


Minutes, CuS Meeting, February 3 rd and 4 th , 2015	 European forum for energy Business Information eXchange
February 25 th , 2015	CuS, Structuring of the energy market, phase V

Minutes – CuS project meeting, February 3rd and 4th, 2015

Date:	Tuesday and Wednesday, February 3rd and 4th, 2015
Time:	09:00 –18:00 and 9:00 – 16:00
Place:	Krakow (Cracow), Poland
Participants:	Christian Odgaard, Energinet.dk Gerrit Fokkema (Convenor), EDSN, NL Grazyna Hańderek, Tauron Dystrybucja, PL Joachim (Joe) Schlegel, RWE, DE Kees Sparreboom, TenneT, NL Ove Nesvik (Secretary), EdiSys, NO Preben Høj Larsen, Energinet.dk Waldemar Lonczak, Energa-Operator SA, PL
Appendix A	Survey (inventory) of how much of the ebIX® deliverables are used
Appendix B	CuS Work plan
Appendix C	Member list
Appendix D	Cancellation
Appendix E	Change of MP attributes



Danish billing
process.pptx

Attachments: , see item 10.3, Combined grid and supply billing

1 Approval of agenda

The agenda was approved with the following additions:

- Request from ETC, see 14.1 under AOB
- Questions from Poland, see 14.2 under AOB

2 Minutes from previous meeting

The Minutes from previous meeting were approved.

3 Resolve matters arising after ebIX® Forum meeting, December 8th 2014

From the ebIX® Forum minutes:

- ETC, CuS and EMD will carry on as planned from January next year until the ebIX® spring forum meeting, however without starting new activities;
- All groups are asked to come with a list of possible (future facing) initiatives and directions;
- The ebIX® projects should finish as much as possible of their work items and not expect increased budgets at the ebIX® spring meeting 2015.

Possible (future facing) initiatives and direction was discussed:

- The basis for the discussion was a review of **Appendix B**, CuS Work plan;

ebIX®/CuS

- Kees came up with a proposal for MPs having multiple parties with similar roles, the typical example is a combined MP with both production and consumption and different Balance responsible Parties (BRP) handling the production and consumption;
- Gerrit proposed adding the process of “switch of grid”, for instance a part of a Metering Grid Area (MGA), such as a village, that is transferred from one Grid Access Provider (GAP) and MGA to another;
- Gerrit also proposed new processes for “demand/response”, which may add new tasks for the Metered Data Aggregator (MDA);
- Christian mentioned a requirement from Denmark where master data connected to the change of supplier process are needed, such as billing information. Today the master data must be sent in a separate document (not in the request for change of supplier), which often leads to cancellation of the switch process due to missing update of master data;
- Kees mentioned processes for handling master data for parties, both for the actors in the energy industry, such as BRP and Balance Supplier (BS), and Party Connected to Grid (PCG);
- Ove mentioned a Nordic need for exchange of master data for domains, such as which MGAs that belongs to a Market Balance Area (MBA) and related characteristics of these domains;
- Gerrit also mentioned the “life cycle of a MP” as a possible new project;
- Kees mentioned that Slovenia has asked for how to handle “Installation Metering Points” and/or fields.

Conclusion:

- The proposals for new items will be presented to ebIX® Forum before added to the CuS work item list:
 - MPs having multiple parties with similar roles, e.g. a MP with different BRPs for production and consumption;
 - Handling of “Installation Metering Points” and/or fields (may be related to the item above);
 - “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;
 - Master data for domains, such as which MGAs that belongs to a MBA and related characteristics of these domains;
 - New processes for “demand/response”, which may add new tasks for the MDA;
 - Combined switch documents and related master data;
 - Master data for parties, both for the actors in the energy industry, such as BRPs and BSs, and the PCG;
 - “Life cycle of a MP”, including how technical events interact with administrative processes.

4 Cancellations

Kees had as homework from previous meeting made an example for cancellation of change of supplier, see Appendix D:

- Gerrit stressed that a cancellation should not be possible after the validity start date of what is cancelled;
- Kees had in his homework prepared two alternatives (activity diagrams) for the cancellation processes, one simple and one more complex:
 - The intention with the simple one was to avoid cancellation of related processes, such as the “notify change of supplier”, which instead is handled by sending a new “notify change of supplier”, with the original data before the “request of change of supplier” was sent;
 - However, it was found that the “notify change of supplier” in the simple alternative has to be sent to the “old supplier” (i.e. the one supplying to the MP before the request “change of supplier was sent”). This means that the complex alternative is the one to be used.

- The “cancellation of notify change of supplier” should have a technical acknowledgement, i.e. an “*Acknowledgement of Processing, Positive*”, see *ebIX® Recommendations for asynchronous acknowledgement and error handling*, hence a textual comment was added to the activity diagram;
- The class diagram for cancellation was reviewed and updated:
 - Cancel request/notification class:
 - Request/notification start date for original request/notification;
 - Original Business Reason, e.g.:
 - “E03, Change of Supplier”.
 - Cancel Request Additions:
 - Transaction ID [0..1] (used if available in the request/notification);
 - Business process ID [0..1] (used if available in the notification).
 - Header and context information:
 - Document Type = “E67, Request regarding Cancellation”;
 - Business Reason = “E05, Cancellation”;
 - Ancillary Business Process Role = the same as in the original request/notification.
- The asynchronous response will be equal to the request, but with the Document Type = “E68, Response regarding Cancellation”;
- For synchronous processes (WS) the request will be equal to the asynchronous process, however without the “... Addition” class, while the confirmation only will be an empty class and the rejection only a Reason code.

Conclusion:

- We use the “complex alternative” (slightly refined);
- We add two new reason codes (error codes) to the ebIX® model, i.e.:
 - No corresponding process;
 - Beyond time limit;
 - Cancellation BRS.
- We specify cancellation of the request and the notification as separate class diagrams in the cancellation document (BRS). These may be combined in the BIM.
- A cancellation should not be possible after the validity start date of what is cancelled.

Homework:

- Kees will update the diagrams in [Appendix D](#);
- Ove will make a new draft version of the document “*ebIX® Recommendations for cancellation of business documents and processes*”, based on the principles discussed above and the diagrams from Kees.

5 BRS for alignment of Meter Characteristics

Ove had as homework from previous meeting:

- Make all classes associated with the “... Async additions”, in all BRSs, the same colour (green), e.g. Metering Point in “Confirm change of BRP”;
- Updated the BRS for meter characteristics according to the notes in the BRS and the comments in the previous minutes.

The BRS was reviewed, among others with the following changes and corrections:

- Update of code lists;
- Communication with Meter class:

- It was proposed to use the Meter Reading Characteristics Type (Manual, Automatic, AMR ...) as enumeration for Type;
- It must be verified if we need to keep the class, i.e. do we keep the class as is, or is it enough to keep the Type (and move the Type to the Meter class)?

Conclusion:

- We skip the class and move the Type to the Meter class.
- The OBIS code was added as an attribute to the Register class.

ETC has been asked to find a common way of specifying conditions in State diagrams (use of Signals - similar to usage of Guards in activity diagrams), however without having had time to do it yet.

Homework:

- ETC will be asked to find a common way of specifying conditions in State diagrams (use of Signals - similar to usage of Guards in activity diagrams) - Continued action from earlier meeting;
- Ove will update the BRS according to comments in the class diagrams (MD model) and send it to CuS for review:
 - The “Header and context” and related enumerations will be made grey;
 - The Gas enumerations will be made blue;
 - The Electricity enumerations will be yellow (as default);
 - Add a column to the description tables for electricity or gas.

6 BRS for alignment of Metering Point Characteristics

Ove had as homework from previous meeting updated the BRS for alignment of MP characteristics and distributed it to CuS. The BRS was reviewed and updated.

The Danish Meter Data Collection Method was added to both Meter and MP alignment BRSs. The Meter Data Collection Method replaces the previous element Meter Reading Characteristics. Kees added the code to the ebIX® model during the CuS meeting.

Conclusions:

- We will await response from the ebIX® gas group regarding gas related questions (noted as comments in the BRS) before finalising the BRS next meeting.

Actions:

- Ove will update the BRS according to comments in the class diagrams (MD model) and send it to CuS for review:
 - The “Header and context” and related enumerations will be made grey;
 - The Gas enumerations will be made blue;
 - The Electricity enumerations will be yellow (as default);
 - Add a column to the description tables for electricity or gas.

7 Change proposal from ebIX® project for alignment with the gas sector

Ove had made, as homework from previous meeting, the TCR required in the Confirm change of TCR document in the Change of TCR BRS and publish the corrected BRS without sending it on circulation for comment.

Kees had sent, as homework from previous meeting, a DMR to UN/CEFACT for addition of new measure unit codes in connection to Contracted Connection Capacity Measure Unit:

- Sm³/hour (Standard cubic meter per hour);
- Nm³/hour (Normalised cubic meter per hour);
- Sm³/day (Standard cubic meter per day);
- Nm³/ day (Normalised cubic meter per day).

Continued action (no ebIX[®] gas group meeting since previous CuS):

- Kees will discuss with the ebIX[®] gas group if ARS can be replaced with the MGA.

8 Code list for production types for gas

From Thibaut:

We receive the remark that the provided list (EECS) is only for electricity production types. We also should have a gas production type code list. Can ebIX[®] take that into account (try to find a list of the different gas production types)? I think this information is also relevant for Germany (maybe also for other countries).

Kees informed that he has asked his contacts in the gas industry and that there seem to be several lists available. However he need some more time to find the right one.

Homework:

- Kees will try finding a suitable list for gas production types.

9 Different resolutions for different purposes in a MP (postponed from previous meeting)

Continued homework from meeting December 2013 (postponed until Belgium is present):

- Belgium will make a proposal for how to handle different resolutions for different purposes in a MP, i.e.:
 - Belgium has a “Metered Data Resolution” (hourly, daily, weekly,,,) for each Register(/Meter);
 - Belgium has also have a “Distribution Resolution” for the distribution of Metered Data from the MP to the Market participants. This can however be split per purpose, e.g. for billing and settlement, or production and consumption;
 - Is the “Distribution Resolution information” a task for ebIX[®]?
 - What Belgium needs is different “Resolutions” for different purposes related to a MP.

10 New items

10.1 Attributes related to the Consumer

Homework from previous meeting:

- Related to “**Item B**) How to handle the different attributes related to the Consumer, such as consumer contact information (e.g. address and invoice address)”.
 - All are asked to find requirements for customer information elements to exchange in a supplier centric model before the next meeting.

Discussion:

- Ove showed the BRS from the Harmonised Nordic Retail market (HNR), which was the bases for the later discussion;
- It is a need for a BRS for exchange of customer party master data:
 - Based on a supplier centric model, i.e. where the BS is responsible for the information;
 - Request for information is sent from the GAP to the BS;
 - The key ID for the information will be the MP ID:

- This is an exception for two reasons, i.e. we have no proper customer ID scheme and the customer should only be relevant because of its relation to the MP;
 - We know for typical party information that the party ID should be the “key ID”.
- The information will be the:
 - Party (name and ID):
 - Contact address;
 - Contact information (communication channel (mail, telephone...) and complete number (telephone number, e-mail address...)).
- Bank account may be a national exception (for the UseCase description and not a part of the class diagram).

Homework:

- Ove will make a draft BRS for next CuS meeting.

10.2 Request change of attributes connected to a MP

Ove had distributed a table related to change of attributes connected to a MP. The table was reviewed and partly updated.

Homework:

- All are asked to fill in the rest of the table in Appendix E.

10.3 Combined grid and supply billing

Homework from previous meeting:

- Related to “**Item D**) Combined grid and supply billing (invoicing), including MD for products, such as; grid fees, grid subscriptions, ...
 - Boštjan, Christian, Grazyna and Joachim are asked to make presentations of the Slovenian, Danish, Polish and German combined billing systems at the next meeting.

Christian presented the Danish billing process, see attached presentation (unfortunately partly in Danish).

Discussion:

- The billing process differs between the countries, i.e. the Danish model is more advanced than the Dutch;
- There might be a good idea to have an ebIX® model for billing, this is what possible new member countries and possible cooperation bodies (Eurelectric...) are looking for;
- It was proposed to make a first try for making a billing (pre-billing) model;
- Kees mentioned that there are some EU (CEN) initiatives regarding billing and invoicing;
- It was questioned if CuS is the correct group for modelling billing, or if EMD is a more correct place.

Conclusion:

- The question, if CuS or EMD is the correct project for the billing process, will be raised at the next ebIX® Forum meeting.

11 Update of the ebIX® web-site

The CuS items on the ebIX® web site was reviewed and found up-to-date.

12 Items for next meeting

Review items to start on from CuS Work plan.

13 Meeting schedule

- Wednesday 8th and Thursday 9th of April in Dortmund, Germany
- Tuesday June 16th and Wednesday June 17th Netherlands
- Tuesday October 6th and Wednesday October 7th Norway
- Tuesday December 1st and Wednesday December 2nd Denmark

In order to improve the quality and productivity of CuS, Ove will for the coming meetings send out a reminder for the CuS homework two weeks before the meeting.

14 AOB

14.1 Request from ETC

ETC had as action item from the ebIX® Forum meeting December 8th to make a survey (inventory) of how much of the ebIX® deliverables are used by each country. However, since ETC only had members from the Netherlands, Poland and Sweden (and secretary from Norway), Kees and Ove were asked to bring the question to CuS and EMD, that have members from more countries participating.

The table (inventory) in Appendix A was reviewed and updated.

14.2 Questions from Poland

Some questions from Grazyna were discussed:

- Can a “Supplier of last resort” deny a supply contract with a customer seen as a bad payer?
 - In Germany the default supplier and the supplier of last resort is the same up to 10.000 kWh. The default supplier cannot deny a supply contract with a household customer;
 - In the Netherlands, there is no need for default supplier or supplier of last resort, because of short switching period;
 - In Denmark the customer’s supplier cannot end an existing supply contract. If the customer is a bad payer, the supplier must send an end of supply, however he will be the supplier until the DSO has disconnect the MP.
- Does a “supplier centric model” mean that there is a single contract?
 - In the Netherlands there is one contracting party (the supplier, making two contracts one for supply and one for the connection/usage to the grid) for the smaller customer, but separate for larger customer;
 - In Norway there are separate contracts for energy supply, grid connection and grid usage.

Appendix A Survey (inventory) of how much of the ebIX® deliverables are used

	ebIX® BRSs	ebIX® BIMs	ebIX® MD UML model	ebIX® pre-defined XML schemas	TT	
Belgium						
Denmark	Used as basis in the Elhub project ¹	Not used	MD is used up till now	Not used	Manually made (updated)	
Germany						
Netherlands	Indirectly used in national documentation	Not used	Not used (EA is used)	Not used	Not used	
Norway	Used as basis in the Elhub project ²	Not used	The MD model is Imported to EA and used to describe process and documents	Not used	Generated from EA	
Poland	Used as basis for national requirements	Not used so far	To be decided	To be decided	To be decided	
Slovenia						
Sweden						
Common Nordic retail market	Used as a basis for a Nordic BRS ³	To be decided	To be decided	To be decided	To be decided	
Nordic Balancing System	Used as a basis for a Nordic BRS	Not used	Used as a basis for Nordic customisation	Not used	Used to create ebIX® based XML schemas	

¹ The Norwegian Elhub is expected to go on the air October 1st 2016.

² The Norwegian Elhub is expected to go on the air October 1st 2016.

³ The project for a harmonised Nordic retail market has made a first BRS based in the ebIX® BRSs. How to continue is not yet decided.

Appendix B CuS Work plan

#	Activity	Priority	Start	End
A)	Include gas for MPs, as proposed by the ebIX® gas group	immediate	Q4/2014	Q2/2015
B)	How to handle the different attributes related to the Consumer, such as consumer contact information (e.g. address and invoice address).	1 st	Q4/2014	Q2/2015
C)	Request change of attributes connected to a MP, such as: <ul style="list-style-type: none"> Closing and Reopening MPs, Change of Metering Method and Change of time frames 	2 nd	Q1/2015	Q3/2015
D)	Combined grid and supply billing (invoicing), including MD for products, such as; grid fees, grid subscriptions, ...	3 rd	Q2/2015	Q1/2016
E)	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.	4 th	Q4/2015	Q3/2016
F)	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?)"	5 th	TBD	TBD
G)	Efficient data alignment, including the possibility to request historical and/or future master data.	6 th	TBD	TBD
H)	Request for services. The item concerns chargeable requests from the BS to the DSO for changes to a MP or a Meter, such as: <ul style="list-style-type: none"> Request for metered data 	TBD	TBD	TBD
I)	The possible role of a datahub in the processes (Proposed by DK) <ul style="list-style-type: none"> Seen from the supplier side 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 extent, i.e. the MPA will be the datahub. Among others, the proposal include processes between the GAP and the MPA.	TBD	TBD	TBD
J)	QA of the CuS model and consistency of the CuS and EMD models	TBD	TBD	TBD
K)	New (enhanced) processes for labelling	TBD	TBD	TBD

Appendix C 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			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 Dystrybcja	+48 32 303 52 01	+48 508 006 285	Grazyna.Handerek@tauron-dystrybcja.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			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
--------------	----	-----------	-------------------	-------------------	--

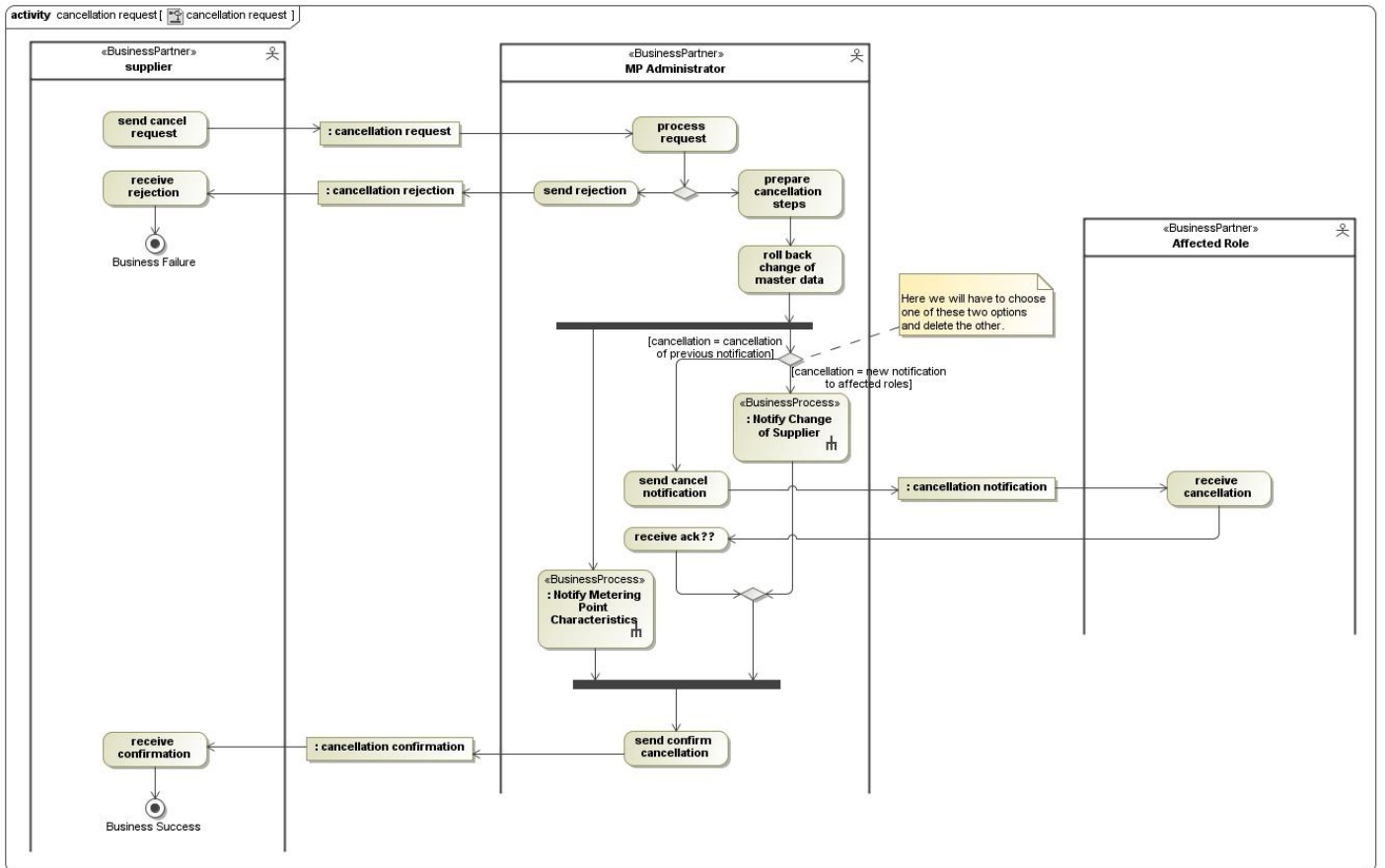
CC:

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

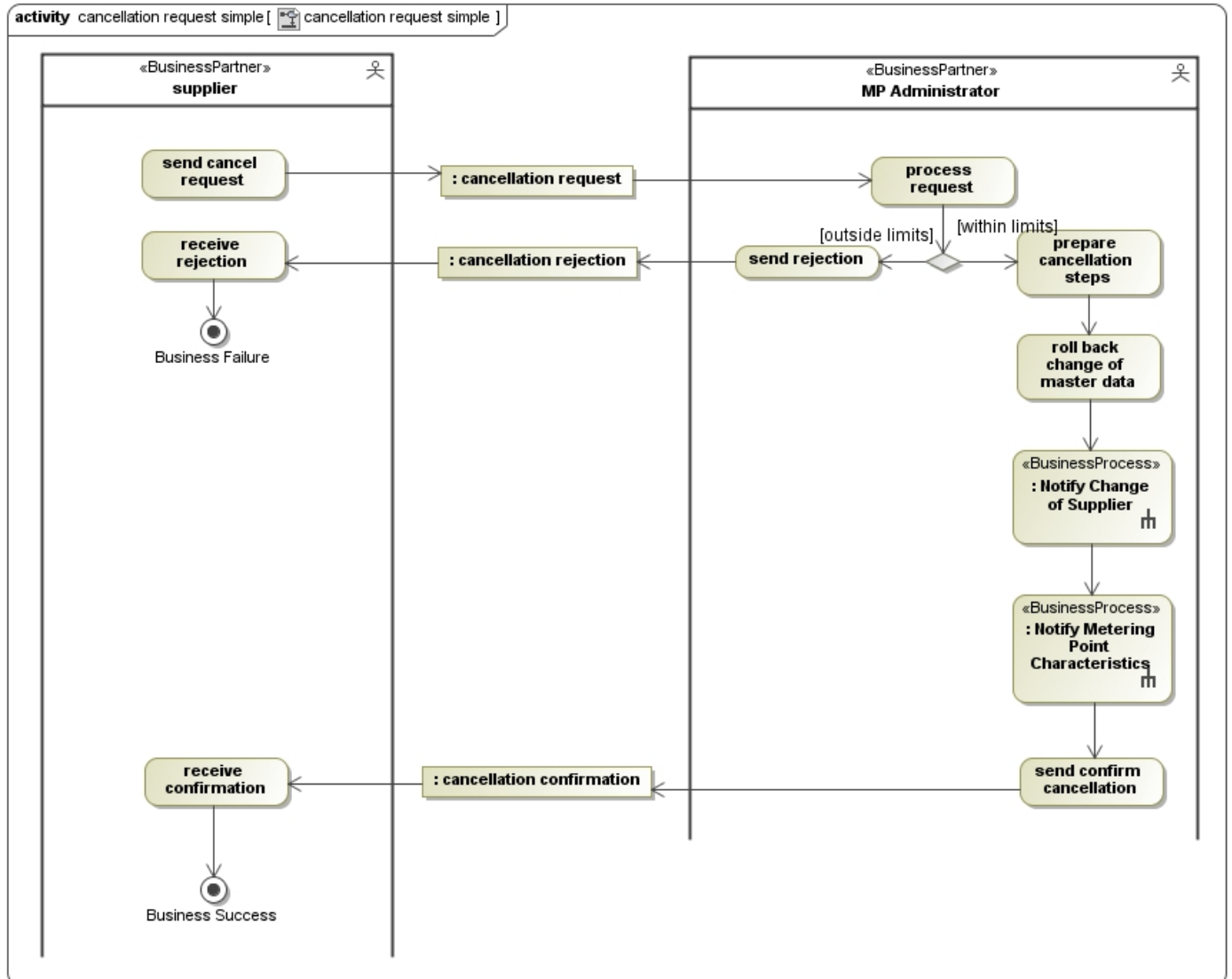
It is expected that cc receivers are reading the CuS minutes and actively responds to these when they have comments to them. It is further expected that the CuS information is actively used in the national data exchange standardisation work.

Appendix D Cancellation

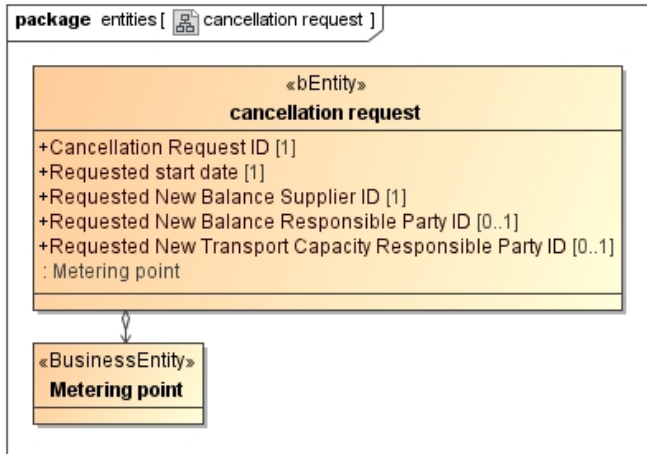
D.1 Cancellation



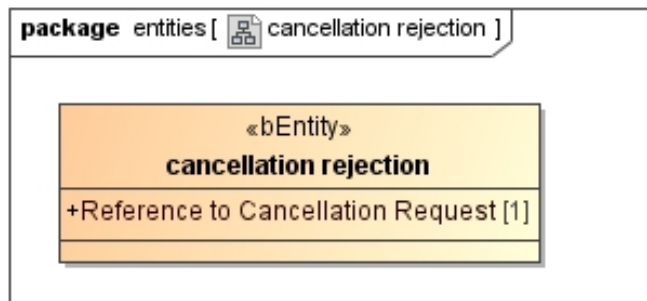
D.2 Simple cancellation draft



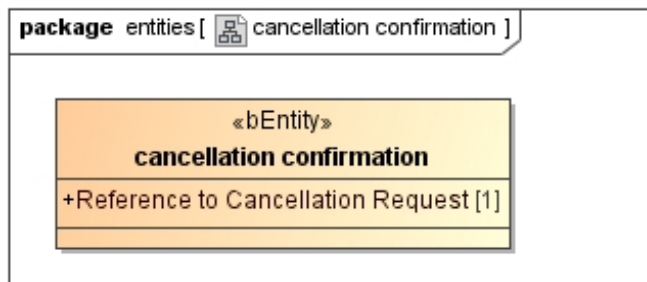
D.3 Cancellation request



Rejection cancellation



Confirmation cancellation



Appendix E Change of MP attributes

MP characteristics attributes	Which role(s) can request change to an element?								Do we see a need for a new ebIX® request/response process covering the change in the MP administration?							
	BE	DE	DK	NL	NO	PL	SE	SI	BE	DE	DK	NL	NO	PL	SE	SI
«Business entity» Metering Point																
Identification ⁴		BS	na	na	na	na				Yes ⁵	No	No	No	No		
«Business entity» Metering Grid Area																
Identification		GAP	GAP	GAP	GAP	GAP				Yes ⁶	No	No	No	No		
«Business entity» Aggregated Reception Station																
Identification		GAP	na	GAP	na	na				No	na	No	na	na		
Metering Point Address																
City Name		GAP	GAP	GAP	GAP	GAP				No	No	No	No	No		
Street Name		GAP	GAP	GAP	GAP	GAP				No	No	No	No	No		
Building Number		GAP	GAP	GAP	GAP	GAP				No	No	No	No	No		
Postcode		GAP	GAP	GAP	GAP	GAP				No	No	No	No	No		
Room Identification		GAP	GAP	GAP	GAP	GAP				No	No	No	No	No		
Floor Identification		GAP	GAP	GAP	GAP	GAP				No	No	No	No	No		
Country		GAP	GAP	GAP	GAP	GAP				No	No	No	No	No		
Geographical Coordinate																
Latitude		na	na	GAP	GAP	GAP				No	No	No	No	No		
Longitude		na	na	GAP	GAP	GAP				No	No	No	No	No		
Altitude ⁷		na	na	GAP	GAP	GAP				No	No	No	No	No		
System		na	na	GAP	GAP	GAP				No	No	No	No	No		

⁴ There is a need for a process for creation and ending of MPs

⁵ Yes, because there already is a process in place in Germany where the BS can correct mistakes in the MP ID

⁶ Yes, because there already is a process in place in Germany

⁷ The altitude of the meter may be used in the gas sector for correction purposes.

MP characteristics attributes	Which role(s) can request change to an element?								Do we see a need for a new ebIX® request/response process covering the change in the MP administration?							
	BE	DE	DK	NL	NO	PL	SE	SI	BE	DE	DK	NL	NO	PL	SE	SI
Metering Point Party																
Balance Supplier ID		BS	BS	BS	BS	BS				No	No	No	No	No		
Metered Data Responsible ID		MDR	na	MDR	na	na				No	No	No	No	No		
Balance Responsible Party ID		BS/ GAP	BS	BS/ BRP	BS	BS/ BRP				No	Yes ⁸	Yes ⁹	No	Yes ¹⁰		
Transport Capacity Responsible Party ID		BS/ GAP	BS11	BS/ TCR	na	na				No	No	Yes ¹²	No	No		
Grid Access Provider ID		GAP	GAP	GAP	GAP	GAP				Yes	No	Yes	No	No		
Supply Customer																
Name		BS	BS	BS	BS	BS				Yes	Yes	Yes	Yes	Yes		
ID		BS	BS	na	BS	BS				Yes	Yes	Yes	Yes	Yes		
Grid Customer																
Name		GAP	na	GAP	na	GAP				No	No	Yes	No	No		
ID		na	na	na	na	GAP				No	No	na	No	No		
Metering Point characteristics																
Balance Group ID		BS	na	na	na	na				Yes	No	No	No	No		
Type Of Metering Point		GAP	GAP	GAP	GAP	GAP				Yes	No	Yes	Yes	Yes		
Metering Method		GAP	na	GAP	GAP	GAP				Yes	na	Yes	Yes	Yes		
Settlement Method		GAP	GAP	GAP	GAP	GAP				Yes	Yes	Yes	Yes	Yes		
Scheduled Meter				/ MDR												

⁸ Denmark want a process for bulk change of BRP

⁹ Netherlands want to open the process so that also the BRP can request the change – A bulk change process is already in place

¹⁰ Poland want to open the process so that also the BRP can request the change and a bulk change process is already defined

¹¹ In Denmark the BS is covered by the Shipper together with the TCR

¹² Netherlands want to open the process for the TCR – A bulk change process is already in place

MP characteristics attributes	Which role(s) can request change to an element?								Do we see a need for a new ebIX® request/response process covering the change in the MP administration?							
	BE	DE	DK	NL	NO	PL	SE	SI	BE	DE	DK	NL	NO	PL	SE	SI
Reading Date																
Grid Agreement Type				GAP												
Meter Reading Periodicity				MDR												
Metering Point Electricity Voltage Level				GAP												
Administrative Status Of Metering Point		na	na	na	na	na				na	na	na	na	na		
Physical Status Of Metering Point		BS/ GAP	GAP	GAP	BS/ GAP	BS/ GAP				Yes	Yes	Yes	Yes	Yes		
Contracted Connection Capacity				GAP												
Contracted Connection Capacity Measure Unit				GAP												
Gas pressure level				GAP												
Meter Reading characteristics				GAP/ MDR												
Sustainable Energy				GAP/BS												
Disconnection Contract				na												
Physical Characteristics																
Capacity of a Metering point				GAP												
Disconnection Method				GAP												

MP characteristics attributes	Which role(s) can request change to an element?								Do we see a need for a new ebIX® request/response process covering the change in the MP administration?							
	BE	DE	DK	NL	NO	PL	SE	SI	BE	DE	DK	NL	NO	PL	SE	SI
Volume information																
Product Type				GAP												
Measure Unit				GAP												
Standard Load Profile				GAP												
Direction				GAP												
Estimated annual volume																
Quantity		BS/ MDA	MDA	MDA	MDA	MDA										
Meter Time Frame Type		BS/ MDA	na	MDA	na	MDA										