Minutes: NMEG meeting **Date:** Tuesday and Wednesday October 27th and 28th **Time:** 10:00 – 12:00 and 13:00 – 15:00 (both days) **Place:** GoToMeeting	**NMEG** Nordic Market Expert Group
November 9th, 2020	

Present:	Christian, Energinet Jan (DK), Energinet Jan (SE), Svenska kraftnät Jon-Egil, Statnett (Convenor) Miika, Fingrid (day 2) Mika, eSett Ove, Edisys (Secretary) Tage, Energinet Teemu, Fingrid
To (NMEG):	Anne Stine, Elhub Christian, Energinet Jan (DK), Energinet Jan (SE), Svenska kraftnät Jon-Egil, Statnett (Convenor) Miika, Fingrid Ove, Edisys (Secretary) Tage, Energinet Teemu, Fingrid
CC:	Audun, Elhub Bent Atle, Statnett (NBM) Fedder, Energinet Hans Erik, Elhub Minna, Fingrid
To (Invited guests):	Mika, eSett Tommy, eSett Tuomas L, eSett Tuomas P, eSett
Appendix A:	Mail exchange related to Weather information to be sent to Svenska kraftnät
Appendix B:	Overview of Nordic memberships in international standardisation bodies
Appendix C:	Overview of the usage of xml-schemas in the Nordic countries
Attachment:	None

1 Approval of agenda

The agenda was approved.

2 Approval of previous meeting minutes

The previous meeting minutes were approved without comments.

3 Status from NEX (Nordic ECP/EDX Group)

Background: NIT has taken over the responsibility for NEX (Nordic ECP/EDX Group), former "ECP/EDX Centre of Excellence". However, the group is still below NMEG in the “formal hierarchy”. NMEG will be kept informed of progress in the grout.

References (links):

What to decide, discuss or inform: Status from NEX.

Miika informed:

- NIT approved the ToR for NEX this summer;
- Miika has taken over from Jari as the convenor of the group;
- Morten Simonsen from Statnett is the secretary;
- Contact persons (Spocs) from the TSOs have been identified.
- Meetings every three weeks, mainly collecting technical issues from the TSOs;
- Among others it has been agreed how to do version control for the ECP network in the Nordics;
- ECP is now synchronised between the Nordic countries and Nordic projects, such as for the MNA project;
- Rules for handling of “ECP message types” are being discussed and almost agreed - on the agenda for the next meeting (Friday):
    - For instance, it is agreed that acknowledgement documents shall have the same ECP message type as the original document.

Action:

- NEX will investigate if NEX should have their own folder at www.ediel.org, like the NBS (eSett) folder.

4 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.

Continued actions:

- Jon-Egil will inform Ove of which documents that will contain the new resolution (P1D)
- Thereafter Ove will update the BRS and upload it to eRoom

5 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, Status for a common meeting with NEAT.

discuss or inform:

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.

6 Support to the NBM project

Background: The NBM-project (Nordic Balancing Model) is going forward and there is a need for a number of new CIM based documents.

References (links): http://nordicbalancingmodel.net/

What to decide, discuss or inform: Status for the NBM project and possible task for NMEG.

Ove had as action from previous meeting updated the Ediel ERRP Planned Resource Schedule Document in the Scheduling BRS with addition of the Reason Code and addition of MktPSRType (Asset Type) at Time Series Level, based on the MR sent to CIM EG after NMEG meeting August 2020.

Jon-Egil had as action from previous meeting forwarded NBM documentation to Ove for update of the NBM usage of the document.

Conclusions:

- NBM Schedule Market Documents will be added to the Nordic TSO Schedules BRS, See item 8, BRS for schedules.
- NBM ACE OL documents and Measurement Value Market Documents will be added to the Nordic Operate BRS;
- NBM Capacity Market Documents will be added to the BRS for Determine Transfer Capacity;
- NBM "Reserve Bid Market Document (Plan mFRR Bid)" will be added to the Nordic TSO Schedules BRS, the Nordic Trading System BRS or elsewhere – to be decided.

See also item 8, BRS for schedules.

7 MR to ebIX® (EBG) for extended association between MktActivityRecord and DateAndOrTime

Background: A request for addition of an association to a "Supply Start Date" related to the Energy Supplier in an AP in the Alignment of AP characteristics process (based on Danish needs) was discussed at an ETC meeting Tuesday September 15th.

- It was agreed that the requirement should be sent to EBG and added to the ebIX® BRS(s) before a MR is sent to IEC.
- It was also noted that there already is a need for more than one association between MktActivityRecord and DateAndOrTime, according to the latest BRS for Alignment of AP characteristics. I.e. a Snapshot Date and a Validity Start Date.
- Hence, Jan (SE) and Ove got the following action from ETC:
    - Jan (SE) and Ove will investigate why we need the Supply Start Date and write a MR to EBG. The MR will include the text:

"In the Nordic countries we need the start date for the current supplier in addition to the Validity Start Date for the set of AP characteristics".

References (links): None.

What to decide, discuss or inform: Making a MR to ETC.

Finland, Norway and Sweden had as action from previous meeting to investigate if a Supply Start Date related to the Energy Supplier in an AP is needed in the Alignment of AP characteristics process. If yes, NMEG will send an MR for it:

- Ove had verified with the Elhub BRSs and couldn't find any Supply Start Date related to the Energy Supplier in an AP.
- Teemu had verified with the Finish hub and couldn't find any Supply Start Date related to the Energy Supplier in an AP either.
- Jan has looked in the Swedish hub documentation and found that if the Customer has given a consent, the new Energy Supplier can get the "Start of delivery date" for the current Energy Supplier.

Action:

- Jan (SE) will investigate further the details related to the Energy Supplier getting the "Start of delivery date".

8 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: Review of the MRs left from previous meeting.

Ove had as action from previous meeting gone through the NMEG BRSs and updated them with newly approved codes by CIM EG. Except for in the NBS BRSs, the old codes are replaced with the new. In the NBS BRSs (to be published when eSett is ready) a comment is added where there are new codes. The following codes has been updated:

Code list	Old code	New code
Role Type	**Z05** Trader	**A47** Energy Trader
Business Type	**Z02** Frequency bias	**C25** Frequency bias
	Z03 Frequency Containment Reserves, Normal (**FCR-N**)	**C26** Frequency Containment Reserves, Normal (**FCR-N**)
	Z06 Frequency Containment Reserves, Disturbance (FCR-D)	**C27** Frequency Containment Reserves, Disturbance (FCR-D)
	Z52 Small scale production	**C29** Small scale production
	Z32 System price	**C30** System price
	C?? Wind gust	**C31** Wind gust
	??? Area imbalance	**C32** Area imbalance
Process Type	**Z05** Bilateral trade	**A59** Internal trade reporting

	Z04 Reserve option market	**A58** Reserve option market
Document Type	**???** Imbalance prognoses document	**B39** Imbalance prognoses document
Unit Of Measure code	**HTZ** Hertz	**HTZ** Hertz
Unit Symbol	**MVA** megavolt-ampere	**MVA** megavolt-ampere

Question from Ove:

- The Area Specification Document used in NBS BRS for Master Data, BRS for Nordic Trading System and in the NorCap BRS is replaced by the Area Configuration Document from ENTSO-E. Shall we replace the Area Specification Document with the Area Configuration Document?

Conclusion:

- For the time being we will not update the NBS BRS for Master Data.

Action:

- Ove will replace the Area Specification Document in the BRS for Nordic Trading System to the latest Area Configuration Document.

Continued action:

- Jon-Egil will verify with CIM EG what the status is for MR NMEG 2019/178, where only one out of three codes have been added to the ENTSO-E code list:

NMEG 2019/178	Code List	Add new Unit Symbol codes: HTZ The UnitSymbol for metered frequency (HTZ unit as per UN/CEFACT recommendation 20) ~~MVA megavolt-ampere (MVA unit as per UN/CEFACT recommendation 20)~~ DD degree (unit of angle) (A unit of measurement of angles expressed in a 0 to 360 degree gradient)

9 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: Update of BRSs and other documents if needed.

9.1 urn-entsoe-eu-local-extension-types.xsd with annotations

Continued actions:

- Jan (DK) is asked to see if the Danish Dnn codes should be converted to Nordic Znn codes for the Datahub version 3.0.
- Bent Atle (Fifty) is asked to see if the Swedish and Norwegian codes could be converted to Nordic Znn codes.

9.2 BRS for Nordic Trading System

Continued actions:

- Jan (SE) and Jon-Egil will continue discussion in CIM EG how to cancel a bid in the Reserve Bid Document. In the IEC document 57_2196e_CDV for 62325-451-7 it is stated that when cancelling a bid all the periods below the Time Series shall be removed, which is impossible as long as the Series_Period class is required.

9.2.1 Review of BRS for Trading after update to HRM 2020-01

- Review of chapter 3 Harmonised roles used in BRS for Trading
- Review of chapter 3.2 Trade Responsible Party (after introduction of Energy Trader).
- Can we delete chapter 4, Business Entity View?
- Review of chapter 5.4, Process area: Trade on intraday market
- Review of usage of terms:
    - Tertiary reserve
    - NordPool exchange rates document
- ….

Conclusions:

- We replace System Operator with LFC Operator in Sequence diagrams and text, and in Role Codes – i.e. replace **A04** System Operator with **A48** LFC Operator, including a parenthesis explaining that it replaces **A48** replaces **A04**.
- We remove the all "old non-CIM" documents and replaces with CIM versions.
- We publish both new and old versions of the BRS at www.ediel.org.
- We remove detailed documentation for documents related to the MNA project and NEMO specific documents, but keep the data exchange in the overviews (Sequence diagrams).

Actions:

- Ove will ask Tor Åge (NordPool) if the Spot Market Bid Document still is used or if we can remove it? And, inform that there will keep the old version of the BRS at www.ediel.org.
- Ove will update the BRS, including update of all "old non-CIM" documents to CIM versions.

Item closed.

9.2.2 Comment from Jan (SE) related to Reserve Bid Document

- 6.7.3 (Attribute usage: Reserve Bid Document (CIM version)):
    - provider_MarketParticipant.mRID is not specified in the table. It is the actor "sitting on the resource" and could be the one pressing the "button" to activate the resource. Even if we are contacting the subject party, are there perhaps situations where we want to now: who is providing the resource? However, this is master data, i.e. the one having the "registered resource", and then not needed to be specified?

      Probably we can then still leave him out.

      Conclusion:

        - Not used for the time being
- 6.7.4 Dependencies:

- Since there is a business type A97 = Manual frequency restoration reserve, should not that be possible to use? Or shall we stick to the Z-codes for mFRR? Because we perhaps need all of them?

  Conclusion:

  - **A95** removed from the Bid document
  - Added **A97** to the dependency table

- However, specifying flowDirection.direction as "Up", "Down" or "Up and down", could not that tell the same as "Commercial production" (=Up), "Commercial consumption" (= Down) and "Commercial" (= Up and down).

  Conclusion:

  - Flow Direction will be kept as required

- Then we would only need A97, Z36 and Z50 ? But "Commercial production" is perhaps not always 'Up', etcetera?

  Conclusion:

  - Flow Direction will be kept as required, hence not applicable

- Looking at the different kinds of offers we will get, using this standard, in the mFRR bids sent from "Flexibility platforms" starting in December here in Sweden, we can separate them into six different categories (in Swedish):

  - Aggregerad kommersiell värmelast (värmepumpar i kontorsbyggnader)
  - Aggregerade elfordonsladdare (främst kommersiella men även privata)
  - Aggregerade privata värmepumpar
  - Reservkraft
  - Kraftvärme
  - Kommersiell last (industri)

  The question is, which business types should be specified?

  a) Only use A97 = Manual frequency restoration reserve, however that is not listed in the current BRS.
  b) Use some of the codes from the current BRS: Z35 = Commercial, Z36 = Reserve, Z49 = Commercial production, Z50 = Commercial wind production, Z51 = Commercial consumption
  c) And add some more?
  d) Group the six categories into some of the today listed business types in the BRS, however not all are "Commercial", some are "Private".
  e) Rather see these six categories as "Asset types", and not needed to be specified in the bid message (= master data for the resource object). And then use A97 as business type.

  Since we will publish our Swedish user guide this week, we will most likely use code A97 this winter (2020–2021). But perhaps use other codes next winter – depending on needs and the discussion in NMEG etcetera.

  Conclusion:

  - For the time being, Sweden will use Business Type **A97.**
  - The topic will be added to coming task to specify Business Types for the Bid Document

Action:

- All are asked to find what Business Types are used in the ERRP Reserve Bid Document and especially if the following are used:

  Z35 Commercial
  Z36 Reserve
  Z49 Commercial production
  Z50 Commercial wind production
  Z51 Commercial consumption

- And, if there is a need for specifying these as Business Types or if we should as for addition of an Asset Type to the Reserve Bid Document:

  Aggregate commercial heat load (heat pumps in office buildings)
  Aggregated electric vehicle chargers (mainly commercial but also private)
  Aggregated private heat pumps
  Reserve power
  Cogeneration (Combined Heat and Power)
  Commercial load (industry)

Item closed.

10 BRS for schedules

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):

What to decide, discuss or inform: Review of updated BRS.

Actions:

- The following actions are reopened since the NBM (Nordic Balancing Model) project has started up:
  1) Jan (SE) and Fedder will check the dependency matrix for ESS schedule document and ESS confirmation report, chapter 7.1 and 7.3.

     Conclusion:

     - Not valid anymore since eSett has taken over the exchanges.

  2) Fedder, Jan (SE) and Teemu 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.

     Conclusion:

     - A09 was removed since it originally was meant for matching, which is removed.

  3) Everyone should verify and possibly update the "Used in" column in chapter 6.2.4;

Conclusion:

- Continued action.

4) Miika will find Finnish usages of Business types in chapter 6.2.5;

   Conclusion:

   - Continued action.

5) Everyone should verify and possibly update the "dependency matrix" in chapter 6.2.6.

   Conclusion:

   - Continued action.

- There is a lot of mismatch between the currently used outage document and the CIM version. Jon-Egil will investigate with NOIS what to do with it.

  Conclusion:

  - Jon-Egil informed that there is a newer document from NOIS, however not well documented. Jon-Egil will continue the investigation.
  - Continued action.

Ove had as action cleaned-up the BRS for Schedules, including Addition of the Reason Code and MktPSRType (Asset Type) at Time Series Level, based on the MR sent to CIM EG after NMEG meeting August 2020, and distribute the BRS to NMEG.

The comments in the updated BRS was reviewed and the schedule part of the NBM documents were added to the BRS.

Actions:

- Miika will find Finnish usages of Business types in chapter "6.2.5 Attribute usage Ediel ERRP Planned Resource Schedule Document, Ancillary services schedule (CIM version)" in the BRS for Schedules;
- Everyone should verify and possibly update chapter "6.2.6 Dependency matrix: Ediel ERRP Planned Resource Schedule Document, Ancillary services schedule" in the BRS for Schedules;
- Jon-Egil will continue the investigation regarding mismatch between the currently used outage document and the CIM version;
- Ove will update the BRS with information from NBM and agreed updates during the meeting.

10.1 Weather information to be sent to Svenska kraftnät

See Mail exchange related to Weather information to be sent to Svenska kraftnät in Appendix A.

Jan (SE) presented some Swedish issues regarding the Weather document (InfEnergyPrognosisDocument_v1_2). Currently the Weather document has a confidence interval, but Sweden would like a percentile instead (see Appendix A for an explanation).

The following changes should be proposed to CIM EG:

- Addition of Process Type in the Market Document class;
- Change the order of the attributes in the Series_Period class;
- Addition a Percentile Quantity class may be sent at a later stage, if more than Sweden will use it.

Action:

- Ove will make a MR to CIM EG for the Energy Prognosis Document with:
  - Addition of Process Type in the Market Document class;
  - Change the order of the attributes in the Series_Period class.

11 XML schemas

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.

Continued actions:

- All 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 added to Appendix C and be published at www.ediel.org.
- Ove will update the table based on NBM documentation received from Bent Atle (NBM/Fifty).

12 NMEG CIM-XML Subgroup

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. The following tasks are prioritised (updated at NMEG meeting March 2020):

a) Update the NMEG model with the latest ebIX® extension;
b) Make a road map for making CIM documents for the Danish Datahub version 3.0;
c) Continue with NBS documents:

   1. NBS ebIX® based documents;
   2. NBS documents based on older ENTSO-E schemas;
   3. 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.

12.1 Report from NMEG CIM-XML Subgroup; GoToMeeting October 7th

- Participants Christian, Jan (DK), Jan (SE) and Ove.
- Ove had as homework continued the updated of ESDMP and the related mapping.
- Jan (SE) informed from the WG16 modelling meeting October 8th:
    - It was discussed how to implement whether the timeseries/transaction/message is about gas, electricity, water… I suggested that the class ServiceCategory from Customers could be added as associated to relevant classes in IEC 62325-301 but Scott Coe suggested that the class MarketProduct, already in the WG16 part of CIM, could be used.

12.2 Report from NMEG CIM-XML Subgroup; GoToMeeting October 19th

- Participants Christian, Jan (DK), Jan (SE) and Ove.
- Ove had as homework continued the updated of ESDMP and the related mapping.
- There was a longer discussion if Charge is the right class for all attributes related to charges, such as id, name, description, validity dates, owner of charge etc.

  Conclusion:
    - We change from the Charge class in 61968 to the class ChargeType in 62325 and add associations to Market Participant and Series

- Thereafter other comments in the Memo; "Mapping of Danish downstream documents to CIM" (until RSM 028) were reviewed:
    - In RSM 022 (Accounting Point characteristics) we replace Time Series with Series
    - In RSM 028 (Characteristics of a Customer at an AP):
        - Add a new association from Market Evaluation Point to Market Participant;
        - Map CVR/CPR (VAT number and Social Security Number) as we did for Request Change of Supplier, both for First and Second Consumer;
        - Add Danish attributes in DK_Ext_MarketEvaluationPoint for "Has Balance Supplier" and " Protected Name";
        - Add an association from Market Evaluation Point to Date and or Time (date and time).

12.3 Report from NMEG CIM-XML Subgroup; GoToMeeting October 26th

- Participants Christian, Jan (DK), Jan (SE) and Ove.
- Ove had as homework continued the updated of ESDMP and the related mapping.
- Christian and Jan (DK) took up the question if some of the special Danish attributes should have been "new attributes to CIM" instead of the attributes we are currently are using. The reason for the question is what we shall do if ebIX® or others choose to use the same attributes for something else in the future. Examples of these kind of attributes are:

    - DAR Reference (UUID for the address) that is mapped to UsagePointLocation / geoInfoReference, which has the following definition:

      (if applicable) Reference to geographical information source, often external to the utility.

      ***Conclusion*:**

        - Probably is a correct place for the information – will be kept for the time being.

- Electrical Heating (Boolean attribute telling if the Accouting Point is using electricity for heating) that currently is mapped to MktActivityRecord / ServiceCategory / kind.

  ***Conclusion*:**

  - We will add a separate occurrence of ServiceCategory qualified with EletricalHeating to avoid possible conflict with future use of ServiceCategory.

- Thereafter RSM 033 Request change of Price List was further discussed.

  Actions:

  - All are asked to investigate (think about) if we shall change the root payload class for RSM 033 Request change of Price List from MktActivityRecord (Event class in ebIX®) to Series (Charge_Series)?
  - Jan will send a mail to Becky (WG16), asking for how to deal with VAT indicator and VAT level.
  - Ove will update the model and memo:
    - Add a separate occurrence of ServiceCategory qualified with EletricalHeating
    - Make a Danish attribute for Transparent Invoicing in a new DK_ChargeType class
    - Make a Danish attribute for Tax Indicator in a new DK_ChargeType class

13 Picture at the front page of www.ediel.org

Background: At the NMEG meeting March 2020, it was agreed to add a picture to the front page of www.ediel.org.

References (links): www.ediel.org.

What to decide, discuss or inform: Status.

Jon-Egil had got two different maps over the Nordic countries that may be used as picture at the front page of the Ediel web site. The one without Bidding Zones (or Scheduling Areas) will be used.

Actions:

- Jon-Egil find the original picture and include Denmark;
- When a picture is ready, Teemu will add it to www.ediel.org.

14 Review of documents from CIM EG subgroups and IEC groups

Background: At the NMEG meeting August 2020 it was agreed that NMEG needs to be more proactive regarding commenting on new ENTSO-E and IEC documents. Hence it is added a fixed item on the NMEG agenda for review of documents from CIM EG subgroups and IEC groups that is of interest for the Nordic market.

References (links):

What to decide, discuss or inform: Review of documents from CIM EG subgroups that is of interest for the Nordic market.

No new documents.

15 Information (if any)

No extra information exchanged.

16 Next meetings and decide if next meeting will be a face-to-face meeting or GoToMeeting

NMEG Corona GoToMeetings:

- Friday November 27th 09:00 – 11:00 and 12:00 – 14:00
- Tuesday December 15th, 10:00 – 12:00 and 13:00 – 15:00
- Wednesday January 13th, 10:00 – 12:00 and 13:00 – 15:00
- Tuesday February 9th, 10:00 – 12:00 and 13:00 – 15:00

NMEG scheduled face-to-face meetings[1]:

- None scheduled

NMEG CIM-XML subgroup GoToMeetings:

- Monday November 2nd 10:00 – 11:30 (CET);
- Tuesday 10th 10:00 – 11:30 (CET);

17 AOB

17.1 Finish Datahub certification tool

Teemu presented Finish Datahub certification tool.

Item closed.

[1] Unless otherwise explicitly stated, the face-to-face meetings start at 09:00 (CET) the first day and end 16:00 (CET) the second day.

Appendix A Mail exchange related to Weather information to be sent to Svenska kraftnät

From Jan (SE) September 10th, 2019:

I got this list (the first column) from a colleague working with SMHI (Sveriges meteorologiska och hydrologiska institut).

Let me just comment some of the items. The agreement what to get from SMHI is not yet finalized, so the list may be updated. I have asked my colleague to get definitions (or links to definitions), and some background (reasons) in order to be able to send in MRs.

Parameter	ENTSO-E code	Title
Temperatur	B49	Air temperature
Vindhastighet (vektorbeskrivning)		
Vindriktning (vektorbeskrivning)		
Byvind		
Wind Chill Index		
Global instrålning	B48	Solar irradiance
Cloud cover eller Cloud area fraction (high, medium, low)	(B50)	Cloudiness
Luftfuktighet	B51	Air humidity
Lufttryck	B52	Atmospheric pressure
Regn		
Snö		
Snödjup/nysnö ([…])		
Molnvatten		
Molnis		
Graupel (nedisning, [...])		

Currently I find the following Business types in the ENTSO-E list (could be more codes), from B46–B53 (see also above):

Wind speed
Wind direction
Solar irradiance
Air temperature
Cloudiness
Air humidity
Atmospheric pressure
Precipitation

From Jan (SE) September 3rd, 2020:

A year ago I sent the mail above related to weather information.

There is an implementation guide for Weather data (the web page would now be https://www.entsoe.eu/publications/electronic-data-interchange-edi-library/)

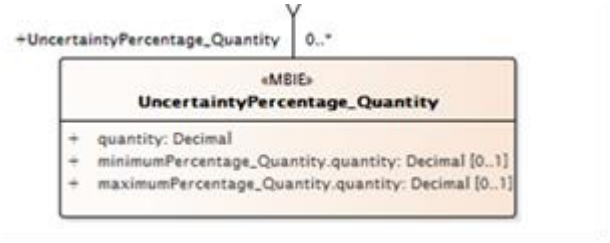
However, is that really based on the Environmental part of IEC CIM?

What we now would like to exchange is three values:

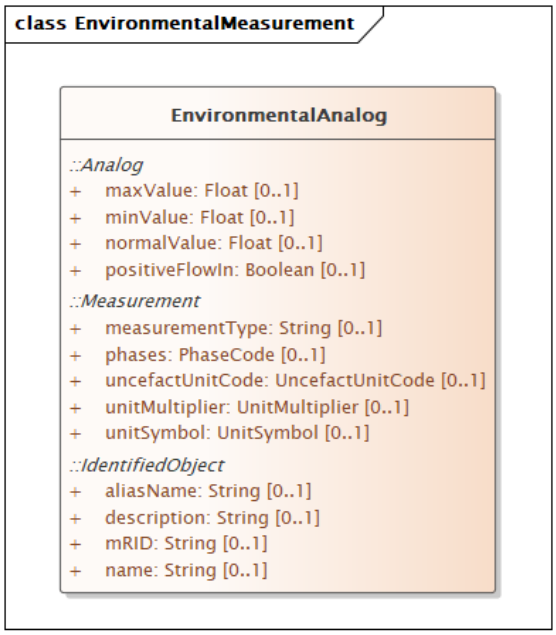
- The average value
- The extreme value (highest)
- The extreme value (lowest)

That I can find in the CIM class EnvironmentalAnalog with a set of attributes like maxValue, minValue and normalValue, see picture later.

But I don't find this exactly in the ENTSO-E implementation guide. There I find:



How should that be used to provide (together with the Point class) the three values we would like to exchange?



BR Jan

From Jan (SE) September 8th:

> Now I have got more background on this issue.
>
> It is not environmental information, but since it was information from a system that we mainly use for wind prognosis, I thought the data to be exchanged was wind values telling the average, the minimum and the maximum. But it is just (partly) about wind. One timeseries is a weekly load prognosis (MW) per area, resolution hour. Another timeseries is a weekly windproduction prognosis (MW) per area and hour. We want to base this exchange on CIM even if it is just sent internally within Svenska kraftnät.
>
> And for each hour there are three values: one normal value and two extreme values. And these extreme values can be expressed as 5 and 95 percentile values.
>
> Looking at some of the ENTSO-E implementation guides I found two more interesting than others, that is:
>
> > Energy prognosis document and Short Medium Term Adequacy Results Document.
>
> Let me now just look at the latter. In the "SMTA_ImplementationGuide_V1.0.pdf" document I find table 6 and table 7 (dependency tables). Well, the receiver will not be RSC, otherwise table 6 looks ok. In table 7 we would use A38 (Available generation) for the windproduction and A13 (Load Profile) for the load prognosis (- to me a "load profile" sounds like something else, i.e. something we use for reconciliation…) (Domain will tell the area – however, I would not have called it "Control area" as in the table..). mktPSRType.psrType would tell the "Asset type". Probably we will here use the old Nordic code Z05 for Wind, I don't think we will distinguish between Wind onshore and Wind offshore. Looking at table 10 we will use type "05" and type "95". (But I note that those types are not part of the XML schema, it is just a string that could have any kind of value.)
>
> So, we think Short Medium Term Adequacy Results Document will fit our needs. Have you any experience of using that document?

From Jan (SE), Thursday September 10th, 11:26:

> …. Let us not discuss this specific (internal) exchange within Svenska kraftnät, but rather let us look at the "ENTSO-E packages" and see: which are relevant for us in the Nordic area?
>
> I.e. among:
>
> - IEC62325-451-7
> - IEC62325-451-8
> - Area Configuration Document
> - CRAC Document
> - CriticalNetworkElement Document
> - FlowBasedDomain Document
> - Coding schemes mapping
> - CGMA
> - SIPS Document
> - OPC
> - SMTA
> - GLSK document
> - RGCE process

- Weather process
- TERRE

Perhaps some are already in use or will be used soon in the Nordic area.

Do we need specific Nordic BRS:s for some of them?
Nordic codes?

And who are following the work with these packages/documents? Perhaps it is enough to know that we do have people that are part of the work or follow the work.

However, looking again at "Short Medium Term Adequacy Results Document" (within SMTA in the list above). This is a sort of energy prognosis. There is also an Energy prognosis document within the Weather process. And then we have the Schedule document (ESS) within IEC62325-451-2 Ed.1

What are actually the needs when exchanging schedules/prognosis?
Do we need to distinguish them as several different documents?
Or will there be a work to "join" them?
Or can at least the used ABIE:s and MBIE:s be more similar?

I don't say that we must use the same XML schema for all. But it is bad quality not having the same order of the attributes in the current different schemas.

From Jan (SE) September 16th:

I noted in the implementation guide for Weather data:

https://docstore.entsoe.eu/Documents/EDI/Library/cim_based/Weather_IG_V1r2.pdf

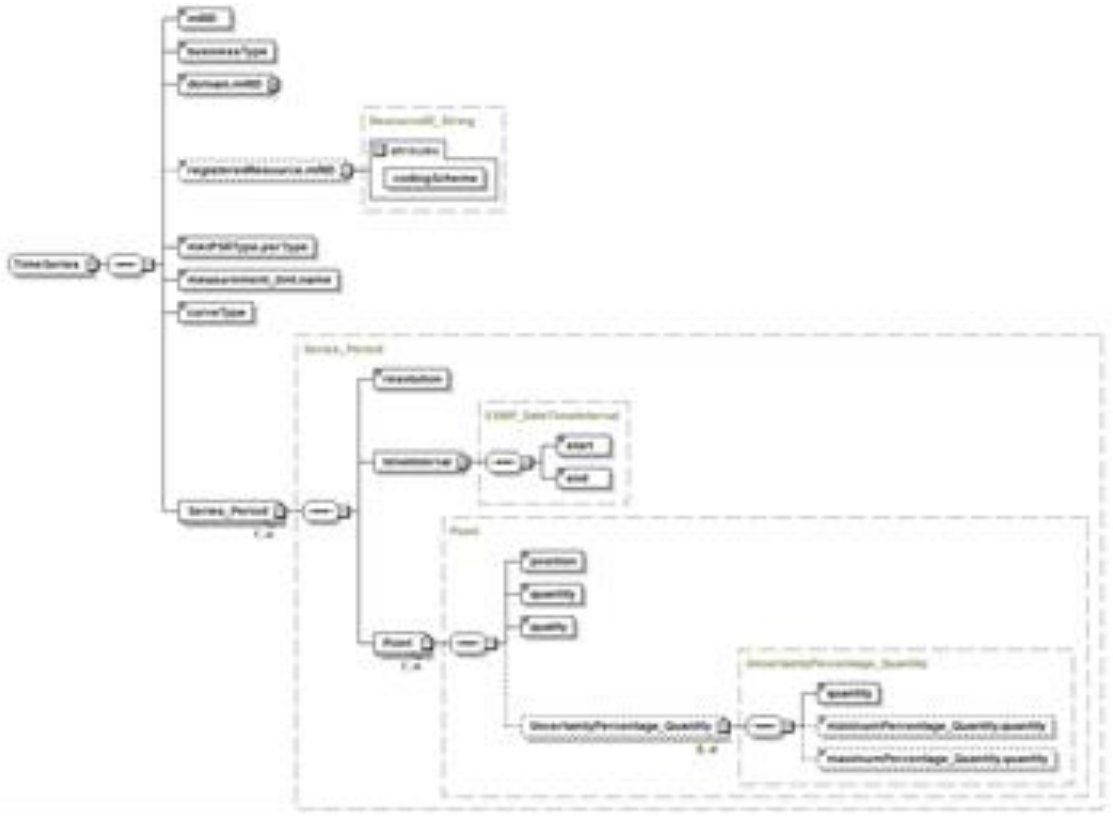
that there are also three other Business Type codes, not in my list below:

B78 = Global radiation
B79 = Diffuse radiation
B80 = Direct solar radiation

But, what is the unit? I think it is the same as for "Solar irradiance", if so, the text "Solar Irradiance" in the ENTSO-E implementation guide for unit codes should be changed to include "radiation" or "radiant energy" or something like that. And probably then also in the ebIX® list of unit codes. But, that should be verified by someone that knows more about solar power.

Response from Jon-Egil, Thursday September 10th, 11:55:

I would assume that the Energy Prognosis document is the more fitting document in this case:

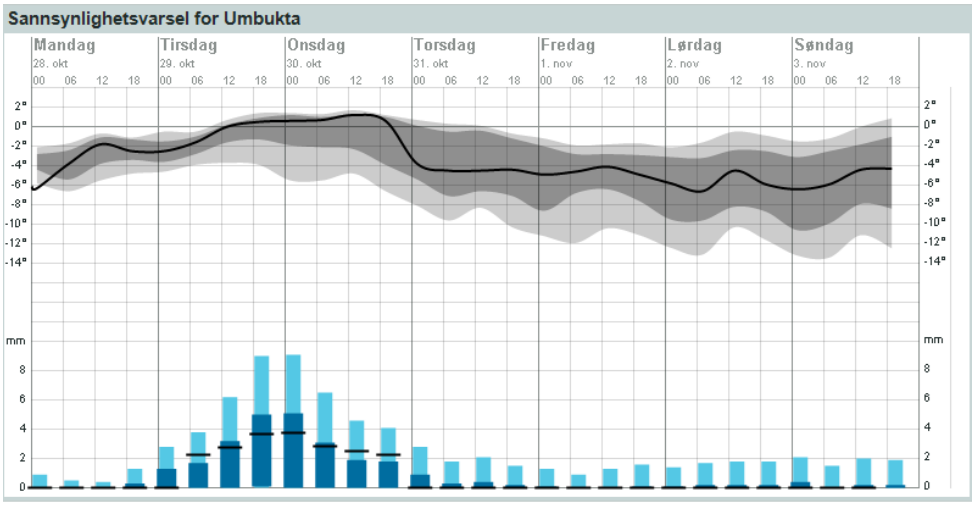


Response from Jan (SE), Thursday September 10th Thu 12:27:

> Regardless if it is, I would suggest that we consider writing a Maintenance request where the order of attributes is updated in this and similar documents so that the order would be more in line with other documents.
>
> For instance, the order within Series_Period should be timeInterval & resolution, not the opposite as here.

Response from Jon-Egil, Thursday September 10th Thu 14:09:

> The intended use is to describe data ala this curve:



In this case the point Thursday at 00:00 will look like this in the xml:

```
<Point>
  <position>1</position>
  <quantity>3.8</quantity>
  <quality>A03</quality>
  <UncertaintyPercentage_Quantity>
    <quantity>30</quantity>
    <minimumPercentage_Quantity.quantity>-
    8.0</minimumPercentage_Quantity.quantity>
    <maximumPercentage_Quantity.quantity>0.5</maximumPercentage_Quantity
    .quantity>
  </UncertaintyPercentage_Quantity>
  <UncertaintyPercentage_Quantity>
    <quantity>80</quantity>
    <minimumPercentage_Quantity.quantity>-
    5.0</minimumPercentage_Quantity.quantity>
    <maximumPercentage_Quantity.quantity>0.0</maximumPercentage_Quantity
    .quantity>
  </UncertaintyPercentage_Quantity>
</Point>
<Point>
```

So, what you're sending is a confidence interval. If you want to send the 5th and 95th percentile the values would be in the <minimumPercentage_Quantity.quantity> and the <maximumPercentage_Quantity.quantity> of the 90 percent confidence interval, and the <quantity> element would be 90.

Response from Jan (SE) , Thursday September 11th, 16:58:

Regardless if it is, I would suggest that we consider writing a Maintenance request where the order of attributes is updated in this and similar documents so that the order would be more in line with other documents.

For instance, the order within Series_Period should be timeInterval & resolution, not the opposite as here.

Further response from Jan (SE), Thursday September 11th, 16:58:

Thanks Jon-Egil for giving an example of the usage of UncertaintyPercentage_Quantity. I will use this, if making an example based on the Energy prognosis Document. However, there are some things that suggest using Short Medium Term Adequacy Results Document:

1) The users of this talks about “P05”, “P50” and “P95” values. The type codes “05” and “95” would be specified in the Short Medium Term Adequacy Results Document, not in the Energy prognosis Document where you instead would specify “90”.
2) The resolution is 60 minutes. That is possible to use according to the implementation guide for Short Medium Term Adequacy Results Document. But according to Energy prognosis Document the resolution should be 1 minute (However: I have not compared this with the possible usage of curveType).

3) We will send load and wind forecast information for a week, and since the *Short Medium Term Adequacy Results Document* is intended for e.g. Week Ahead PXX Load Forecast and Week Ahead PXX Wind Offshore/Onshore Forecast, it seems to fit. PXX in the implementation guide describes the "P05" and "P95" that we want to exchange.

But still, the two documents are so similar that they should have been more equal than they actually are (looking at the order of the attributes). And perhaps they might be joined in the future.

Even more response from Jan (SE), Tuesday September 15th, 17:00:

Based on input from e.g. Jon-Egil, we will now use an updated version of the Energy Prognosis Document (version 1.1) when exchanging percentile values. There are three changes in the XSD you get here, compared with the original one from ENTSO-E. Beside namespace and name of the xsd (that probably could be something else).

1) Added ProcessType to the header
2) Changed the order of resolution & timeInterval in the SeriesPeriod class
3) Added an optional Percentile_Quantity class in parallel with UncertaintyPercentage_Quantity

   The Percentile_Quantity class includes three attributes:

   a) quantity (i.e. the energy value)
   b) percentage_Quantity.quantity (i.e. the percentage level)
   c) percentage_Quantity.type (i.e. the unit of this latter percentage quantity – default P1 = %).

The idea is that you are having (zero), one or more percentile values. It could be the 5% value, the 30%, the 50%, the 80%, the 95% or "whatever". Sent together or sent separately.

Examples:

- If you only are interested in the average expected value and the 90% percentile (P_{90}), you can send two values and use Percentile_Quantity once.
- If you also are interested in the 10% percentile (P_{10}), you can use Percentile_Quantity once more, but may then also use UncertaintyPercentage_Quantity. Using the latter option, you will specify the confidence interval as 80 and the two values as minimum + maximum.

One advantage of having a Percentile_Quantity, as suggested in what you get here, is that you express the percentile with its level. That would not be the case when using UncertaintyPercentage_Quantity where you instead specify the confidence interval.

Let me now look at the attached (draft) xml example.

messageType = B14 = Energy prognosis document
processType = A14 = Forecast
businessType = A04 = Consumption
mktPSRType.psrType = A05 = Load
domain = SE3 (Swedish elområde 3)

So, this is a load forecast within the area SE3. The quantity is 67. Within UncertaintyPercentage_Quantity, the confidence interval is 90, and then the values for 5% and

95% are 53 and 98 respectively. Within Percentile_Quantity the same information is expressed, the P_5 value is 53 and the P_{95} value is 98.

Of course you will not send the information in both ways – the example is just showing that you can express the values in both ways, and using Percentile_Quantity you explicitly specify the percentile (5 and 95 in the example), while you with UncertaintyPercentage_Quantity instead would specify the confidence interval (90 in the example).

Is there any interest by you others of sending percentiles? If so, we can make a Nordic version of the Energy prognosis document. Making it possible to send (single or more) percentiles.

And at least we should suggest some updates to the ENTSO-E version of that document.

Appendix B Overview of Nordic memberships in international standardisation bodies

Name	Member of
Anders (SE)	CGMES
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 (SE)	NMEG, HG, ebIX®, IEC/WG16+14
Jon-Egil	NMEG, CIM EG, IEC/WG16, ESMP, CCC, CIO/LIO, TPC
Martin (SE)	CCC
Miika	CIM EG, NEX
Morten (NO)	NEX
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)
NEX	Nordic ECP/EDX Group
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	NMA	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**[2]	**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						

[2] 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.