Minutes Nordic TSO XML format meeting **Date:** Thursday May 14th and Friday 15th, 2009 **Time:** 9:00-17:00 (18:00?) and 9:00 – 15:00 **Place:** Energinet.dk, Ballerup, Copenhagen	Nordel Nordic Ediel Group
May 15th, 2009	

Participants: Christian Hoang Huy Le, Statnett (day 1)
Christian Odgaard, Energinet.dk
Jan Owe, SvK
Jari Hirvonen, Fingrid
Jon-Egil Nordvik (Convenor)
Mikael Kristensen, Energinet.dk
Ove Nesvik, EdiSys (Secretary)

TO: Antti Niemi, Nord Pool Spot
Heli Anttila, Fingrid
Jan-Olov Lundberg, SvK
Roar Grindstrand, Statnett
Willem Karel D van der Meijden, Energinet.dk

CC: Oscar Ludwigs, SvK
Tor Bjarne Heiberg, Statnett
Tor Åge Halvorsen, NordPool

Attachment: None

1 Approval of agenda

The agenda was approved.

2 Approval of previous meeting minutes

The minutes were approved.

3 Resolve matters arising from NEG meeting April 21st 2009

Christian O and Jon-Egil reported from the latest NEG SC meeting:

- NEG was happy about the work of the Nordic TSO XML work and the new project plan was approved, see extract in Appendix B.
- Approval of the *Determine transfer capacity* was postponed until after approval of the project in the Nordel Market committee. The Nordel Market committee have approved the project and the *Determine transfer capacity* documents (BRS, XML schemas and HTML model) should be sent on circulation for comments and approval to the NEG SC (with a copy to the project group). Responses should be sent within 3 weeks. After approval the documents will be published on www.ediel.org.
- Willem will participate in ETSO/TF-EDI (soon ENTSO-E) ERRP project group.
- Both Willem and Tor are proposed as Nordic members in the new ENTSO-E EDI group.
- Jon-Egil will probably continue participating in one of the new ENTSO-E sub groups.
- NordREG has proposed that Nordenergi (the Nordic energy organisations, i.e. EBL, Svensk energi, Dansk energi, Energia teollisuus) shall do the detailing of the common Nordic end user market. However this decision was questioned by the participants.
- Christian and Ove got some homework related to review and make a proposal for update of www.ediel.org.

Homework:

- Ove will send the *Determine transfer capacity* documents (BRS, XML schemas and HTML model) on circulation for comments and approval to the NEG SC.

4 Review of Determine transfer capacity process (if needed)

No comments have been received so far. The documents will be sent on circulation for comments to NEG SC (see above).

5 Standardisation of message information

Roar has come up with some questions related to missing and inconsistent information in the different messages he receives.

- Header:
  - Do we need a *Responsible agency*, e.g. NordicTSO, ETSO, ebIX in the header?
  - ➔ Yes, this was added to the ECP header as a Nordic extension, see Appendix C, Communication envelope

  - Investigate and find principles on usage of:
    - *Message/Document type* and *Process type* (ETSO terms)
    - *Message name/Message type* (ebIX terms)
    - *Business data type*, *Business reason* and *Process type* (NorNed terms)
    - Do we always need all three (four) elements?
  - ➔ See Appendix D, Identification of time series. The appendix will be added to the *Common rules and recommendation* document.

  - Do we need a *Status* element (e.g. original, resent)?
  - ➔ Not used in any Nordic data exchanges and not within ETSO. The element will not be used.

  - New: Do we need a flag for "request for acknowledgement", confirmation etc? (In NorNed this is called "*Business Service*").
  - ➔ No, acknowledgement principles should be defined in the business processes.

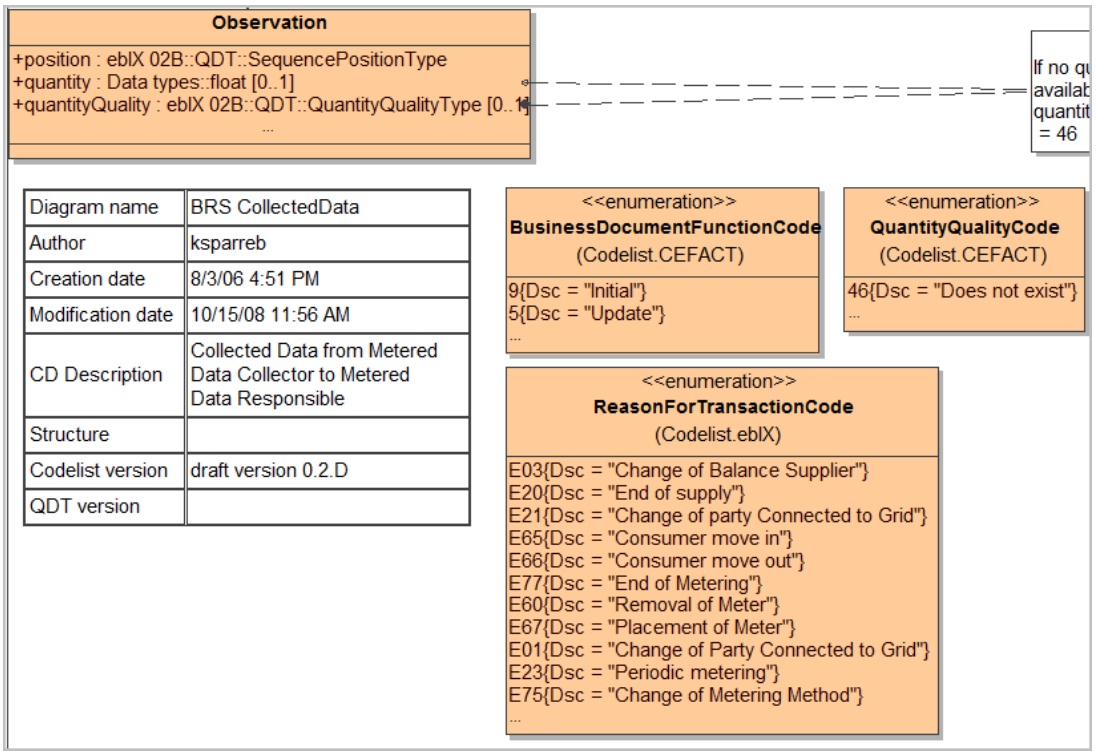
- Time series:
  - *Business type* (ETSO and NorNed), *Reason for transaction* (ebIX)
  - ➔ Se Appendix D, Identification of time series

- Time periods/ time stamp and date time formats:
  - How to handle different date/time/period formats in time series?
  - ➔ Basic rules:
    - No periods, i.e. periods are defined as a start date/time and end date/time.
    - Date/time format should always be YYYY-MM-DDTHH:MM:SSZ, YYYY-MM-DD, PnD (n = number of days), PTnH (n = number of hours) or PTnM (n = number of minutes)
    - Always use UCT time (UTC+0)
    - Summer/winter rules as defined in the BRS – This will be moved the *Common rules and recommendation* document.

- Can we add format information (e.g. interval or time stamp) for simplification of mapping to/from internal formats?

➔ No, the format is seen in the schema. Similar the offset to UTC is seen for the date/time formats (i.e. by the Z (Zulu time) parameter),

- Quantities
  - Can we add a quantity qualifier and/or quality element, e.g. estimated, read or no-value?
    - Quantity quality is NOT used in ETSO IGs
    - Quantity quality is used in *ebIX/EMD models* as an attribute, but as a separate element, *e.g.:*



    - Quantity quality is NOT used in *ebIX EMD model Measure for Billing*

➔ Ove quoted from a UN/CEFACT mail:

"This is the old cherry of what does null mean that plagued the SQL world for decades. Mark is right - data integrity is hence a nightmare

Now in XML the W3C were swayed by the SQL vendors and got sucked into doing nillable - result same nightmare, so good that CEFACT is avoiding that tar pit.

The real solution in XML is distressingly simple. Add an optional attribute to the element. If you have good quality data - no need for the attribute. If data is uncertain - use the attribute to indicate how.

So for your birthdate example for aristotle <birthdate state="unknown"/> or for the baby <birthdate state="pending"/> etc, or the case of a suspect <birthdate state="not provided"/>

Since this technique applies to the BIE level - it really is not context driven - and I know Scott wants to solve everything with a graph - this seems simpler - its just the state of the actual data.

And the rule of thumb in XML is; do NOT make things nillable - instead associate an optional attribute that denotes the state of the information."

➔ The Quantity data type from the UN/CEFACT DT catalogue was reviewed, but there was no quantity quality or status attribute available. Ove promised to investigate the possibilities for a change request with Jostein (EdiSys), ebIX/ETC and the ebIX, EFET and ETSO Harmonisation group. Alternatively we will add an element to the observation class.

- General:
  - Do we need *Code list agency* and *Code list* for all code lists and/or identifiers?
  - ➔ Yes, we add a *Code list agency* and *Code list* for all code lists and identifiers. The *code list agency* will be mandatory and the *code list* will be dependent (shall be used for national code lists). This also implies creation of Nordic QDTs for codes and identifiers, using Ediel as qualifier term for the Data Type.

    It was also agreed to create a new UN/CEFACT code list agency, i.e. 330 Ediel and rename the existing 260 to ebIX.

Homework:

- Ove will add the following to the *Common rules and recommendation* document:
  - Appendix C, Communication envelope
  - Appendix D, Identification of time series
  - Basic rules for date/time
- Ove will investigate the possibilities for a change request, related to addition of a quantity quality or status, with Jostein (EdiSys), ebIX/ETC and the ebIX, EFET and ETSO Harmonisation group.
- Ove will create QDTs for codes and identifiers, using Ediel as qualifier term.
- Ove will make a change request to UN/CEFACT asking for creation of a new code list agency "330 Ediel" and rename the existing 260 to ebIX.

6 Scheduling process

6.1 BRS (Business Requirements Specification)

Homework from previous meeting:

- Jon-Egil will verify if the *International system operator* participates in the UseCase *Exchange market schedules.*
  - ➔ Postponed until next meeting

- Jari, Jan and Jon-Egil will verify:
  - If we need the *Market operator* as an actor in the *Exchange market schedule* process
  - ➔ We need the *Market operator* as an actor in the *Exchange market schedule* process, since the *Market operator* is sending the actual trade in the Spot- and Elbas-markets
  - ➔ In addition bilateral trade is sent directly from the *Balance responsible parties* to the *System operators*.

- How the TSO receives bilateral trade, i.e. if this is received from *NordPool* or directly from the *Balance responsible parties*.

➔ Bilateral trade is received directly from the *Balance responsible parties* in all Nordic countries. Jan informed that SvK receives the following from *NordPool* and *Balance responsible parties*:

- Trade between *Nord Pool Spot* (Swedish Nord Pool) and the actors.
- Trade between *Nord Pool Spot* and other foreign Nord Pool companies, e.g. *Nord Pool Denmark, Nord Pool Finland*, etc.
- Sweden receives trade towards Denmark split into DK1 and DK2.

- All will:
  - verify if *the NORDEL system is stabilised **exclusively** or **mainly** through frequency control*

➔ *The NORDEL system is stabilised **mainly** through frequency control.*

  - If Max/Min production capacity should be added as new attributes in the Interval class or as a new business types.

➔ We will add two new *Business type codes*, i.e.:

  - Nnn Maximum production capacity
  - Nnn Minimum production capacity

- Mikael will verify if *Recourse provider* is needed in the Nordic scheduling process

➔ Postponed until next meeting

- Ove will update the BRS for scheduling according to updates of the MagicDraw model and relevant parts of the ERRP IG.

➔ Done

Ove raised the following questions related to the distributed BRS:

- What is the difference between *Ancillary services* and *Reserve resources*?

➔ Nobody could tell the difference. It was therefore assumed that the two terms can be treated as synonyms. In the BRS *Ancillary services* will be used and a comment will be made in the introduction explaining that these are synonyms).

- Should we split *Balance responsible parties* into *Production responsible parties*, *Consumption responsible parties* and *Trade responsible parties*?

➔ We will use *Balance responsible party* throughout the document.

- Is the *Request/Confirm match* really an *extension* to the *Exchange market schedules* or is it a separate process?

➔ It is a separate process.

- Should we use *Notification*, *Document* or *Message* as the extension of notification messages, i.e. *Schedule notification, Schedule document* or *Schedule message*?

➔ We will use *Schedule document.*

The Process area Nominate capacity was discussed.
The difference between a schedule and a nomination is that the nomination is referencing a contract. It was agreed to postpone the process and later on define a separate document explain the complete nomination process. The item will be put on the pending list for discussion ad approval in the NEG SC.

Homework:

- Ove will update the BRS with:
  - The statements above.
  - Only Balance responsible party is used (no specialisations).
  - Separate the Request/confirm match from the Exchange market schedules process.
  - Rename *Balance area* to *Market balance area*
  - Update all activity diagrams with the correct document type from the updated sequence diagram, including relevant states.
- Jon-Egil will verify if the scheduling sequence diagram covers all message flows required by the NOIS SOW document.
- Denmark, Finland and Norway will:
  - Verify id *Ancillary services schedules* are sent from the *System operator* to the *Imbalance settlement responsible*.
- Finland and Sweden will verify if they are using the *Nominate capacity* process.
- Sweden will verify the updated matching process.
- Ove will make a separate CC document, containing descriptions of all attributes, except the dependencies, which must be maintain together with the class diagrams for the actual messages.
- Ove will make class diagrams for the rest of the messages and dependency proposals.

6.2 RSM (Requirements Specification Mapping)

The item was postponed.

6.3 XML schemas

The item was postponed.

7 Agree on how to identify schedules

The item was postponed.

8 Detailing of the communication appendix (if time)

The item was postponed.

9 Next meeting

- June, Tuesday 16th and Wednesday 17th, Sundbyberg (Stockholm).
- September, Tuesday 8th and Wednesday 9th Oslo (EdiSys)

10 AOB

No items.

Appendix A TO BE DISCUSSED AND AGREED

1. Should the new principles for time series identification in Sweden influence this project?

2. Follow up on *Special rules related to NOIS*:
   - Reason codes have to be sent in a separate time series. The related quantities must always have a dummy value, but the value will be ignored by NOIS.

3. The Process area *Nominate capacity* (opposite to a schedule the nominations are referencing a contract) is suggested to be define in a separate document for the complete nomination process. A proposal for this new project activity will be forwarded to the next NEG SC.

Appendix B EXTRACT OF THE OVERALL PROJECT PLAN

Phase 2 (spring 2009), Scheduling process covered by the ESS and ERRP documents from ETSO

- operational and financial
- balancing and reserves
- In addition phase 2 will include:
    - A document containing common rules and recommendations, *including* detailing of the communication appendix in the BRS for *Transfer Capacity*
    - *A docu*ment covering a common *Domain model* for the Nordic market.
    - Agree on how to identify schedules, i.e. can the TSO XML project base its identification principle on the new principles for time series identification in Sweden?
    - Preparation for implementation verification of schedules between the Nordic TSOs.

Phase 3 (autumn 2009), Bid process,

- Bid to the Balance regulation market
- Activation messages
- Bid process to the Spot market (dependent on NordPool)

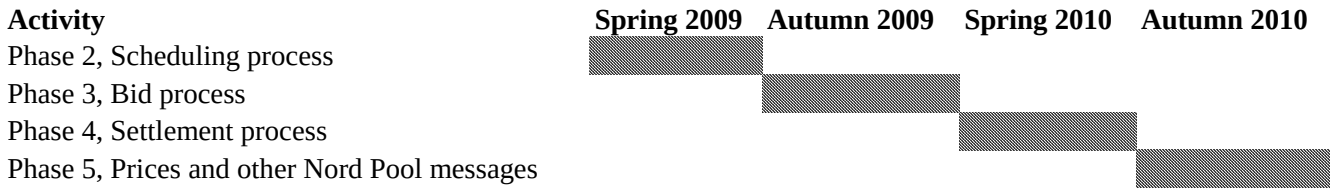
Phase 4 (spring 2010), Settlement process

- Metered data
- Settlement result, including prices

Phase 5 (autumn 2010), Prices and other Nord Pool messages (dependent on Nord Pool)

The Customer switching (CuS) process is a potential additional phase, dependent on political decisions, i.e. a common Nordic end user market.

For each of the phases mentioned above, a BRS and a RSM (including related XML schemas) will be made for the relevant business process. The project group may chose to combine two or more business processes into one BRS and/or RSM, if this seems suitable.



Appendix C COMMUNICATION ENVELOPE

The Nordic TSO will base the communication on SOAP 1.2, extended to be compatible with ECP (Energy Communication Platform), **Error! Reference source not found.**. This includes usage of SOAP with extensions from ebMS and ECP, as follows:

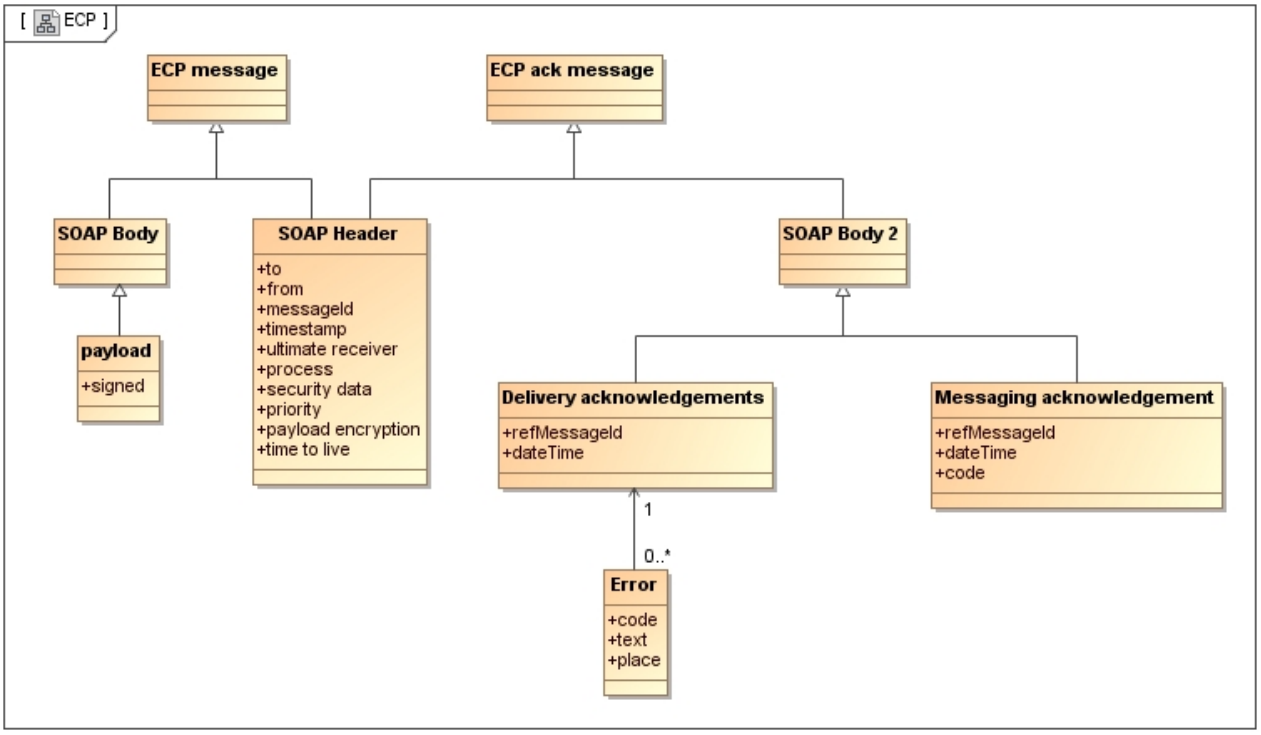


Figure 1: Class diagram: ECP (Energy Communication Platform)

The SOAP version 1.2 header is extended with the following elements from ebMS version 3.0:

- to
- from
- messageId
- timestamp

And with the following ECP extensions:

- ultimate receiver
- process
- security data
- priority
- payload encryption
- time to live

Nordic TSO XML extensions:

- Responsible agency

Appendix D IDENTIFICATION OF TIME SERIES

The following elements will be used by the Nordic TSO XML project as identification elements of time series.

D.1 Document Type

Document Type = *Message/Document type* from ETSO ≈ *Message name/Message type* from ebIX

Definition (from ETSO): The coded type of a document. The document type describes the principal characteristics of a document.

Examples:

A01	Balance responsible schedule	A schedule that has been prepared by a balance responsible party providing planned schedule information.
A05	Control block area schedule	A compilation of all the exchange programs of all control areas for one control block with all neighbouring control areas of a neighbouring control block.
A07	Intermediate confirmation report	An intermediate confirmation report that may be produced between final cut-offs.
A15	Acquiring System Operator Reserve Schedule	A document providing reserve purchases submitted by an Acquiring System Operator
A17	Acknowledgement Document	A document providing acknowledgement information

D.2 Process type

Process type: The combination of *Process type* and *Business type (see below)* ≈ *Reason for transaction*, on the detail (header) level, from ebIX ≈ *BPI (OBPI)*, on the envelope level, from ebIX.

Definition (from ETSO): Indicates the nature of process that the document addresses.

A01	Day ahead	The information provided concerns a day-ahead schedule.
A02	Intra day	The information provided concerns an intra day schedule (note: this is to be used only for incremental schedule transmissions).
A03	Inter-area transit	The information provided concerns an inter area transit schedule. The rules governing this process are market dependent
A04	System operation closure	The information provided concerns the closure of a given period of both scheduled and regulation information
A05	Metered data aggregation	The information provided concerns the aggregation process of metered information
A06	Imbalance settlement	The information provided concerns the imbalance settlement for a given period for a balance responsible party or parties
A07	Capacity allocation	The information provided concerns the capacity allocation process
A08	Central Reconciliation	The process carried out to finalise the imbalance settlement based on actual metered values against provisional values from profiled metering points

D.3 Business type

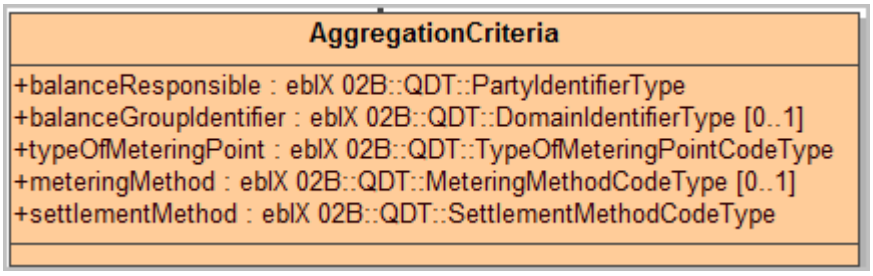
Business type: The combination of ETSO *Process type* and *Business type (see above)* ≈ *Reason for transaction*, on the detail (header) level, from ebIX ≈ *BPI (OBPI)*, on the envelope level, from ebIX.

Definition (from ETSO): The exact business nature identifying the principal characteristics of a time series.

A01	Production	The nature of the business being described is production details
A02	Internal trade	The nature of the business being described is internal trade details.
A03	External trade explicit capacity	The nature of the business being described is external trade details between two areas with limited capacity requiring a capacity agreement identification.
A04	Consumption	The nature of the business being described is consumption details.
A05	External trade total	The nature of the business being described is external trade total. **Note:** This code has been *deprecated* and the code A06 in conjunction with the adequate Object Aggregation code should be used instead. In a future release the code will be deleted.
A06	External trade without explicit capacity	The nature of the business being described is external trade details between two areas without requiring capacity allocation information.
A07	Net Production / Consumption	Net production/consumption - where signed values will be used. With the following rules: In area=Out area, In party=Out party, + means production and – means consumption.
A08	Net internal trade	Net internal trade - where the direction from out party (seller) to in party (buyer) is positive and the opposite direction is negative (with minus signs).
A09	IPP (Independent Power Producer)	A time series concerning the production schedule from an IPP.
A10	Tertiary control	A time series concerning tertiary reserve requirements.

D.4 Object aggregation

Object aggregation: The combination of ETSO *Object aggregation* and *Classification Type* ≈ The ebIX class *Aggregation criteria*:



Definition (from ETSO): The identification of the domain that is the common dominator used to aggregate a time series.

A01	Area	The object being described concerns an area.
A02	Metering point	The object being described concerns a metering point.
A03	Party	1. The object being described concerns a party.
A04	Agreement identification	The object being described concerns an agreement identification

D.5 Classification

Classification: The combination of ETSO *Object aggregation* (see above) and *Classification Type* ≈ The ebIX class *Aggregation criteria*. *Classification* is only used in ESS from ETSO and will not be used in the Nordic TSO XML project.

Definition (from ETSO): Indicates the classification mechanism used to group a set of objects together. The grouping may be of a detailed or a summary nature.

A01	Exchange type	The schedule is classified as providing the detailed trades between two entities (all external trades between two entities).
A02	Summary type	The schedule is classified as providing the aggregated trades between all entities (aggregated values between all entities).