

# Rights and obligations of DSOs and suppliers in the customer interface

Report 4/2011



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# Preface

The Nordic Energy Regulators (NordREG) have for some years been promoting the idea of a truly borderless free Nordic electricity market. This includes both the wholesale and the retail markets. NordREG has been given the task by the Nordic ministers for energy to intensify the work to achieve a common Nordic retail electricity market. To make this work possible NordREG set up the framework for the project organisation during the autumn of 2010. This work has now started

During 2011 and 2012 the very important phase of determining the target market model will be carried out. In that work it is essential to develop the customer interface and the market rules at a high level. This report presents several very significant pieces of the puzzle that will form the target market model and especially the customer interface.

# 1 Introduction

NordREG has for several years worked to promote the development of a common Nordic electricity end user market. In the last couple of years this project has become more concrete and the work has been intensified. NordREG has been asked by the Nordic energy ministers to develop the framework and details for how this common market should be designed and starting in 2011 the Nordic council of ministers has also allocated funds for the hiring of a project coordinator and for consultancy needs in order to speed up the work. NordREG are also working together with stakeholders in order to achieve as good a market as possible

The goal of this project is to minimise the obstacles for suppliers willing to operate across the Nordic borders. The project aims at harmonising the processes and the rights and obligations of the different market actors so that any supplier willing to operate in any other Nordic country should be able to do so without encountering any significant obstacles.

## 1.1 Principles for harmonising the Nordic end user markets

NordREG has found that there are some basic requirements that should be demanded from the common Nordic end user market.

The first requirement is that the common Nordic end-user market should be open for all customers. The national end user markets are already open for all customer groups. Restricting the common Nordic end user market only to e.g. hourly/monthly metered customers or commercial and industrial customers would introduce unnecessary confusion and possibly barriers of entry. To sum up, the market model for the common Nordic end user market shall provide solutions to allow all customers to take part in the common market.

Customers' confidence is essential for the development of the end user market. Thus the second requirement is that consumers must have the same protection independent of the origin of the supplier. A lack of confidence in this regard will hinder the development of the Nordic market. Therefore customer protection must be ensured, no matter which supplier the customer chooses.

Furthermore, low entry barriers should be ensured by making it easy for suppliers to operate in all Nordic countries. Implementation of common processes and systems is vital for creating a common market. Suppliers that are already operating in one country should also easily be able to establish their business in the other Nordic countries, having regard to the national requirements to registration and licensing of legal entities (and of course to all other national laws and regulations common to all suppliers in the country).

It is important for a supplier to be able to use a single IT-system inside the same company while operating in all Nordic countries. This objective requires that the business processes are harmonised between the Nordic countries. In order to lower the costs of suppliers and entry barriers for new entrants, common message formats etc. must be developed, with this overall goal in mind.

When designing the common Nordic end-user market it is important to keep in mind and follow the harmonisation process of the EU electricity market. The recommended market model and business process solutions should be as future proof as possible.

## **1.2 Benefits of the common Nordic end user market**

The common Nordic market is anticipated to bring benefits for all stakeholder groups.

A successful implementation of a common market will most likely increase competition among suppliers. This will improve the efficiency in the market and bring benefits for the customers, partly by increasing the pressure on end-user prices. It is also anticipated that the larger market will provide customers with a wider choice of offerings and products to meet their needs. For example, more specialised products could be offered through the expanded end-user markets.

The common Nordic end user market will also provide an opportunity for suppliers to operate on a larger electricity market, leading to improved efficiency and reduction in suppliers' unit costs. The Nordic market will also be more attractive for new entrants. A common Nordic end user market will reduce the possibility to develop end user market regulation only from a national perspective. Suppliers are as such expected to benefit from a relatively stable regulatory environment with more predictable rules as future changes have to be implemented the same way in all Nordic countries. In sum this will reduce the so-called regulatory risk for the market actors.

By introducing new players, products and business models into the national markets the common Nordic end user market might strengthen the connection between wholesale and retail markets, especially when considering the possibility of increased development of demand response products.

DSOs and TSOs will benefit from the common Nordic end user market through improved efficiency and automated processes. Expected improvement in data quality will reduce the use of manual work in most processes. Stable end user market regulation including clear definitions of the roles and responsibilities of different market actors will reduce the regulatory risk also for the network operators.

Furthermore the society will also benefit from increased competition and improved efficiency at all levels. NordREG believe that long term it is more efficient to operate one market compared to four national markets. The project on harmonising the four markets is also a golden opportunity that should be used to further develop and improve the electricity market, making it friendlier for customers while improving competition and efficiency and making sure that the DSO role is limited to facilitating a good market.

Another important aspect of the Nordic harmonisation work is that this project can be seen as a step towards a European market. The development of a Nordic market could be seen as a good example of how four countries can integrate their electricity end user markets into one common market.

## 1.3 Target market model

The focus for 2011 is to develop and design the target market model for the Nordic market. This means making recommendations on a number of issues. This includes the mapping and studies of the future data exchange (including the issue of hubs and databases) by the Business Process TF, further studies on customer protection and supplier of last resort schemes by the Customer Empowerment TF and looking into balancing issues and smart metering within the Metering TF. Given the outcome of the final report on billing, the issue of harmonisation network tariffs may also be studied deeper. General description of each planned task can be seen in the table below.

Task #	Projects
<b>A. Market Rules Task Force</b>	
A1	<b>Analysis and definition of <i>rights and obligations</i> of DSOs and suppliers in the supplier centric customer interface model.</b>
A2	Description of the combined billing regime in detail and <i>impact assessment of the billing regime</i> . The task shall assess the implications of mandatory vs. voluntary combined billing, and analyze if it is possible to design a <i>security payment system</i> that is not creating a market barrier for the supplier.
A3	Analyze whether national <i>tax structure legislation</i> will allow foreign suppliers to collect taxes and fees in each Nordic country.
<b>B. Customer Empowerment Task Force</b>	
B1	Identify what should be defined in common legislation and what are the needs for additional <i>standard agreements between suppliers and DSOs on a Nordic level</i> .
B2	Analyze how the <i>contracts between customers and suppliers/DSOs</i> 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.
B3	Analyze what is needed from the <i>harmonized customer protection regulation</i> .
B4	Analyze the impact of common Nordic rules for <i>prepayment and payment after delivery</i> .
B5	Analyze if the existing <i>obligation to supply and the supplier of last resort schemes</i> includes elements that negatively impacts the market functioning and also if there is a need for a harmonization.
<b>C. Business Process Task Force</b>	
C1	Make high level suggestions for future common Nordic business processes for <i>key processes</i> .
C2	Make an <i>impact assessment</i> of the suggested changes in business processes.
C3	<i>Make an inventory of national legislation and rules</i> to identify best practice and what needs to be harmonized.

C4	<i>Make a detailed specification</i> for all common future Nordic business processes.
C5	<i>Prepare future harmonized legislation</i> for business processes.
<b>D. Structures of Network Tariffs Task Force</b>	
D1	<i>Analyze if harmonization of the structures of network tariffs is a prerequisite for combined billing</i> and if it is feasible.
<b>E. Metering Task Force</b>	
E1	Further elaborate on the <i>introduction of AMR</i> in the Nordic countries and national AMR requirements and their impacts on a common Nordic end user market. Deadline is not until December 2012, however given the importance of this task it should be started already during 2011.
E2	Complete and continue the work related to the Nordic balance settlement with focus on DSO and supplier tasks and information exchange.

In this report NordREG has made recommendations for how the interface between the customer and the market should be designed in the future common Nordic end user market. The design of the customer interface has been identified by NordREG as an important part of the target market model for the Nordic market. NordREG has earlier stated that the common Nordic end user market should be based on a supplier centric approach. In general this means that most issues, from a customer perspective, are handled by the supplier.

The supplier centric model does not mean that all customer issues should be handled by the supplier. Strictly network related issues, meaning issues that deal with the physical connection or the meter, should still be handled by the grid company (Distribution System Operator - DSO). NordREG sees that it is important to keep the communication gateway between the DSO and the customer open, even in the future supplier centric Nordic market. The DSO is the market actor that has the best knowledge about grid related issues and it is also important that the DSO and the customer can communicate on issues such as safety, new or change of connection etc.

This report aims at clarifying the supplier centric market model and the roles and responsibilities that should be allocated to different market actor in the future common Nordic end user market.

The reader should take note of that although NordREG has actively been working with the stakeholders in the Market Rules TF to create this report, the recommendations presented should not be considered as the views of the stakeholders. The recommendations in this report have naturally been discussed with the task force participants, but that does not necessarily mean that all stakeholders have supported these recommendations. The decision to publish these draft recommendations has in the end been taken by NordREG.

## 1.4 Objectives of this study

*The object of this task is to present recommendations on definitions of rights and obligations of DSOs and suppliers in the supplier centric customer interface model.*

The established customer interface model within the Nordic electricity market is in principle based on a dual point of contact-model<sup>1</sup>, meaning that the customer has business relations both with the DSO and the electricity supplier.

In the NordREG report “Implementation Plan for a Common Nordic Retail Market” (NordREG Report 7/2010) it is stated that the customer interface model for the common Nordic end user market should be based on the supplier centric model. In this model most issues from a customer perspective are handled by the supplier. The supplier centric model doesn’t mean that all customer issues should be handled by the supplier. There are also strictly network related issues which should remain within the responsibility of the DSO.

When reviewing the market model and designing the common Nordic retail market, one of the most important issues is to consider the customer perspective. A changed market model will affect the customer perception of the market and interaction with the market. Therefore it is important, within this study, to look closely at what the consequences are for the customer when choosing between the different options

A changed market model will change the roles and responsibilities for suppliers and DSOs. A direct consequence is that existing business processes have to be changed and new must be designed. Changes in the responsibilities also affect the risks for the market participants.

Changes in responsibilities and business processes put new demands on information availability. To meet this new market conditions equivalent information must be available for all market participants. Future needs related to smart grids should also be kept in mind when carrying out this study.

The output of this task has heavy impact on business processes and the data exchange area. This work will set guidelines for the coming work related to the business processes, designing the data exchange mechanism, writing the detailed specifications and coding etc.

### 1.4.1 Objectives

When analysing the different areas of responsibility, it should be considered how the different options affect the overall objectives of the common Nordic retail market, which are listed below.

- ✓ *Customer friendliness.* One of the objectives of the common Nordic retail market is to increase the customer friendliness of the market and to make it easier for the customer to be active in the market. The report should analyse how this objective is affected.

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<sup>1</sup> However, in most cases when customers have not switched away from the incumbent supplier the situation is in practice a single point of contact model.

- ✓ *Well-functioning common market.* The goal is to have a well-functioning common electricity market (wholesale and retail). How this goal is affected by the different options should be analysed in the report.
- ✓ *Improved competition.* To improve competition among suppliers (for instance through low entry and exit barriers) is an important objective. Therefore the report should analyse how competition among suppliers is affected by the proposed solutions.
- ✓ *Improved efficiency.* Customers will benefit from improved efficiency in the market. The report should analyse what affect the different solutions would have on the efficiency for individual stakeholders and the market and society at large.
- ✓ *Compliance with EU regulation and development.* How do the recommended solutions comply with the general development in the EU and with existing and coming EU regulation? This should be analysed in the report.
- ✓ *Neutrality of DSOs.* DSOs should function as market facilitators, but how is the DSO neutrality affected by the chosen solution? This should be analysed in the report.

## 1.5 Definitions and clarifications

### 1.5.1 Definitions

*Customer* - a natural or legal person purchasing electricity for his own consumption

*Consumer*- a natural person purchasing electricity for his own household consumption

*Data hub/database* - a data hub is a technical interface that can connect DSO's, suppliers and customers. It can share and publish anonymised data and can for instance ease consumer's access to their own data and facilitate a change of electricity supplier. Moreover, a data hub can simplify the data traffic in the market where players today communicate bilaterally in a many-to-many relationship.

*Default supplier* – the electricity supplier that supplies inactive customers with electricity. Customers who have not actively chosen a supplier will get supplied by the default supplier. The systems for appointing default suppliers differ between the Nordic countries.

*Demand response* - changes in electric usage by end-use customers/micro generators from their current/normal consumption/injection patterns in response to changes in the price of electricity over time, or to incentive payments designed to adjust electricity usage at times of high wholesale market prices or when system reliability is jeopardized. This change in electric usage can impact the spot market prices directly as well as over time.

*DSO* – Distribution System Operator. The operator of the local or low voltage electricity network.

*ESCO* – Energy Service Company. A commercial business providing a broad range of energy solutions including designs and implementation of energy savings projects, energy infrastructure outsourcing, power generation and energy supply, and risk management.

*Primary contact point* – by this we mean the market actor that is the customer's primary contact point in each specific issue. This is the market actor that the customer should contact in case he or she has a complaint, an inquiry or if he or she wishes to take action of some sort (could be supplier switching, moving, installing a small wind mill etc.). This means that all involved parties (market actors, authorities, consumer advisory bodies etc.) should inform and encourage the customer to first contact the market actor defined in this report (if not defined otherwise in the contract). If the customer gives power of attorney to a third party to deal with the primary contact point on behalf of the customer, the customer only has to contact the third party.

*Responsible party* – this is the market actor that is responsible to take action following the customer request that is communicated through the primary contact point. This is not to say that the responsible party should carry out all the “behind the scenes” work. The “behind the scenes” work will to a large extent be determined by the Business Process Task Force starting in the autumn of 2011.

*Retailer* - The company that is the seller of electricity to the end user.

*Supplier* – The company that is the seller of electricity to the end user.

*Supplier of last resort* – the electricity supplier that is appointed to deliver electricity to customers who cannot find a supplier on the market or when a supplier goes bankrupt.

### **1.5.2 Clarification of the communication between the DSO and the supplier**

In this report it is sometimes mentioned that the DSO should send data to the supplier, or the other way around. This communication could also be handled in an anonymous way, for instance via a central data hub or data base. The reason for this anonymous data handling is to reduce the risk for any integrated suppliers to use their position to gather information about the customers' contract. This system will be in place in Denmark once the centralised data hub is up and running in 2012.

## **1.6 Regarding the possibility for a supplier to handle DSO issues**

In the supplier centric customer interface model a lot of the responsibility in terms of communication with the customer should be handled by the supplier. There is however still a number of issues, mainly issues that are strictly network related, that remains within the responsibility of the DSO.

The primary responsibility for being able to handle the communication with the customer for such issues lies on the DSO. The DSO is responsible for making sure there is a customer service that the customer can contact for these issues and the DSO is the primary contact point indicated in this report.

However, if a customer chooses a supplier who is willing to handle these contacts with the DSO on behalf of the customer, then the primary contact point for that customer is the supplier. This procedure requires a power of attorney from the customer. If such a power of attorney exists, then the DSO must provide the supplier with at least the same kind of service as if it was the customer who contacted the DSO directly<sup>2</sup>. Such an arrangement will from a customer perspective appear as somewhat of a single point of contact model (depending on how much of the DSO issues that the supplier is willing to handle on behalf of the customer), but in practice it is the supplier who acts as the customers stand in in any communication with the DSO.

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<sup>2</sup> In future reports more detailed rules on how these power of attorneys are to be handled in practice should be defined.

## 2 Summary of the recommendations

Companies operating on the free market (suppliers and energy service companies) should in the common Nordic retail market be responsible for the parts of the customer interface that concerns products and services provided on the free market. Also the customers' main contact point when switching supplier or moving should be the supplier.

The customer should rely on that the DSO provides information and resolves problems related to issues that could be classified as strictly network related, i.e. issues that concern the customers' physical connection to the grid, including meter issues, quality of supply and interruptions.

By moving more of the responsibilities from the DSO to the supplier in the customer interface the power of consumers choice will be even greater since a larger part of the customers interaction with the market will be handled by a market actor that the customer has the possibility to switch/change if the customer is not satisfied with the services provided. This will also simplify the electricity market for most customers. An additional argument for a supplier centric market model is that the services that the customer is able to choose from in the electricity market should not be limited by the location of the customers home and what services that the local DSO is willing to offer. The playing field will from a supplier perspective be more level.

However, in the Nordic electricity retail market, which consists of hundreds of suppliers and hundreds of DSOs, it would not be efficient to let the suppliers handle all issues. In general NordREG finds that issues that are strictly related to the infrastructure, i.e. issues concerning the physical connection to the grid, should still be handled by the DSO. The DSO is best placed to help the customer with these issues which are often both technical and local in their nature.

Even though the supplier centric market model is easy for the customer, he or she may wish to be only in contact with one party. This could be solved through a power of attorney. In this report the possibility for a customer to let a supplier, or any other third party, to act on behalf of him or her through a power of attorney has been highlighted. This is of course possible already today, but given the increased contact between the supplier and the customer that the supplier centric model brings there may also be an increased interest in such "full package solutions" from customers.

Such power of attorney schemes will from a customer perspective make it seem as if he or she has a single point of contact customer interface, but in practice such an arrangement means that the supplier takes on the role of the customer towards the DSO. This also highlights the need for a DSO to, at all times, make sure there is a customer service to handle grid related issues (and other DSO issues as specified in this report).

In general the recommendations in this report means that the supplier, and other relevant operators in the free market (such as Energy Service Companies) should take care of the most part of the communication with the customer. This should include, but not be

limited to, supplier switching, move in, move out, information about offers and contracts covering supply, demand response, micro generation etc.

General information about the content of the bill (price and tariff components, taxes etc) should be provided by whoever sends the bill. More detailed information could be provided by the party responsible for the claim (the DSO for detailed info about grid tariffs and the tax authority for detailed information about tax components).

Issues concerning the customers' physical connection to the grid, the meter, quality of supply, new connection etc. and any complaints or inquiries concerning these issues should be communicated between the DSO and the customer.

### **2.1.1 Consideration of objectives in relation to the recommendations**

When making the recommendations presented in this report the main objectives of the common Nordic retail market has been considered. Below you will find some general comments to how each of these objectives would be fulfilled or promoted by the recommendations.

#### *✓ Customer friendliness*

A supplier centric market model is by nature both simple and customer friendly since it reduces the need for contacting both the DSO and the supplier for most issues (compared to the current situation in the Nordic countries). A supplier centric model supports that the participating in the energy market is as easy as possible for customers. The recommendations presented in this report also help clarify the roles and responsibilities in the communication between the customer and the companies in the electricity market.

The recommendations presented in this report also increases the power of customer choice since a larger part of the customers' interaction with the market will be handled by a market actor that the customer has the possibility to switch away from if the customer is not satisfied with the services provided. In addition a supplier centric market model means that the services that the customer is able to choose between in the electricity market will to a lesser extent be limited by the location of the customers home and to what services the local DSO is willing to offer.

- ✓ Well-functioning common market.*
- and*
- ✓ Improved competition*

It is likely that the recommendations presented in this report would promote both competition and the general functioning of the Nordic electricity market.

Naturally the customer interface has little to do with the functioning of the wholesale market. But a supplier centric common market is believed to increase supplier switching and improve competition and it is likely that NordREG's recommendations presented in this report will boost the suppliers role in the electricity market and make the customer more aware of the possibility to choose between different operators offering different

kinds of products and services in the free market. This will also bring increased development of demand response products which in the long run will have a positive effect on the functioning of the wholesale market.

When discussing customer interface models, it should always be remembered, that the basic structure of open electricity markets is that suppliers are acting under competitive circumstances, whereas the DSOs are operating in a monopoly thus should not engage in competition with other market actors. Therefore it should be noted also, that since the supplier acts on the competitive part of the retail market, the supplier has stronger interest than DSO to find ways to keep their existing customers and to gain new customers by developing products and services that satisfy customers' needs.

By ensuring a competitive environment and a more level playing field– partly through a supplier centric market model - the common Nordic market will also be more attractive to new entrants.

#### ✓ *Improved efficiency*

The recommendations presented in this report will also bring benefits in the form of increased efficiency for customers, compared to the situation today, since they will in the future only need to be in contact with one stakeholder for most issues. Since the market model proposed is supplier centric, communication with customers for most of these issues will be handled by the market actors operating under competitive circumstances. This will increase the efficiency when these market actors, in order to gain market shares, will develop their customer service and offer solutions that benefit the customers.

In addition, by defining and allocating roles and responsibilities to different stakeholders the situation will to some extent be clearer in the common market. This will in itself bring some increased efficiency.

#### ✓ *Compliance with EU regulation and development.*

The recommendations presented in this report are in line with any current EU-legislation. During the work with this report regulators participating in the work has also compared and coordinated the project with past and currently on-going projects within the regulators European cooperation (Council of the European Energy Regulators - CEER) to make sure NordREGs recommendations do not divert from any general direction that is intended for the future European electricity market.

It is also interesting to notice that the development of a common Nordic retail market is a unique project in the European context. Nowhere else exists any similar project and rather than following any future EU development, there is a very real possibility that the future development in the EU may to some extent be influenced by the Nordic model for harmonising the national rules for electricity retail markets.

✓ *Neutrality of DSOs.*

When developing customer interface models, it should be remembered that the basic structure of open electricity markets is that suppliers (and energy saving companies) are acting under competitive circumstances, whereas the DSO is operating in a monopoly. This should be respected in order to create a level playing field among all suppliers and to assure a sound retail market development.

To ensure neutrality of DSOs is crucial in order to get a well-functioning electricity end user market with a level playing field for all suppliers. This objective is assisted by the recommendations presented in this report where NordREG clearly indicates which market actor should be responsible for what in the customer interface. NordREG also emphasize that any communication between the DSO and the customer should be neutral and only deal with strictly DSO related issues directly concerning the physical connection to the grid. By ensuring that information concerning products or services that could be provided by the free market will be communicated by actors on the free market, we discourage unfair behaviour by integrated companies.

# 3 ROLES AND RESPONSIBILITIES IN THE CUSTOMER INTERFACE

## 3.1 Supplier switching

### 3.1.1 Contact point during the switching process

The customer should only need to be in direct contact with the new supplier. The reason for this is that the new suppliers have the best incentives to carry out switches as fluently as possible and they should therefore handle the switching process for the customer. From a customer perspective it is also easiest if you only have to deal with one market participant.

The new supplier is responsible for informing the customer of procedures and status during the switching process. It is essential that the DSOs are totally neutral towards all market participants in relation to supplier switching. The DSO should have the responsibility for relevant customer data and act only as a coordinator for exchanging this data.

### 3.1.2 The prerequisites for the switch

Before a switch is carried out the customer has the responsibility to make sure he/she is able to agree on the new supply contract. In case of existing binding fixed term contracts, any dispute with the old supplier that may also include compensation for breach of contract should be settled according to standard contract law. During the switching process the old supplier may not oppose to the switch in any situation<sup>3</sup>.

The person who makes the supply contract has to be the same person who has the network contract with the DSO. This will clarify the contractual relationships between market players and prevent possible misunderstandings. The new supplier is responsible for ensuring that the person that is entering the new contract is also the person who has the network contract.

The customer might be able to provide all necessary information, including metering point ID, to execute the switch. However, if the customer can't provide the metering point ID, the new supplier is responsible for retrieving it. The DSO should assist the supplier to ensure that the process is as smooth as possible, but preferably this process should be automated. This process and DSOs' involvement will be defined more carefully in the upcoming work of the Business process TF.

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<sup>3</sup> With the use of a central database or data hub there may be a possibility to include a function that alerts the customer, the new supplier or the old supplier that the new contract which the customer is entering is in conflict with the existing contract. Such a function would be useful from a customer perspective and would help reduce the number of disputes in the electricity market.

### 3.1.3 Meter reading and information about meter reading values

The DSO has the responsibility to read the meter or retrieve meter reading values when the customer is switching. In addition, the DSO has a responsibility to provide the meter reading and/or energy consumption values <sup>4</sup> to both the new and the old supplier.

In connection to the switch the old supplier has the responsibility to give the meter and/or energy consumption values<sup>5</sup> to the customer in the last bill.

### 3.1.4 Information about the switch

The new supplier has a responsibility to inform the DSO about the switch when the contract is concluded with the customer. The DSO should inform the old supplier that the switch has been carried out. This information exchange may also be handled through a data hub as described in chapter 1.5.2.

**Table 1. Supplier switching**

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier	DSO	Supplier
1. Supplier switching (including if there are any legal obstacles to suppliers handling the switching and moving processes towards customers instead of the DSOs.)				
1.1 Who should the customer contact to initiate the switch		X		X
1.2 Who informs the customer of procedures and status during the switching process?		X		X
1.3 Check the prerequisites for the switch		X		X
1.4 Read the meter before/when the customer is switching			X	
1.5 Information about meter reading values in connection with switching		X	X	X

## 3.2 Move in/move out processes

A move could be split into two separate business processes: a move out of a consumption place and a move into a consumption place. Normally both business processes follow each other: first a customer moves out of a consumption place and then they move into a new consumption place. When a customer is moving out of a consumption place and moving into another, they will either switch suppliers at the same time, or they keep the same supplier.

### 3.2.1 Contact point during the moving process

When moving in the customer should only need to be in direct contact with the chosen supplier.<sup>6</sup> The supplier must always send a notification message about the move to the DSO<sup>7</sup> even if the customer has already informed the DSO about the move.

<sup>4</sup> Whether both the meter reading values and/or consumption values should be delivered will be defined more precisely later in the Metering TF.

<sup>5</sup> Ibid

When moving out the customer should only need to be in direct contact with the current supplier. However, in moving out situations the supplier and DSO both must send a notification message about the move to the other party (DSO or supplier). This should be done even though the customer has already informed the other party about the move. This is important to ensure that any customer move is registered by both the DSO and the supplier to avoid any faulty billing to the customer.

### **3.2.2 Meter reading and information about meter reading values**

The DSO has the responsibility to read the meter when the customer is moving. The DSO also has a responsibility to provide the meter reading and/or energy consumption values to the supplier or suppliers – both the new and the old one if the supplier has been changed in connection with the move. The supplier has the responsibility to give the meter values to the customer with the last bill.

### **3.2.3 Disconnection and reconnection**

The DSO has the responsibility to take care of disconnection and reconnection.

As the supplier is the primary contact point in the moving process, the supplier has the responsibility to inform the customer about disconnection and reconnection during moving in or moving out process. The DSO should provide the supplier with information about disconnection dates and reconnection dates.

The customer is responsible for ensuring that he/she has contracts with the DSO and a supplier when moving in, however the customer only needs to be in contact with the supplier when moving in. The DSO must take into account that if the customer's supplier has announced a moving out date for the DSO, the aforesaid supplier will be no longer responsible for supplying energy to the consumption place after that specific date. The DSO is responsible for disconnection if there is no longer supplier who is responsible delivering electricity to the consumption place (for example it might be that the consumption place will be left empty after customer is moving out).<sup>8</sup>

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<sup>6</sup> The supplier of last resort scheme has affect on moving process in general. The Customer Empowerment TF will analyse existing obligation to supply and supplier of last resort schemes starting in the autumn of 2011.

<sup>7</sup> Or via a datahub.

<sup>8</sup> There is variation on the national solutions related to invoicing consumption of electricity in a consumption place that is supposed to be empty. This is due to the supplier of last resort schemes. The Customer Empowerment TF will analyse existing obligation to supply and supplier of last resort schemes starting in the autumn of 2011.

Table 2. Move in/move out processes

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier	DSO	Supplier
<b>2. Move in/move out processes</b>				
2.1 Who should the customer contact to initiate the moving in/out process		X		X
2.2 Reading the meter when the customer is moving in/out			X	
2.3 Information about meter reading values in connection to moving in/out		X	X	X
2.4 Disconnect / reconnect		X	X	X
2.5 Information about disconnect/reconnect		X		X
2.6 New contract with grid company and/or supplier		X	X	X

### 3.3 Queries and complaint handling related to the energy supply and contractual issues

The customer should only need to be in contact with the supplier in order to get information that is related to the energy supply and on issues related to the supply contract.

The supplier is also responsible for making sure that the person receiving the information is actually a customer of that supplier. In addition, the supplier is responsible for handling and informing the customer on the status of any complaint or inquiry that the customer has submitted to the supplier. The supplier is responsible for providing the information to the customer. The DSO is responsible for delivering the metering values that the supplier needs for invoicing the customer. Regarding information about the bill and information about prices etc. it is also the supplier who is responsible for providing this information to the customer. If the customer's question concerns the contractual terms concerning network issues, the DSO is the primary contact point<sup>9</sup>.

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<sup>9</sup> If the customer's contract with the supplier contract does not also include the grid contract, in which case the primary contact point also for the grid contract is the supplier.

**Table 3. Queries and complaint handling related to the energy supply and contractual issues**

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier	DSO	Supplier
<b>3. Queries and complaint handling related to the energy supply and contractual issues</b>				
3.1 Who should the customer contact		X		
3.2 Validate the customer has the right to the information		X		X
3.3 Who informs the customer of procedures and status during handling of errand?		X		X
3.4 Management of errand and contract		X		X
3.5 Feedback and solution for customer		X		X
3.6 Electricity consumption (based on metering information)		X	X	X
3.7 Invoices	TBD1	TBD1		X
3.8 Payments		X		X
3.9 Contractual terms, sales		X		X
3.10 Contractual terms, grid	TBD2	TBD2	X	
3.11 Price and invoice for energy		X		X
3.12 Content of the bill		X		X

*TBD1 – depending on the future billing regime*

*TBD2 – depending on the future contract regime*

### **3.4 Queries, complaint handling and compensation issues on the DSO**

*(e.g. compensation for damages, outage compensation, quality, lack of information etc.)*

The primary responsibility for being able to handle these queries and complaints lies on the DSO. The DSO is responsible for making sure there is a customer service that the customer can contact for these issues and the DSO is the primary contact point. However, there is also another solution to this issue. This solution in practice makes the supplier the primary contact point for the customer. The precondition for this solution is an agreement between the customer and the supplier (power of attorney), as described in chapter 1.4. When the customer<sup>10</sup> has contacted the DSO with a query or a complaint, the DSO has the responsibility to check that the customer who is submitting the complaint or asking for information also has the right to do this (i.e. that the person is actually a customer in the grid area). Thereafter the DSO is responsible for providing solutions to the problems listed below.

- To inform the customer of procedures and status during handling of inquiries and complaints
- Management of inquiries and complaints

- Feedback and solution for customer
- Provide information about the level and structure of the grid tariff

This also means that the DSO is the primary contact point for solving these problems. However as mention above the supplier can instead take the role as the primary contact point for the customer, provided that the customer and the supplier have agreed on this solution (power of attorney).

In addition, the DSO is always responsible for carrying out the following actions:

- Determine when and how long any outages have affected the customer
- To evaluate damages and estimate any compensation that the customer may have the right to receive
- Initiate an on-site check of damages to verify any claimed damages

It is also the responsibility of the DSO to pay the customer any compensation<sup>11</sup> he is entitled to due to problems with the grid. Standard compensations should be included in the normal billing procedure and the compensation should in a clear approach be subtracted on the next invoice. Therefore the "primary contact point" for this issue should be decided once the future billing regime has been decided.

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<sup>11</sup> In Denmark there does not exists any compensation scheme directly targeting the customers (at the time of publication of this report). The compensation is instead carried out by a reduction of the revenue cap which indirectly leads to a reduction of the DSOs net tariffs.

**Table 4. Queries, complaint handling and compensation issues on the DSO**

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier	DSO	Supplier
4. Queries, complaint handling and compensation issues on the DSO (e.g. compensation for damages, outage compensation, quality, lack of information etc.)				
4.1 Who should the customer contact	X		X	
4.2 Validate the customer has the right to the information			X	
4.3 Who informs the customer of procedures and status during handling of inquiries and complaints	X		X	
4.4 Management of inquiries and complaints	X		X	
4.5 Feedback and solution for customer	X		X	
4.6 Check the time of outage	X		X	
4.7 Evaluate the damages and map against agreed (legislation or other) compensation frames	X		X	
4.8 Initiate on site-check of damage or other checking to verify the claimed damages	X		X	
4.9 Execute compensation payment to customer	TBD	TBD	X	
4.10 Complaints or inquiries about grid tariff	TBD	TBD	X	

*TBD – To be decided, depending on the future billing regime.*

## **3.5 Providing information of various price components (network tariff, electricity price etc.)**

### **3.5.1 Primary contact point and responsibility for service**

Questions about price components should in general be answered by the market actor that is responsible for those price components. This means that it is up to the supplier to answer questions about the electricity price and price components related to the supply (including taxes) while the DSO is responsible for answering questions about the level and components of the network tariff (including taxes). However, this issue is also closely linked to the choice of billing regime. In case of combined bills (provided by the supplier) it is naturally the sender of the bill that should be the primary contact point for all items on the bill, but if the customer requires detailed information about the network tariff or if the customer has complaints about the level of the tariff the customer could be referred to

the DSO for more detailed information. As mentioned in chapter 1.4 the customer may choose to communicate with the DSO through the supplier (which requires a power of attorney), this is of course possible also for any information on tariff components etc.

If a customer during the contact with a DSO asks about supply offers the DSO must act in a neutral way and not recommend any supplier in particular. Preferably the DSO should refer the customer to independent sources of information such as independent price comparison websites.

The same allocation of responsibilities applies when considering who should resolve an inquiry or a complaint and also who should inform the customer of procedures and status during the handling of an inquiry or a complaint; It is primarily the suppliers' responsibility to handle and inform the customer if the issue is supply related, while the DSO has the same primary responsibility to handle and inform the customer if the inquiry or complaint is related to the grid contract.

**Table 5. Providing information on various price components**

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier	DSO	Supplier
<b>5. Providing information on various price components (network tariff, electricity price etc.)</b>				
5.1. Who should the customer contact concerning questions or complaints about the invoice	TBD	TBD	TBD	TBD
5.2 Who informs the customer of procedures and status during the handling of an invoice errand and who provides feedback and solution for the customer?	TBD	TBD	TBD	TBD
5.3. Who should the customer contact concerning questions or complaints about the electricity price components (including taxes)		X		X
5.4 Who informs the customer of procedures and status during the handling of an errand concerning electricity price components and who provides feedback and solution for the customer?		X		X
5.5. Who should the customer contact concerning detailed grid tariff components (including taxes)	X		X	
5.6 Who informs the customer of procedures and status during the handling of an errand concerning grid tariff components and who provides feedback and solution for the customer?	X		X	

*TBD – To be decided once the future billing regime is decided*

### 3.6 Connection (new and change of connection)

For new connections (when building a new house or connecting an existing house to the electricity grid for the first time) the customer should contact the DSO for arranging a connection contract. The DSO is responsible for handling and informing the customer on the status of any complaint or inquiry that the customer has submitted to the DSO related to the connection. The DSO is also responsible for providing all relevant information to the customer and responsible for invoicing the customer. Although the DSO has also a responsibility to turn on the connection in the new consumption place, it should be noted that the customer should always contact a supplier to agree on a new supply contract for starting the supply. The DSO should inform the customer about this procedure when the customer is making the connection contract.

For any change of connection, such as upgrading the size of the fuse etc., the customer should contact the DSO. The change of connection has most probably some effect on the price of customer's network tariff and it might also require some technical adaptations which the DSO should take care of. The DSO is responsible of establishing an adjusted grid contract.

**Table 6. Connection (ne and change of connection)**

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier	DSO	Supplier
<b>6. Connection (new and change of connection)</b>				
6.1 Who should the customer contact to arrange a new connection to the grid?	X		X	
6.2 Who informs the customer of procedures and status during handling of errand?	X		X	
6.3 Management of errand	X		X	
6.4 Feedback and solution for customer	X		X	
6.5. Invoice the customer	X		X	
6.6 Installation issues	X		X	
6.7 Turn on/off connection	X		X	
6.8 Establish new or adjusted grid contract	X		X	
6.9. Arrange a supply contract for a new connection point		X		X

### 3.7 Quality of supply and unplanned outage

The DSO has ultimately the responsibility to take care of customers with quality issues. The DSO should be the primary contact point for customers since this is the best way to ensure that the customers reaches the party that are responsible for the quality of supply. This includes the obligation to provide feedback to inquiries and solutions to the customers. As long as the obligation to provide good quality of supply lies on the DSO, the supplier has little incentive to follow up on all Nordic DSOs on behalf of the customer so that the customer will receive proper solutions regarding these issues. On the other hand it is crucial that DSOs are in direct contact with customers so that they are in a good

position to assess the customers' needs and decide which steps to take in order to provide customers with a good solution.

Although the DSO is the primary contact point for customers, any party is allowed to act on behalf of a customer by power of attorney, as described in chapter 1.6. In this way, a supplier could act as a single point of contact for the customer. However, this does not relieve the DSO of its obligations towards the customers.

**Table 7. Quality of supply and unplanned outage**

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier	DSO	Supplier
<b>7. Quality of supply and unplanned outage</b>				
7.1 Who contact the customer or who should the customer contact	X		X	
7.2 Feedback for the customer	X		X	
7.3 Providing the solution for the customer	X		X	

### 3.8 Planned interruption of electricity supply

Also regarding planned interruptions, the DSO should be the point of contact for customers. Only the DSO has competence to handle customer inquiries regarding their planned network operations.

**Table 8. Planned interruption of electricity supply**

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier	DSO	Supplier
<b>8. Planned interruption of electricity supply</b>				
8.1 Who should the customer contact, who informs customer	X		X	
8.2 Feedback and solution for customer	X		X	
8.3 Planned outages (who should inform customer, how)	X		X	
8.4 What are the steps and who will carry on them when interrupting the supply (reminders, warnings of interruption etc)	X		X	

### 3.9 Disconnection due to non-payment or non-compliance

The DSO is responsible for the physical disconnection of customers who breaches the network or the supply contract. If the customer is in danger of being disconnected due to

non-payment, the primary contact point for the customer should be the party which has the claim against the customer. This may be the DSO or a supplier.<sup>12</sup>

**Table 9. Disconnection due to non-payment or non-compliance**

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier	DSO	Supplier
<b>9. Disconnection due to non-payment or non-compliance</b>				
9.1 Who contact the customer or who should the customer contact	X	X	X	X

### 3.10 Metering and meter value reporting

The DSO is responsible and should be the primary contact point regarding technical metering issues.

The DSO is responsible for metering and for providing metering data to the market, but the supplier should be the primary contact point for queries about meter values. The supplier should also provide feedback, but seeing that suppliers will have strong incentives to provide good customer service there should be no need to give suppliers an obligation to do so.

It will probably differ how and from whom a customer receives data on his actual consumption. This depends on the implementation of data hubs or other solutions for distribution of consumption data. An important prerequisite is that all suppliers must have equal access to metering data, which means that all suppliers will be able to provide actual consumption data to its customers.

**Table 10. Metering and meter value reporting**

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier	DSO	Supplier
<b>10. Metering and meter value reporting</b>				
10.1 Answer technical issues regarding metering	X		X	
10.2 Provide meter data to customers	X	(X)	X	
10.3 Answer queries about meter values	X	(X)	X	
10.4 Answer questions about meter switching and functionalities	X		X	

<sup>12</sup> In Denmark and Norway the supplier may not demand a disconnection of a customer due to non-payment or non-compliance.

*(X) = The obligation to inform customer lies on the DSO, but all suppliers should have equal access to meter data so that they easily may provide the same information to customers if they want to.*

### 3.11 Collection of taxes

(VAT, energy taxes, feed-in, emergency supply fees etc.)

The issue of collection of taxes is closely related to the issue of billing regime. In case of mandated combined billing by the supplier any taxes will naturally be collected by the supplier whereas in the case of separate billing each market actor will be responsible for collecting any taxes that are directly related to that company's business.

In general the customer should get information about the taxation and VAT from the part which is responsible for the tax and VAT collection.

There are different kinds of national tax related price components, such as electricity certificates, that must be indicated clearly on the bill. The contact point for questions or complaints regarding these types of tax related price components should primarily be handled by the supplier.

Since there to some extent are different taxes for different categories of customers even within the same country (the tax level could for instance be based on the location of the customer or how much the customer consumes) there is a need to classify the customers regarding the taxation. Which market actor that should be responsible for the classification will be studied by NordREG starting in in the autumn of 2011. In this study NordREG will also analyse which market actor that should be responsible for paying the collected taxes to the national tax authorities.

**Table 11. Collection of taxes**

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier	DSO	Supplier
11. Collection of taxes (VAT, energy taxes, feed-in, emergency supply fee)				
11.1 Classifying customers regarding taxation	TBD	TBD	TBD	TBD
11.2 Collect the taxes	TBD	TBD	TBD	TBD
11.3 Answer questions regarding the taxes	TBD	TBD	TBD	TBD
11.4 Several kinds of national tax related price components	TBD	TBD	TBD	TBD
11.5 Paying the taxes to the authorities	TBD	TBD	TBD	TBD

*TBD – To be decided in the planned NordREG study on taxation issues, which will be started during the autumn of 2011.*

### 3.12 Demand response

Demand response could be defined as this:

*Changes in electric usage by end-use customers/micro generators from their current/normal consumption/injection patterns in response to changes in the price of*

*electricity over time, or to incentive payments designed to adjust electricity usage at times of high wholesale market prices or when system reliability is jeopardized. This change in electric usage can impact the spot market prices directly as well as over time*

The customer is the key stakeholder in order for the full potential of demand response to be realised. In the customer interface it is therefore important that the power of choice is in the hands of the customer. This means that the main part of the responsibility in the customer interface should be handled by the actors competing in the free market so that the customer may choose the offer that is most suitable for him or her. The DSOs role in demand response should be as limited as possible and only provide some of the technical solutions that demand response schemes require (and only those issues which are regulated). The supplier has a key role in order to develop pricing formulas and demand response solutions that reflect the actual consumption pattern of the customer while the development of services and products by ESCOs<sup>13</sup> is likewise important to develop smart appliances, home energy management systems and software applications so that consumers are able to use any demand response schemes as efficient and easy as possible.

Regarding the responsibility of demand response issues (questions, complaints and feedback) in the customer interface the commercial issues should naturally be handled by the service providers (ESCOs and suppliers). Only questions or complaints related to the meter or the physical connection to the grid should be handled by the DSO.

**Table 12. Demand response**

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier/ESCO	DSO	Supplier/ESCO
<b>12. Demand response</b>				
12.1 Answer questions, receive feedback and complaints on commercial issues (including any technical device provided by the supplier or the ESCO)		X		X
12.2 Answer questions, receive feedback and complaints on meter and grid issues	X		X	

### 3.13 Micro generation

Micro generation in the form of small scale production of electricity at household level is anticipated to be more widely spread in the future. It is therefore important to also clarify the roles and responsibility in the interface between the market and these “prosumers<sup>14</sup>”. NordREG has found that grid complaints, enquiries and other issues regarding the physical connection, installation, change of connection, capacity in the net to handle the future input, reporting to the grid company what type of equipment that will be installed etc. is to be communicated between the customer/producer and the DSO.

<sup>13</sup> Energy Service Company

<sup>14</sup> Household electricity consumer who also produces electricity on a small scale level

NordREG foresees that it is likely that “total package services” may be offered by companies operating in the free market in which for instance one company may offer the customer to rent or purchase a micro production unit, install it, arrange all the communication with the DSO and also offer a buy/sell contract for a period of time. The service provider<sup>15</sup> will be responsible for handling the commercial side of micro production issues (such as contracts/agreements and compensation for load control).

**Table 13. Micro generation**

Areas of responsibility in the customer interface	Primary contact		Responsible party	
	DSO	Supplier/ESCO	DSO	SupplierESCO
<b>13. Micro generation</b>				
13.1 Answer questions, receive feedback and complaints on commercial issues (including any technical device or production unit provided by a commercial market actor)		X		X
13.2 Answer questions, receive feedback and complaints on meter and grid issues	X		X	

<sup>15</sup> A supplier or an ESCO (Energy Service Company)







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