NordREG
Nordic Energy Regulators

NordREG's work towards a harmonised Nordic retail market

- Roadmap update and national implementation monitoring

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Report 5/2014

The following NordREG representatives have contributed to the report:
Marielle Liikanen (Chair), Ei
Ivar Clausen Munch, NVE
Mari Salo, EV
Jan H. Pedersen, DERA
Peder Söderlund, Coordinator Nordic Energy Research

NordREG
c/o Energimarknadsinspektionen
Box 155, 631 03 Eskilstuna, Sweden
Telephone: + 46 16 16 27 00
E-mail: registrator@ei.se
Internet: www.nordicenergyregulators.org

1 Preface

NordREG, the cooperation between Nordic energy regulators, has for several years been devoted to the work of developing the Nordic electricity market. In recent years, NordREG has focused on establishing joint recommendations in order to achieve a harmonized Nordic retail market for electricity. A harmonised retail market with common practices and market rules is a natural next step after the establishment of NordPool Spot, NBS etc.

A harmonised Nordic retail market with a supplier centric market model will increased customer friendliness and introduce more competition to the Nordic market. It is also in line with – and supporting – the development at European level.

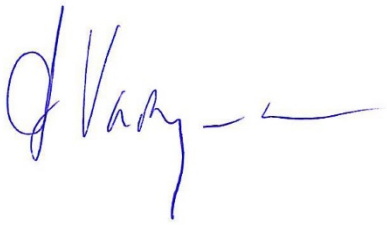
The project for a Nordic retail market is carried out on a voluntary basis, therefore the project is dependent on political backing. The Nordic Council of Ministers and the Energy Market Group (EMG) are providing a project coordinator to the project. This is a full time employee who coordinates and supports the work towards the common retail market.

In 2011 to 2013 NordREG made a series of recommendations that defined market rules for the first steps towards a supplier centric model. In 2014 NordREG has worked on the main elements of the future harmonized retail market and it is NordREG's view that the analysis and recommendations provided earlier in the project are feasible and provide us with guidance for national implementation. The process is now at a stage where we to some extent must wait for national decisions and implementation of NordREG recommendations. There are however still critical tasks that needs to be handled on the Nordic level.

Since the harmonisation of the Nordic end-user markets will continue after 2014, there is a need to plan and map future tasks. In order to receive input from the industry NordREG arranged a hearing in June with representatives from a customer organisation and the industry. This hearing resulted in valuable input. The industry representatives gave support to the harmonization project and acknowledged NordREG's crucial role. NordREG recognises that the implementation phase will uncover additional issues that needs to be addressed.

The main target groups for the road map are the Nordic governments, legislators and the electricity industry.

Stockholm, September 2014



Chair of NordREG

2 Executive summary

The Nordic Energy Regulators (NordREG) has worked towards a harmonised retail market since August 2005, when the Nordic energy ministers set the objectives for further development of the Nordic electricity market at their meeting in Greenland. These objectives and related tasks were commissioned to the Nordic transmission system operators, ministries, regulators and other relevant authorities. NordREG was assigned to review the conditions for the establishment of the common Nordic end-user market in an economically beneficial way. The main goal was to create harmonised Nordic solutions and to eliminate the biggest entry barriers for a supplier entering the Nordic market. NordREG's work has been funded through the national NRA's until 2011 when the Nordic Energy Ministers decided to contribute to the work with financial support.

This report describes the overall process of the work carried out by NordREG for the last four years, 2011 to 2014, and presents the national status of the implementation of a supplier centric market in the member countries. The report also points out the benefits of a hamonised Nordic retail market. These benefits are such as efficiency gains, increased customer friendliness and more competition. Development of a harmonised market is also in line with, and supporting, the development at the European level.

Nordic retail market in a European context

Retail market issues are of increasingly importance in Europe. In the last years, the European commission (EC) has issued recommendations in regards to the rollout of smart meters and focused on issues related to electricity market design, and the role and responsibilities of the DSOs. Further, in EU there are also several approaches to what constitute a well-function electricity market. The Nordic tradition focus on creating a customer friendly market in which obstacles for establishing operations in the competitive market should be low. NordREG work can bring benefits to the European development in these issues.

Retail market issues are also an upcoming focus for the European agency for the cooperation of energy regulators (ACER). ACER had a public consultation on the green paper «Energy Regulation: A Bridge to 2025»[1]. The "Bridge to 2025" identifies the challenges Europe's energy markets will face in the coming decade and regulatory responses for the period 2014-2025 including aspects covered by CEER, to ensure that energy markets operate to the benefit on European consumers. Thus, retail market issues are identified as an area for regulatory focus also for ACER.

Harmonisation work from 2011 to 2014

NordREG has identified four areas as the most important to harmonise in order to achieve a Nordic harmonised retail market:

- Combined billing
- Supplier switch and customer moving
- Information exchange and
- Customer interface

[1] ACER, April 2014, European Energy Regulation: A Bridge to 2025 Public Consultation Paper PC_2014_O_01 29 APRIL 2014

In the period 2011 to 2014 NordREG has been focusing on establishing a harmonised framework for the Nordic retail market based on a supplier centric model. This has been done systematically through studies and analysis. NordERG and consultancy studies has been used to identify possible Nordic solutions and recommendations. Industry representatives has been actively involved in the project, and contributed through participation in task forces, public consultations and hearings. NordREG has issued several recommendations in these areas.

From 2011 to 2014, there has been good progress on these areas, but there is still work to be done. There are ongoing national processes regarding information exchange systems that have made it difficult to make detailed Nordic recommendations. Even if the cooperation with the national stakeholders has worked very well, the process has put a challenge to the industry organisations in reaching a consensus on a Nordic level.

National status of implementing a supplier centric model

The national status of implementing recommendations for information exchange, billing, moving and supplier switch are in progress in all countries even though the pace varies between the Nordic countries, due to differences in national prioritisation. A key issue for implementing most of the recommendations are information exchange systems. Business processes such as; supplier switch, customer move and billing are linked to the development of national information exchange systems. There are activities regarding the development of new information exchange systems in all countries. Finland has started to investigate a future information exchange system and Ei in Sweden has made a proposal to the government. Denmark and Norway has decided to establish national hubs.

All countries have a supplier centric switching process. Three of the countries will in the near future have a supplier centric moving process. The issue on combined billing has been proven to be more complicated and controversial to implement nationally. So far only Denmark has decided to implement mandatory combined billing.

Table 1 summarises the national development towards a Nordic supplier centric model. The areas described in the table handles the development on information exchange, billing, moving and switching toward supplier centric model:

	Information exchange	Combined Billing	Moving	Switching
Denmark	Data hub was introduced 2013. New version will be launched Oct. 2015	Combined billing is planned to be introduced Oct. 2015	The supplier takes care of the moving processes since 1st of March 2013	Supplier centric with the implementation of the wholesale model Oct. 2015
Finland	Project to investigate future information exchange model will be finished by the end of 2014. Decision on the future model will be done after that	No legislation done or planned	Will be initiated after investigation regarding future information exchange model has been chosen	Will be initiated after investigation regarding future information exchange model has been chosen
Norway	Establishment of data hub is underway and will be operational from Oct. 2016	Currently being reviewed, proposal will be delivered within 2014	Will be changed when the data hub is operational	Will be changed when the data hub is operational
Sweden	Ei has proposed a centralized information exchange model to the Government June 19th 2014	Ei has proposed combined billing to the Government	EI has proposed that the supplier should take care of the move out and move in process to the Government.	Supplier centric switching process is implemented

Table 1 Summary of national development toward a supplier centric model

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3 Introduction

Since 2006 the association of Nordic energy regulators (NordREG) have with support from the Nordic energy ministers worked to establish a single harmonized Nordic end-user market for electricity.[2] The national markets included are Denmark, Finland, Norway and Sweden. Iceland is a member of NordREG but has not been participating actively in process. However, Iceland has decided to commit to NordREG work. During 2011-2014 NordREG has worked with the focus to create recommendations and best practices for the retail markets in the Nordic countries to facilitate the transition towards a single retail market.[3] During this period NordREG has issued several recommendations that, when fully implemented, will take the Nordic markets significantly closer toward a common Nordic retail market.

NordREG previously expressed that by 2015 the retail markets should be harmonised to the extent that a base for a Nordic harmonised retail market is in place.[4] NordREG has devoted a lot of time and resources to reach this goal. It is important to remember that the harmonisation is dependent on each member circumstances of each member country and their legislative processes for legislation. Hence, a stepwise implementation adjusted to national circumstances moves the nations toward the harmonised Nordic supplier centric model in different speeds. Therefore, it will be important on a Nordic level, regulatory level and on a political level to coordinate and to secure that recommendations are understood and implemented in same way across member states. However, it is important to bear in mind that the work towards a single Nordic retail market is a work in progress and that there are still many more steps to be taken after 2014.

The purpose of the road map for 2014 is to describe the overall process so far of harmonising the Nordic electricity retail markets. The road map is being continuously updated as NordREG's work progresses. The road map for 2014 includes an update of the report structure and added chapters such as a summary of the project period 2011-2014 and national status. Since there is no supranational organisation or institution (like in the EU), it means that any future development of the Nordic retail market will have to be continuously coordinated between the Nordic countries to ensure that the markets maintain the progress towards continued harmonisation.

A harmonised Nordic retail market has several benefits:

- Customers have a greater choice of supplier and better opportunities to change to a new supplier and/or new product
- New suppliers will have more incentive to establish themselves on a larger market due to economics of scale
- Suppliers will have more incentive to develop products and new types of contract as well as specialist products
- Automated and simple procedures for customers changing supplier will enable greater

[2] Norden, 19 August 2014: http://www.norden.org/sv/nordiska-ministerraadetministerraad/nordiska-ministerraadet-foer-naeringsliv-energi-och-regionalpolitik-mr-ner/deklarationer-och-foerklaringar/ministererklaering-for-energi-fra-det-nordiske-ministermoetet-i-bodoe-den-7.-8.-september-2006

[3] NordREG, 2010, Implementation plan for a common Nordic retail market

[4] NordREG, 2010, Implementation plan for a common Nordic retail market, page 5

efficiency and reductions in suppliers' costs
- Greater coherency between pricing on the wholesale and retail markets and thus possibilities for better usages of energy

NordREG' s work on the harmonised Nordic supplier centric model contributes to the European initiative regarding retail market and competiveness.

3.1 NordREG's vision of a single Nordic retail market

The work towards a single Nordic retail market is based on NordREG's vision that all Nordic electricity customers should have the possibility to choose suppliers, energy service[5]companies and aggregators[6] and benefit from efficient and competitive prices and reliable supply through the Nordic and European electricity market.

NordREG's main objective for the integration of retail markets in the Nordic region is to minimize the regulatory and technical obstacles for suppliers that are willing to operate in all Nordic countries. The main purpose behind this is to harmonise the market models in the Nordic countries to the extent that the transition will be smooth and feasible for suppliers who want to start operations in other Nordic countries. The market integration would thus provide a harmonised framework for the suppliers to make business in the whole Nordic region and in such, all retail customers would be eligible to take part in the Nordic electricity market. Also the framework of customer empowerment should be adequately secured so that the customer can buy electricity from any supplier with confidence.[7] A supplier centric market model has been developed to meet the vision.

3.2 Objectives

A shift toward a supplier centric model means rebuilding the function of the market. Roles and responsibilities for DSOs and suppliers will change. Everything from information exchange, business processes, service functions, access to information and other market functions and routines will be affected. These imply investments by the industry. But as the supplier centric model under development and its implementation is dependent on national development and decisions, there will be uncertainty as to when the industry should make their investments. Wrong investments creates costs for the industry. Therefore, it has been important for NordREG to be determined to issue recommendations that focus toward the vision and the main objective. To bring further guide of the development six sub objectives have been formulated. The vision and objectives have been important tools to enable the progress of a supplier centric model.

[5] energy service' means the physical benefit, utility or good derived from a combination of energy with energy-efficient technology or with action, which may include the operations, maintenance and control necessary to deliver the service, which is delivered on the basis of a contract and in normal circumstances has proven to result in verifiable and measurable or estimable energy efficiency improvement or primary energy savings, DIRECTIVE 2012/27/EU

[6] a demand service provider that combines multiple short-duration consumer loads for sale or auction in organised energy markets, DIRECTIVE 2012/27/EU

[7] With slightly modification. NordREG, report 9/2010, COMMON NORDIC RETAIL MARKET Organization of the further work

During the project period, these recommendations have been considered:

- Customer friendliness
- Well-functioning harmonised market
- Improved competition
- Improved efficiency
- Compliance with EU regulation and development
- Neutrality of DSO

For the time being NordREG works with plans for the next four years. As part of that work the vision and these objectives have been revised.[8]

[8] NordREG, report 2014, Strategy for a harmonised Nordic retail market 2015-2018

4 Nordic retail market in a European context

A harmonised Nordic retail market has significant advantages for customers, electricity companies and for economic efficiency. The total electricity consumption in Europe is 3 085 TWH[9] of which about 11, 3 percent (348 TWh)[10] relate to the Nordic countries. According to analyses made by NordREG in 2006, 2008 and 2009, a single Nordic retail market would have almost 15 million customers, 400 suppliers and around 500 grid companies. An increase in number of players in the market creates better conditions for effective competition in the market and thus better protection of customers against unreasonable prices.

4.1 Development of a European retail market

European Commission (EC) has focused their work, up to now, mostly on the development of a European wholesale market for electricity and gas. The EU aims to fully integrate national energy markets by 2014, to give consumers and businesses more and better products and services, increased competition, and more secure supplies. Progress has already been made: consumers can switch suppliers for gas and electricity, and suppliers must provide clear explanations of terms and conditions. Work still to be done includes aligning national market and network operation rules for gas and electricity as well as making cross-border investment in energy infrastructure easier. However, in the recent years the focus has shifted towards the retail market.

The Smart Grids Task Force (SGTF)[11] was set up by the EC at the end of 2009. The purpose of the group is to support the development of smart grids across the European Union. However the question of smart grids is also heavily connected to smart metering which is an issue that falls within the scope of end-users and retail markets. The SGTF reached a consensus over the last two years on policy and regulatory directions for the deployment of Smart Grids. The SGTF has also issued key recommendations for standardisation, consumer data privacy and security. An important part of these recommendations is based on best practices which are provided by involved members of the respective expert-groups and the SGTF.

Based on these results, during 2011 the EC has adopted a Communication on Smart Grids, issued a Mandate for Smart Grids standards to the European Standardisation Organisation and created an Inventory of Smart Grid projects and lessons learned in the EU. The EC has also adopted a Recommendation for the rollout of Smart Metering Systems and issued Guidelines for conducting Cost Benefit Analysis of Smart Grids projects in 2012.

Under the SGTF five expert-groups have worked throughout the period:

[9] ACER/CEER, November 2013, Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2012

[10] Eurostat, 16 June 2014, http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do;jsessionid=9ea7d07e30d92324416f512a462ba4f1dd1435afd95f.e34MbxeSahmMa40LbNiMbxaMchuMe0

[11] EU Commission, 14th June 2011: http://ec.europa.eu/energy/gas_electricity/smartgrids/taskforce_en.htm

- Expert Group 1 –Smart Grid Standards
- Expert Group 2 – Regulatory Recommendations for Privacy, Data Protection and cyber-security in the Smart Grid Environment
- Expert Group 3 – Regulatory Recommendations for Smart Grids Deployment
- Expert Group 4 – Smart Grid Infrastructure Deployment
- Expert Group 5 – Implementation of Smart Grid Industrial Policy

During the last years Expert Group 3 has focussed on issues relating to retail market design and the role and responsibilities of foremost the DSO. In a report[12] made by the group in 2011 "Roles and Responsibilities of Actors involved in the Smart Grids Deployment" a number of conclusions were reached. One of the conclusions was that a when deploying smart grids, a number of challenges needs to be resolved including customer engagement with Smart Grid issues. It is especially focusing on public acceptance of and engagement with smart metering and reassuring consumers on privacy and/or security, and other issues that may arise. In order to build consumer trust there needs to be a systematic review of consumer protections and a strategy to deliver tangible benefits to consumers[13]. Therefore it is noticeable that when discussing smart grids issues impacting the development of the retail market is key issues – when it comes to customer involvement. Which stakeholder should be the one that has the customer contact and what should be done on the monopoly side of the electricity market.

NordREG believes that the development of smart grids with together with the roll-out of smart meters can bring great benefits to the Nordic and European electricity market. There is a high level of smart meters installed already in the Nordic area and it is expected to be an area with smart meters by 2020 at the latest. It is important that the Nordic regulators take an active part in the development of recommendations and regulation from the EU and provide examples of existing or planned solutions for smart energy usage based on smart metering for example.

4.1.1 A Bridge to 2025

From 29 April to 16 June 2014 the Agency for the Cooperation of Energy Regulators (ACER) is ran a public consultation on the green paper «Energy Regulation: A Bridge to 2025»[14]. In selecting a time horizon of over a decade, ACER consider that there can be a greater certainty in assessing the more significant influences that might occur before 2025. In this "Bridge" from the date scheduled for the completion of the internal energy market until 2025, and cover the completion and parallel implementation of the network codes that will provide the core rules supporting the EU's integrated Single Energy Market. The "Bridge to 2025" identifies the challenges Europe's energy markets will face in the coming decade and regulatory responses for the period 2014-2025 including aspects covered by CEER, to ensure that energy markets operate to the benefit on European consumers. The consultation paper identifies a number of areas that may benefit from greater regulatory focus in the Energy sector trends such as:

[12]EU Commission Task Force for Smart Grids Expert Group 3: Roles and Responsibilities of Actors involved in the Smart Grids Deployment EG3 Deliverable 04. April 2011

[13] Page 27 forward

[14] European Energy Regulation: A Bridge to 2025 Public Consultation Paper PC_2014_O_01 29 APRIL 2014

- Electricity wholesale markets
    - Integration of wholesale markets
    - Renewables growth driving changes in generation
    - Policy interventions to ensure adequacy
- Gas wholesale markets
    - Integrating gas wholesale markets
    - Uncertain gas demand and supply
    - The gas market's role in providing flexibility
- Infrastructure investment
- Consumers, retail markets and the role of DSOs
    - Consumer concerns
    - Technological advances
    - Enabling demand response
    - The future role of DSOs

NordREG notes that the areas encompassed by the The Bridge are of key interest for the Nordic area and the outcome of the public consultation is going to affect the Nordic area. It is therefore of utmost importance that the market models chosen in the Nordic area are compatible with the chosen European solutions and that the good examples of for example customer service and availability of smart energy offers are part of upcoming good practices.

4.2 Nordic approach to market design

Market design is a key issue in order to have a well-functioning market with equal access for all competitive stakeholders. This means that the definition of the roles and responsibilities of each stakeholder, especially the monopoly ones, is a key feature of a retail market design.

There are several different approaches regarding what constitutes a well-functioning electricity market. The Nordic approach has traditionally been focussed on creating a customer friendly market in which the obstacles for establishing operations for the stakeholders in the competitive market should be low. The approach has been to create conditions for a competitive market with a real choice of solid offers for the customers. This is being done with a strong social infrastructure, with social policy, that enables a well-functioning protection for those customers that needs it.

There are however an increasing number of countries in European that have adopted other measures rather than enabling and enhancing competition for the benefit of the customers there has been a focus on protecting customers from the market. Regulated prices have been a reality for some time in more than half of the EU-countries. This is seen as a tool until the market has a level of competition that is satisfactory. Apart from this, an increasing number of EU-countries have set up new regulation to help vulnerable customers, such as social tariffs for example. These measures do not correspond with the Nordic approach. Therefore, a strong Nordic voice with good examples of market design with well-functioning markets is of the essence.

An example of an increasing level of regulation on the competitive side of the market is the one European country that has since January 2014, adopted regulation stating limits on what kind of contracts suppliers can offer the customers:

- Complex tiered tariffs will be banned. Suppliers will now only be allowed to have one structure for tariffs – a unit rate (or unit rates for time of use tariffs) and standing charge, which can be zero. This will make tariffs more consistent and easier to compare.
- Choosing a new deal will be easier, as you will only have to choose from four core tariffs for gas and four for electricity.
- Cash discounts will be simplified. Suppliers will only be able to offer two cash discounts, one for dual fuel (where a consumer takes gas and electricity from the same supplier) and one for managing your account online. These will be displayed in a simple pounds-per-year format. We are also banning restrictive discounts which made it difficult to compare the costs of tariffs.

To summarize the consumers will be able to choose from four core tariffs for gas and electricity from each supplier, a single standing charge, advanced notice of when the fixed deal ends etc.

Another example on regulation of the competitive side of the market is to adopt rules for billing that in practice means that a customer will have an eight-page bill with the pages full of information. This in an effort to help and support the customer to make informed and good decisions.

NordREG believes that is increasingly important to have a Nordic approach with regards to the continued development of the electricity market. It is crucial that NordREG engages and provides cases for best practice in the continued work under the EC.

5 NordREG's harmonisation work from 2011 to 2014

With support from the Nordic energy ministers and the national NRAs, NordREG has been working since 2011 with the transition towards a harmonised Nordic retail market. The main goal has been to create common practices for the retail market and to eliminate entry barriers for suppliers.[15] During this period NordREG has issued several recommendations that, when fully implemented, will take the Nordic market a significant step toward a harmonised single market.

This chapter summarises the development of NordREG's work from 2011 to 2014 in four main areas:

- Billing
- Switching and moving,
- Information exchange and metering
- Customer interface.

Some of these areas have demanded more resources than others, which has led to several reports and studies before publishing Nordic recommendations. These recommendations will benefit the customers even if not all recommendations affect the customer interface toward suppliers and DSOs. Rather, many of the recommendations aim in the first place to increase other objectives such as improved efficiency, neutrality of DSOs and create a well-functioning market for areas such as business processes and information exchanges between suppliers, DSOs and National Point of Information (NPI) smoother.

For a more detailed list of tasks and deliverables, please see "Annex 1. Planned work for 2011-2014 and publications as a result of that".

5.1 Billing

NordREG has devoted a lot of resources to the issue of a future billing regime with respect to a supplier centric model. The efforts have gone into the development of recommendations for a uniform combined billing regime on a Nordic level. When the recommendations are fully implemented in each member state it will result in a significant change in the market processes. Therefore, it has been crucial to find a billing regime that in the best way meets the objectives for the Nordic retail market. In order to take advantage of and learn from national experiences, NordREG has organised workshops regularly which has proven to be an effective method for work with best practices.

In 2011 NordREG gave a consultant the task to investigate four types of billing regimes; mandatory combined billing, voluntary combined billing, mandatory separate billing and no harmonisation [16]. The recommendation was that NordREG should advocate mandatory combined billing because the benefits exceeded the other billing regimes and it also supports a supplier centric model.

[15] NordREG, 2010, Implementation plan for a common Nordic retail market
[16] Vaasa ETT, August 2011, Consideration of alternative billing regimes for the Common Nordic End-User Market

Stakeholders from the industry reacted to the conclusion presented in the consultancy report. This lead to a second assignment to conduct a cost benefit analysis to verify the results[17] which showed that combined billing was the preferable choice.

In 2012 and 2013, NordREG continued to work with the combined billing regime in respect to risk management and tax collection. The work was based on a consultancy report that proposed a broad range of scenarios on how customer billing could be organised from a risk management viewpoint. The report lead to further investigations with the task to analyse two models for combined billing that were:

1. The supplier invoices the total claim including network charges. The customer is then in debt to the supplier.
2. The supplier invoices the total claim, including network charges although in the name of and for the account of the DSO. The customer is in then in debt to both the DSO and the supplier.

The conclusion from the analysis showed that the first alternative would fulfil the main objectives to a larger extent than the second alternative. The consultant also suggested that the supplier should take care of taxation (VAT, energy tax etc.) which would simplify the process for the customer who only need to contact the supplier in tax related matters.[18] In 2013, NordREG published recommendations to provide a Nordic approach on implementations of combined billing supporting an approach toward model one where the supplier is responsible for debt collection of both supply and grid cost. The DSO has a claim against the supplier that corresponds to the grid cost.[19]

The issue with combined billing raised the question of the contractual relationship between the customer, DSO and the supplier. Therefore, NordREG ordered a consultancy report under 2012 to investigate the legal advantages and disadvantages with two general contract models; a subcontract model and a power of attorney model. In a subcontractor model, the customer enters into a contract with the supplier that covers the supply of electricity and use of the grid. The supplier then handles the issue with the grid by entering into a separate contract with the DSO. Under the power of attorney model, the customer will have a contract with the DSO for the use of the grid. The supplier will then use a power of attorney from one of the parties in order to facilitate combined billing. The consultants concluded that from a legal point of view a subcontract model was preferable although it needs to be investigated further.[20]

Denmark has decided by October 2015 to implement a one contract model where the customer enters in a contract with the supplier similar to the subcontract model.

[17] Vaasa ETT, November 2011, Consideration of alternative billing regimes for the Common Nordic End-User Market –Cost-Benefit Analysis
[18] GAIA Consulting Oy, April 2013, Payment requirements with combined billing
[19] NordREG, May 2013, NordREG recommendations on implementing combined billing
[20] Bjørnebye B and Alvik I, 2012, Legal analysis of contract models in a common Nordic electricity retail market - Legal advantages and disadvantages with different contract approaches under a supplier centric model

5.2 Switching and moving

NordREG has worked a lot with how to handle changes in business processes for supplier switching[21] and customer moves[22]. The switching and moving processes are considered as key processes that need to be harmonized for a successful implementation of a single Nordic retail market. NordREG has published two reports that include timeframes, content of messages and responsibilities for DSO's and suppliers. In 2013, a consultant was given the assignment to deliver recommendations for harmonised technical requirements related to data exchange format, content of messages, communication platform and data security measures. The final report suggests a harmonised business requirement model for the following processes:

- Pre-switch checking
- Change of supplier
- Customer move
- Exchange of master data
- End of supply and/or grid connection
- Special processes
- Exchange of metered data

The report should be used as a guideline when Nordic countries are developing national information exchange systems. When taken into use for such a purpose the harmonisation of business processes will take a significant step forward. However, there are still national differences caused by current national legislation and market rules. It is recommended that these differences are reviewed to facilitate further harmonisation in the market. [23]

In 2014 NordREG published the report "Framework for a harmonized model for moving"[24] with the focus on the regulatory framework for the move-in and move-out processes. In this publication, NordREG recommends that the moving process should be further harmonized in respect to stakeholders back office procedures. The report includes both fully harmonized processes and some exceptions that could not be harmonised so far. NordREG suggests nine recommendations for the move-in process which are described in fifteen messages that should be sent between the supplier and DSO or the National point of Information (NPI). For the move-out process seven recommendations are suggested which are described in seven messages that should be sent between the supplier and DSO/NPI. The report should enhance transparency and may contribute to eliminate some of the entry barriers for suppliers entering the Nordic retail market.

[21] A switch should be understood as the action through which the customer acts and changes supplier. NordREG, report 4/2013, Harmonized model for supplier switching
[22] A move should be understood as when a customer moves in or out from a location with a meter. NordREG, report 3/2014, Framework for a harmonized moving process
[23] EDISYS consulting, 2014, Information exchange –Business requirements for a harmonized Nordic retail market
[24] Report 3/2014

5.3 Information exchange and metering

NordREG has performed several studies regarding information exchange systems and business processes between DSOs and suppliers. In addition, workshops have been organized regularly to gather information and to learn from national experiences in the matter. Like the issue of combined billing a change in information exchange systems will affect the business processes in the entire industry. If the implementation of the recommendations regarding information exchange between DSO's suppliers are to be successful it is crucial that each NRA reviews the recommendations on national level and take into account the development in the other Nordic countries.[25]

One focus area for NordREG in 2014 is the coordination of national implementation of issued recommendations. Workshops for national experts from the NRAs are organised regularly. The workshops deal with areas, such as implementation of combined billing and information exchange systems.

The first study on the investigation of a common Nordic information exchange system for key business processes was carried out during 2012. One of the main conclusions of the study was that it seemed preferable to arrange communications between few parties compared to bilateral communications[26] between DSOs and suppliers. The suggested model was a centralised information exchange system where stakeholders in the market could connect and exchange information on equal terms. The model would increase neutrality and reduce possible discrimination by the DSOs of other stakeholders. Further studies on this topics took place on national level. [27]

In December 2012 NordREG decided to work on recommendations for the creation of harmonised technical requirements for information exchange between the Nordic countries. The work was conducted by Edisys consulting in cooperation with the Nordic Ediel Group (NEG), as the NEG organisation already is deeply involved in the establishment of technical requirements on national level in the four countries. The technical harmonisation report is called the "Business Requirement Specification for a Harmonized Nordic Retail Market Business processes, message format, content and interface" and constitutes a base for the continued work with the underlying processes that are necessary for the electricity market to function efficient. The report focused on the processes for supplier changes, customer moves and combined billing.

NordREG believes that the work with technical specifications is crucial in order to implement already issued Nordic recommendations. It is also important to continue the good cooperation between NordREG and stakeholders, such as Transmission Systems Operators (TSO), DSOs and suppliers for the process to proceed efficiently. This is necessary in order to avoid a situation where stakeholders may continue to develop their own technical solutions. Therefore, it is essential that three main areas are addressed for future work: The development of a Nordic technical handbook (which in detail describes harmonized back-office processes), maintenance of documents (such as

[25] Chapter "National status, current situation" in this report describes the national status of the implementation of an information exchange system.
[26] Point to point communication between suppliers and DSOs.
[27] NordREG, report 1/2012, High level suggestions for common Nordic processes for information exchange-obstacles and possibilities

XML schemes) and the development of use-cases[28] by the industry. NordREG encourages the industry to continue this work and suggests that it is led by the industry. NordREG also welcomes initiatives from stakeholders and intends to facilitate and incorporate tasks of that nature in the upcoming working program for NordREG.

5.3.1 Smart metering

The roll out of smart metering systems opens up new ways to handle and collect detailed information about the customers through their electricity consumption. The access to this information is important for stakeholders such as suppliers and energy service companies (ESCOs) in order to provide their services to the customers. Access to data on-demand regarding the customer's historical and current consumption is necessary to level the playing field for smart energy solutions. During the spring of 2013 NordREG published a paper with five recommendations on transparency and customer access to metering data. The recommendations include principles that require full transparency of metering data from the customer perspective. This means that the customer should have control over what information that is being collected through the customers' meter, how this data is used (apart from data that is necessary for the suppliers and DSOs to perform regulated duties, such as billing etc.) and receive information on the specific data. NordREG has proposed that three of the five recommendations should be implemented by 2015. [29]

NordREG has also mapped the national situation in the Nordic countries regarding smart metering. There are initiatives in all four countries that aim at having smart meters for their customers. This was presented in a report[30] published in 2014, which contained a framework for a harmonised model for metering methods. NordREG proposed the following recommendations:

- Metering method: Automatic meter reading should be implemented in all four Nordic countries for all of the customers to facilitate an effective and functioning Nordic retail market. The time frame for implementation should be decided nationally.
- Meter capabilities: Meters should be capable of registering energy usage at least on an hourly basis. However, the timeframe for implementation should be decided on a national basis. For cost reasons it could be allowed nationally to make an exception in the hourly metering requirement in cases when electricity consumption at the point of consumption can be estimated exactly, meaning that the consumption is timely.(e.g. automatic traffic control cameras, single traffic lights, street lights etc.).
- Meter reading frequency: Meter reading should be done on daily basis. For customer with low consumption, the meter reading frequency could be decided on a national level. The meter reading frequency should be in compliance with the time limit decided for the balance settlement period.

[28] A use-case is a list of steps, typically defining interactions between a role (an "actor") and a system of participants, to achieve a goal (for instance a move)
[29] NordREG, May 2013, NordREG recommendations for customers and market actors access to metering data and transparency
[30] Report 2/2014 recommendations on Common Nordic Metering Methods

5.4 Customer interface

In 2011, a report specifying the roles and responsibilities of DSOs and suppliers was published[31]. The result of publication clarified the supplier centric model and dealt with several issues related to customer contact with DSOs and suppliers. The status of the implementation of the recommendations is presented in the chapter "National implementation toward a supplier centric model" of this road map.

In 2013 NordREG published a report with an analysis of the need and possibility to harmonise the national regulations covering universal service obligations or what is referred to as default supplier and supplier of last resort. The regulation for universal service obligations differ between Nordic countries but NordREG concludes in the report that the harmonisation of the national regulations is not crucial for the harmonisation of the Nordic markets. NordREG do however recommend that universal service obligations should be developed towards a model where all customers are encouraged to actively choose and make a contract with a supplier. Further, the report strongly points out the need for DSOs to be neutral if there happens to be contact between a customer and DSO concerning electricity supply or energy services performed by ESCOs. The DSO should also be neutral in contact between customer and DSO concerning general questions on the electricity market. [32]

5.5 Work process and organisation

In general, the harmonisation process can be described in three steps:

1. Making Nordic recommendations and specifications of the target market model
2. National design and implementation
3. Market adaption

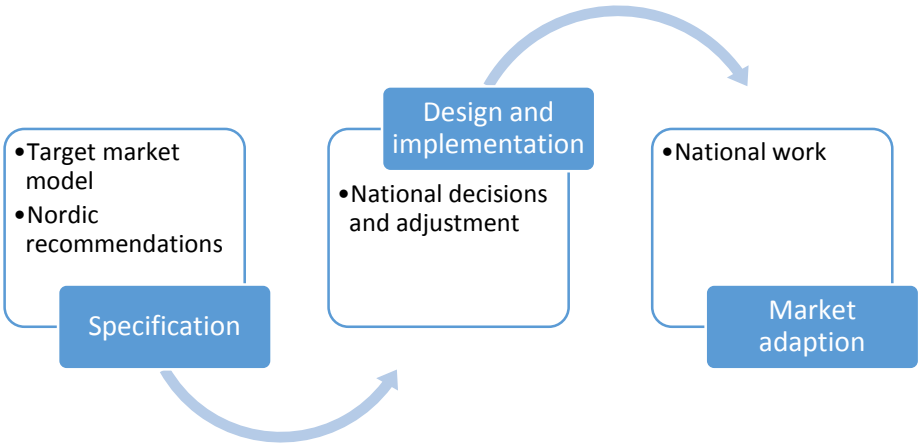


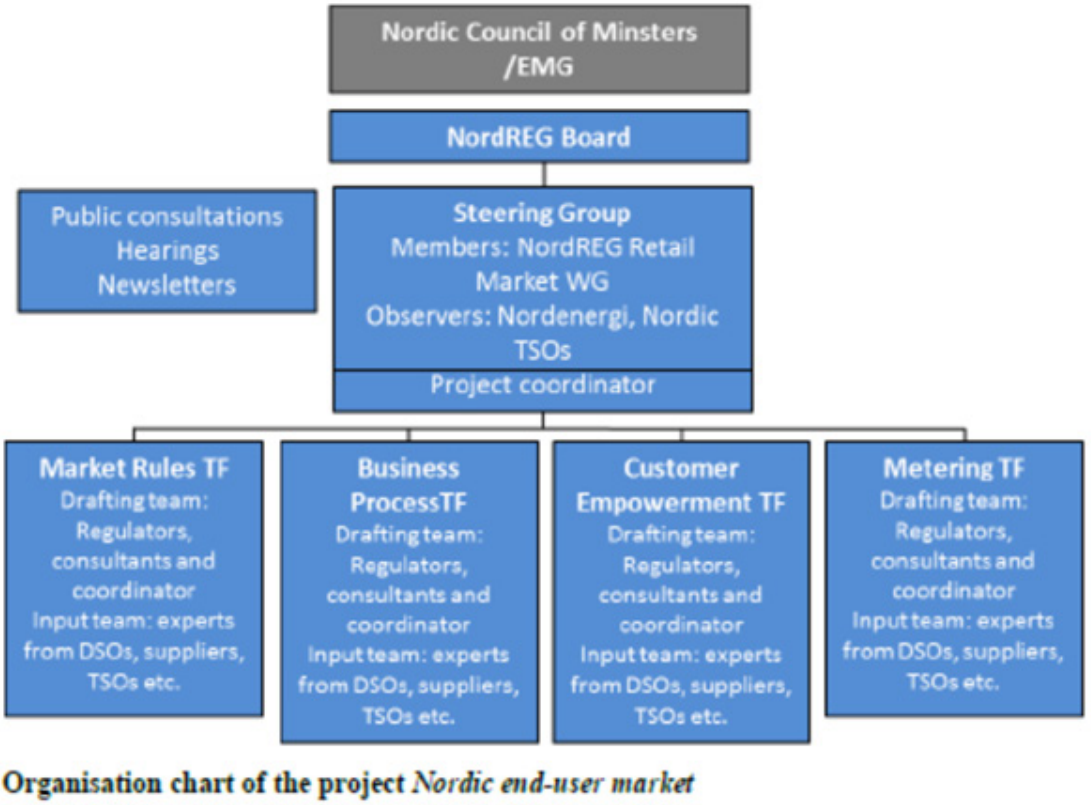
Table 2Harmonisation process

The specification of the target market is characterised by investigation, analysis and recommendations toward a Nordic supplier centric model. This work is done mainly on a Nordic level. The next step, national design and implementation is done in each Nordic country by the

[31] NordREG, report 4/2011, Rights and obligations of DSOs and suppliers in the customer interface
[32] NordREG, report 3/2013, Nordic harmonization of universal service supply obligations

National regulatory authority (NRA). The recommendations are produced and adapted to fit national legislation and regulations. This step is highly dependent on national political processes and other decision makers. The last step, national design and implementation, is coordinated on a Nordic regulatory level and a political level. In the last step national markets have to be adapted. Stakeholders are given sufficient time to adapt their business models and procedures to the new regulatory framework. During this step NordREG monitors how market participants adapts to the new rules.

The figure below illustrates the organisation chart for 2011 to 2014:



Organisation chart of the project *Nordic end-user market*

Table 3Organisation chart

6 National status of implementing a supplier centric model

All recommendations issued by NordREG, put together, specifies the regulatory frames for a supplier centric model. A key area for successful implementation of the supplier centric model is information exchange systems and linked key processes such as supplier switch, customer move and billing. This chapter gives a national status review of the development in these areas and describes the general development toward a supplier centric model.

6.1 Denmark

6.1.1 General description

In Denmark the recommendations of the Nordic end-user market project are used as an important benchmark and as the minimum requirements when the national market rules are formulated as part of the on-going work with the introduction of the data hub (v.2), combined billing and the Danish supplier centric model (the so-called wholesale model).

The Danish TSO, Energinet.dk, is in constant dialog with the Danish Energy Regulatory Authority (DERA) and NordREG to assure that the Nordic recommendations are followed. Also, when preparing adjustments in the Danish Electricity act the recommendations of NordREG are carefully considered to ensure that the national changes follow a harmonised Nordic approach.

The overall assessment is that the Danish retail market corresponds very well with the recommendations of NordREG. All market rules are already updated in line with the Nordic proposals and according to the supplier centric model (SCM) recommended by NordREG. A data hub was launched 1st of March 2013. The main difference with other NordREG member countries is that the Danish SCM will be developed one step further into a so-called wholesale model by 1st of October 2015. It states that there will only be one contract present for the customer and that is in relation to the supplier. Between the supplier and the DSO a standard contract will be present. The DSO (and the TSO) will sell their services to the supplier but not to the customer. Each supplier then bills the customer for “delivered electricity”, that is electricity supply including net and system services, VAT etc[33]. The wholesale model also means that customers will usually only have to contact their supplier. The supplier is responsible for customer-related master data. The supplier also gets also the financial risk on the customer and must pay the grid company regardless of whether the customer pays. Another effect is that the grid companies can concentrate on their core tasks related to operation, maintenance and necessary conversion and expansion of the grid, measuring electricity consumption and promotion of energy conservation.

6.1.2 Information exchange

In order to facilitate easier communication of meter and master data between grid companies and suppliers, a data hub was introduced a year ago. A data hub also makes it easier for the customers to change supplier and to get access their own consumption data. This new information exchange system is operated by the Danish TSO, Energinet.dk. A new version of the data hub is planned to be

[33] The handling of taxes is still under consideration.

launched in Oct. 2015 (see above).

6.1.3 Billing

Denmark has also decided to introduce mandatory combined billing. According to the present plans, will combined billing be introduced in Oct. 2015.

6.1.4 Moving

Energinet.dk works continuously to improve the relevant market regulations such as processes for moving, always taking the Nordic recommendations into consideration.

The market regulations are prepared in cooperation with the relevant stakeholders of the market and the methods for the market rules are approved by DERA.

6.1.5 Switching

Energinet.dk works continuously to improve the relevant market regulations such as processes for supplier switching, always taking the Nordic recommendations into consideration.

The market regulations are prepared in cooperation with the relevant stakeholders of the market and the methods for the market rules are approved by DERA.

6.2 Finland

6.2.1 General description

The overall assessment is that the Finnish retail market corresponds fairly well with the NordREG´s recommendations. Most of the market procedures are already mostly in line with the proposed Nordic recommendations. The main difference with other NordREG member countries is that the Finnish government has informed that it supports the supplier centric model as such but not the mandatory combined billing at least not for now. This means that in Finland there are no legislation changes done or even planned at the moment regarding processes relating to the combined billing like in other member countries. That said the Ministry of Employment and Economy has indicated that Nordic Market issues are in their agenda and it will at some point go through NordREG´s recommendations in order to assess the needed legislative changes relating to this project.

In Finland the real effects of the Nordic Market project are currently concentrated at the moment around information exchange and its development. The discussion among the industry has been active since the start of the Finnish information exchange project. There has been one actual legislative change that has resulted from the Nordic Project in Finland and that is the rule concerning possibility to outsource the tasks relating to the NBS/ balance settlement to entity under shared ownership of Finnish TSO´s and other TSO´s from the European Economic Area.

Even though there has not been that many legislative changes due to the Nordic project it has still forced the industry to start thinking about how to further develop the market so that it would become more effective and fair market field for all the market participants.

6.2.2 Information exchange

The main issues that are under investigation and under actual legislative development relate to the information exchange system development and NBS projects.

The Finnish TSO, Fingrid has started an information exchange project in January 2014 in order to

investigate how the information exchange system should be developed in Finland. The main target is to look for the best possible solution for the Finnish electricity market and in doing so also take the Nordic development into account. The project is thought to be finished by the end of this year after which the results are presented to the stakeholders. Possible legislative changes relating to information exchange will be considered later on.

The Nordic Balance Settlement (NBS) is a Nordic TSO project that has been on its way for some time now. In Finland there are ongoing discussions regarding changes in secondary legislation between the Ministry and Fingrid. The Ministry continues to prepare the changes, and the proposals are expected to be sent on public consultation by the end of spring EV believes the necessary legal changes can be finalized late 2014 or early 2015, and take effect by autumn 2015 when the NBS is planned to be operational in Finland.

6.2.3 Billing

Open

6.2.4 Moving

When the model for a future information exchange solution has been chosen the moving process can be looked into.

6.2.5 Switching

When the model for a future information exchange solution has been chosen the switching process can be looked into.

6.3 Norway

6.3.1 General description

The Norwegian retail electricity market was established in the early 1990's. Over time, the market has become more competitive with the establishment of more independent suppliers and suppliers establishing themselves outside of their traditional area. In 2013 there was more than 350 000 household customers switching suppliers in Norway[34], this is roughly 15 % of the households. Still however the dominant supplier has an average of 70 % of all household customers.

The attention to Nordic harmonisation is present in Norway, and there are several ongoing processes to further move the Norwegian market towards a harmonized Nordic market. The two main ongoing harmonisation processes for the time being are the introduction of the Norwegian data hub (ElHub), and the ongoing study on the implementation of mandatory combined billing. These processes have been initiated or heavily influenced by NordREG's work and recommendations.

The Norwegian electricity retail market corresponds rather well with NordREG's recommendations for a harmonized Nordic retail market. Most market processes can be initiated from the supplier, our current market model can be said to be partly supplier centric. However, there are several ongoing processes that will further move the Norwegian retail market towards a supplier centric model and NordREG's recommendations for a Nordic harmonised retail market:

[34] NVEs Supplier switching report, 1. Quarter 2014, NVEs leverandørskifteundersøkelse 1. kvartal 2014

6.3.2 Information exchange

The process for establishing a Norwegian NPI (named Elhub) is well underway. The task was given to Statnett early summer 2013. The Elhub will be operational from October 1st 2016.

The Elhub will facilitate much easier information exchange between DSOs and power suppliers. The Elhub will handle and exchange metering data, customer data etc.

Given its position as information exchange point, the Elhub will facilitate several market processes in the retail market.

The first version of Elhub will not support/include combined billing.

The introduction of the Elhub in the Norwegian market will require a quite substantially revision of the relevant secondary legislation ("Forskrift om måling, avregning og samordnet opptreden ved kraftomsetning og fakturering av nettjenester"). This revision is well underway and will be put to public consultation early summer 2014.

More information about the Norwegian Elhub can be found on www.elhub.no.

6.3.3 Billing

NVE is currently reviewing different solutions for mandatory combined billing in the retail market in Norway. The model will be a supplier centric model; compliance with NordREG recommendations is a key factor in the ongoing process.

The project will deliver a proposed solution including necessary legal revisions within 2014.

6.3.4 Moving

There is not specific ongoing work on the moving process. The moving process will be changed as a result of the introduction of the Elhub and the supplier centric model.

6.3.5 Switching

There is not specific ongoing work on the switching process. The switching process will be changed as a result of the introduction of the Elhub and the supplier centric model.

6.4 Sweden

6.4.1 General description

The Swedish electricity market was reformed in 1996. Since then, supply and production of electricity have been exposed to competition. The Swedish electricity network consists of 545,000 kilometres of power cables, of which 329,500 km are underground cables and 215,500 km overhead lines. Svenska Kraftnät (SvK) is the State-owned utility that owns the Swedish national grid, and is responsible for maintaining the balance between production and consumption of power, as well as for the operational safety of the Swedish electricity transmission system. SvK is certified as a national network company by the Energy Markets Inspectorate (Ei). In its role as a regulator, Ei has the task of scrutinising SvK. Local and regional network companies are responsible for sufficiently maintaining their networks to ensure that each connection within their individual networks, at all times, have access to electricity according to given quality standards. As of 2012, there were 168 electricity network companies in Sweden.

The Swedish Energy Markets Inspectorate runs the price comparison site Elpriskollen.se where suppliers are required to report contracts and prices. According to statistics from Elpriskollen.se, Swedish consumers can choose from almost 2000 electricity supply contracts whereof 1200 of are contracts with 100 percent renewable energy.

The Swedish government gave the Ei the task to suggest a national legislative framework for a supplier centric model in late 2012. The basis for this proposal was the recommendations from NordREG that a supplier centric model is the most customer friendly market model. The suggestions were delivered to the government in June 2013. The project focused on three key retail market processes: moving, billing and switching. The proposals were out for a public consultation made by the government in the fall of 2013.

6.4.2 Information exchange

NordREG made recommendations[35] stating recommendations for all NordREG members when looking into a revision or change of the national information exchange model. The report also highlights the importance of having one or very few contact-points for a supplier wanting to act in a national and Nordic market.

Looking at the NordREG recommendations and following discussion nationally Ei suggested in June 2013 that there should be a centralized information exchange model with the Swedish TSO, SvK, as the responsible party. This suggestion was part of the public consultation in the fall of 2013. After comments and further analysis of the topic the government gave Ei the task to develop a regulatory framework for a centralized information exchange model by June 2014. On the 19th of June Ei reported back to the government. Ei suggests that there should be a centralized information exchange model which carries out the key processes in the electricity market. Processes such as switching and moving should be carried out in the hub. The hub should also be an access point for the competitive stakeholders to the electricity market. Ei believes that it would be easier to establish business in the Swedish electricity market if you only have to be in contact with on point rather than each and everyone of the DSOs, depending on in which area the customer lives.

6.4.3 Billing

Combined billing made by the supplier is one of the main recommendations made by NordREG. When Ei was given the task to give legal proposals for how a supplier centric model can be implemented in Sweden, billing was a key topic. When working on these proposals the Nordic recommendations were a guiding tool. Ei suggested a regulatory framework for a supplier centric a billing regime were the supplier is responsible for billing, both for supply and distribution. In Ei's proposals the supplier bills on behalf of the DSO but is always responsible for paying the DSO even though the customer does not pay the supplier.

6.4.4 Moving

When making the proposals for a supplier centric model moving was a key process. Ei has suggested a regulatory framework for a supplier centric moving process. The suggestions means that the customer should only be in contact with the existing or new supplier in order to make a move in or out. This would also mean that fewer customers will have a default contract. The government has

[35]High level suggestions for common Nordic processes for information exchange- obstacles and possibilities, Report 1/2012

announced that they will bring forth a proposal regarding a supplier centric moving process during the fall of 2014.

Ei delivered a report to the government in November 2013 were the findings were that many, over 17 %, customers have a de fault contract and that they pay about 30% more that an active customer. Most, about 80%, the customers get a de fault contract when moving. The DSO is obliged to appoint a de fault supplier if the customer hasn't chosen a supplier when moving. The de fault supplier is very often an incumbent supplier.

6.4.5 Switching

Sweden already has a supplier centric switching process so there was no need to make any changes in that process.

6.5 Summary on the national development

Table 2 summarises the national development towards a Nordic supplier centric model. The areas described in the table handles the development on information exchange, billing, moving and switching toward supplier centric model:

	Information exchange	Billing	Moving	Switching
Denmark	Data hub was introduced 2013. New version will be launched Oct. 2015	Combined billing is planned to be introduced Oct. 2015	The supplier takes care of the moving processes since 1st of March 2013	Supplier centric with the implementation of the wholesale model Oct. 2015
Finland	Project started Jan. 2014 thought to be finished by the end of 2014. Decision on the future model will be done after that	No legislation done or planned	Will be initiated after investigation regarding future information exchange model has been chosen	Will be initiated after investigation regarding future information exchange model has been chosen
Norway	Establishment of data hub is underway and will be operational from Oct. 2016	Currently being reviewed, proposal will be delivered within 2014	Will be changed when the data hub is operational	Will be changed when the data hub is operational
Sweden	Ei has proposed a centralized information exchange model to the Government June 19th 2014	Ei has proposed combined billing to the Government	EI has proposed that the supplier should take care of the move out and move in process to the Government.	Supplier centric switching process is implemented

Table 4 Summary on the national development

NordREG is pleased to see national commitment and the ongoing work towards a supplier centric model. A key question for the future development is information exchange infrastructure. The supplier switching process, the process for customer move and combined billing are closely linked to information exchange systems.

All countries have a supplier centric switching process. Three of the countries will in the near future have a supplier centric moving process. The issue on combined billing has been proven to be more complicated and controversial to implement nationally. So far only Denmark has decided to implement mandatory combined billing.

Denmark and Norway has decided to establish a national hub.

7 Annex 1 Planned work for 2011-2014 and publications as a result of that

In the NordREG report "Common Nordic Retail Market -Organisation of further work" from 2010 a work-list of task was presented. The goal was to find Nordic recommendations in order to harmonise the Nordic market during the project period 2011 to 2014. A majority of these tasks has resulted in several publications, both NordREG recommendations and consultancy studies. These tasks and related publications are listed below.

Five Task Forces (TF) was established with predetermined tasks; Market Rules TF, Customer Empowerment TF, Business Process TF, Structures of Network Tariffs TF and Metering TF. For more information about the organisation see NordREG report "Common Nordic Retail Market - Organisation of further work". [36]

General list of tasks to harmonise during the period 2011 to 2014:	
Market rules TF	**Publications**
Analysis and definition of rights and obligations of DSOs and suppliers in the supplier centric customer interface model.	1. Rights and obligations of DSOs and suppliers in the customer interface[37] (NordREG, 2011)
Description of the combined billing regime in detail and impact assessment of the billing regime. The task shall assess the implications of mandatory vs. voluntary combined billing, and analyse if it is possible to design a security payment system that is not creating a market barrier for the supplier.	2. Consideration of alternative billing regimes for the Common Nordic End-User Market[38] (August 2011) 3. Consideration of alternative billing regimes for the Common Nordic End-User Market – Cost-Benefit Analysis[39] 4. Credit risk management in future billing regime - A common Nordic end-user market with combined billing[40] (Ernst & Young, May 2012) 5. Payment requirements with combined billing[41] (April 2013) 6. NordREG's recommendations on implementing combined billing (NordREG, May 2013)[42]
Analyze whether national tax structure legislation will allow foreign suppliers to collect taxes and fees in each Nordic country.	7. Tax collection in the future billing regime - A common Nordic end-user market with

[36] NordREG, report 9/2010, COMMON NORDIC RETAIL MARKET Organization of the further work
[37] NordREG, report 4/2011, Rights and obligations of DSOs and suppliers in the customer interface
[38] Vaasa ETT, August 2011, Consideration of alternative billing regimes for the Common Nordic End-User Market
[39] Vaasa ETT, November 2011, Consideration of alternative billing regimes for the Common Nordic End-User Market –Cost-Benefit Analysis
[40] Ernst & Young, May 2012, Credit risk management in future billing regime - A common Nordic end-user market with combined billing
[41] GAIA Consulting Oy, April 2013, Payment requirements with combined billing NordREG, May 2013, NordREG recommendations on implementing combined billing
[42] NordREG, May 2013, NordREG recommendations on implementing combined billing

	combined billing[43] (Ernst & Young, May 2012)
Customer empowerment TF	
Identify what should be defined in common legislation and what are the needs for additional standard agreements between suppliers and DSOs on a Nordic level.	
Analyse how the contracts between customers and suppliers/DSOs should be arranged and what should be defined in common legislation and what are the needs for additional standard agreements with customers on a Nordic level.	8. Legal analysis of contract models in a common Nordic electricity retail market - Legal advantages and disadvantages with different contract approaches under a supplier centric model[44] 9. NordREG's recommendations on implementing combined billing (NordREG, May 2013)
Analyse what is needed from the harmonized customer protection regulation.	10. NordREG, May 2013, NordREG recommendations for customers and market actors access to metering data and transparency
Analyse the impact of common Nordic rules for prepayment and payment after delivery.	11. NordREG's recommendations on implementing combined billing (NordREG, May 2013)
Analyse if the existing obligation to supply and the supplier of last resort schemes includes elements that negatively impacts the market functioning and also if there is a need for a harmonization.	12. Nordic harmonisation of universal service supply obligations[45] (NordREG, 2013)
Business process TF	
Make high level suggestions for future common Nordic business processes for key processes.	13. High level suggestions for common Nordic processes for information exchange-obstacles and possibilities[46] (NordREG, 2012)
Make an impact assessment of the suggested changes in business processes.	The work is conducted on a national level
Make an inventory of national legislation and rules to identify best practice and what needs to be harmonized.	14. Harmonised model for supplier switching[47] (NordREG, 2013) 15. Framework for a harmonised moving process48 (NordREG, 2014)
Make a detailed specification for future common Nordic business processes for all business processes.	16. Business requirements for a harmonised Nordic retail market49 (EDISYS, 2014)
Prepare future harmonized legislation	National work and coordinated on a Nordic level
Structures of network tariffs TF	

[43] Ernst & Young, May 2012, Tax collection in the future billing regime - A common Nordic end-user market with combined billing

[44] Bjørnebye B and Alvik I, 2012, Legal analysis of contract models in a common Nordic electricity retail market - Legal advantages and disadvantages with different contract approaches under a supplier centric model

[45] NordREG, report 3/2013, Nordic harmonization of universal service supply obligations

[46] NordREG, report 1/2012, High level suggestions for common Nordic processes for information exchange-obstacles and possibilities

[47] NordREG, report 4/2013, Harmonized model for supplier switching

[48] NordREG, report 2014, Framework for a harmonized moving process

[49] EDISYS, June 2014, Business requirements for a harmonized Nordic retail market

Analyse if harmonization of the structures of network tariffs is a prerequisite for combined billing and if it is feasible.	
Metering TF	
Further elaborate on the introduction of AMR and AMM in the Nordic countries and national AMR and AMM requirements and their impacts on a common Nordic end user market.	17. Common Nordic metering methods[50] (NordREG, 2014)
Complete and continue the work related to the Nordic balance settlement with focus on DSO and supplier tasks and information exchange.	The TSOs are working on a common Nordic balance settlement (NBS).[51]

Table 5 Planned work for 2011-2014 and publications as a result of that

[50] NordREG, report 2014, Common Nordic metering methods
[51] NBS, 16 June 2014, http://www.nbs.coop/about

8 Annex 2 Abbreviations

AMM: Advanced Metering Management

AMR: Automatic Meter Reading

DERA: The Danish Energy Regulatory Authority

DSO: Distribution system operator

EC: European Commission

Ei: The Swedish Energy Markets Inspectorate

ElHub: Norwegian data hub

EMG: The Electricity Market Group

ESCO: Energy Service Company

EV: The Finnish Energy Authority

NEG: Nordic Ediel Group

NBS: Nordic balance settlement

NPI: National point of information

NRA: National regulatory authority

NVE: Norwegian Water Resources and Energy Directorate

SGTF: The Smart Grids Task Force

TSO: Transmission system operator

TF: Task Force

SvK: Svenska Kraftnät

XML schemas: Extensible Markup Language schemas

9 Annex 3 References

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NordREG report 4/2011 Rights and obligations of DSOs and suppliers in the customer interface

NordREG, report 1/2012, High level suggestions for common Nordic processes for information exchange- obstacles and possibilities

NordREG, report 3/2012, Nordic harmonisation of universal service supply obligations

NordREG, report 4/2013, Harmonized model for supplier switching

NordREG, May 2013, NordREG recommendations on implementing combined billing

NordREG, May 2013, NordREG recommendations for customers and market actors access to metering data and transparency

NordREG, report 5/2013, Road map towards a common harmonised Nordic end-user market

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NBS, 16 June 2014: http://www.nbs.coop/about

Norden, 19 August 2014: http://www.norden.org/sv/nordiska-ministerraadet/ministerraad/nordiska-ministerraadet-foer-naeringsliv-energi-och-regionalpolitik-mr-ner/deklarationer-och-foerklaringar/ministererklaering-for-energi-fra-det-nordiske-ministermoetet-i-bodoe-den-7.-8.-september-2006

NordREG
Nordic Energy Regulators