Minutes: Harmonised Nordic Retail Market - Message format, content and interface project **Date:** Tuesday November 12th and Wednesday November 13th, 2013 **Time:** 09:00 - 17:00 and 09:00 – 15:00 **Place:** Energinet.DK, Erritsø	**Nordic Ediel Group**
December 12th, 2013	

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Attachments:

Appendixes:

Appendix A Assumptions and conclusions
Appendix B Content of the pre-switch checking process in the Nordic countries
Appendix C **Proposal for harmonised address structure**

Approved minutes - Harmonised Nordic, see item 2, Approval of previous meeting minutes

Memo Norwegian answers and comme**,** see item 3, Status for discussions in national reference groups


Swedish Comments to questions from H, see item 3, Status for discussions in national reference groups


Swedish comments to the Acknowledge, see item 6.1, Review of proposed Acknowledgement process

Useful links:

Harmonised Model for Supplier Switching, NordREG, June 2013
ebIX Business Requirements for Change of supplier v3r1A
ebIX BRV for Customer Move v3r1B
ebIX Business Requirements for End of supply v3r1A
ebIX Business Requirements for Change of Balance Responsible party v3r1A
ebIX Business Requirements for Notify MP Characteristics v3r1B
ebIX Business Requirements for Query MP Characteristics v3r1A (*Upfront request for Metering Point Characteristics*)
ebIX Business Requirements for Request MP Characteristics v3r1A
ebIX Business Requirements for Measure Collected Data 2r0E
ebIX Business Requirements for Measure Determine Meter Read 2.0.B
ebIX Business Requirements for Measure for Reconciliation 2r0C
ebIX Business Requirements for Measure for Billing 2r0A
http://www.norden.org/sv/aktuellt/nyheter/elmarkedet-i-norden-skal-styrkes
http://www.norden.org/fi/ajankohtaista/uutiset/pohjoismaisia-saehkoemarkkinoita-vahvistetaan (*Finnish version*)

1 Approval of agenda

The agenda was approved

Under this item Christian informed that Steen Mahler will leave the project and be replaced by Preben Høj Larsen from Energinet.dk.

2 Approval of previous meeting minutes

The minutes from previous meeting were approved after a few corrections. The updated minutes are attached (with changes tracked).

3 Status for discussions in national reference groups

Denmark have had one meeting:

- Christian informed that the Danish can agree on using calendar days instead of working days for most of the holydays, however Denmark wish exceptions for common holydays, such as during Christmas and Easter.
    - Emma informed that Sweden is using calendar days today for the switching process, which works fine.
    - It was also noted that this item is not within the scope of this project, unless it influences the technical issues

Norway and Sweden have also had one national meeting. The outcome of these meetings are attached.

Markus reported from a couple of meetings held in Finland:

- Currently Finland have a combination of working days and calendar days within the message exchange processes, e.g. a supplier switch shall take 14 days from the first request is sent till the switch is active, but the time limits for the document exchanges count up to 5 working days. However, Finland prefer calendar days in a Harmonised Nordic Retail Market.

4 Continue with national additions and specialities in the "Business Entity View" in the BRS

4.1 Open homework from the June 2013 meeting

Norway will clarify with NVE if the Norwegian rule that a change of supplier shall be rejected if no actual meter reading is available between 20 to 6 working days before the switch, will be changed or if this shall be stated as a Norwegian speciality.

Answer from NVE (the Norwegian regulator):

The requirement in the regulation on a meter reading 20-6 working days before the Change of Supplier date applies for manual read Metering Points, but after deployment of AMS, the majority of the Metering Points will be automatically read. It is uncertain how many remaining manually read Metering Points it will be after 2019 and whether the above requirement will continue to apply to these.

As regards the submission of data for automatic read Metering Points when changing supplier, it is not clear whether NVE will base regulatory changes on the NordREG recommendation. However, as the project Harmonized Nordic Retail Market is a NordREG project, you can start with the NordREG recommendation in further their work in this area.

4.2 Review of Structuring elements usage

Due to lack of time and homework, the review of Structuring elements were postponed until next meeting

4.3 Review of Measure elements usage

Due to lack of time and homework, the review of Measure elements were postponed until next meeting

4.4 How can we harmonise the pre-switch checking process

The definition of a Metering Point was discussed:

- According to the ebIX®, EFET and ENTSO-E Harmonised Role Model, the Metering point (MP) is defined as:

  An entity where energy products are measured or computed

  And, an Accounting Point is defined as:

  An entity under balance responsibility where balance supplier change can take place and for which commercial business processes are defined.

  Additional information: *These entities are usually defined in a contract. Typical business processes where this would be used may be "compensation management", "settlement", "calculation of energy volumes", etc.*

  This is a type of metering point.

- It was agreed to continue using the term Metering Point, to avoid misunderstandings
- It was also noted that an "installation" should be defined as two MPs if there are both production and consumption, and the Customer wants different Balance Suppliers for production and consumption
- Poul informed that the Danish DSOs uses a Point of Delivery (POD), which identifies the physical installation. There may be several channels, such as meters, connected to the POD. It will be difficult for the Danish DSO IT-system to handle two MPs for one POD.
  - Poul thinks that we will create problems for ourselves if we create a solution using two MPs for an installation with both production and consumption.

- Christian informed that the Danish Datahub will use two MPs if a split is needed for production and consumption
- Emma "concluded" that it will be more difficult to have two different suppliers (one for production and one for consumption) in one MP, than having two MPs for one installation

ebIX® has documented the pre-switch checking process in the BRS "*Upfront request for Metering Point Characteristics*". The BRS was briefly reviewed and it was agreed to ask the national Ediel groups to see if the ebIX® BRS can be used as a basis for a harmonised Nordic pre-switch checking process.

See also Appendix B for an overview of the current pre-switch checking process in the Nordic countries.

Assumptions:

- We will assume that an installation with both production and consumption will have two MPs (two IDs)
- We continue using the term Metering Point (and not Accounting point), to avoid misunderstandings

Homework:

- Poul will verify the consequences for splitting a POD into two MPs if there are different suppliers for production and consumption in the POD
- The national Ediel groups will be asked to see if the ebIX® BRS for "*Upfront request for Metering Point Characteristics*" can be used as a basis for a harmonised Nordic pre-switch checking process.

5 Review of "Business Requirements View" in the BRS

5.1 Answers from NordREG

The following answers have been received from NordREG:

- In appendix II, page 15, in the switching report it is stated: "*The DSO sends message with **Meter reading at the switching date +/- 5 days** at the latest 9 days after switching date, to the new and the old Balance Supplier*". Is the meaning that an actual meter reading must be obtained +/- 5 days, or that it no longer is a need to estimate at the actual switching date?

  Answer:

  By meter reading is meant actual/real values at the switching day – if impossible then an estimation can be used. The 5 days were the number of days to be used to get a meter reading from a MMR (Manual Meter Reading).

- When the term "day" is used in the switching report, shall this be interpreted as "working days" or "calendar days"?

  Answer:

  Calendar days. The argument was simply that the holydays sometimes are different among the countries. Otherwise the stakeholders have to know all the Nordic national holidays before initiating a inter Nordic switch. Working days seems therefore to be a 2nd best solution.

Conclusion:

- We will make a note of the answers and use them in the deliverables, i.e.
  - A meter reading connected to a switch shall be within +/- 5 days. The switch meter reading ***can*** be estimated if not on the exact day. The meter reading must be distributed to the Balance Supplier within 9 days after the switching day.
  - We will assume calendar days when appropriate

Homework:

- Jan Pedersen will verify if the word ***can*** in the sentence "*if impossible then an estimation **can** be used*" should be ***shall***

5.2 Review of chapter 1 in the BRS

The structure of the BRS was reviewed and the following principles will be used in the next version:

- Only use UseCase diagrams and UseCase descriptions (tables) in chapter 1
- Add a sequence diagram as an introduction to each process in chapter 3, i.e. before the relevant class diagrams for each process.
- Remove unnecessary stereotypes from the artefacts
- Add the relevant extract of the methodology introduction from *Nordic TSO XML common rules and recommendations* as an appendix
- Change Consumer to Customer
- Remove everything related to gas, such as Transport Capacity Responsible Party

Thereafter the Customer move process was discussed:

- Ove presented the ebIX® BRS for Customer Move:
    - It was noted some errors in the CuS move BRS:
        - An arrow is missing in chapter 1.2.3.2.
        - The Notify MP Characteristics UseCase in chapter 1.2 should probably be removed
- It should be stated that a Move out and a Move in preferably should be on the same date. According to ebIX® and ENTSO-E rules a start date is "inclusive" and an end date is "exclusive", which means that the last date for which the old customer is connected to the MP is the day before the end date.

Homework:

- Ove will update the BRS according to the bullet points above

After the review of the ebIX® BRS for Customer Move, the "Moving-report" from NordREG was reviewed. The HNR project started on the UseCases in Appendix II and compared these UseCases with ebIX® Move In and Move Out processes:

NordREG UseCase	ebIX® Use Case	Comment
UC1: New customer only reports move in (in this UC there is no Customer linked to the MP when the Move In is received)	Standard ebIX® Customer Move In UseCase, including the UseCases: • Request Customer Move In • Notify Metering Point Characteristics • Determine Meter Read Excluding the UseCase: • Notify Customer Move In	In Denmark there will be a Supplier of last resort connected to the MP if the Old Customer has been moved out before the Request Move In has been received. I.e. The Supplier of last resort must be notified of the Move In.
UC2: New customer reports move in, current customer has not reported move out	Standard ebIX® Customer Move In UseCase, including the UseCases: • Request Customer Move In • Notify Customer Move In • Notify Metering Point Characteristics • Determine Meter Read	
UC3: New customer reports move in, metering site is disconnected	Standard ebIX® Customer Move In UseCase, including the UseCases: • Request Customer Move In • Notify Customer Move In	

	• Notify Metering Point Characteristics • Determine Meter Read	
UC4: Move in on empty site, not reported to anyone	Standard ebIX® Customer Move In UseCase, including the UseCases: • Request Customer Move In • Notify Customer Move In • Notify Metering Point Characteristics • Determine Meter Read	Time limits for move in date back in time must be decided nationally or by NordREG
UC5: Customer reports move in, ongoing new connection	Standard ebIX® Customer Move In UseCase, including the UseCases: • Request Customer Move In • Notify Customer Move In • Notify Metering Point Characteristics • Determine Meter Read	Time limits for move in date back in time must be decided nationally or by NordREG
UC6: Retroactive move	Standard ebIX® Customer Move In UseCase, including the UseCases: • Request Customer Move In • Notify Customer Move In • Notify Metering Point Characteristics • Determine Meter Read	Time limits for move in date back in time must be decided nationally or by NordREG
UC7: Current customer only reports move out	Standard ebIX® Customer Move Out UseCase, including the UseCases: • Request Customer Move Out • Notify Customer Move Out [1)] • Determine Meter Read	[1)] Only used for notifying the Grid Access Provider if the Metering point Administrator is a Datahub (i.e. currently only valid for Denmark)
UC8: New customer reports move in, current customer has reported different move out date **a) move out date later than the move in date**	Standard ebIX® Customer Move In UseCase, including the UseCases: • Request Customer Move In • Notify Customer Move In • Notify Metering Point Characteristics • Determine Meter Read ebIX® Customer Move Out UseCase, which is rejected	The ebIX® model proposes the opposite process than the NordREG moving report, i.e.: The Customer Move Out process is stopped and the Customer Move In process takes over the remaining actions from the Customer Move Out process, including move out for the requested move in date The Danish rules is according to the proposal from the NordREG moving report. ***Homework:*** • To be discussed in the national reference groups • To be discussed in the HNR steering groups
b) move out date earlier than the move in date	Standard ebIX® Customer Move In UseCase, including the UseCases: • Request Customer Move In • Notify Customer Move In	

	• Notify Metering Point Characteristics • Determine Meter Read Standard ebIX® Customer Move Out UseCase, including the UseCases: • Request Customer Move Out • Notify Customer Move Out • Determine Meter Read	
UC9: Current customer reports move out, new customer has noted a different move in date		***Homework:*** • To be discussed and filled in national reference groups
UC10: Cancelled move		***Homework:*** • To be discussed and filled in national reference groups
UC11: Move in to an incorrect metering point		***Homework:*** • To be discussed and filled in national reference groups
UC12: Customer contacts several suppliers in case of move in		***Homework:*** • To be discussed and filled in national reference groups
UC13: Move in when customer reports contract party change due to e.g. divorce, death etc		***Homework:*** • To be discussed and filled in national reference groups
UC14: Customer reports that existing connection contract is to be transferred to a new owner		***Homework:*** • To be discussed and filled in national reference groups
UC15: Move in when customer has lost his creditworthiness		***Homework:*** • To be discussed and filled in national reference groups
UC16: Move out/in when customer has fixed contract		***Homework:*** • To be discussed and filled in national reference groups
UC17: Change move out date		***Homework:*** • To be discussed and filled in national reference groups
UC18: Change future move in date		***Homework:*** • To be discussed and filled in national reference groups

Questions to NordREG:

a) If there is a MP without a Customer connected, e.g. because the Old Customer has moved out before a Request Move In is received, there are two different ways of handling this:
   - In Denmark there will be a Supplier of last resort responsible for the consumption in the MP
   - In Finland, Norway and Sweden the DSO will be responsible for the consumption in the MP (i.e. add it to the grid loss)

   Appendix 2 in the Moving report suggest that the responsible role for the consumption should be the DSO

   How should this be handled in a Harmonised Nordic Retail Market?

b) In the Moving report, UC2, it is stated: "There can only be one (the correct) customer connected to each metering point". However, in Denmark there can be two customers (e.g. man and wife) and in Finland there can be an unlimited number of Customers to a MP.

Should the HNR project assume that there only can be one Customer at a MP at a given point in time?

c) In the Moving report, UC8, it is stated:

> 5. a) If the NPI/DSO finds that it has already received a move out for the same metering point with a move out date which is later than the move in date required the NPI/DSO rejects the request with a negative acknowledgment message telling the reason. The use case stops here with a negative result. Go back to point 3

This is opposite to what ebIX® is proposing, i.e.:

> The Customer Move Out process is stopped and the Customer Move In process takes over the remaining actions from the Customer Move Out process, including move out for the requested move in date

The main argument for the ebIX® proposal is that the Move In request comes later than the Move out request and is probably more up-to-date.

The rule in the NordREG Moving-report should be reviewed!

6 Technical alignments

6.1 Review of proposed Acknowledgement process

Homework from previous meeting:

- Ove will add the ENTSO-E acknowledgment process and document to the BRS
  Status: Done

- Jan Owe and Markus will propose reason codes for technical and application acknowledgement (syntax and process level) to the next meeting
  Status: Done, but a review was postponed to a later meeting

- All investigate nationally frequently occurring errors

The acknowledgement process was discussed:

- Christian mentioned the Danish acknowledgements rules:
  - Acknowledgements are only sent from the Datahub and not required from the actors, i.e. negative acknowledgements are sent from Energinet.dk, while rejections from the actors must be handled manually, e.g. by phone
  - Positive acknowledgements are not used to and from the Datahub
- Christian proposed to use SOAP acknowledgements when using WS as means of communication
- Jan Owe showed a PowerPoint presentation, see attached, which summarised previous conclusions and raised some new questions.
- Ove noted that NBS has decided to always send an acknowledgment (positive or negative). The negative acknowledgement will only have one error code "***999***, *General error*", however with a detailed text explaining the error.
- Denmark has currently about 90 different error codes. The number of error codes have increased from Datahub version 1 to version 2.

Assumptions:

- We will use NBS principles for acknowledgement of receipt (technical acknowledgements on syntax level)
    - For synchronous WS:
        - If error: Always sending SOAP ack
        - If OK: no SOAP ack
    - For asynchronous communication (MADES, SMTP….)
        - If error:
            - Always sending negative acknowledgement of receipt
            - Only using one error code, "999", and specify the error so that the recipient of the acknowledgement can understand the error
        - If OK: Never sending positive acknowledgement of receipt
- If errors occur on a business level in a one-way notification pattern, we will specify in the business process if an acknowledgement of processing shall be used. This apply for both negative and positive acknowledgements
- If two-way pattern, such as request and response processes; a negative or positive business document shall be used instead of an acknowledgement of processing

6.2 Harmonise of address fields

From related discussions:

- NEE (Norway) proposes:
    - c/o address is seen as a part of the address (and not a part of the name, which is in line with UN/CEFACT CCL).
    - NEE suggest adding separate fields, as part of the Address class, for:
        - «c/o address»
        - «Attention»
    - NEE proposes also that names are handled as in UN/CEFACT CCL, i.e. separate elements for Persons and Companies (Parties):
        - Person, including:
            - Given Name
            - Middle Name
            - Family Name
        - Party:
            - Name (including type of ownership, such as AS, ASA, LTD, GMBH etc.)
- Denmark:
    - Has two Customer Name elements (each up to 132 characters long, an..132).
    - For contacts; there are two name elements, where the second can be used for c/o Address or Attention. There are no common rules for how to present c/o Address or Attention
    - There are three possible addresses:
        - MP address (installation address)
        - Meter reading card address
        - Voting card address (only used for voting cards for the DSOs general assembly)
    - Person or Company Names are put in the same Name field, i.e. there are no split between Persons and Companies, and no split between Given, Middle and Family Names.
    - Can have two Customer names (e.g. man and wife), but no Customer address (only one installation address)
- Finland is using the standard EDIFACT name and address fields, but uses only one Name fields (an..35)
    - Address types:
        - MP address (R)
        - Customer name and address (R)
        - Customer name 2 (if two customers) (O)
        - Invoicing name and address (O)
        - Contact name and telephone (O)
- Sweden is also using the standard EDIFACT name and address fields, but uses two Name fields (an..35)

  - Sweden is also discussing how to handle "sole proprietorship companies (enskild firma)", i.e. a MP having a company name but an Social-Security-Number as the ID
  - Address types:
    - MP address (R)
    - Customer name and address (R)
    - Invoicing name and address (O)
    - Contact name and address for the DSO (only internal for the DSO) (O)
    - For companies: Customer contact name and address (normally not exchanged, but may be sent as c/o address or Attention) (O)
- Sweden had made the following comments as homework:
  - Some data that we see a need for in Sweden:
    - "Lägenhetsnummer" ("apartment number")
      Conclusion: This is a four digit code identifying floor and room, which can be put in "Room Identification".
    - "Trappuppgång" ("staircase")
      Conclusion: This is a part of the "Building number"
    - Other information like "Över gården", "Källarvåning", "Höger/vänster port", Name of the estate etcetera
      Conclusion: A "Free From" element was proposed added
    - Coordinates?
      Conclusion: Not to be exchanged
    - Property unit designation ("Fastighetsbeteckning")
      Conclusion: Proposed put into the "Free From" element if needed
  - How will you specify an address for a metering point "in the woods" (a radio tower or similar)?
    Conclusion: Proposed put into the "Free From" element if needed
  - In order to separate the information into different data elements there is quite a work to be done, especially when changing present databases and if there are new information items to be added not existing today.
  - We see a need to have three different types of addresses:
    - Metering point address
    - Customer address
    - Invoicing address
  - If both *Metering point address* and *Customer address* can be sent in a document, do we need to send both addresses? Even if they are the same?
    Conclusion: Will be asked as question for national groups
  - C/o addresses
    - We see it as part of the address.
    - Also "Attention" (a person or a department at a company) do we see as a part of the address.
    - Both "c/o address" and "attention" can be sent in the same attribute since they are very much the same kind of information, and typically the former is used for households, the latter is used for companies.
      Conclusion: Proposed as two elements, since they are used differently when put into a letter
- Norway is using the standard EDIFACT name and address fields, but uses two Name fields (an..35)
  - Address types:
    - MP address (R)
    - Customer name and address (R)
    - Invoicing name and address (O)
- Ove stressed that having a common solution is important. If we make structured names and addresses optional; a company having a structured database will not know how to store received unstructured names and addresses.

A class diagram showing a proposal for address structure was made, to be discussed as homework for the national groups, see *Appendix C:* **Proposal for harmonised address structure**.

6.3 Harmonisation of codes and qualifiers
Due to lack of time the item was postponed.

6.4 Harmonisation of cancellation procedures
Due to lack of time the item was postponed.

6.5 Harmonisation of "technical attributes"
Due to lack of time the item was postponed.

7 Discussion (brainstorming): Requirements for communication means and formats

There was a brief discussion regarding the means of communication, where it was assumed that MADES and SMTP are candidates for a harmonised communication standard.

Assumption:

- Means of communication can be:
  - MADES
    - Requires that the four Nordic TSOs (or some other national or Nordic organisation) agree to run "MADES nodes"
  - SMTP:
    - Currently used in Norway and Sweden
    - As addition to existing FTP communication in Finland
    - As addition to existing WS in Denmark

8 Prepare a status report for NEG and NordREG

There is a Steering group meeting November 27th in Oslo and all members of the HNR project are invited. So far Anne Stine, Jan Owe, Jan Pedersen, Jari, Markus, Minna and Ove from the HNR project have confirmed participation.

Jan Owe and Ove will make a presentation for the meeting showing the status in the project. A part of the presentation will be asking NordREG and NEG, and also ourselves if we are on the right track.

9 Prepare questions for national reference groups (PowerPoint presentation)

A PowerPoint presentation with questions for national reference groups and NordREG was made. The presentation is attached.

10 Publication of minutes and documents at www.ediel.org

Homework:

- Ove will make a web page under www.ediel.org, including:
  - Project plan
  - Approved minutes
  - Questions for national groups
  - Name of national reference groups

11 Next meetings

December 2013: Tuesday 10th, 09:00 – 17:00 and Wednesday 11th 09:00 – 15:00, Fingrid, Helsinki
January 2014: Tuesday 21th, 09:00 – 17:00 and Wednesday 22nd 09:00 – 15:00, Fjordkraft, Bergen
March 2014: Wednesday 5th 09:00 – 17:00 and Thursday 6th 09:00 – 15:00, SvK, Stockholm

12 AOB

No items

Appendix A Assumptions and conclusions

The assumptions and conclusions below will be reviewed during the project.

Area/Item	Assumption or conclusion	Date
BRS	• We will try to avoid national specialities in the final BRS, there will however be some differences, such as:	20130827
	• Identifiers used may differ (e.g. Customer ID may be Social Security Number or Date of birth)	20130827
	• The change of supplier process will include change of suppliers connected to a Production Metering Point	20130827
	• The BRS is assuming a supplier centric model, as stated by NordREG	20130827
	• The document will assume combined billing, according to NordREG recommendations; *"In line with previous recommendations the cost for electricity supply and the cost for the grid shall be combined in a single invoice and sent to the customer by the supplier"*	20130827
	• We will assume that an installation with both production and consumption will have two MPs (two IDs)	20131112
	• We continue using the term Metering Point (and not Accounting point), to avoid misunderstandings	20131112
	• The Harmonised Electricity Role Model from ebIX®, EFET and ENTSO-E will be used o E.g. Metering Point Administrator will be the Datahub (if relevant), or else the DSO	20130827
Syntax	• We assume that the syntax will be XML based on ebIX® and ENTSO-E standards, among others because of: o NBS will use a combination of ebIX® and ENTSO-E XML documents o For the ENTSO-E documents there are no existing alternative based on EDIFACT syntax o The Danish Datahub have already implemented XML documents based on ebIX® and ENTSO-E standards	20130827
Date Time Formats	• In the exchanged document we will use UTC time in to avoid different time zones in "the Nordic market" o E.g. if a Norwegian supplier want to send a request for change of supplier to a Finnish DSO at midnight during summer: o The switch time in the document will be 21:00 (the day before) o The Norwegian supplier system will display 23:00 (the day before) o The Finnish DSO system will display 00:00 (on the switch day)	20130827
Acknow-ledgements	• We describe usage of the ENTSO-E acknowledgment document in the BRS for a Common Harmonised Nordic Retail Market processes.	20130827
	• Technical acknowledgement on a syntax level (similar to the CONTRL messages used in FI, NO and SE) will only be used for asynchronous communication, such as SMTP. For Web Services, technical acknowledgement on a syntax level is not needed, since the response will appear more or less immediately (as SOAP ack), as a part of the service.	20130827

	• We will add the possibility to use the ENTSO-E acknowledgement document on an "Object level", i.e. rename the Time Series Rejection class to Object Rejection	20130827

	• We will use NBS principles for acknowledgement of receipt (technical acknowledgements on syntax level)
	  ○ For synchronous WS:
	  ▪ If error: Always sending SOAP ack
	  ▪ If OK: no SOAP ack
	  ○ For asynchronous communication (MADES, SMTP….)
	  ▪ If error:
	  • Always sending negative acknowledgement of receipt
	  • Only using one error code, "999", and specify the error so that the recipient of the acknowledgement can understand the error
	  ▪ If OK: Never sending positive acknowledgement of receipt
	• If errors occur on a business level in a one-way notification pattern, we will specify in the business process if an acknowledgement of processing shall be used. This apply for both negative and positive acknowledgements
	• If two-way pattern, such as request and response processes; a negative or positive business document shall be used instead of an acknowledgement of processing
		20131112

Datahub	• The Datahub in Denmark will include combined billing from autumn 2014	20130827
	• There will be a first version of a Datahub in Norway (end of 2016), probably without combined billing, planned one year after start of a Common Harmonised Nordic Retail Market (end of 2015)	20130827
	• There are no decisions regarding Datahub in Finland or Sweden	20130827

Means of communi-cation	• Means of communication can be:
	  ○ MADES
	  ▪ Requires that the four Nordic TSOs (or some other national or Nordic organisation) agree to run "MADES nodes"
	  ○ SMTP:
	  ▪ Currently used in Norway and Sweden
	  ▪ As addition to existing FTP communication in Finland
	  ▪ As addition to existing WS in Denmark
		20131112

Appendix B Content of the pre-switch checking process in the Nordic countries

B.1 Norway; NUBIX pre-switch checking process

In Norway NUBIX is used in the pre-switch checking process. NUBIX is a system where all DSO's databases are connected to a central service hosted by Statnett (TSO). Suppliers can make requests against the central service via web-site www.nubix.no or via web-services. The requests are routed to the right DSO based on postal code. The main idea of NUBIX is to let new suppliers obtain and/or verify information about the customer and his metering point ID before starting the switching process. This can be done by three different requests:

- Request for private customers.
- Request for companies.
- Verify already known metering point ID.

The tables below lists request and response content for each request.

B.1.1 Request for private customers:

Request
Customer first name
Customer middle name
Customer family name
Customer address
Date of birth
Flat/unit number
Postal code
City
Meter ID

All fields are optional except Postal Code. At least three fields must be filled in. Customer name fields are considered as one field. Wildcard search with three, four or five characters + an asterisk (*) depending on field, are allowed.

Response.
Request status (Information found/not found etc.)
Grid owner
Customer Name
Date of birth
Meter ID
Address
Postal code
City
Metering point ID
Way of metering (hourly/automatic or manual reading)
Description (free text)
Status of installation active/inactive
Date of last meter reading
Date for delivery obligation
Number of digits on meter
Grid owner.

B.1.2 Request for companies:

Request
Customer name
Customer address
Organization number
Postal code
City
Meter ID

All fields are optional except Postal Code. At least three fields must be filled in. Wildcard search with three, four or five characters+ an asterisk (*) depending on field, are allowed.

Response.
Request status (Information found/not found etc.)
Grid owner
Customer Name
Date of birth
Meter ID
Address
Postal code
City
Metering point ID
Way of metering (hourly/automatic or manual reading)
Description (free text)
Status of installation active/inactive
Date of last meter reading
Date for delivery obligation
Number of digits on meter
Grid owner.

B.1.3 *Verify already known metering point ID.*

Request
Date of birth
Organization number
Metering point ID
Postal code

Metering point ID and Postal code are mandatory.

Response.
Request status (Information found/not found etc.)
Date of birth or organization number
Address of metering point
Postal code
City
Metering point ID
Way of metering (hourly/automatic or manual reading)

Description (free text)
Status of installation active/inactive
Date of last meter reading
Date for delivery obligation
Number of digits on meter
Grid owner.

B.2 Swedish pre-switch checking information

PRODAT/Z01 (Request):
Metering Point ID
Start date
Metering Grid Area
Reference to authorisation
Transaction ID
Customer ID (Social security number or Organisation number)
Customer Name and Address
PRODAT/Z02 (Response):
Metering Point ID
Metering Method
Metering Grid Area
Reference to requesting Transaction ID
Customer ID
Customer Name and Address
Metering Point Address

The Swedish pre-switch checking process is optional and not much used. All fields are mandatory and the output of the process is a verification of the information sent in, possible a correction of the address and name fields and the Metering Method. The alternative to using PRODAT/Z01 and Z02 is for the supplier to get a "power of attorney" from the customer and send this to the DSO (e.g. via mail) to get the Metering Point ID.

B.3 Finnish pre-switch checking information

In Finland there is a Metering point database, accessible on internet or via Web Service, where the suppliers can get the Metering Point ID. Input is:

Street name
House number
Post code
DSO name.

B.4 Danish pre-switch checking information

In Denmark the Metering Point ID can be obtained online from the Datahub. If the Metering Point ID is known a message based process can be used, where the Supplier sends in the Metering point ID and the result is:

B.4.1 Master Data Metering point

Metering Point ID
Meter reading day
Type of meter reading
Meter reading frequency
Energy limit kW
Energy limit Ampere
Estimated annual consumption
Validity date
Hour data
Metering Point address
Type of Metering Point
Metering Gird Area ID
Connection status
Settlement method
Net settlement group

B.4.2 Master Data Meter

Metering Point ID
Meter number
Number of digits
Meter constant
Register ID (Tælleværksenhed)
Type of Register

B.4.3 Master data Customer, Balance Supplier

Metering Point ID
Sector code from Danish Energy
Electricity heating (Boolean)
Electricity heating fee start date
Supplier of last resort Customer
Validity date
Customer name(s)

Appendix C Proposal for harmonised address structure