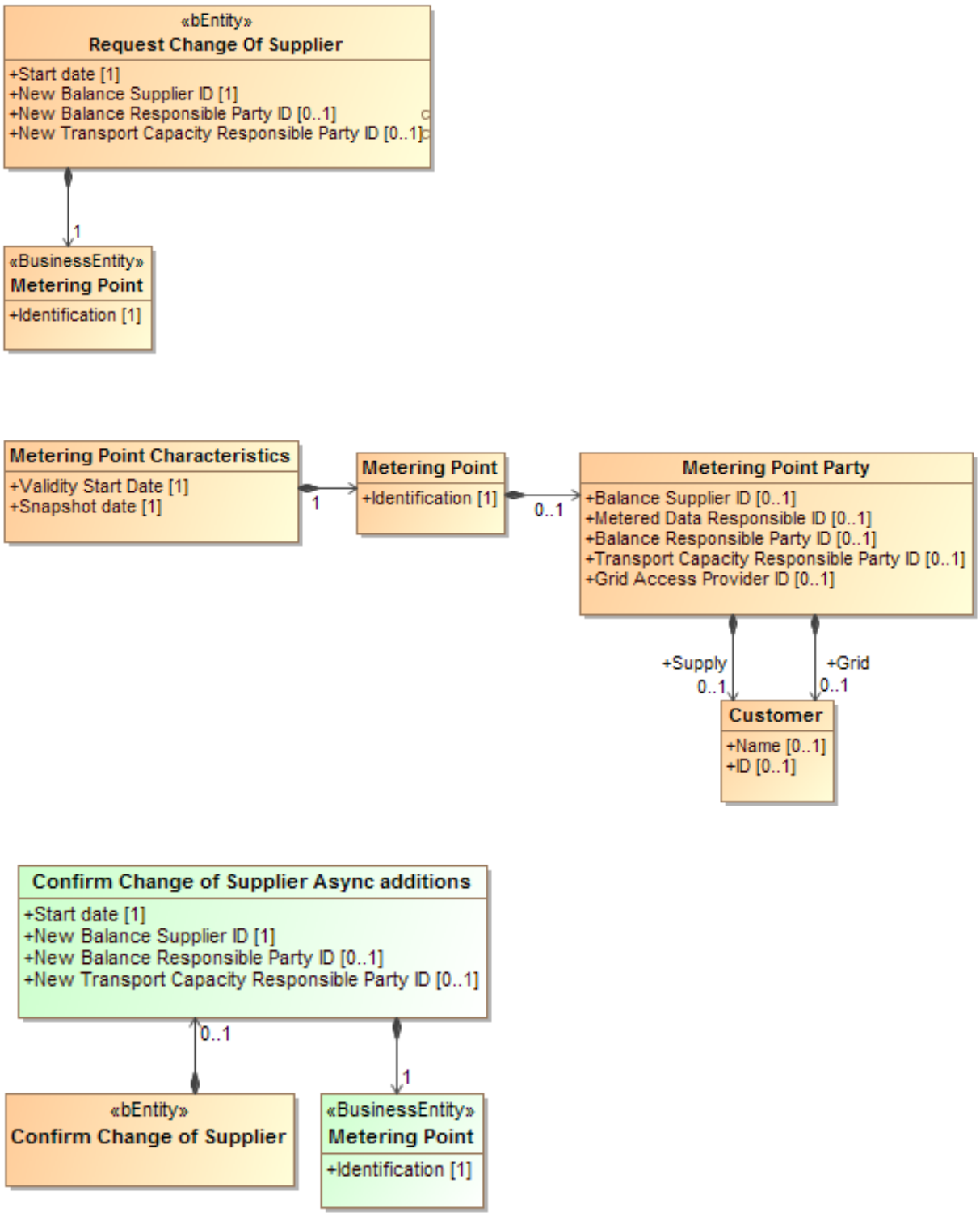
Action:

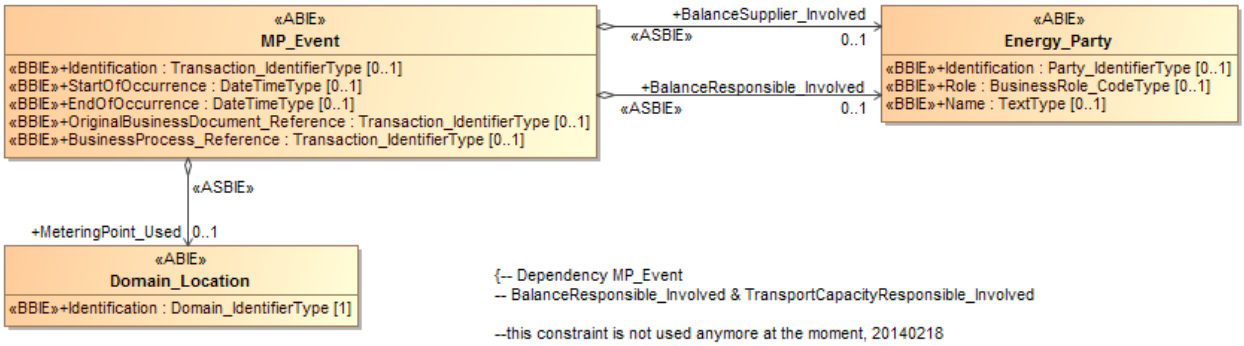
- Kees will make a DMR for a new code for "3139 Contact function code":
  Meter reading contact; "Department/person to contact for matters regarding meter reading"

ETC askes CuS if we should add a new enumeration "Contact function code" based on "3139 Contact function code", with the following proposed literals:

CuS requirements	**3139 Contact function**		
	code	**name**	**definition**
Main contact	AY	Electricity supply contact	Department/person to contact for matters regarding electricity supply
	AZ	Gas supply contact	Department/person to contact for matters regarding gas supply
Neighbour	WI	Alternate contact	Alternate department or person to contact
House keeper	AV	Maintenance contact	Department/person to contact for matters regarding maintenance
Invoice contact	PE	Payee contact	Department/employee to be contacted at the payee
Technical	AT	Technical contact	Department/person to contact for matters regarding technical issues.
Meter reading	AQ	Quantity surveyor contact	Department/person to contact for matters regarding quantity surveying **Question:** Should we ask UN/CEFACT for a new code?

Appendix D Linking of Metering Point, Parties and Validity Date





{-- Dependency MP_Event
-- BalanceResponsible_Involved & TransportCapacityResponsible_Involved

--this constraint is not used anymore at the moment, 20140218

--self.BalanceResponsible_Involved->notEmpty() implies self.TransportCapacityResponsible_Involved->size()=0
--inv: self.TransportCapacityResponsible_Involved->notEmpty() implies self.BalanceResponsible_Involved->size()=0}