Minutes: NMEG meeting **Date:** Tuesday and Wednesday January 21st and 22nd, 2020 **Time:** 09:00 –17:00 and 09:00 – 16:00 **Place:** Svenska kraftnät's offices in Sundbyberg March 3rd, 2020	**NMEG** Nordic Market Expert Group

Present:	Christian, Energinet (via GoToMeeting first day) Jan, Energinet Jan, Svenska kraftnät Jari, Fingrid Jon-Egil, Statnett (Convenor) Mika, eSett (via GoToMeeting the first day) Ove, Edisys (Secretary) Teemu, Fingrid Tuomas L, eSett
To (NMEG):	Anne Stine, Elhub Christian, Energinet Jan, Energinet Jan, Svenska kraftnät Jari, Fingrid Jon-Egil, Statnett (Convenor) Ole, Energinet Ove, Edisys (Secretary) Tage, Energinet Teemu, Fingrid
CC:	Audun, Elhub Fedder, Energinet Hans Erik, Elhub Minna, Fingrid
To (Invited guests):	Mika, eSett, FI Tommy, eSett, FI Tuomas L, eSett, FI Tuomas P, eSett, FI
Appendix A:	Result from NMEG CIM-XML Subgroup
Appendix B:	Overview of Nordic memberships in international standardisation bodies
Appendix C:	Overview of the usage of xml-schemas in the Nordic countries
Attachment:	Memo NMEG roadmap 20200120.c , see item 11, NMEG Roadmap

1   Approval of agenda

The agenda was approved with the following additions:

- New codes for ACE OL from Statnett (NBM), see item 6.4;
- ebIX® BRS for Alignment of area characteristics, see item 6.5;
- Comments from eSett to the NMEG roadmap, see item 11.1;

- Will CGM used for congestion management require changes to the HRM? See item 14.1 under AOB;
- NMEG Nordic ECP "centre of excellence" workshop See item 14.2 under AOB;
- XML specification for FFR services, see item 14.3 under AOB;
- Study regarding interoperability of Nordic datahubs – New project from the Nordic regulators, see item 14.4 under AOB.
- Swedish hub API portal, see item 14.6 under AOB.

eSett participated via GoToMeeting for item "6.2 - NBS BRSs", "10 - Making a common Nordic downstream market BRS based on CIM, for exchange of metered data" and "11.1 - Comments from eSett to the NMEG roadmap".

Tuomas Pulkkinen from eSett was added to the NMEG distribution list.

2   Approval of previous meeting minutes

The minutes from previous meeting were approved with the following comments:

- Ove will make sure we use the term "What to decide, discuss or inform" in the header of each item in both agendas and minutes.

3   NMEG-NORCAP Project

Background: NORCAP is a project run by Nordic RSC that needs a set of new CIM based documents, such as the CRAC document and the SIPS document.

References (links): None.

**What to decide,
discuss or inform:**   Update of the NorCap BRS after approval of several MRs related to the BRS.

Jon-Egil informed that CIM EG will discuss if CGMES (CGM Exchange Standard) or CIM for market should be used in a new version of the SIPS document at the next CIM EG meeting in February, hence the item is postponed until next NMEG meeting.

4   Status for a common meeting with NEAT

Background: NIT has taking over from MSC as "home" for NMEG and consequently we should have a common meeting with NEAT (Nordic Enterprise Architecture Team), e.g. half day (same time and place) to see how we can cooperate.

References (links): None.

**What to decide,
discuss or inform:**   Status for a common meeting with NEAT

Ongoing task:
- Jon-Egil will check if it still is any interest for a common meeting with NEAT and if so, schedule a common meeting.

5   Status for new host for www.ediel.org

Background: Currently Energinet is hosting www.ediel.org, but Energinet would like to find another home for the web site. Hence, Ove will create a new website based on WordPress at Webhuset.

References (links):   A WordPress version of www.ediel.org can be found at https://edieltest.org/.

**What to decide,
discuss or inform:**

Fedder, Jan (DK) and Ove had as action to move www.ediel.org from Energinet to Webhuset. Due to budget restrictions at Energinet, the move had to be done latest January 14th.

Report from Fedder:

> There has been a bit of a mess during the migration. First of all, the Infrastructure guys at Energinet were a bit slow to issue a new certificate and accept they should change DNS. Secondly, Fedder asked Webhuset to clone www.edieltest.org to www.ediel.org, but they kind of screwed that up pretty hard, leaving both sites in a pretty sad state. However, the current state is that www.ediel.org is working, but it is using a database from www.editest.org. Fedder has informed that he failed to figure out how to reliably backup and restore the MySQL databases they use. Note that www.edieltest.org is configured to use THE SAME database, so that should be fixed. Fedder hope that Teemu or Jon-Egil have experience in working with MySQL. Once we know how to backup and restore a database, it should be pretty easy to change the connection parameters in the wp-config.php file. However, since the current status is that the website now is up and running and the information is available to the public, there is no haste per se.

Teemu fixed the remaining problems during the meeting.

Item closed.

6   Status and update of Nordic BRSs and other documents if needed

Background: NMEG is responsible for a set of BRSs that are published at www.ediel.org.

References (links):   None.

**What to decide,
discuss or inform:**

1) Update of BRSs and other documents if needed;
   Status:
   - See item 6.1 and 6.2 below.

3) Status for a project for aligning the NBM with the existing Nordic BRSs;
   Status:
   - Done case by case – first is ACE OL, see below.
   - Item closed.

4) Decide if we shall update and publish the Nordic trading system BRS with the new enhanced Currency Exchange Rate Market Document or if we shall continue waiting for other updates or do a complete review of the BRS.
   Status:

- The Nordic trading system BRS will be updated and published, see details under item 6.1 below.

6.1   BRS for Nordic Trading System

Ove had as action from previous meeting added the enhanced Currency Exchange Rate Market Document and the CIM version of the Area Configuration Document to the BRS for Nordic Trading System in addition to the existing descriptions.

Action:

- Ove will update the last comment in the BRS, send it to NMEG for 14 days of commenting and thereafter publish it.

Item closed.

6.2   NBS BRSs

Ove had as action from previous meeting updated the NBS BRS and the NBS BRS for TSO-MO and sent it on circulation for comment to NMEG and eSett. However, there was several comments to the BRSs, which led to several changes to the BRSs, such as creation of a new flow for aggregated production.

Ove had also updated the NBS BRS for Master Data, i.e. updated Document Types for the Area Configuration Document and Process Type for all documents to official ENTSO-E codes and made new versions of the xml schemas with the new codes. The updated BRS and xml schemas were sent on circulation for comment to NMEG and eSett. Also, this update got several comments, such as from Norway that are using the Area Configuration Document in several processes already. Also, eSett have implemented the Area Configuration Document and the Party Document, however without having started using them.

Conclusion:

- What to do with the NBS BRS for Master Data will be put on the agenda for our next meeting in Helsinki where also eSett will participate.

- Ove will, as a part of the NMEG project "Making a common Nordic downstream market BRS based on CIM, for exchange of metered data", see item 10, make a MR to ebIX® for addition of Technology (currently using Asset Type), Production Type, Business Type and Energy Supplier, to the document Aggregate Data per MGA (Production Type is used by Finland and Norway).

Item closed.

6.3   Update of Energy Prognosis Document from Statnett (Stein-Ole)

See item 6.4 below.

Item closed.

6.4 New codes for ACE OL from Statnett (NBM)

Related to NBM, the Nordic TSOs needs to share real-time imbalance for each area (ACE Open Loop), hence a new Business type is needed. ENTSO-E has a few ACE related codes, but none of these matches our need.

From Bent Atle:

> Dear NMEG Members,
>
> We are working with a common user interface in an NBM context and have some needs. We want you to consider the following request for your next meeting.
>
> In connection with the fact that we are working on a new common Nordic user interface solution for operators we have a need for a new message (document) in addition, and we need to set up codes for process types, message types and business types for different purposes.
>
> Attaches information in plain text here, but also adds the project documentation that can be a compliment to details I may have overlooked.
>
> New Document added – ***ACEOL_MarketDocument:***
>
> The basis for creating a new document is that there is a need for something that we call ACE Open Loop, ACE OL, which is imbalance in MW without planned flow (ID, DA, other) and without regulations (aFRR, mFRR).
>
> These are values that come from the individual TSO systems (EMS) and it should consist of point values, i.e. only a value for each bid zone, for a given time and should be received every 10 seconds with a maximum of 30 sec delay of a real change.
>
> Since this pass through ECP/EDX and should be sent from/to the individual TSOs, the document is stripped down to have as little overhead as possible. The document is intended for use in 2 purposes, ACE OL Point Value (real-time values) and ACE OL Historic (Corrections/Update of data with time series).
>
> We have created this definition of ACE OL:
>
> *ACE OL: ACE Open Loop (ACE OL) is the real-time imbalance of an area in the power system without automatic Frequency Restoration Reserve(aFRR) and manual Frequency Restoration Reserves(mFRR). ACE OL is the imbalance before any operator balancing actions. The imbalance prognosis is the prognosis of ACE OL.*
>
> Function:
>
> ACE OL = Measured flow - Planned flow (ID,DA,other) - Total regulations (aFRR,mFRR,other regulations)
>
> Type of codes:
>
> We need some codes in conjunction to the new messages we are going to implement.
>
> I've attached the table in plain text which is also in the enclosed documentation. I still give a brief description of the messages and function:

ACE OL Point Value (*ACEOL_MarketDocument*): A document to provide real-time ACE OL Point Value for Each LCA/bidding zone.

ACE OL Historic (*ACEOL_MarketDocument*): A document to provide historical ACE OL values for a given period.

ACE OL Limit (*Schedule_MarketDocument*): A document specifying alert types given by the max./min. values of ACE OL in each bidding zone for a given period.

In the table we need codes where it is set ZXX:

	Process Type	Description	Message Type	Description	Business Type	Description
ACE OL Point Value	**Z12** ACE OL real-time	The process of exchanging real-time ACE OL values	**Z35** ACE OL	A document to provide Area Control Error Open Loop (ACE OL) values	**Z77**	**ACE OL (Area Control Error Open Loop)** The Area Control Error Open Loop (ACE OL) is the real-time imbalance of an area in the power system without automatic Frequency Restoration Reserve (aFRR) and manual Frequency Restoration Reserves (mFRR). ACE OL is the imbalance before any operator balancing actions
ACE OL Historic	**Z13** ACE OL report	The process of reporting ACE OL values	**Z35** ACE OL	A document to provide Area Control Error Open Loop (ACE OL) values	**Z77**	**ACE OL (Area Control Error Open Loop)** The Area Control Error Open Loop (ACE OL) is the real-time imbalance of an area in the power system without automatic Frequency Restoration Reserve (aFRR) and manual Frequency Restoration Reserves (mFRR). ACE OL is the imbalance before any operator balancing actions
Imbalance prognosis	-not in use-		B39	A document to provide the prognosis of energy imbalances for a given period.	**C32**	Area imbalance - A time series concerning imbalance between planned consumption, production and exchange in an Area.
ACE OL Limit	**Z12** ACE OL real-time	The process of exchanging real-time ACE OL values	**Z36** Limits	A document specifying limits, such as max. or min. values.	**Z78** Upper Alert	A time series concerning the upper limit before an alarm is raised
ACE OL Limit	**Z12** ACE OL real-time	The process of exchanging real-time ACE OL values	**Z36** Limits	A document specifying limits, such as max. or min. values.	**Z79** Upper Emergency	A time series concerning the upper limit before an emergency is raised

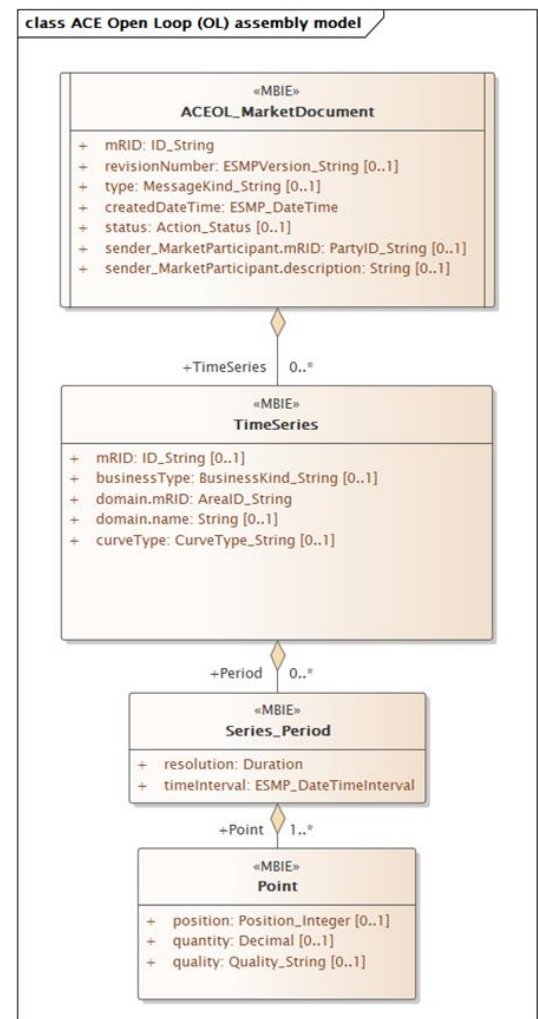|	Process Type	Description	Message Type	Description	Business Type	Description
ACE OL Limit	**Z12** ACE OL real-time	The process of exchanging real-time ACE OL values	**Z36** Limits	A document specifying limits, such as max. or min. values.	**Z80** Lower Alert	A time series concerning the lower limit before an alarm is raised
ACE OL Limit	**Z12** ACE OL real-time	The process of exchanging real-time ACE OL values	**Z36** Limits	A document specifying limits, such as max. or min. values.	**Z81** Lower Emergency	A time series concerning the lower limit before an emergency is raised
ACE OL Limit	**Z12** ACE OL real-time	The process of exchanging real-time ACE OL values	**Z36** Limits	A document specifying limits, such as max. or min. values.	**Z82** Upper Warning	A time series concerning the upper limit before an warning is raised
ACE OL Limit	**Z12** ACE OL real-time	The process of exchanging real-time ACE OL values	**Z36** Limits	A document specifying limits, such as max. or min. values.	**Z83** Lower Warning	A time series concerning the lower limit before an warning is raised

Other:

Assembly model for ACEOL_MarketDocument:

Conclusions:

- Proposal for update of ACEOL Market Document from NMEG:
  - Add a Process Type [0..1];
  - Replace Sender_MarketParticipant.description with Sender_MarketParticipant.role;
  - Add optional Recipient ID and Role;
  - Add optional ACEOL_TimePeriod;
  - For the ACE OL Point Value document:
    - Add a "PointValue_DateAndOrTime" to the Time Series, based on the «ACC-» DateAndOrTime to be used as a time stamp for the Point Value – optional, only used for Point Value;
    - Add a "PointValue_Quantity" to the Time Series, based on the «ACC-» Quantity to be used for the Point Value – optional, only used for Point Value;
    - Verify with the project if a Quality is needed;
    - Period and sub-classes are not used for the Point Value.
- New Z-codes issued (see above);
- We will not make MRs for CIM EG for the time being.

Item closed.

class ACE Open Loop (OL) assembly model

«MBIE»
ACEOL_MarketDocument

+ mRID: ID_String
+ revisionNumber: ESMPVersion_String [0..1]
+ type: MessageKind_String [0..1]
+ createdDateTime: ESMP_DateTime
+ status: Action_Status [0..1]
+ sender_MarketParticipant.mRID: PartyID_String [0..1]
+ sender_MarketParticipant.description: String [0..1]

+TimeSeries 0..*

«MBIE»
TimeSeries

+ mRID: ID_String [0..1]
+ businessType: BusinessKind_String [0..1]
+ domain.mRID: AreaID_String
+ domain.name: String [0..1]
+ curveType: CurveType_String [0..1]

+Period 0..*

«MBIE»
Series_Period

+ resolution: Duration
+ timeInterval: ESMP_DateTimeInterval

+Point 1..*

«MBIE»
Point

+ position: Position_Integer [0..1]
+ quantity: Decimal [0..1]
+ quality: Quality_String [0..1]

6.5   ebIX® BRS for Alignment of area characteristics

The ebIX® Business Group (EBG) has started a review of the BRS for Alignment of area characteristics and Ove was asked for some clarifications from the Nordic countries:

1) Is the MGA Type really an attribute to the MGA (and not to a grid in general)? EBG wants a better explanation of its usage.
    a. Transmission grids are MGAs, with its own MGA ID and Customers;
    b. The MGA Type is currently not used for the imbalance settlement itself – this is master data;
    c. It is the TSOs that are responsible for the information.
2) How does the Alignment of area characteristics (especially MGA-MGA relations) relate to CGM?
    a. CGM has areas in general as an item, but not MGA especially. You cannot specify MGA-MGA relations with CGM.

Item closed.

7   Status for MRs to ENTSO-E

Background: NMEG has sent several Maintenance Requests (MR) to ENTSO-E during the last years and some of these (about 10 MRs) has been postponed by WG-EDI.

References (links):   The MRs can be downloaded from [Statnett's eRoom](#).

**What to decide,
discuss or inform:**   Status for the MRs sent to WG-EDI.

Status for:

- NMEG 2019/168: New Role Code for "**Z05** Trader", based on MR NEMM 2013/113B
    o The trader is used in Master Data exchanges, such as "Bilateral Trade Structure" and "Area Configuration Document" when used for MBA-MGA Relations
  Conclusion:
    o **A47** Energy Trader

- NMEG 2019/169: New Business Type Codes used in BRS for Schedules and BRS for Trade:
    Z02   Frequency bias (Nordic code)
    Z03   Frequency Containment Reserves, Normal (**FCR-N** earlier **FNR**) (Nordic code)
    Z06   Frequency Containment Reserves, Disturbance (FCR-D earlier FDR) (Nordic code)
  Conclusion:
    C25   Frequency bias
    C26   Frequency Containment Reserves, Normal (**FCR-N**)
    C27   Frequency Containment Reserves, Disturbance (**FCR-D**))

- NMEG 2019/170: New Process Type Code "**Z05** Bilateral Trade" to be used in the NBS BRS (ESS)
  Conclusion:
    o More information wanted from CIM EG – Jon-Egil to provide this at the next CIM EG

- NMEG 2019/171: New Business Type Code "**Z64** *Internal trade difference, within a Market balance area, i.e. the difference between trades reported from an out party (seller) and an in party (buyer). The internal trade difference is the delta value between what is reported by the two Balance Responsible Parties*". See also MR NTC 2014/126.

Conclusion:
> **C28**   Internal trade difference

- NMEG 2019/172: New Business Type code "**Z52** Small scale production"**,** used in ESS in the NBS BRS for TSO-MO
Conclusion:
> **C29**   Small scale production

- NMEG 2019/173: New Process Type "**Z04** Reserve option market", used in BRS for Trade
Conclusion:
> **A58**   Reserve option market

- NMEG 2019/174: New Business Type "**Z32** System price (including volume)", used in BRS for Trade:
> The system price is an unconstrained market clearing reference price. It is calculated without any congestion restrictions by setting capacities to infinity.
Conclusion:
> **C30**   System price

- NMEG 2019/175: New Business Type "Wind Gust", with the definition: "An increase in the speed of the wind lasting for a short period"
Conclusion:
> **C31**   Wind gust

- NMEG 2019/176: New Document Type "Imbalance prognoses document"
Conclusion:
> **B39**   Imbalance prognosis document

- NMEG 2019/177: New Business Type "Area Imbalance"

Conclusion:
> **C32**   Area imbalance

Continued action:
- Jon-Egil will go through the set of Reason Codes from the NBS BRS for TSO-MO below and suggest how to make some of them Business Types and some of them Reason Codes. Thereafter MRs will be made.

> **Z22**   Supportive power
> **Z26**   Transit triangle
> **Z27**   Transit redispatch
> **Z28**   Transit SB Loop Long
> **Z29**   FCR (Frequency Containment Reserve (FCR) is an automatic and momentarily regulation, to adjust the physical balance in the power system)
> **Z30**   FRR-A (Frequency Restoration Reserve - Automatic (FRR-A) is an automatic reserve, activated continuously by the frequency)
> **Z31**   FRR-M, Balancing Power (Frequency Restoration Reserve - Manual activated reserves (FRR-M), Balancing Power)
> **Z34**   FRR-M, Quarter regulation (Frequency Restoration Reserve - Manual activated reserves (FRR-M), Quarter regulation when TSO need transfer of production (usually start 15 min earlier))

Z35 FRR-M, Special Regulation (Frequency Restoration Reserve - Manual activated reserves (FRR-M), Special Regulation where regelation does not affect the regulation price)

Z36 Hour Change Regulation (to reduce problems encountered at the turn of the hour in the Nordic countries or in Finland, Fingrid reserves the right to transfer the planned changes to begin 15 minutes before or after the planned moment)

Z37 Power Transaction (Fixed price transaction used for specific purposes outside of ordinary regulation)

Z38 TSO Internal Countertrades (The time series concern TSO Internal Countertrades)

Z39 Day Ahead Production Adjustment **(**Energy (production) moved from one hour to another to avoid major changes between hours)

The following has already been approved by CIM EG:

C26 Frequency Containment Reserve, Normal operation (FCR-N).

C27 Frequency Containment Reserve, Disturbance (FCR-D).

Action:

- Ove will update the relevant NMEG BRSs with the new codes.
- Ove will update and upload the latest MR status document to Statnett eRoom.

8   BRS for schedules (postponed until we start a project together with NBM)

Background: The latest version of the BRS for Schedules was published in February 2014. Since then the scheduling processes has changed and NMEG is working on updating the document.

References (links): The draft BRS can be downloaded from NMEG working documents.

Action(s): The following actions will be reopened when we start a project together with NBM (Nordic Balancing Model):

1) Jan and Fedder will check the dependency matrix for ESS schedule document and ESS confirmation report, chapter 7.1 and 7.3.
2) Fedder, Jan and Jari will verify if "**A09** Finalised" is (will be) used for the ERRP Planned Resource Schedule Document from BRP to SO, or if it is only "**A14** Resource Provider Resource Schedule (Operational schedule)" that will be used (as in Norway), ref. chapter 7.4 in the Schedule BRS;
SvK and Fingrid will be using A14. Energinet is pending.
3) Everyone should verify and possibly update the "Used in" column in chapter 7.4.3;
4) Jari will find Finnish usages of Business types in chapter 7.4.4;
5) Everyone should verify and possibly update the "dependency matrix" in chapter 7.4.5.

What to decide,
discuss or inform:

Postponed until we start a project together with NBM.

9   XML schemas (postponed until we start a project together with NBM)

Background: The NMEG set of schemas, including extended table with TSO columns, are shown in Appendix C.

References (links):

Action(s):   When we start a project together with NBM (Nordic Balancing Model), everyone are asked to find what versions of xml-schemas are used to day in different projects and come up with proposals for new schemas and/or sets of schemas that should be published at www.ediel.org.

What to decide,
discuss or inform: Verify the list of proposals for new schemas and/or sets of schemas, from the NMEG participants, that should be published at www.ediel.org.

Postponed until we start a project together with NBM.

10   Making a common Nordic downstream market BRS based on CIM, for exchange of metered data

Background: At the NMEG meeting November 2019, it was agreed to establish a NMEG CIM-XML Subgroup that will make Nordic CIM based XML documents, with the following priorities:

- a) NBS ebIX® based documents;
- b) NBS documents based on older ENTSO-E schemas;
- c) NBS master data documents.

The members of NMEG CIM-XML Subgroup are Jan (DK), Jan (SE), Teemu and Ove.

References (links):

What to decide,
discuss or inform: Status.

The NMEG CIM-XML Subgroup has had two GoToMeetings since previous NMEG meeting. The result is shown in Appendix A, which was reviewed.

Actions:

- The NMEG CIM-XML Subgroup will add the "ebIX® Extension packages" to the used CIM model after verification by WG16/Jean-Luc;
- The NMEG CIM-XML Subgroup will verify with WG16 if classificationType is the correct place to differentiate between electricity and gas;
- Make Quantity required [1] in Validated Data for Settlement for Aggregator.
- Ove will make a MRs to ebIX® for addition of Technology (currently using Asset Type), Production Type, Business Type and Energy Supplier, to the document Aggregate Data per MGA (Production Type is used by Finland and Norway).

11   NMEG Roadmap

Background: At the NMEG meeting November 2019, a Roadmap for the coming years was made. The work plan will be forwarded to NEAT for comments and thereafter to NIT.

References (links):

**What to decide,
discuss or inform:** Status.

The NMEG Roadmap was updated based on comments received. The updated Roadmap is added as an embedded attachment.

Action:

- Jon-Egil will forward it to NEAT and, if no blocking comments, thereafter to NIT.

Item closed.

11.1 *Comments from eSett to the NMEG roadmap*

eSett followed up on MADES implementations. There was a sentence, which was added: "During 2020, NMEG intend to make a framework for governance of MADES and ECP for the Nordic countries."

eSett would like to emphasize, that in the future all Nordic TSOs would have to have some kind of forum responsible of deciding such matters as e.g. which version of ECP/EDX components would be used in the ECP network for NBS. And this question isn't just about TSOs providing the central components, but also the Market Parties would have to be taken into consideration end their endpoints.

The only group that can force (decide) what to use and how is the NIT. However, NIT needs input from NMEG and others as input for their decisions.

Conclusions:
- eSett will be invited to the ECP workshop.
- Governance of MADES/ECP will be put on our next NMEG meeting.

12 Information (if any)

Ove informed that Audun Matre Meinich from Elhub has been added to the NMEG mailing list. He is responsible for the interface between Elhub og other bodies, such as the communication towards eSett.

Appendix B was reviewed and updated.

13 Next meetings

Unless otherwise explicitly stated, the meetings start at 09:00 (CET) the first day and end 16:00 (CET) the second day.

- Tuesday and Wednesday March 3rd and 4th in Fingrid's offices in Helsinki.
- Wednesday June 3rd and Thursday June 4th in Energinet's offices in Erritsø.
- Tuesday and Wednesday August 18th and 19th in Edisys offices in Oslo.
- Tuesday and Wednesday October 27th and 28th in Svenska kraftnät's offices in Sundbyberg.

NMEG CIM-XML subgroup GoToMeetings:

- Wednesday January 29th 13:00 – 14:30 (CET)
- Tuesday February 11th 13:00 – 14:30 (CET)
- Monday February 17th 13:00 – 14:30 (CET)

14 AOB

14.1 Will CGM used for congestion management require changes to the HRM?

The question was raised at the latest ETC meeting.

Answer:

- It doesn't seem that CIM or CGM has anything related to congestion management

Item closed.

14.2 NMEG Nordic ECP "centre of excellence" workshop

Jon-Egil informed that the ECP team at Statnett has proposed that NMEG runs an ECP workshop for technical personnel before the go-live of the Nordic MNA, to make sure that all TSO's are well prepared.

Since the setup is based on the NMEG recommendations it seems natural that this is done under the NMEG umbrella.

The workshop will be held at Statnett SF and it's not foreseen any budgetary consequences for NMEG.

Item closed.

14.3 XML specification for FFR services

The Fast Frequency Reserve Implementation Group (FFR IG) is responsible for implementing the FFR service until May 2020. One of the goals is to exchange process required forecast information between the Nordic TSOs, that the correct FFR volume can be procured in the day-ahead market. This document should elaborate a fit for purpose format, which enables the required information exchange in a standardised manner for further data processing. The document also serves as working document, to further align on the specifications between business and IT experts.

The documents distributed from Jari was reviewed with the following comments:

- CIM version ERRP Planned Resource Schedule should be used instead of the Generation and Load document;
- We need a new Document Type "Power Prognoses";
- We need new Business Types:
  - Inertia;
  - FFR;
- We need a new Process Type "Fast Frequency Reserve Process".

During the meeting, the following table were made, describing how the CIM version of the ERRP Planned Resource Schedule can be used for FFR services:

IEC CIM Attribute	Cl.	Code and description
	[1]	*Planned Resource Schedule Market Document*
mRID	[1]	The unique identification of the document being exchanged within a business process flow.

IEC CIM Attribute	Cl.	Code and description
revisionNumber	[1]	The identification of the version that distinguishes one evolution of a document from another. **Fixed 1**
type	[1]	The coded type of a document. The document type describes the principal characteristic of the document. **Z?1** Power prognoses
process. processType	[1]	The identification of the nature of process that the document addresses. The process dealt with in the document. *Z?2 FFR process*
sender_MarketParticipant. mRID	[1]	The identification of a party in the energy market. --- Document owner.
sender_MarketParticipant. marketRole.type	[1]	The identification of the role played by a market player. --- Document owner. --- The role associated with a Market Participant. **A04** System Operator
receiver_MarketParticipant. mRID	[1]	The identification of a party in the energy market. --- Document recipient.
receiver_MarketParticipant.marketRole.type	[1]	The identification of the role played by a market player. --- Document recipient. --- The role associated with a MarketParticipant. **A04** System Operator
createdDateTime	[1]	The date and time of the creation of the document.
schedule_Time_Period. timeInterval	[1]	The start and end date and time for a given interval. --- This information provides the start and end date and time of the schedule time interval. All time intervals for the time series in the document shall be within the total time interval for the schedule. The receiver will discard any time intervals outside the schedule period.
domain.mRID	[0..1]	The unique identification of the domain. --- The identification of the domain that is covered in the schedule document. It is in general the market balance area that is the subject of the schedule plan. Any known area from the Harmonised role model covering the areas within the time series level of the document, e.g. Market Balance Area, National Area, Nordic Market Area (10Y1001A1001A91G) etc.

IEC CIM Attribute	Cl.	Code and description
	[1..*]	*Planned Resource Time Series*
mRID	[1]	A unique identification of the time series.
businessType	[1]	**Z?3** Inertia **Z?4** FFR
product	[1]	Power active
connecting_Domain.mRID	[1]	The EIC code of the relevant area, i.e.: Nordic Market Area 10Y1001A1001A91G Norway 10YNO-0--------C Finland 10YFI-1--------U Sweden 10YSE-1--------K Denmark 10Y1001A1001A65H
resourceProvider_MarketParticipant.mRID	[1]	The EIC ID of the sending System Operator
measurement_Unit.name	[1]	**HTZ** Hertz **A90** gigawatt **MAW** Megawatt
objectAggregation	[0..1]	The identification of the object (party, domain, etc.) that is the common denominator used to aggregate a time series. **A01** Area
	[1..*]	*Series_Period*
timeInterval	[1]	The start and end time of the period.
resolution	[1]	The definition of the number of units of time that compose an individual step within a period. The resolution defining the number of periods that the time interval is divided. The resolution is expressed in compliance with ISO 8601 in the following format: PnYnMnDTnHnMnS. Where nY expresses a number of years, nM a number of months, nD a number of days. The letter "T" separates the date expression from the time expression and after it nH identifies a number of hours, nM a number of minutes and nS a number of seconds. E.g. **PT1H** or **PT60M**
	[1..*]	*Point*
position	[1]	A sequential value representing the relative position within a given time interval.
quantity	[1]	The principal quantity identified for a point.

Action:

- Jari will inform the FFR IG about our suggestion and offer NMEG help for submitting MRs to CIM EG.

Item closed.

14.4 Study regarding interoperability of Nordic datahubs – New project from the Nordic regulators

Ove had been contacted by the Norwegian regulator who informed that NordREG intend to send out a procurement for a study related to cost-benefit analysis regarding interoperability of the Nordic datahubs. The procurement documents are expected to be distributed February 1st. They believe it can be helpful for their consultants if they can offer them contact persons from NMEG in the procurement documents. The origin of the question was related to questions to the HNR-report published summer 2014.

Ove had received draft procurement documents, including an appendix describing the mission. It contains some internal comments**; hence it must not be circulated**.

Answer:

- For general questions regarding the processes and data exchanges used (or to be used) by the Nordic datahubs, the datahubs or datahub projects should be contacted.

- For questions regarding the HNR BRS report (see https://ediel.org/harmonised-nordic-retail-market-hnr/) from 2014 or the communication standards used between the Nordic countries today, Jan (jan.owe@svk.se), as chair of the HNR project. or Ove (ove.nesvik@edisys.no), as secretary of the HNR project, can be contacted. Note that questions/answers must be limited as there is a limited amount of time available for this kind of work.

Item closed.

14.5 NMEG recommendation for asynchronous communications

The "NMEG recommendation for asynchronous communications" has been slightly updated after review by NEAT. The updated version was reviewed and published at www.ediel.org.

Item closed.

14.6 Swedish hub API portal

Jan presented the Swedish hub API Portal, see https://api-portal.emh.svk.se/public/api-portal/.

Item closed.

Appendix A Result from NMEG CIM-XML Subgroup

A.1 CIM based document for Aggregated Metered Production

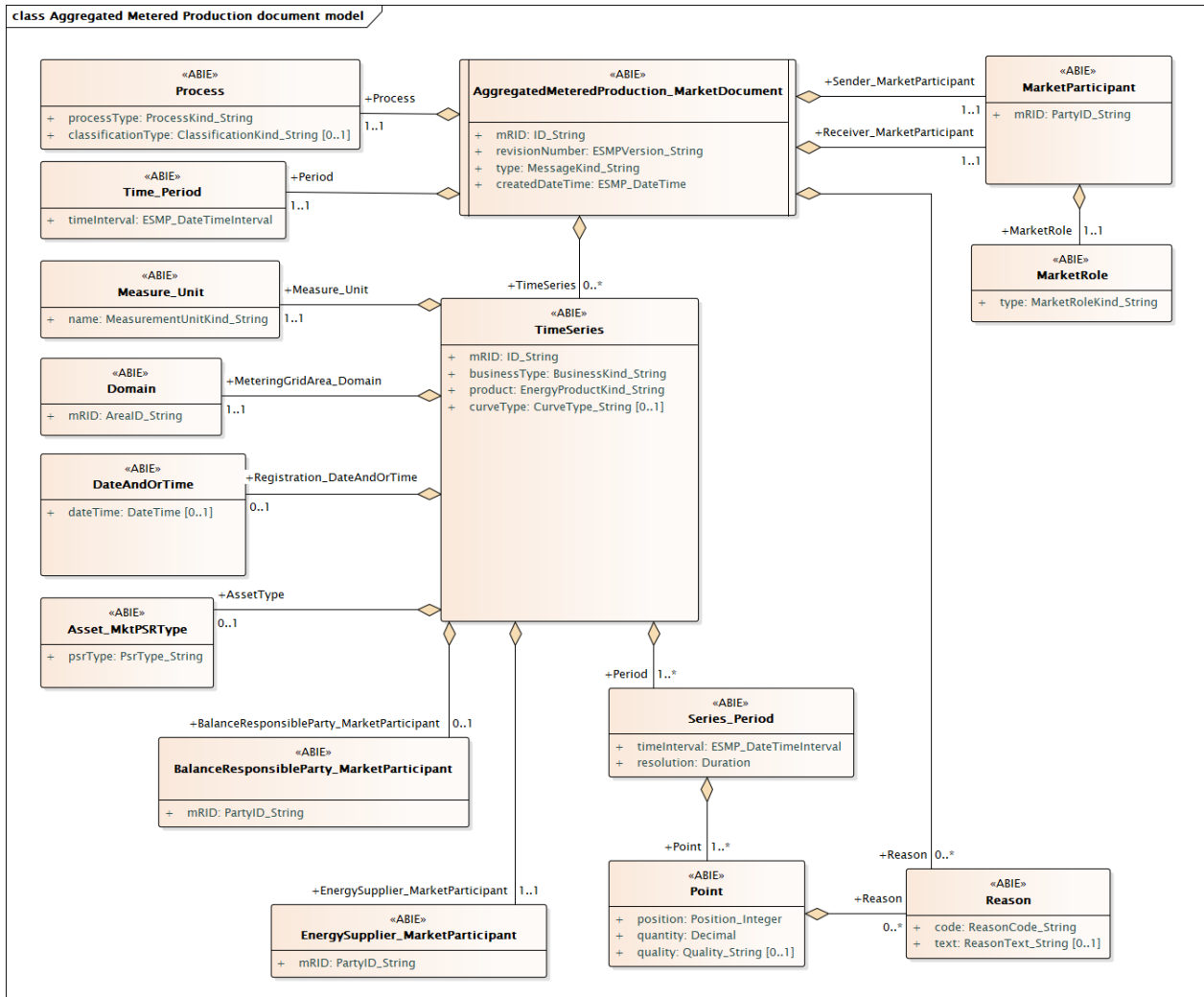### A.1.1 CIM based document for Aggregated Metered Production contextual model

Figure 1: Class diagram: Aggregated Metered Production contextual model

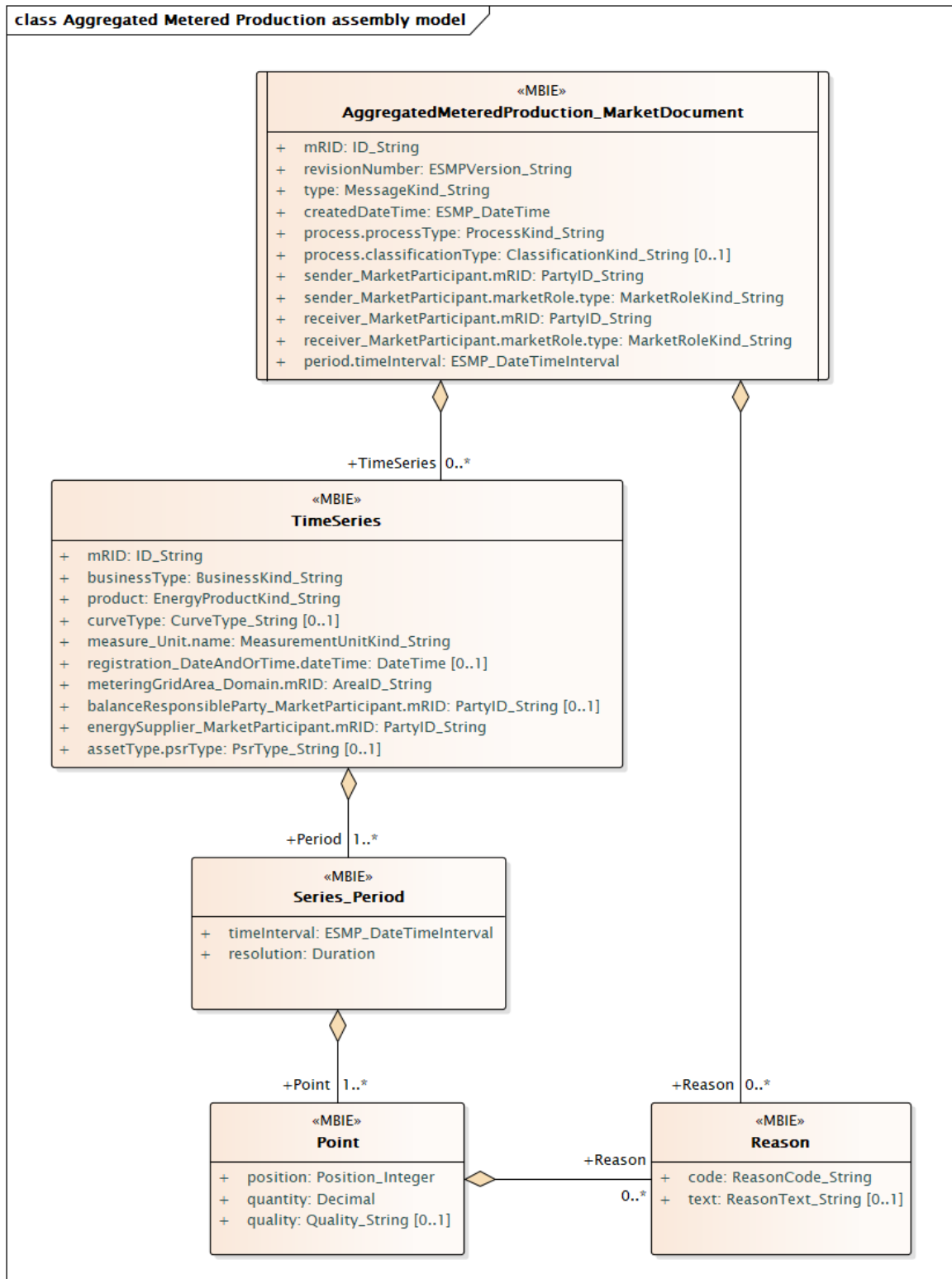## A.1.2 CIM based document for Aggregated Metered Production assembly model

Figure 2: Class diagram: Aggregated Metered Production assembly model

A.1.3 Comments and questions to Aggregated Metered Production

- We are missing attributes in CIM for:
    - o Metering Point Type;
    - o Settlement Method;
    - o Production Type.

    Jan has sent MRs to WG16 for Metering Point Type and Settlement Method.

    NMEG comment:
    - o The Production Type will first be proposed for ebIX® (EBG), see item 6.2.

- The attribute revisionNumber is added to be in line with ENTSO-E – not used in ebIX® documents today;
- The attribute process.processType is used for the ebIX® attribute "Business Reason Code"
- The attribute process.classificationType is intended to be used for the ebIX® attribute "Sector" (Electricity or Gas);
    NMEG comment:
    - o We should verify with WG16 if classificationType is the correct place to differentiate between electricity and gas.

- The attributes sender_MarketParticipant.marketRole.type and receiver_MarketParticipant.marketRole.type is used instead of only one role in the ebIX® documents "Energy Business Process Role";
- The attribute period.timeInterval is added to be in line with ENTSO-E – not used in ebIX® documents today;
- Should we see if CEN/EECS Technology and/or Fuel Type codes should be used instead of Asset Type?
    NMEG comment:
    - o For the time being we keep Asset Type.

A.2 CIM based document for Validated Data for Settlement for Aggregator

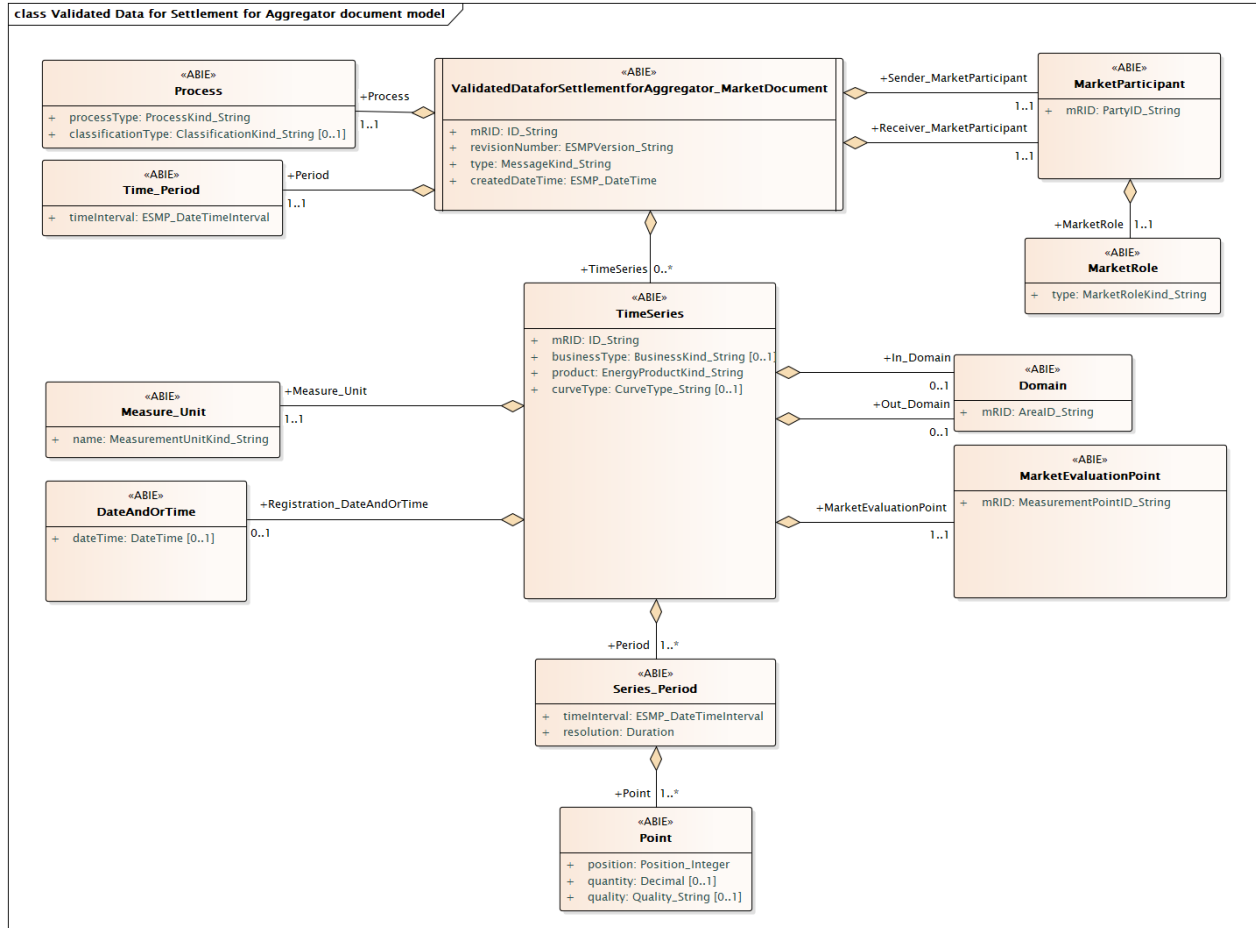### A.2.1 CIM based document for Validated Data for Settlement for Aggregator contextual model

Figure 3: Class diagram: Validated Data for Settlement for Aggregator contextual model

A.2.2 CIM based document for Validated Data for Settlement for Aggregator assembly model

class Validated Data for Settlement for Aggregator assembly model

«MBIE»
ValidatedDataforSettlementforAggregator_MarketDocument

+ mRID: ID_String
+ revisionNumber: ESMPVersion_String
+ type: MessageKind_String
+ createdDateTime: ESMP_DateTime
+ process.processType: ProcessKind_String
+ process.classificationType: ClassificationKind_String [0..1]
+ sender_MarketParticipant.mRID: PartyID_String
+ sender_MarketParticipant.marketRole.type: MarketRoleKind_String
+ receiver_MarketParticipant.mRID: PartyID_String
+ receiver_MarketParticipant.marketRole.type: MarketRoleKind_String
+ period.timeInterval: ESMP_DateTimeInterval

+TimeSeries 0..*

«MBIE»
TimeSeries

+ mRID: ID_String
+ businessType: BusinessKind_String [0..1]
+ product: EnergyProductKind_String
+ in_Domain.mRID: AreaID_String [0..1]
+ out_Domain.mRID: AreaID_String [0..1]
+ marketEvaluationPoint.mRID: MeasurementPointID_String
+ measure_Unit.name: MeasurementUnitKind_String
+ registration_DateAndOrTime.dateTime: DateTime [0..1]
+ curveType: CurveType_String [0..1]

+Period 1..*

«MBIE»
Series_Period

+ timeInterval: ESMP_DateTimeInterval
+ resolution: Duration

+Point 1..*

«MBIE»
Point

+ position: Position_Integer
+ quantity: Decimal [0..1]
+ quality: Quality_String [0..1]

Figure 4: Class diagram: Validated Data for Settlement for Aggregator assembly model

- We are missing attributes in CIM for:
    - o Metering Point Type.
- The attribute revisionNumber is added to be in line with ENTSO-E – not used in ebIX® documents today;
- The attribute process.processType is used for the ebIX® attribute "Business Reason Code"
- The attribute process.classificationType is intended to be used for the ebIX® attribute "Sector" (Electricity or Gas);
- The attributes sender_MarketParticipant.marketRole.type and receiver_MarketParticipant.marketRole.type is used instead of only one role in the ebIX® documents "Energy Business Process Role";
- The attribute period.timeInterval is added to be in line with ENTSO-E – not used in ebIX® documents today;
- Business Type is currently optional:
    - o What to send in Business Type? Should it be optional or removed?
    - o Business Type is not needed for the Validated Data for Settlement for Aggregator, but it is used in all other ENTSO-E base CIM documents (?).

  NMEG comment:
    - o We keep it optionally for the time being.
- Quantity is made optional to be in line with ebIX® documents, but how to send Quantity Quality and Quantity Missing?

Code	ENTSO-E	Description	ebIX® equivalent
A02	Not available	The contents of the object are not available. (note that a quantity should be present (e.g. zero))	May be used as an alternative to "Quantity Missing" (as used by ebIX®). If true the quantity is absent.
A03	Estimated	The contents of the object are estimated.	**56** Estimated
A04	As provided	The contents of the object are as provided.	UN/CEFACT equivalent is "**127** Metered" (however not used by ebIX® - "Metered" is default value)
A05	Incomplete	The contents of the object are calculated based on incomplete data.	**21** Temporary

NMEG comment:
- o Make the Quantity Requiered!

Appendix B Overview of Nordic memberships in international standardisation bodies

Name	Member of
Anne Stine	NMEG, ebIX®
Bertil (SE)	EBG
Christian	NMEG, ebIX® observer (?)
Fedder	NMEG, CIM EG, IEC/WG16, CSSG, EEAT, ENTSO-E CIM tools, CIO/LIO
Jan	NMEG, HG, ebIX®, IEC/WG16+14
Jari	NMEG, CIM EG
Jon-Egil	NMEG, CIM EG, IEC/WG16, ESMP, CCC, CIO/LIO, TPC
Martin (SE)	CCC
Oscar	CIO/LIO, ebIX®, CIM EG
Ove	NMEG, HG, ebIX®, IEC/WG16
Svein (NO)	IEC/WG14+13, CGMES
Teemu	NMEG, CIM EG, EBG, ETC, CIO/LIO

Abbreviations:

CCC	Coordinated Capacity Calculation (project under CIM EG)
CGMES	Common Grid Model Exchange Standard (subgroup under CIM EG)
CIO/LIO	Central Issuing Office / Local Issuing Office
CSSG	Communication Standards (subgroup under CIM EG)
Dc	ENTSO-E Digital committee
EBG	ebIX® Business Group
EEAT	ENTSO-E Enterprise Architecture Team (subgroup under Dc)
ESMP	European Style Market Profile (subgroup under CIM EG)
ETC	ebIX® Technical Committee
HG	ebIX®, EFET and ENTSO-E Harmonisation Group
MC	ENTSO-E Market Committee
MIT	Market Integration and Transparency (subgroup under MC)
TPC	Transparency Platform Coordinators (subgroup under MIT)

Appendix C Overview of the usage of xml-schemas in the Nordic countries

#	XML schema	BRS	Version used by					
			NBS	MNA	Energinet	Fingrid	Statnett	Svk
1.	NEG ECAN publication document	NBS BRS for TSO/MO	1.0					
2.	NEG ERRP Reserve Allocation Result Document	a)　NBS BRS for TSO/MO b)　BRS for Trade	1.0					
3.	NEG Area Specification Document	a)　NBS BRS for Master Data b)　BRS for Trade	1.0[1]	2.0 (CIM)				
4.	NEG Bilateral Trade Structure Document	NBS BRS for Master Data	1.0					
5.	NEG Party Master Data Document	NBS BRS for Master Data	1.0					
6.	NEG Resource Object Master Data Document	NBS BRS for Master Data	1.1					
7.	ENTSO-E Acknowledgement Document	NEG Common XML rules and …	6.0					
8.	ENTSO-E ERRP Planned Resource Schedule Document	NBS BRS for TSO/MO	5.0					
9.	NEG ERRP Planned Resource Schedule Document	BRS for Schedules						
10.	ENTSO-E ERRP Resource Schedule Confirmation Report	BRS for Schedules	No NEG version					
11.	ENTSO-E ESS Anomaly Report	BRS for Schedules	No NEG version					
12.	ENTSO-E Outage document	BRS for Schedules	No NEG version					
13.	NEG ESP Energy Account Report Document	NBS BRS	1.0					
14.	ENTSO-E ESS Confirmation Report	NBS BRS	4.1					
15.	ENTSO-E ESS Schedule Document	a)　NBS BRS b)　NBS BRS for TSO/MO	4.1					
16.	ebIX® Aggregated Data per MGA for Settlement for Settlement Responsible	NBS BRS	2013pA					
17.	ebIX® Aggregated Data per Neighbouring Grid for Settlement for Settlement Responsible	NBS BRS	2013pA					
18.	ebIX® NEG Confirmation of Aggregated Data per Neighbouring Grid for ISR	NBS BRS	2013pA					
19.	ebIX® Validated Data for Settlement for Aggregator	NBS BRS	2013pA					
20.	NEG ECAN Allocation Result Document	BRS for Trade						
21.	NEG Currency Exchange Rate Document	BRS for Trade						
22.	NEG Auction Specification	BRS for Trade						
23.	NEG Spot Market Bid Document	BRS for Trade						
24.	ENTSO-E ERRP Reserve Bid Document	BRS for Trade						
25.	ENTSO-E ERRP Activation Document	BRS for Operate						

---

[1] The NBS version 1.0 is using dateTimeType for Validity Start/End (error correction), while the MO version 1.0 is using dateType. dateTimeType will be used from version 2.0.