NordREG
Nordic Energy Regulators

Harmonized supplier switching model

Report 2/2008

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Preface

Differences in national rules and practices in supplier switching were identified in the NordREG's report "The integrated Nordic End-User Electricity Market" as a significant regulatory obstacle for establishing a truly common Nordic retail market with free choice of supplier. Even if the supplier switching models of the various Nordic countries do not vary a lot, some relevant differences still exist. These differences may result in unnecessary delays in switching processes and hamper the suppliers entering other than domestic electricity markets.

Based on this NordREG has formulated in the Work Programme for 2007 the task to prepare a proposal for a harmonized supplier switching model.

NordREG recognizes that the concept of a common Nordic retail market includes several important issues that need to be analysed and solved. This report focuses only on processes between new and present suppliers and the DSO after the customer has signed a new supply contract until the start of supply. NordREG would like to point out that the report is limited in the sense that many other factors influencing the market design of a Nordic retail market are not mentioned in this report, but NordREG continues the work of market design of a common Nordic retail market in 2008.

To test and present the tentative proposals, and additionally, to offer to the electricity market stakeholders an opportunity to express their views a workshop was organised in Helsinki on the 13th of November 2007. NordREG also arranged a public consultation on the draft report in January 2008. NordREG appreciates all the comments and suggestions the stakeholders have given regarding to the harmonized supplier switching model, and NordREG has taken them into consideration during the finalization of the report.

The report of a harmonized supplier switching model has been prepared by one of two working groups under the headline Market design of the Nordic retail market. The participants in the group are:

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Summary

In this report NordREG has mapped the present supplier switching processes in the Nordic countries (excluding Iceland) and, based on the detected differences, proposes a harmonized switching model for the countries. The focus of the report is on residential and small business customers. In some issues it has not been easy to find a common solution that fits all the countries. For certain details both the benefits and drawbacks can be argued and in these situations efforts have been made to carefully analyse which objectives should be appreciated most.

Making a new contract and timeframe for supplier switching

NordREG suggests that the timetable for the switching procedure could be as short as possible and that the switch could take place any day of the week. NordREG also believes that 14 days should be the maximum time from making a contract to the switch actually taking place. To make the suggested timetable possible it is necessary to establish what kind of information should be given to the DSO when initiating the switch. This information should be determined by regulation.

To initiate the switch the residential or small business customers have to be in contact only with the new chosen supplier. The person making the supply contract being the same person who has the contract with the DSO, is not a critical point for harmonization at this point. But NordREG recognizes the advantage of this regulation and recommends that this should be harmonized at some point in the future.

It is important that each country has an arrangement for making relevant customer data about their national customers available, and that this information is easily accessible to all the Nordic suppliers without high expenses.

Data exchange between the market participants

NordREG suggests that there should be only one data format in use, but it is initially up to market actors to decide upon the appropriate format. NordREG also recommends that for ensuring the compatibility of data systems and messages there should be established testing systems for sending and receiving messages of common format preferably between the Nordic countries, or at least at national level at the beginning.

NordREG suggests that a new supplier should send a message on the supplier switch to the DSO as soon as a new contract has been made and at minimum 14 days before the planned start of supply. The DSO’s time limit for sending a confirmation message containing customer data to the new supplier should be no more than three working days allowing, however, some national exceptions during a transition period. The time limit should be calculated from the moment the DSO has received the message on the supplier switch from the new supplier. As regards the DSO’s message containing customer data to the old supplier, it should be sent no later than three working days before the announced switch date. NordREG also suggests that a cancellation message from the new supplier to

the DSO should be taken in use in all Nordic countries and it should be sent no later than four working days before the announced switch date.

There should be a common minimum set of information points that the messages between the suppliers and the DSO have to contain to be able to identify the customer, the contract and the installation address. There should be as little room for errors as possible.

Metering issues

NordREG recommends that the common message format for sending meter reading data should be decided among the industry. The meter reading itself should be done on the day of the switch because it gives the most correct consumption specification, but may also, in some cases, be read ± 5 working days from the switch. Estimated metering values should only be allowed in very limited situations. Deadline for sending meter reading from the DSO to the old and new supplier should be done, by the latest, 10 working days after the switch.

There should be no financial obstacles when it comes to supplier switching and therefore also meter reading. As a result it should not be allowed to have any meter reading fees in this regard.

NordREG suggests also that installation of AMR should be encouraged as well as the objective for more accurate meter readings.

Implementation

In order to implement the above mentioned harmonized supplier switching model it requires more or less changes in regulation in each country. For market participants it mainly requires changes in IT systems and procedures thus incurring costs that vary depending on the market participant. The market actors should also agree on technical issues like data formats.

It is important for the market participants that the harmonized regulatory framework exists before they can make changes in their IT systems. This also reduces the costs of implementation. Therefore it is crucial to start the preparation of the changes in regulation in each Nordic country at the end of 2008 or, by latest, at the beginning of 2009. Thus it is possible to have a harmonized regulatory framework by 2010.

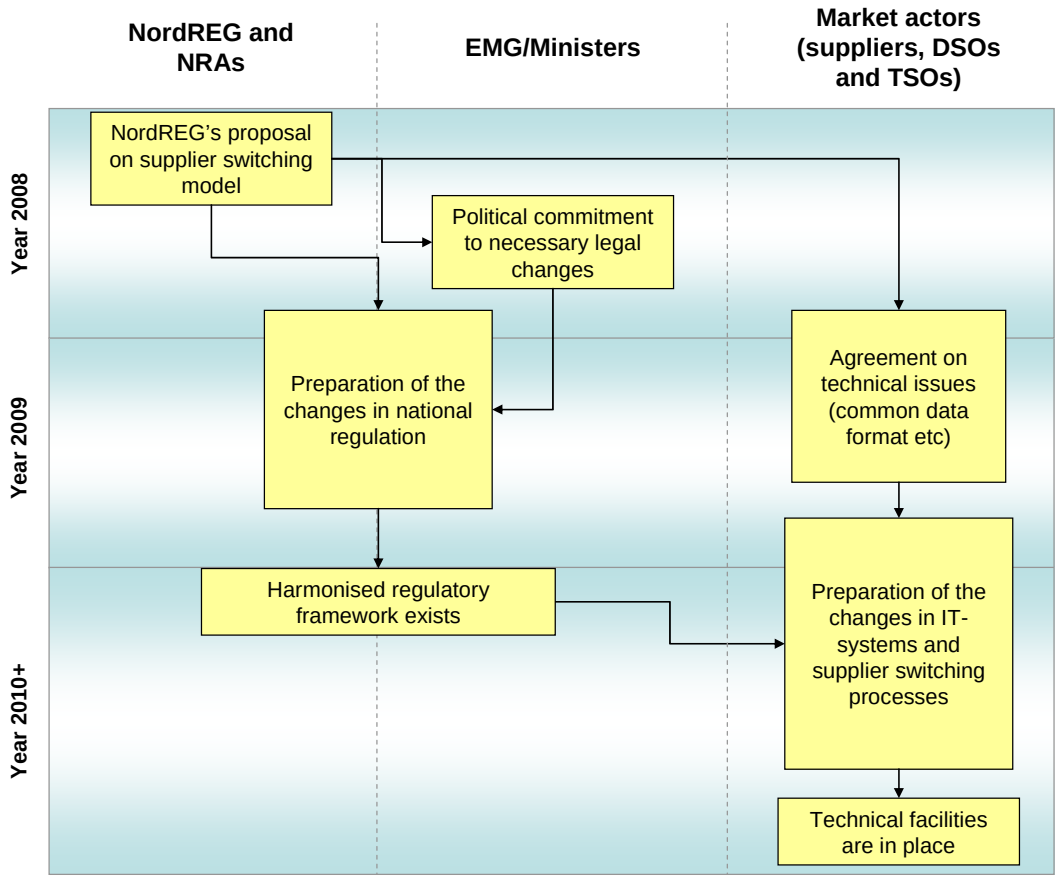


Figure 1 Tentative implementation process of the harmonized supplier switching model

1 Harmonized supplier switching model

NordREG's mission and common goal is to actively promote a legal and institutional framework and conditions necessary for developing the Nordic and European electricity markets. The specific strategic priorities of NordREG are to provide for a well-functioning Nordic conducive to establishing a common Nordic retail market with free choice of end-user supplier within the region. When trying to harmonize the Nordic routines for supplier switching into one model, all countries would have to make necessary changes in their routines. NordREG's concern is to see to that these changes are consistent with moving towards a more efficient and well functioning market: a market that minimizes opportunities for misuse of monopoly power, protects customers' rights while also encouraging market competition and innovation.

It should be noted that NordREG does not try to find solution to all obstacles to a harmonized model identified in this report. These are typically more technical barriers, like data format or testing system for message sending. NordREG believes that the most efficient solutions to these kinds of questions will be brought on by the industry itself. In this report NordREG will come up with suggestions and sketch a framework for a model, while still leaving some of the details unregulated. The report will only discuss the actions and measures concerning the actual supplier switching process. Thus, issues related to, for example, message sending in regards of a customer moving house or information to be given to a customer prior to switch or billing issues are not specified here, although they may have mutual impacts. These issues will be investigated more thoroughly in another context. Also, the issues that are subject to consumer protection laws or general contract laws are not dealt with in this report. For instance, possible disputes between a customer and a supplier concerning the validity of the existing contract or cancellation of the contract are among such issues.

Establishing a truly common Nordic retail market with free choice of supplier requires that the switching processes and rules should be harmonized between Nordic countries at least to some extent. Harmonization makes it easier for suppliers entering other than domestic electricity markets. Reliable, transparent and fluent switching practices decrease costs of all suppliers and other market participants from which also the electricity end-users should benefit.

When creating the harmonized model for supplier switching the following five principles should be taken into account:

1. Procedures for switching supplier should be as smooth, easy and quick as possible.

2. It is truly important that the distribution system operators (DSOs) are totally neutral towards all market participants in relation to supplier switching. They should have the responsibility over relevant customer data and act only as a coordinator for exchanging this data.

3. New suppliers have the best incentives to carry out switches as fluently as possible and they should therefore handle the switching process for the household or small business customer. It is also easiest for the customer to deal only with one market participant.

4. Meter readings should be as accurate as possible in order to have market signals function more efficiently. This means that instalments of smart meters should be

increased and having the meter actually read by the customer or DSO should be preferred to estimated values.

5. Customer's rights should always be protected. It is important for market functioning that the customers keep trusting the liberalised electricity markets.

NordREG has mapped the present supplier switching processes in the Nordic countries which are described in Annex.

Rules and practices do not vary a lot, but still some relevant differences exist. Differences in switching rules and practices create needs for country-specific operational processes, which decreases efficiency. Furthermore the differences make it complicated and costly for suppliers to enter other than domestic markets.

The identified differences in switching rules and practices could be divided into two categories: harmonization is necessary and harmonization is optional.

Some of the differences in switching rules and processes are seen as critical barriers for establishing a well-functioning common Nordic retail market. These differences should be removed. Some of the differences are not seen as a critical barrier for establishing a common Nordic retail market, but harmonization would be beneficial. The following tables depict the existing barriers ranked according to the division.

Table 1.1 Differences that are necessary to harmonize

CRITICAL DIFFERENCES	**HARMONIZED MODEL**
In Sweden and in Denmark supplier switching is possible only on the 1st day of the month.	Supplier switching is possible on any weekday of the month.
In Denmark there is a 30 days notice period before supplier switching.	Supplier switching is possible in 14 days notice period.
In Finland DSO may collect a meter reading fee from the customer if time from the previous change of supplier is less than one year.	No fees are allowed in relation to supplier switch.
In Denmark and Sweden there is not a common database or an information hub for metering point IDs.	A common way of automatically retrieving metering point IDs is in use in each country. All suppliers have access there easily and without high expenses.
In Finland processes for sending messages related to supplier switching are not legally binding.	Procedures for data exchange are included in binding regulation.
In some of the countries DSOs and suppliers are not bound to use both a certain data format and method for sending messages.	One electronic data format and method is used by all market participants.
In all countries content of messages and deadlines for sending them vary.	All countries have same minimum content of messages and deadlines for sending them.

Table 1.2 Differences that are optional to harmonize

OTHER DIFFERENCES	HARMONIZED MODEL
It is possible to cancel a contract in all the Nordic countries. The timetables of the cancellation periods are somewhat different.	Timetables regarding cancellation are similar.
In Finland no testing system for ensuring the compatibility of data systems and electronic messages exists.	One unique or at least national certifying process for testing is available and all the data systems are tested before taking them into use.
In Finland a present supplier may oppose the switch if it has a fixed-time contract with the customer.	A present supplier may not oppose the switch in any situation.
In Finland and Denmark different persons may act as a contracting party to a supply contract and a network contract to the same consumption place.	Only the same person can make a supply and a network contract to the same consumption place.

The harmonized switching model, as regards message sending, is presented in the figure below. Details and justifications of the choices are described in the following chapters.

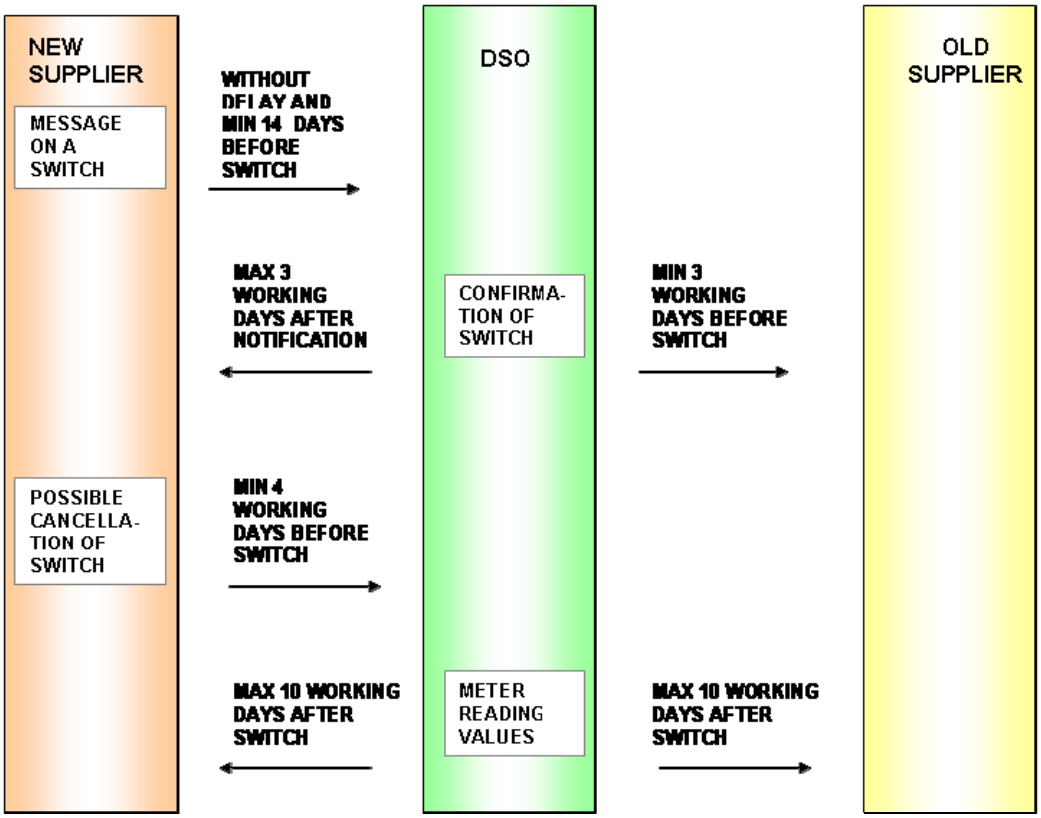


Figure 1.1 Harmonized switching model in message sending

1.1 Making a new supply contract

NordREG has identified that the switching process actually consists of two processes. One process concerns the customer's contact with the new supplier and the other process concerns between the new supplier, the DSO and the old supplier. We have found that it is very important to distinguish between these two processes.

In the first process the customer contacts the new supplier and a contract is drawn up. As part of the contract the parties agree upon when the contract will begin to apply. There is no regulation regarding the timeframe from when the contract is being made to the actual switch taking place. The supplier is an actor in a free, competitive market and has the right to sell electricity at the price and from a date on which the two parties agree upon. The second process is an area which is an object for regulation, namely the process between the new supplier, the DSO and the old supplier. When we refer to timeframes and switching processes in this report we are talking about this second process. Thus, NordREG's focus in this report will be from the point in time when all the customer data are available. The timeframe for the switching process as a whole is always calculated from the time when the new supplier informs the DSO about the coming switch.

1.1.1 Timeframe for the supplier switch

Timeframe from the first message from the new supplier to the DSO, to the actual supplier switch taking place varies between the countries. Below are the minimum timeframes from the new supplier sending information to the DSO to the actual switch taking place:

- Norway, 6 working days
- Finland, 14 days
- Sweden,13-16 days[1]
- Denmark, 1 month

These timeframes are regulated by law or regulation[2] in all countries except for Finland. There are circumstances when a longer timeframe is allowed for example when the contract is made in ample time before the actual switch is to take place. Mutual for the timeframes is that they are measured from the first information exchange between the new supplier and the DSO.

To some extent the differences in time tables are due to what kind of information that has to be available at the point of the message from the new supplier to the DSO. One could say that the shorter the timetable the more information has to be available, particularly concerning metering values. In Finland the timetable is 30 days if there has to be a meter change or new metering arrangements before the switch.

An important factor that has an influence on the timeframe of a switch is regulation regarding consumer protection. For example; when the contract is not made in person the consumer has a possibility to regret making a contract within two weeks after agreeing to the contract. This is relevant when making a contract over the telephone for example. In

[1] The timeframe varies depending on the length of the month. The latest time for reporting a change is the 15th of the month before the switch.
[2] In Denmark Market Regulations made by the TSO apply.

these situations, new suppliers have to also take into account that a regret period must end at least four working days before the switch date, so as to meet a deadline proposed in chapter 1.2.2.1 for sending a cancellation message to the DSO.

As far as the day of the actual switch there are some differences. The switch can only take place on the 1st of the month in Denmark and Sweden whereas the switch can take place any day of the week in Norway and Finland.

Mutual for the Nordic countries is that the household or small business customer only has to be in contact with the new supplier to be able to make a supplier switch. The customer has to terminate the existing contract with the current supplier, but a new supplier can also offer to the customer a possibility to terminate the contract with a power of attorney.

Recommendations

NordREG suggests that the timetable for the switching procedure could be as short as possible and that the switch could take place any day of the week. NordREG also believes that 14 days should be the maximum time from making a contract to the switch actually taking place. However, when a contract can be cancelled by a customer, new suppliers may have to set the switch date further than 14 days from making a contract as to send a possible cancellation message to the DSO in time. To make the suggested timetable possible it is necessary to establish what kind of information should be given to the DSO when initiating the switch. This information should be determined by regulation and not based on the recommendations of industry associations.

1.1.2 Possibility to make a supply contract

In Sweden the person who makes the supply contract has to be the same person who has the network contract with the DSO. This obligation can be helpful when identifying the customer and reduces risks of error when making a supply contract. In the other Nordic countries a supplier switch is not bound to a certain person but more to a metering point in which the supplier changes. Therefore, a customer may be a different person (e.g. a spouse) in the network contract with the DSO and in the supply contract with the supplier for the same consumption place. However, this is usually not recommended. In Denmark there is no direct contract between the customer and the DSO but instead there are some distribution terms in which the customer should know.[3]

In Finland and Sweden it is possible to make an oral contract, over the telephone for instance. If the customer wants to have a written contract he/she can demand this and the supplier then has an obligation to send the contract in written form. In Denmark and Norway the supply contract has to be written, thus oral contracts are not allowed. The customer can however make a contract over the internet. The written form is then upheld through an electronical signature.

In Sweden, Norway and Denmark the customer has the responsibility to make sure he/she is able to make the contract. The situation is a little different in Finland where the current supplier will check during the switching process whether the customer still has a valid contract with him and if so, has the possibility to oppose the switch from taking place. In all countries, however, the customer can make a new contract though he/she still has a

[3] See Annex for more information

contract with another supplier. The rules, concerning the relationship between the current supplier and the customer, are to be found in civil law.

Recommendations

NordREG suggests that the person who makes the contract with the supplier is the same as the person who has the contract with the DSO. At the moment NordREG does not see this as a critical point, but recognizes the advantage of this regulation and recommends that this should be harmonized at some point in the future.

As far as the differences in the concluding of the contract NordREG suggests that it is not necessary with a harmonization regarding this area of the switching process, at this point. The most important reason for this being that this part of the process has mainly to do with contract law. NordREG however believes that it is very likely that there is a need for harmonization sometime in the future.

1.1.3 Information about metering point ID

An important factor, to enable a smooth supplier switch, is easily available information. This is true in particular regarding the customer's metering point ID (delivery site ID). At present the Nordic countries have a somewhat different situation regarding availability regarding this information. The main rule being, in all cases, that the customer shall give information about the metering point ID to the new supplier. But if the customer is unable to give this information there are alternatives for the new supplier.

In Finland the supplier can search for this information in a nation-wide consumption place register carried out by the industry organisation. The register was opened in September 2007. During the first phase the access to the database will be free of charge for the suppliers and DSOs that are members of the association. After that a fee of approximately 150 euros per year will be charged by the association. Since the information in the data base is given by the DSOs on a voluntary basis, some consumption points may not be available. A supplier can also get the information free of charge directly from the DSO e.g. by e-mail.

In Norway there is from 1.1.2008 a web service called NUBIX[4] from which the new supplier can get information about the metering point ID. The DSOs are obliged, through regulation, to have relevant customer data available for searches through this site.

In Sweden the DSO is obligated to give this type of information to the new supplier free of charge. The new supplier should however have a letter of authority from the customer to get access to this information. Svensk Energi, an industry association, is now developing EMIX which is a hub for the DSOs and suppliers. EMIX 1.0 is designed to act as a switching board for messages sent by the stakeholders.

In Denmark the new supplier can get information about the metering point ID from the DSO free of charge. It is being investigated if a hub similar to the Swedish EMIX would be plausible to establish in Denmark.

[4] Norwegian Utilities Business Information Exchange

Recommendations

NordREG believes that it is of great importance for the suppliers to have correct information easily available to enable a smooth switching process. NordREG suggests that there should be a harmonized model available for how this exchange of information should be done. Furthermore it is important that each country has a point of information, for example a database, or a hub through which the information about the metering point IDs should be made available to all the Nordic suppliers without high expenses.

1.2 Sending information on a new supply contract

1.2.1 Message format

In all the Nordic countries both customer data and meter data are sent by Ediel messages. Ediel is a type of EDIFACT message.[5] These messages allow for standard communication of business information across companies and borders.

Given that Ediel messages are standard, all market actors have to use the same messages with the same content for the same type of market operations. Between the Nordic countries though, the content and the Ediel format used for different messages varies. Today the PRODAT (Product Data Message) message is used in Norway, Finland and Sweden to send customer data between DSOs and suppliers in a supplier switching process. In Denmark, the UTILMD (Utility Master Data Message) is used. Even though the PRODAT message is standardized, the content of the message is somewhat different in each country. When it comes to consumption data, the message MSCONS (Meter Service Consumption Report) is used in all countries. In addition Norway and Denmark use the UTILTS (Utility Time Series Message). As far as NordREG knows, the UTILTS and UTILMD are more advanced than the PRODAT messages, for instance making it possible to both transfer customer and economic data.

Without giving any advice here on what format should be used, NordREG will like to point out the importance of the message format to be the same. If DSOs and suppliers between countries shall communicate in an efficient and swift way the communication tools will have to be compatible. Seeing that format decisions are not primarily for the Nordic regulators to decide, NordREG finds that the industry (in close co-operation with the regulators) should agree on which type of messages should be used for customer data.

One important factor to implement a fluent supplier switching process is that the market participants' data systems for sending and receiving messages shall be compatible with the agreed common format of messages. For ensuring the compatibility of data systems and messages before taking into use there are testing systems in Norway and Sweden established by the TSOs. In Finland the industry association has planned to establish a testing system in 2008.

[5] EDIFACT is short for Electronic Data Interchange For Administration , Commerce and Transport. It is a standard developed by the United Nations.

Recommendations

NordREG suggests that there should be only one data format in use, but it is up to market actors to decide upon the appropriate format. NordREG also recommends that for ensuring the compatibility of data systems and messages there should be established testing systems for sending and receiving messages of common format preferably between the Nordic countries, or at least at national level at the beginning.

1.2.2 Content and timing for messages

The content of the Ediel messages are regulated to a varying degree in the Nordic countries. However, in no country are all details concerning the exchange of Ediel messages regulated by the regulator. Such detailed regulations would have been unnecessarily rigid.

If we look besides the differences in message format already mentioned, there are two other main differences in the interchange of customer and meter data between the Nordic markets to be spotted: differences in *content* and differences in *time limits*.

In the section below there will be a short summary of the information routines prior to the supplier switching in the four Nordic countries; Finland, Denmark, Sweden and Norway, as they are today, focusing on the differences that are obstacles to uniting the Nordic energy market.

Bearing in mind that one of the aims for the switching model is that *"the procedure for switching should be as smooth, easy and quick as possible"*, some proposals for harmonization and further work will be given.

1.2.2.1 Messages between new supplier and DSO

The new supplier informs the DSO about the requested switch. In all countries but Denmark is PRODAT Z03 used. Denmark uses UTILMD.

Time limits

In Sweden the PRODAT Z03 cannot be sent later than the 15th of the month prior to the switch and it is only possible to switch on the first day of the month. The switching process could then take up to a maximum of about 45 days, and a minimum of 15 days. Norway also uses the PRODAT Z03 to inform about the switch. The message containing the meter reading cannot be sent later than on the 6th day before the switch. There is also the requirement in Norway that the meter reading is sent before the switch. This meter reading can be sent together with the information about the switch or on a later day, but no sooner than 20 days ahead of the switch and never later than on the 6th day before the switch. There are no limitations as to what day of the month the switching can take place. The switching process in Norway could in theory be as short as 6 working days. For Finland the PRODAT Z03 is sent a minimum 14 days ahead of the switch and the switching day could be on any day of the month, which means that the switching process will take 14 days or more. Denmark does not use the PRODAT message, but rather the

UTILMD. It has to be sent at least 30 days ahead of the switch and the switch itself is only possible on the first day of the month. The switching process could then take up to a maximum of almost 2 months, and a minimum of 31 days in Denmark, depending on what day of the month the customer requests the change of supplier.

As we see, there are some huge differences in processing time for a supplier switch between the countries. The processing time of a switch is much longer in Denmark and Sweden than in Norway and Finland. This is mainly due to the limitation of possible switching days. Even though it might be necessary with some differences in processing time, for instance due to customer protection rules, best practice should be implemented in all countries in order to make the switching process more efficient. There are no technical limitations in Denmark and Sweden which makes it necessary to limit the possibility to switch to the first day of the month. It seems that it is only a question of regulation.

For all countries the DSO will have to confirm the requested switch and it also has to give out more information about the customer concerning expected annual consumption and final meter reading. The time limit for the DSO to do so is not the same in all the countries. Also the amount of information given back to the new supplier varies. A minimum base for the content of the information contained in DSO messages to new supplier should be established, but if there are minor differences in the reporting content it is not crucial. Difference in the time limit for this reporting though is a bigger obstacle when trying to harmonize the four Nordic markets.

If we look at Sweden, the DSO has a time limit of 3 working days *from receiving* the message about the switch, to confirm it and send information about the customer to the new supplier. In Finland the DSO has to confirm and send customer data to the new supplier at least 5 days *before the switch*. In Norway this confirmation and customer data have to reach the new supplier within 2 working days *from the DSO's receiving* of the message about the requested switch. Finally, in Denmark, there is a maximum time of only 2 hours *after the notification* of the switch for the DSO to confirm or reject it. For sending the customer data the DSO has 5 working days.

We see that there are some differences as to what the time limit refers to (date of switch and date of notification). NordREG thinks it would be preferable if the time limits had the same reference point and were of the same length. How much time is needed depends for instance on the possibility to check the received information manually. In the case of Denmark, the control of information is done automatically, and there is no time to check manually[6] for errors to find the cause of a rejected switch. If one finds that there is a need to have the opportunity to check error messages manually, one would need more than just a few hours.

[6] In Denmark after the rejected switch it is up to the new supplier to find the reason for the rejection.

Recommendations

NordREG suggests that a new supplier should send a message on the supplier switch to the DSO as soon as a new contract has been made and at minimum 14 days before the start of the contract[7].

NordREG suggests that the DSO's time limit for sending a confirmation message containing customer data to the new supplier should be no more than 3 working days allowing, however, some national exceptions during the transition period. Time limits should in any case be calculated from the moment the DSO received the complete message from the new supplier.

Content of message

There are not only time limits that are different between the countries when it comes to message sending. How much and what kind of information this message is required to contain differs somewhat between the four countries, for example in Norway, a message containing meter reading done by the customer (before the switch) has to be sent for the process to proceed. There should be as little room for errors as possible. With mainly numeric information, the controlling process could be automatic and thereby done quickly. For this to work, the messages should be standardized and in the same format. As long as the same persons are not required for a network and a supply contract there is no need for a customer ID in order to start the supply. Only one unique number, a metering point ID, is needed for identifying the consumption place in this case.

Recommendations

NordREG recommends that there should be a common minimum of information points that the message from the new supplier to the DSO has to contain to be able to identify the customer and the installation address. Suggested minimum information are:

- metering point ID
- supplier's balancing responsible ID
- date of switch

There should also be a common minimum set of information given by the DSO to the new supplier. It is important that the message contains relevant data as the following:

- consumption profile
- information about meter reading, i.e. whether it is done manually or automatically and at what frequency
- date of switch.

[7] Norway will continue with the current time limit of six working days

Cancellation

In all the Nordic countries when making a contract based on distance selling a consumer has a regret period of 14 days to tell the new supplier that he has changed his mind about changing supplier.

In other countries except for Finland there is a specific message for cancellation of a switch as well as the deadlines for sending these messages. In Denmark and Sweden a new supplier has to send a cancellation message to the DSO within 5 working days after receiving the confirmation message from the DSO. In Norway, as long as the new supplier informs the DSO about the cancellation of the switch no later than one day before the switch date, the customer will stay with his old supplier. If the announcement of the cancelled switch is later than one day before, there will not be a cancellation in the same sense. The procedure for this situation is not regulated, but the rule worked out by the Norwegian Ediel Expert group (NEE), is that the new supplier will be responsible to sort out the situation.

NordREG suggests that there should be a standardized way of cancelling an announced switch. This could be done by sending a defined Ediel message containing metering point ID, switch date and the information about the reason for cancellation. When making a supply contract with a consumer based on distance selling the regret period for the consumer is 14 days, and since the first message about the switch from the new supplier to the DSO is to be sent no later than 14 days ahead of the switch date, there will theoretically be time to call off the switch before it is executed even if the switch is to happen at the minimum time. This requires that the supplier has established routines for handling regrets from the potential new customers as soon as they come in. Of course the new supplier can announce a switching date earlier than 14 days ahead in order to have more time to handle potential regrets from customers.

There is some time needed for the DSO and old supplier to receive and react to the message from the new supplier about the cancellation. The DSO needs time to check and confirm this message and also most likely to send a cancellation notice to the old supplier.

The old supplier will get a message from the DSO about an oncoming switch no later than three working days before the switch date. If the cancellation message is sent from the new supplier to the DSO a minimum four working days or more before the switch, the DSO might not yet have sent the message about termination of contract with the customer to the old supplier. Thereby there will not be a need for the DSO to send any messages to the old supplier. As a consequence of this cancellation, the requested switch by the customer is abandoned and the customer will stay with his/her old supplier.

If the new supplier wants to protect himself from the tight time limit, in case a customer waits until the last days of his regret period before informing the new supplier, he can do so by setting the switch date further ahead than 14 days from making a contract.

Recommendations

There should be a standardized way of cancelling an announced switch. NordREG suggests that a cancellation message from the new supplier to the DSO have to be sent no later than four working days before the announced switch date.

1.2.2.2 Messages between DSO and old supplier

Messages from DSO to old supplier

There is not much information that needs to be sent from the DSO to the old supplier except information about the switch and termination date. After the switch has taken place the old supplier also needs to know the final meter reading. Same for all countries is that the DSO is the one responsible for sending this information. But we can detect some variances in time limits between the countries for sending out this information.

In Sweden the information about the switch and termination date has to be sent from the DSO to the old supplier maximum three working days after the DSO has received the information about the switch. For Norway it has to be sent three days *before* the switch date. For Finland, this information is sent maximum two days after the DSO has received the information about the switch. Finally in Denmark the DSO has to send the message/confirm the switch to the old supplier no later than two hours *after* the cancellation period. The cancellation period is five working days after the DSO has approved the switch towards the new supplier.

The confirmation and the switch date should not be given too close to the switch, because the old supplier should have some time to adjust its procurement. At the same time the DSO and new supplier both need time to check that the information given is correct, ergo the time limit cannot be too short.

Recommendations

NordREG suggests that the DSO should send an information message containing customer data to the old supplier no later than three working days before the announced switch date.

Suggested minimum information is:

- metering point ID
- date of switch.

Messages from old supplier to DSO

There are no messages transferred from the old supplier to the DSO for any of the countries except for Finland. In Finland the current supplier must send a notification about the end of supply to the DSO who can only then continue the switch. If a customer has a valid fixed-time contract with the current supplier the supplier may oppose the switch by sending a negative message to the DSO. However, a customer may proceed with the switch if he likes, but may then be liable for contractual penalties. The described procedure can be seen as an obstacle to switching since the old supplier should not influence in any way the customer's will to have a switch carried out. The practice also makes it possible for the old supplier to intentionally delay the switches by not sending the messages in due time to the DSO who cannot continue the switching process before receiving the confirmation.

On the other hand, this approach has been seen to protect customers from undesired contractual penalties for breach of contract. Many especially small consumers often do not make sure before the switch whether they have a rolling or a fixed-time contract. NordREG points out that also the suppliers have their own responsibility to keep their

customers well informed about the type of contract they have and about possible contractual penalties for breach of contract. Abolishing the present practice may cause more manual work if the suppliers want to find out whether a customer already has a fixed-time contract, in order to avoid any mistakes or unnecessary cancellations.

As the Finnish system with confirmation message from the old supplier to the DSO differs from procedures in other Nordic countries and has above mentioned downsides it could be advisable in the long run to abolish this practice to meet the requirements for harmonization. However, taking also into account the controversial aspects related to this issue it is not seen as a critical obstacle to harmonization since, additionally, this does not require any supplementary work from the potential non-domestic suppliers. Therefore, some national specifics could remain providing that they do not disturb the deadlines for other messages.

Recommendations

NordREG recommends that all Nordic countries have the same practices as regards different steps of data exchange. In the long run it is thus advisable to require that there is no need to have a specific message from the supplier to the DSO to confirm or oppose the end of supply. However, the use of such practice is not seen as a critical barrier to harmonization while some changes to make a switch more fluent in Finland are yet recommended.

As a midpoint solution the following change is recommended to be adopted in Finland to bring the practices closer to each other. After the DSO has sent a notification on the new contract to the old supplier the latter must react in two working days by sending the negative message if he has an existing fixed-time contract with the customer. If a supplier does not react in due time this is interpreted as a sign that there is no obstacle to start the new supply and the DSO would be responsible to carry out the switch after five working days from receiving the new supplier's notification.

1.3 Meter reading and sending meter information

1.3.1 Switching procedures with regard to meter reading

Today in the Nordic countries there are different kinds of methods of measuring the consumption of electricity. There are self metering, estimated metering and automatic metering (AMR systems) and in some cases manual metering where a person is sent out to meter the electricity consumption on behalf of the DSO.

This report is outlining a new harmonized model for supplier switching and therefore also outlining some common standards with regards to meter reading with a focus on the template end-users. The object in this harmonized model, with regards to meter reading, is to find a model which is most suitable for a Nordic common market.

There are several complex obstacles which need to be sorted out before a full harmonization can occur and an efficient switching procedure can take place. It is essential that the grid operator or the meter-service provider make the data accessible to all other authorised market players in a non discriminatory manner or else it will hamper a fully integrated Nordic market and the process of supplier switching will thus not be efficient. Furthermore the timeframes for the different actions with regards to meter reading and exchange of meter information should be compatible in all Nordic countries.

In other Nordic countries except for Finland there are no meter reading fees related to supplier switching in any case[8].

Responsibility for reading the meter

Today in all Nordic countries the responsibility lies within the DSO to read the meter. However, when it comes to supplier switching in Norway the end-user actually has a responsibility as well if the switch is to be carried out. In Norway, if the DSO has not received an acceptable reading or a reading at all, then there will be no switch. The NordREG does not recommend any changes regarding the responsibility for meter reading.

Use of estimations

Estimated values should only be allowed in very limited situations as they do not give an exact consumption specification. This may cause confusion to a customer and give the DSO some extra work if it turns out that their estimation is very wrong. It should therefore, only be in very limited and strictly defined situations where estimated values are a solution. It should though be kept in mind that as long as we have mechanical meters there will always be a need for estimations. It should also be noted that the use of estimations in turn saves DSOs' costs resulting from going out to read the meter, if a customer does not read it himself.

In Norway the meter has to be read before the switch and the DSO has to accept meter readings done 20 to 6 working days before the switch day. On special occasions, if agreed upon by the parties, there could be an estimated value. If there is an unreasonable cost or inconvenience for the DSO to collecting the meter value, the latter can be stipulated. In Denmark estimations are a last solution, but it is sometimes used in situations when self reading does not occur. In Finland estimations are allowed but only if the end-user has not, within reasonable time, provided the meter reading or if the end-user has no access to the meter. In Sweden estimations are also only allowed under very specific conditions. There is thus unity among the Nordic countries in that the use of estimations instead of actual meter values during the supplier switching process should be limited as much as possible. If automatic meter reading is installed, there will be no need for estimations, and it would therefore not be a problem either if the end-user cannot self-read his meter because of not having the access to it.

Timeframe for reading the meter

The meter reading itself should preferably be done on the day of the switch, but may also in some cases be read ± a few days from the switch. This means that self reading or distance metering through AMR should preferably be done on the day of the switch and that it is sent back to the DSO before the deadline.

In Sweden the timeframe for reading the meter is within 5 days before until 5 days after the switch. In Norway the timeframe is within 20 days before the switch until 6 days

[8] In Denmark though there can be a meter reading fee, but only in very rarely situations. For further information see the country specific annex under Denmark.

before the switch. In Finland the meter has to be read between 7 days before or 7 days after the switch. Lastly, in Denmark it is up to the DSO when the meter has to be read. Based on this, NordREG suggests that the timeframe for reading meter could be harmonized, that the meter should preferably be read on the day of the switch, but may also in some cases be done ± 5 working days from the switch.

Timeframe for sending the meter values

In Sweden meter values have to be sent no later than 10 days after the switch. In Norway the final meter value is sent to the old supplier no later than 3 weeks after the switch. In Denmark the DSO has 5 weeks from the date of switch to send the final meter reading to the old supplier and the DSO does not send the actual consumption specification to the new supplier. Finally, in Finland the meter reading should be sent no later than 10 days after the reading took place.

NordREG suggests that the deadline for sending meter values from the DSO to the old and new supplier should be done by the latest 10 working days after the switch. This deadline should be the same in all Nordic countries and agreed upon by the market actors and the regulators.

Norway, Sweden and Finland use the MSCONS and in Finland PRODAT messages are used in certain cases for this. In Denmark, the UTILTS is used. As before, the format and specifications of the messages should be the same in each country.

It should also be noted that with the help of AMR the existing problems related to reading meters and timeframes for doing that will be mainly solved.

Recommendations

NordREG recommends that the common message format for sending meter reading data should be decided among the industry. The minimum content of messages and timeframe for sending messages, including meter values, should also be harmonized. Estimated metering values should only be allowed in very limited situations. The meter reading itself should be done on the day of the switch because it gives the most correct consumption specification, but may also in some cases be read ± 5 working days from the switch. Deadline for sending meter reading from the DSO to the old and new supplier should be done, by the latest, 10 working days after the switch.

There should be no financial obstacles when it comes to supplier switching and therefore also meter reading. As a result it should not be allowed to have any meter reading fees in this regard.

1.3.2 Use of Automatic Meter Reading systems

Nordic countries have begun to establish the AMR (Automatic Meter Reading)[9] systems either nationally or regionally. There are several reasons why the AMR system should be

[9] Technology that enables remote meter reading through different ways of communication (telephone lines, powerline carries, GSM, GPRS, radio).

preferred instead of the present meter reading options that are normally used for template end-users in the Nordic countries.

First of all AMR will bring several advantages to the consumers. With the AMR the end-users get much more accurate metering which may give them good incentives for reducing the electricity consumption.

It is also very important to have good quality metering to secure the well functioning of the electricity market, especially if supplier switching is to be made quickly and efficiently. It is of course very important to note, that if the AMR system is introduced, then the quality of the data flow will be at least as good as or almost certainly better than the data flow from the present manual meters. This is because when using AMR you, to a large extent, avoid manual misreading and the lack of meter reading. With the AMR system it is possible to choose the most efficient way of sending data from each metering point so it will be received by the DSO without any noticeable data loss. This means that AMR can secure a high data quality. It is important that the smart meter could be read on call from the DSO when necessary to make it possible to switch a supplier on any weekday of the month.

In regards to competition among energy retailers the AMR system will increase the competition. This is because it will make it easier for end-users to switch between retailers and they can now compete on offering end-users different electricity prices that apply at different times of the day.

The AMR system will also bring advantages to the DSO. The system will reduce the administrative costs, when the manual reading stops. When the data is sent automatically instead of manually it can furthermore shorten the time-limit for sending the final consumption specification from the DSO to the old supplier. The reason for this is that there is no need to wait for e.g. self metering when using AMR. There are thus no requirements that the end-user actively has to take part in the meter reading.

The AMR system is thus making it easier and more efficient for the market players to send data messages to the other players, which in general will make it easier to handle the supplier switch more efficiently. If all Nordic countries at some time have installed AMR, then standard requirements for a Nordic AMR system should be developed in close co-operation with market actors and regulators. This is to establish functional and efficient market rules that should be followed by all Nordic countries. [10]

Naturally it comes down to a cost-benefit analysis whether it is financially advantages to introduce the AMR or not at this present time. The present meter reading system has the advantage that they are already installed and no further costs are demanded, which means that the network tariffs are not going up. On the opposite site when the meters are to be replaced anyway, the extra cost for a smart meter is rather small compared to the gains. With the new AMR system there is furthermore no need for estimated values and manual self reading which prolongs the supplier switching process. Furthermore all other benefits like, fewer data errors, less manual labour etc. will not be realized with the present manual meter reading system.

Nordic countries have already begun to establish the AMR systems either nationally or regionally. The ultimate goal for the energy market should be to harmonize the Nordic

[10] AMR Forum has been established by Nordic Energy Research to encourage a cost efficient implementation of AMR solutions in the Nordic countries.

electricity market. If all countries in the future are using smart meters, then they could have the same data flow on the same platform in regards of metering and sending data which is a step towards one single energy market.

Recommendations

It is a very timely and cost consuming operation to establish the AMR system in all Nordic countries, and it is not realistic to make installation of this system mandatory in the near future. Bearing in mind the advantages of these systems NordREG, however, recommends that AMR installations should be promoted and AMR systems introduced to the legislator in all Nordic countries.

2 Implementation of the harmonized supplier switching model

2.1 Required changes in each Nordic country

2.1.1 Denmark

2.1.1.1 When supplier switching is possible

In Denmark there is a 30 day notice period before supplier switching is possible. It also has to be done on the first of the month. It would probably be realistic technically to harmonize the time limit so the notice period is the same in all Nordic countries. It will require a dialogue between the market actors and energinet.dk to find a solution to the various technical problems that can occur when implementing a new notice period. It is the technical aspects that are time consuming because changing the market regulation would be a rather fast process if the market actors can agree on the common goal.

2.1.1.2 The contract

In Denmark there is no distinct contract when referring to the network contract. In Denmark we use a network user agreement, which is posted on the website of the DSO. It is therefore not an agreement which has to be signed and returned. In the other Nordic countries it is a real contract that has to be signed by certain persons. These differences were found not to be a problem.

New market regulations in the fall of 2007 will transpose the end-users' right of cancellation into the Danish market regulation.

2.1.1.3 Meter reading

In Denmark self metering is most common, and if that is not possible then estimated metering is often used. Some companies have begun to set up smart meters within their network area, but no national plan has been composed. Naturally it will take several years if all metering points have to be smart metered in the future, due to the fact that it is costly and time consuming to establish.

2.1.1.4 Sending messages

Below the possibilities for changing different time limits will be outlined:

- In Denmark the DSO has to confirm the switch to the new supplier no later than 2 hours after an approved announcement about the switch. (Step number 5 in the Danish supplier switching model).
  - To expand the time limit to, for example, 1 or 2 days would change it from being a quick process to being an unnecessary rather slow process and

prolonging the supplier switching process. This is because it is done automatically.

- In Denmark if the new supplier finds out that the switch has not been made to the right metering point, then the supplier has to cancel the switch within 5 working days after the approved announcement. (Step number 6 in the Danish supplier switching model).
  - It would be difficult to shorten the 5 day period because a potential error sometimes has to be discovered manually and that can not always be done with a shorter time limit. Perhaps with better IT-systems it is possible to bring down the time limit but there needs to be a time span where errors can be detected manually.
- In Denmark the supplier can request a consumption profile at the DSO. The request has to be taken care of within 5 working days.
  - This time limit could be made shorter because all the data is collected and needs only to be transformed into excel files and then sent out to the supplier. How short the time limit can be made is subject to a dialogue between Energinet.dk and the market actors. It has to be done free of charge to the supplier.

2.1.2 Finland

2.1.2.1 Meter reading fees

Existing legislation allows that a DSO may collect a meter reading fee from a customer who switches supplier more often that once a year. A harmonized supplier switching model provides abolishing this provision and requires an amendment in the Electricity Market Act.

2.1.2.2 Binding force of procedures

Processes and deadlines for sending messages regarding supplier switching are mainly based on the recommendations of the industry association. Regulation exists only for supplier’s responsibilities to give information to a balance settler or a DSO on the start and end of supply. In order to ensure that all market players are using the same rules as regards all the necessary data flow and deadlines, binding regulation is needed. A more comprehensive decree on data exchange covering these issues is being prepared to be given by the Ministry of Trade and Industry in the near future.

2.1.2.3 Data exchange

In Finland the old supplier sends a notification to the DSO informing whether it is possible to terminate a present supply contract. Normally, the only reason for opposing a switch is that the customer has a fixed-time contract with the old supplier. It has been recommended that this data exchange should, in the beginning, be altered and finally abolished.

Standardized cancellation messages and timeframes for sending them are not defined in the Finnish regulation or in the recommendations by the industry association. These procedures, as proposed in this report, should be established by the legislation.

Some deadlines for data exchange between DSOs and suppliers need to be slightly revised according to the harmonized model. As regards a new supplier's responsibilities to give information to a balance settler or a DSO on the start of supply, the deadline set out in the present decree by the ministry is 10 days before the start of supply. This is proposed to be replaced by 14 days before the start of supply. The change is already implemented in the recommendations by the industry association.

According to the present practices the DSO confirms a new supply to a new supplier five days before a suggested starting date for the contract. This is proposed to be revised so that during the transition period the deadline is five working days and after that three working days. The time limits are calculated from the point of time when the DSO was informed of a new contract by a new supplier.

At present, the meter should be read in ± 7 days from the switch and meter reading values should be sent to the new and former supplier, at the latest, 10 days after the reading took place. The first deadline is proposed to be changed to ± 5 working days from the switch and the second deadline to 10 working days from the switch, at the latest.

The changes mentioned in this chapter could be taken into account when preparing the above mentioned new decree on the data exchange.

2.1.2.4 Testing system for sending messages

At the moment no standardized testing system for ensuring the compatibility of data exchange between the different data systems exists. A proposed obligation to market participants to test the compatibility before starting the data exchange requires a regulation that could be included in the decree on the data exchange.

2.1.3 Norway

Given changes as a result of harmonization, there are some of the routines that are different in Norway from some of the other countries, and thereby targets for possible change.

2.1.3.1 Timing of sending messages between DSO and suppliers

Any changes in the time limits for sending messages would imply changes in regulation, as all the timing of message sending is written down in the regulation. The time limit today for the DSO to send the final meter reading to the new and old supplier is three weeks in Norway. This is suggested reduced in the model to 10 days.

2.1.3.2 Responsibility for meter reading

The DSO has the responsibility for checking that the meter reading is correct. It is regulated that all customers with an electricity use of less than 100 000 kWh per year has to read their meter and report it to the DSO via the new supplier before a switch is made. This timeframe for meter reading is suggested to ± 5 days from the switch.

2.1.3.3 The contract between supplier and customer

It is regulated that the contract between the supplier and the customer must be in writing. The contract can be in electronic format, but not done orally over the phone.

2.1.4 Sweden

2.1.4.1 When supplier switching is possible

A major difference, compared to Finland and Norway, in the Swedish switching process concerns when a switch can take place. It is only possible to change supplier on the 1st of the month and the message from the new supplier to the DSO has to be sent on the 15th of the month before the switch. The timeframe refers to the calendar rather than to specific number of days. This is regulated in a subsidiary law. There are no obvious technical obstacles to harmonizing the regulation regarding the switching day and the fixed date for the message sending. This would require changes in primary and secondary law.

2.1.4.2 The contract

The contract between the customer and the supplier is governed by the electricity act, general contract terms[11] and contract law. In Sweden this means that the legislator has given the consumer the responsibility, in a large extent, to handle issues regarding the contract. This is most obvious concerning the termination of the contract. The contracts are largely made orally, over the telephone for example, but can be made in written form - if the consumer so wishes.

There is a contract between the consumer and the DSO. The supplier can only sign a contract with the person who has the contract with the DSO. NordREG suggests that this should be harmonized at some point but is not critical to change in the initial phase. Therefore Sweden does not have to make any changes in regulation regarding this.

2.2 Costs of implementation

It is very difficult to estimate exact costs of the implementation of the harmonized supplier switching model.

Costs of implementation are mainly caused by the necessary changes in IT systems of market actors. These costs could be substantial for individual actors. On the other hand, due to the development of the electricity market, there is reason to believe that the IT systems will be updated regularly anyway.

The requirement on how soon a harmonized platform for the common Nordic end-user market shall exist affects also the cost of implementation. Costs could be reduced by creating the harmonized regulatory framework first. Thus the market actors will have clear rules before they have to start making changes in their IT systems and supplier switching processes.

[11] Allmänna avtalsvillkor, agreement between the industry association and the consumer agency

2.3 Timetable

2.3.1 Denmark

All the above changes are subject to changes in the Danish market regulations, which are produced by Energinet.dk, in accordance with Order nr. 1463 of 19/12/2005. Changes in the market regulations will take from 6 months up to several years depending on the complexity with regards to national legislation and technical obstacles and the market actors' willingness to agree upon the changes.

2.3.2 Finland

A proposed amendment in the Electricity Market Act is expected to take from one up to two years and preparing and implementing a new decree on the data exchange from six month to one year. Based on the estimations the changes could be implemented by 2010.

2.3.3 Norway

In general it is to be expected about 6 months from submitting a proposed set of corrections for a public hearing until it is approved. Then again the actors in the market need time to adjust to the new set of rules. How much time it requires depends on how drastic the changes.

2.3.4 Sweden

Regarding adaptability of the Swedish supplier switching model there has to be a legal process before changes can take place. This process could take up to a couple of years depending on what the priority of the legislation will be. Based on estimation, changes could be implemented by 2010.

3 SUMMARY OF THE RESPONSES TO THE CONSULTATION

NordREG arranged a public consultation on the draft report on harmonized supplier switching model on the 11th of January 2008. Ten responses were received from the following stakeholders: Finnish Competition Authority, Nordenergi, Finnish Energy Industries, Fortum Oyj, Vattenfall Verkko Oy, Vattenfall Sähkönmyynti Oy, Energinet.dk, Statnett SF, TietoEnator Forest & Energy Oy and Bergen Energi.

All stakeholders share the view that the harmonization of supplier switching process is important and beneficial to a well-functioning Nordic retail market. Most of them also see that regulatory changes and even strong participation of the regulators in creating a common Nordic market are needed for effective harmonization. Nevertheless, a close discussion with the industry and other relevant parties is vital. No crucial or large amendments to the content of the report were presented, but some clarifications for details were requested. A general opinion is also that the market model as a whole should be clearly defined and that the process of supplier switching should be seen as one part of the whole development in the Nordic and other European countries.

The Finnish Competition Authority sees that the work which is done towards an integrated Nordic retail market including the central issue on harmonization of supplier switching is very important from the competition viewpoint. Competition will increase when national markets are integrated into one common market as consumers will have more suppliers to choose from, and the suppliers' margins may fall as a result of competition from a larger number of companies.

Nordenergi states that the development of operational models and routines within a limited area, like change-of-supplier procedures, should be done with a top-down approach, after first defining the market model. Open interfaces between different existing IT-systems should be possible as an alternative to entirely new systems. All stakeholders should agree on using one data format and standard messages, within a framework set by the regulators. If the time limit for carrying out the change-of-supplier procedure is too ambitious, the need for IT-support will probably exceed a reasonable level. Regarding data hubs, a common Nordic market model should not be prejudiced towards any system as long as the system efficiently identifies delivery point IDs and the demand for compatibility is taken care of. Nordenergi believes that aiming for a harmonized regulation by 2010 may be overambitious. After the regulatory framework has been settled, the industry should have three to five years to fully implement the model. Nordenergi sees that a cost-benefit analysis would be highly beneficial and that NordREG should cooperate closely with the industry before planning details for the retail market. It is important to keep a close eye on the development in other EU-countries, but also ensure that the Nordic countries will not be subject to additional major changes in the supplier switching process.

Finnish Energy Industries (ET) refers to and supports the common views of Nordenergi and focuses in its statement on specific Finnish viewpoints. Besides supplier switching,

ET wishes to see a more detailed overall road map for harmonization. They suggest establishing a Nordic retail forum for co-operation which should also cover other areas than data exchange. ET sees that a proposed cancellation procedure means, in practice, that in remote contracts supplier switching takes minimum 25 days and thus makes it impossible to change the supplier as soon as possible. In addition, ET states that requirements for minimum information of messages should be determined after the market model and all processes are modelled. If it is seen necessary to define minimum information at this stage, ET wishes to point out that supplier's balancing responsible ID and information on how meter reading is conducted and at which frequency is not needed in Finland today. Concerning the suggested change to the Finnish procedures (chapter 1.2.2.2) regarding the old supplier's notification to the DSO, ET sees that this demands automatic processes in message sending and that technical functionality in the data exchange is critical for the information exchange to work. Abolishing the old supplier's notification to the DSO about the fixed term contract may in the long run cause problems from a customer protection point of view. It is important that this kind of development does not make it unattractive for suppliers to offer fixed-time contracts.

Fortum Oyj considers it beneficial if the report could have described how the process for implementing a harmonized supplier switching fits into a more detailed overall road map. For co-operation between different stakeholders a Nordic retail forum could be established. Fortum finds the proposed schedule challenging and thinks that longer transition times are needed for some of the features requiring AMM. The requirement for a higher degree of automatisation could be further emphasized in the report. It should, in addition, be assessed whether the Swedish EMIX-solution could be utilized in the other countries. Regarding more detailed comments on the report, Fortum proposes, among other things, that the possibility to switch supplier any day of the week should be coordinated with the development of the settlement procedures. Fortum also requests clarification regarding time frames in the suggested cancellation procedure and information related to identification of delivery site. Fortum has also questioned if the information content of messages could be more extensive and they support limited use of estimated meter values, but a transition period is required for implementation of AMM.

Vattenfall Verkko Oy and **Vattenfall Sähkönmyynti Oy** propose that impacts on settlement and regulatory changes should be analyzed. Likewise, what impact the Eurelectric "Retail Market Model" proposal has on the Nordic market model and the costs to reach a harmonized supplier switching in the Nordic region should be analyzed. Vattenfall supports a customer oriented perspective regarding the proposals on starting a new contract. On the other hand, from a customer point of you, they see it somewhat problematic that the same person should be the contracting party in both the supply and network contract. The customer should have the right to decide which family member is signing the contract. A common message format should be regulated after consultation with the industry. Suggested cancellation messages will decrease unnecessary data exchange, but extend the period for concluding the supplier switch. Vattenfall also points out that the report does not suggest how long in advance a contract between supplier and customer can be made. If contracts are made well before existing fixed contracts are due, the customer might forget the new contract by the time it comes into force, and there might also be some risk connected to the DSO's storage of this information. Vattenfall, in addition, suggests that the DSO could send a notification to the old supplier three working

days after the switch has been reported. As it comes to implementation Vattenfall expects that the authorities will consider the consequences of these new requirements, especially in the light of additional costs. Regarding the suggestions in chapter 1.2.2.2 Vattenfall Sähkönmyynti Oy, as a supplier, wants to emphasize the importance of protecting the customer from breaking his fixed-term contract without being aware of it. It is also important that the processes do not make it unattractive for suppliers to offer fixed-term contracts.

Energinet.dk proposes that other processes for a common Nordic retail market than supplier switching should be addressed. A harmonized solution for situations where a customer moves and simultaneously changes a supplier is important also. A strong interference from the regulators is needed for defining some issues e.g. choosing a common data format or creating a data hub, as it may take a long time for the market actors to agree on these issues. In any case, harmonization of a common message format will be expensive. Energinet.dk also asks for clarifications about certain issues mentioned in the report, for instance, what happens if the customer regrets after the suggested deadline for cancellation and what information, besides metering point ID's, will be available in the proposed national data base or hub. They also suggest that the announced time of 14 days notice period mentioned in 1.1.1 could create some time problems, especially around the holiday season, since all other time limits in the report are given in working days.

Statnett SF states that the draft report describes a good start for a common market. For managing the relevant customer data Statnett believes that the NUBIX solution used in Norway is the best and most efficient solution with low expenses. Regarding the data format NordREG should challenge Nordel together with the industry to take a leading role in that work. Likewise, consumer organizations could be challenged to consider both customer protection and the responsibilities for customers. Statnett sees that the time for a new supplier to send a message on supplier switch could be less than 14 days before the start of the contract. Statnett points out that a proposed time frame for meter reading together with the 14 days notice period could, in some cases, force the customer to read his meter twice for the same switch. This is not a very customer friendly solution. The use of date of birth is mandatory for customer identification in Norway which practically means that for an automatic identification of the customer in a switching process, a supply and a network contract have to be made by the same person. Statnett also points out some specifications regarding cancellation procedures in Norway.

TietoEnator Forest & Energy Oy emphasizes the importance of understanding end customer's situation and motivation for supplier switching over national borders. They also point out that harmonization of procedures may require some significant changes in business processes, IT systems and system architectures and that the development cycle of IT systems should be taken into account when deciding upon the schedule for harmonization. The final decision on the regulatory framework should be done only after there is an agreement on technical issues. TietoEnator believes that after the decision, a period of 18-24 months should be reserved for preparation of changes in IT systems. TietoEnator questions how it could be achieved an agreement on technical issues by the industry alone in about one year time and what forums or industry consortia will be made responsible for reaching this kind of agreement. In this work, also IT suppliers must be

heavily involved. Furthermore, new technologies, for instance XML-based formats should be considered instead of EDIFACT.

Bergen Energi states that the possible harmonization throughout the whole of Europe should be kept in mind when developing a model for the Nordic markets. In particular Bergen Energi emphasizes the importance of independent suppliers in the market. Survival possibilities for such actors should be taken into account to a great extent. Regarding more detailed comments, Bergen Energi does not see the need for a time frame longer than six working days for supplier switching. Addressing of the messages for data exchange could involve a problem as a common identification system does not exist in the Nordic countries. There should be an international, unique code, identifying the customer. An EAN/GS1 code should be set as a part of the information provided. Bergen Energi suggests that a timeframe for reading and sending the meter readings could be set between 20 and 6 days before the switch and could be substantially shorter when AMR is in place. Bergen Energi sees that, to a certain extent, regulations and guidelines regarding market behaviour as well as sanctions have to be established by legislation and supervised by the regulator. The importance of neutrality of DSOs is also underlined.

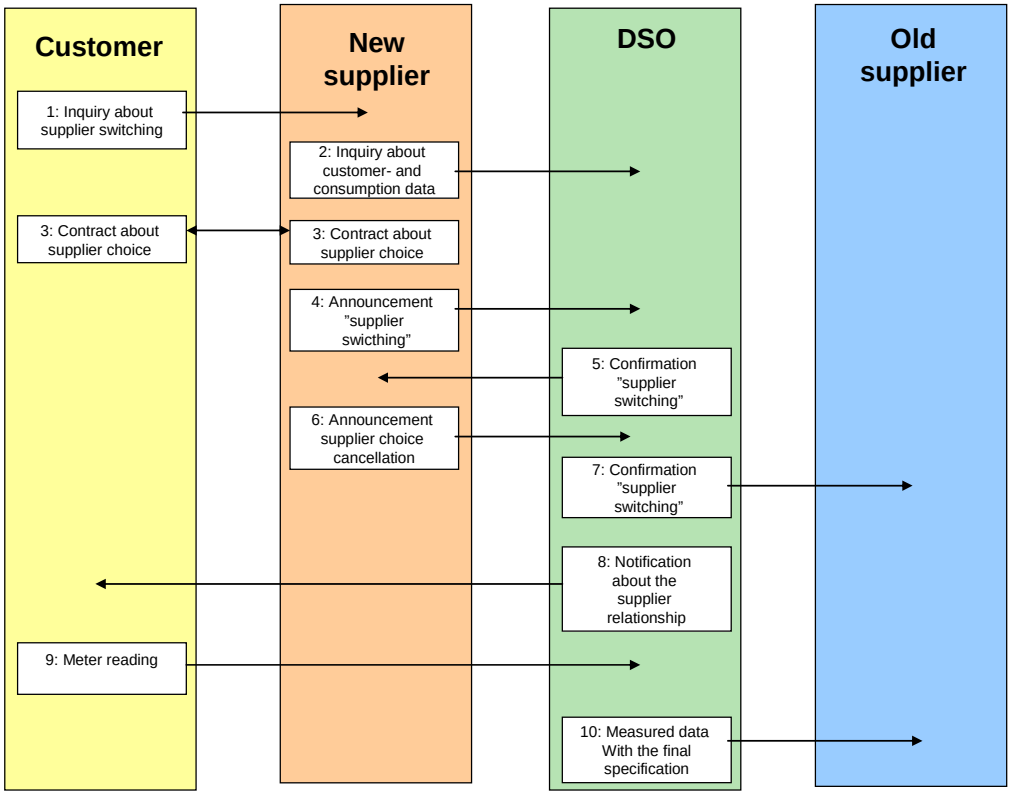
Annex

The present switching models in the Nordic countries

Denmark

In Denmark there are about 3 million template customers and 40.000 industry customers with grid access. In 2003 2, 25 % of the template customers made a supplier switch, and in 2006 the number was only approx. 1, 25 %.

The customer may switch supplier on a 30 days notice to the end of a coming month. The switch is without expenses for the customer according to paragraph 6 in the Danish Electricity Supply Act. It is always the supplier that contacts the DSO about the supplier switch. It is not allowed for the customer to give that kind of information to the DSO.



Making a contract

A customer has an inquiry about a possible switch to the new supplier. The new supplier can make an inquiry about the consumption from the metering point and the consumption profile. All this data is to be received free of charge from the DSO. Then a contract is

made and signed between the customer and the new supplier. The supply contract has to be written down. It is possible to enter a supply contract electronically but a contract in paper will be sent to the customer to be signed and returned. For making a switch the customer only needs to be in contact with the new supplier.

In Denmark there is not a distinct contract when referring to the network contract. In Denmark a network user agreement is used, which is posted on the website of the DSO. It is therefore not an agreement which has to be signed and returned.

Information on a new contract sent by a new supplier

Messages are sent as Ediel massages, and these messages are tested so the data systems can understand each other. There is a test in 2 steps for the Ediel messages. First there is a test with the TSO and the IT-supplier, where the functionality of the system is tested. Then there is a test at the supplier, where it is done in a more realistic operational environment, where the Ediel conversion is tested over some weeks.

The new supplier announces the supplier switch to the DSO by sending an Ediel message (change of supplier). The announcement of a supplier switch must be made a least 1 month before the completion date, and always by the 1st of the month. E.g. if a switch is to be effective on May 1st, the announcement has to be done in March.

In Denmark there is no central register where the market actors can find the metering point ID. A register will perhaps be established in the future. Today the customer can find his own metering point ID on every invoice sent from the DSO.

Information on a new contract sent by a DSO

The DSO sends an Ediel message (approved / rejected) to the new supplier. The DSO confirms the switch no later than 2 hours after an approved announcement. The DSO can also reject the supplier switch, with these reasons:

- The metering point cannot be identified.
- Not approved supplier.
- Requested completion date not within deadline.
- Not approved balance responsible.
- New supplier is already the supplier.
- Metering point is blocked, e.g. because of:
  - Switch already announced to the completion date
  - Metering point inactive.

If there is more than one announcement in one day to the same metering point, the first announcement is accepted.

If the switch is approved from the DSO then the DSO also sends basic data back to the new supplier. It is now the responsibility of the new supplier to control, that the switch has been made for the right metering point. If this is not the case, the new supplier has to cancel the supplier switch within 5 working days after the approved announcement. The cancellation is made by an Ediel message (annulment of transaction).

The DSO sends a confirmation about the supplier switch to the old supplier. It has to done after expiry of the cancellation period. More specific the DSO has to inform the old supplier about the supplier switch no later than 2 hours after the cancellation period. It is made by an Ediel message (Change of supplier).

The DSO notifies the customer about the approved switch. If the customer informs that the change has been made by a mistake, the DSO will contact both suppliers for a cancellation of the switch.

Meter reading and sending meter information

It is the responsibility of the DSO that a meter reading is made. Normally self reading is used. The customer has an obligation to read his meter, and in theory, to read it on the day of the switch. If the customer does not read the meter, the DSO can, through the bailiff's court demand access, or they can estimate the consumption. The DSO would rather not do the estimation as it can give them a lot of extra work, if it later turns out that the estimation was wrong. If the DSO needs to demand access there can be a meter reading fee because the DSO sends out a technician to the reading.

The DSO sends the final consumption specification, so the old supplier can settle the accounts. It is done by an Ediel message (Change of supplier). The DSO has 5 weeks after the switch to send the final consumption specification.

The new supplier has the responsibility to inform the balance responsible about the new metering point.

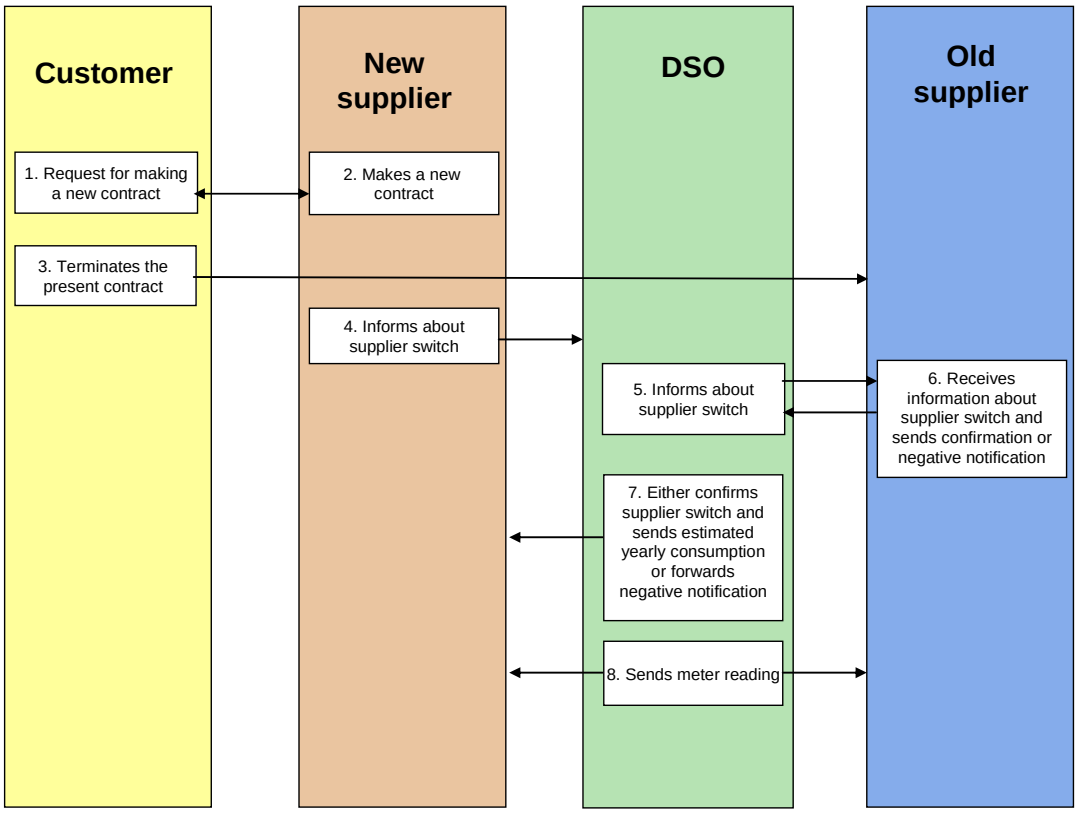
Cancellation

A customer has a right to cancel a contract within his regret period of 14 days when the contract is made over the internet. The time of regret runs from the signing of the contract among the parties. The new supplier can cancel the switch within 5 working days after the approved announcement of the switch which is given by the DSO. When a cancellation is made it also implies that the contract with the new supplier and the customer has been cancelled.

For Denmark it has not been possible to show a table for the content and deadlines with regard to the messages sent between the market participants.

Finland

There are about 3 million electricity users in Finland. In 2006, approximately 4% of all customers made a supplier switch. Statistics from the first four months of 2007 show that switching activity continues to be at the same level.



Making a contract

To start a switching process a customer needs to contact only the new supplier for making a new supply contract and terminating the present one. A customer may, if he likes, also contact directly a current supplier in order to terminate the existing supply contract.

A supply contract can be concluded either orally, in written form or electronically. Contracts shall, however, always be drawn up in writing if a contracting party so requires. If the supply contract has not been concluded in writing, the supplier must afterwards provide the customer with information on the contract and on the prices and other terms applied to the contract (confirmation notification).

If it occurs that the contracting party in the network contract and in the supply contract for the same consumption place is not the same person, it is advisable to bring both the contracts under the same name but that is not mandatory.

Information on a new contract sent by a new supplier

Rules for transferring information that are described in the following paragraphs are mainly based on the recommendations of the industry association. As regards the content of the various messages there is not yet any common testing system to ensure the compatibility of messages between different data systems. However, some plans and arrangements are underway to establish a testing system by February 2008.

When drawing up a new contract a supplier needs to know the customer's metering point identification. If the supplier does not know that from before it can, at first, try to find it from the nation-wide consumption place register. The register has been taken into use in September 2007 in order to enhance supplier switching. It is carried out by the industry association and includes following information:

- DSO
- Identification code for metering point
- Address of metering point
- Date for last updating

DSOs should announce and maintain the correct data in the register by updating the data at least once a month. The register is open to all suppliers. In the first phase, however, the access to the database is free of charge to the members of the industry association only. It has been planned that after first two years a membership fee of approx. 150 euros will be collected from all suppliers and DSOs participating in the system. It has been estimated that the register covers about 2.5 million of 3 million consumption places. As the register is based on the voluntariness of the DSOs information of all consumption points is not available. In such cases the supplier may inquire the necessary data from the DSO.

It is possible to switch supplier on any day. The new supplier sends, without delay, a notification to the DSO informing of the new contract (PRODAT message Z03). The notification must be sent, at the earliest, three months and at the latest 14 days before the contract comes into force. If making the new contract does not require a notice period of any existing contract the DSO must be informed about the new contract at the latest 10 days before. When there is need for a new metering arrangement the DSO must be informed 30 days before the contract comes into effect. The information transfer described in this paragraph is also partly enacted in the legally binding decree. The main difference compared to the industry's guidelines is that, according to the decree, the notification to the DSO must be sent at least 10 days before start of supply.

Information on a new contract sent by a DSO

When receiving the notification about the new contract the DSO shall forward this information to the present supplier without any delay and at the latest in two days (PRODAT message Z05).

If the current supply contract can be terminated the current supplier sends to the DSO a notification about ending the supply (PRODAT message Z08[1]). If there is an obstacle to terminate the existing supply contract the current supplier sends to the DSO a notification about continuing the supply (PRODAT message Z08[N]).

In practice, the only situation where the current supplier is entitled to send the negative message Z08[N] informing of the obstacle to a new contract is that the current supplier has a valid fixed-term contract with the customer. If the timeframe between the date for a suggested new contract and the date for a termination of the current contract is 30 days at the maximum the current supplier should notify the DSO of the first possible day for termination of the current contract. Message Z08[1] or Z08[N] shall be sent to the DSO ten days before the start of the suggested new contract.

After receiving a notification from the present supplier the DSO informs the new supplier whether the new supply can be started (PRODAT message Z04[1] or Z04[N]). The confirmation message or negative notification shall be sent to the new supplier five days before a start of the suggested new contract. With a positive notification the DSO shall also send a figure of estimated yearly consumption.

Meter reading and sending meter information

It is not mandatory by law to read the meter when a customer switches supplier. There exist, however, certain prerequisites for DSOs to use estimated meter values. Estimations are allowed only if the customer has not provided the meter reading to the DSO in a reasonable time set by the DSO or if the customer has no access to the location of the meter.

If the meter has to be read the DSO is, in the first place, responsible for it by doing it itself or using outsourcing services. It can also be agreed that the customer self-reads his meter. According to the industry's guidelines the meter has to be read 7 days before or after the supplier switch. The DSO sends the meter value to the new and old supplier using the PRODAT message Z11, at the latest 10 days after the meter reading took place. However, for an hourly read metering point with over 3x63 A, MSCONS message is used to transfer meter readings. It is possible for the market participants to agree that MSCONS message is also used for smaller hourly metered consumption places.

If the meter needs to be changed to another meter in connection with supplier switch the DSO sends the data on the new meter and the meter value to the new supplier (PRODAT message Z10) at the latest 10 days after the meter change.

The DSO may collect from a customer a fee for having to read his meter if customer switches supplier more often than once a year.

Cancellation

On distance selling a customer may cancel the contract in a regret period of 14 days. A new supplier informs the DSO about the cancellation of a switch. There are no standardized cancellation messages in use or deadlines for sending this kind of message. The new supplier has to use other ways of communication (e.g. fax or e-mail).

From whom to whom	Type of message	Content of message	Deadline

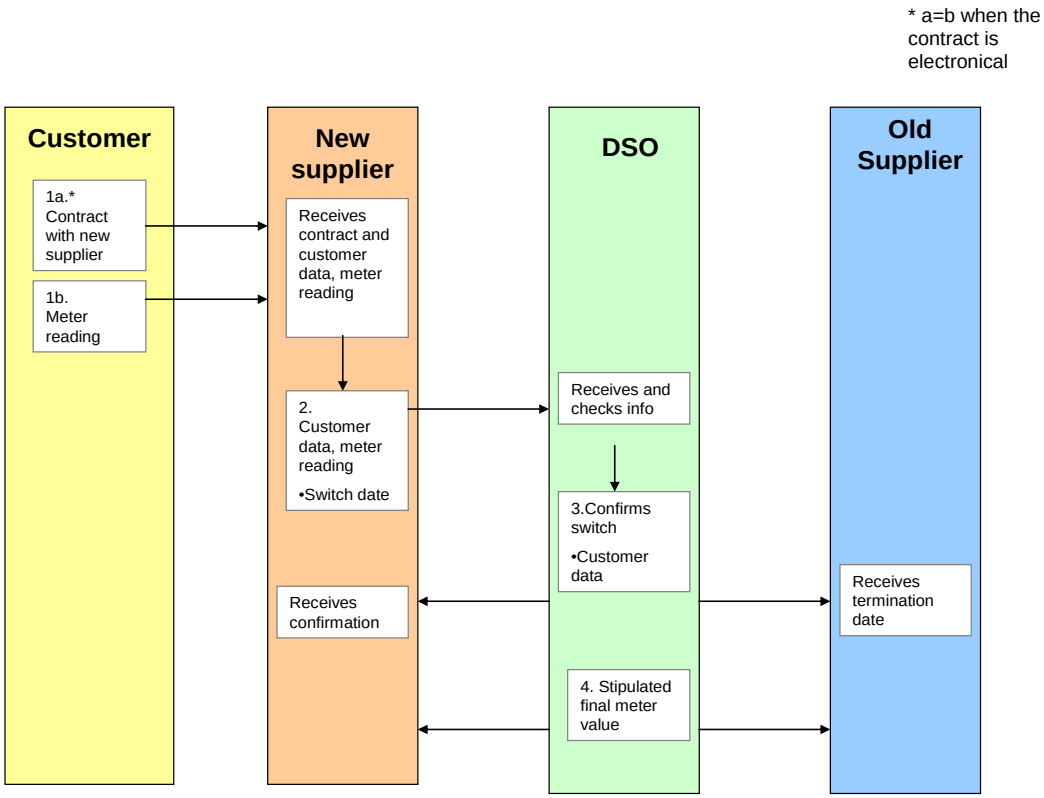
New supplier -> DSO	PRODAT Z03	Use case reference Metering point ID and address New supplier ID and contract number Country and net area codes Proposed starting date of supply Invoicing mode	14 days (30 days if new metering arrangements are needed) before a start of new contract
DSO -> current supplier	PRODAT Z05	Use case reference Metering point ID Current supplier and contract number Country and net area codes Proposed starting date of supply	2 days after receiving Z03
Current supplier -> DSO	PRODAT Z08[1] or Z08[N]	Use case reference Metering point ID Current supplier and contract number Country and net area codes End of supply date (not required for Z08[N] if over 30 days from ending date of current contract to starting date of new contract)	10 days before a start of new contract
DSO -> new supplier	PRODAT Z04[1] or Z04[N]	Use case reference Metering point ID New supplier and contract ID Country and net area codes For Z04[1] also: - Name of the DSO customer - Date of start of supply - Supply timing zone ID - Customer profile ID - Invoicing mode - Estimated yearly consumption - Estimated annual balance energy - Fuse size	5 days before a start of new contract

		- Number of the meter - The number of the digits - Meter constant For Z04[N] also: Date of end of the current supply (not required if over 30 days from ending date of current contract to starting date of new contract)	
DSO -> new and current supplier	PRODAT Z11[1] or Z11[3] (used for consumption places with load profiles or max 3x63 A with hourly metering, for latter also MSCONS possible) For over 3x63 A hourly metered consumption places MSCONS	Use case reference Metering point ID Meter number Supplier and contract number Country and net area codes Metering period begin date For Z11[1] also: - Customer profile ID - Meter reading, begin - Estimated yearly consumption - Estimated annual balance energy - Meter constant For Z11[3] also: - Metering period end day - Metered consumption - Meter reading, begin and end - Settlement energy	10 days after meter reading
DSO -> new supplier	PRODAT Z10[12] (used when meter is changed in connection with supplier switch)	Use case reference Metering point ID Meter number New supplier Current contract number Country and net area codes Metering period begin date New timing zone Customer profile ID Fuse size Estimated yearly	10 days after the date of meter change

		consumption Estimated annual balance energy Meter reading, begin The number of the digits Meter constant	

Norway

In Norway there were about 2 300 000 residential customers and 270 000 industry customers at the end of 2006. About 11,9 % of the household customers made a supplier switch in 2006, while about 19,4% made a switch in the year of 2003 which was a peak year for switching. In Norway the supplier switch is free of charge for the customer.



Making a contract

The customer will initiate a switch of supplier by contacting the new supplier and signing a written contract with him. The contract between the parties does not have to be signed in person but could have an electronic form. In this scenario the customer fills in all information needed for the switch (normally including meter value) on the web form and agrees to the legal issues by clicking ok and sending the web form contract. If the customer signs a contract with a new supplier on i.e. a stand on a mall, he does not know

his meter value, and he sends this information on a later stage. The new supplier handles the next steps in the switching process and the customer does not have to be in contact with his old supplier nor the DSO. The customer who signs the contract with the supplier does not have to be the same person who holds the contract with the DSO, even if both contracts are for the same metering point address. In practice though, this is not very common.

Information on a new contract sent by a new supplier

In Norway the customer can at any time decide to switch supplier and the switching process could take place on any day of the month. The new supplier will need information from the customer about: name, postal code, date of birth or organization number, meter reading and also the metering point ID. The new regulation in Norway states that all the DSOs will have to make available, relevant customer data, for an internet search service. This web service is called NUBIX (Norwegian Utilities Business Information Exchange) and is a solution for all the suppliers to search for the customers metering point ID in the DSO's data base. Thus, if the customer does not know his or her metering point ID, it can be retrieved by the new supplier through a search at the web site.

After the request for supplier switch, the new supplier will, without delay, send information about the new contract, starting date, date of birth or organization number and metering point ID. Between 20 and 6 days in advance of the switch, the new supplier sends the meter reading to the DSO.

Information on a new contract sent by the DSO

The DSO is responsible for checking the customer data together with the meter reading. If ok, the DSO confirms the switch by sending a message to both new and old supplier. The new supplier will in addition get key information and consumption data for the metering point/ customer. The DSO has 2 days to send this confirmation and information of customer data back to the new supplier. For confirmation of the meter reading, the DSO has 3 days. The information about the customer and the switch date has to be sent to the old supplier no later than 3 days before the switch date. What the messages between the DSO and new and old supplier should contain and the time limits for these messages are all regulated by law.

Meter reading and sending meter information

It is the customer's responsibility to read his meter and report back to the new supplier (or directly to the DSO if the customer prefers). The new supplier passes on the meter reading (value) to the DSO. The meter reading is mandatory and regulated by law and only for installations without metering (like street light) or if there has been an agreement between the parties about estimation, should there be stipulated a value done by the DSO. For metering points with automatic reading the DSO will collect the meter value on the switching day. There are no metering fees related to supplier switching.

It is the DSO's task to control if the meter reading is correct, and then stipulate the meter value at the date of the switch. If the DSO finds that the meter value from the customer is incorrect the DSO will report back to the new supplier and tell the new supplier to do the meter reading again (if the customer has reported directly to the DSO, the DSO contacts the *customer* to get a new reading). The last day for reporting a correct meter value is on the 6th day before the switch and it cannot be reported earlier than 20 days before the switch date. The maximum time of 20 days is set to shorten the gap between the meter reading and the switch date. Since the final meter reading takes place before the switch, the DSO stipulates the value at the day of the switch. With no more than 20 days between stipulation and latest meter reading, the stipulation will be quite accurate.

If the DSO has not received an acceptable reading or no reading at all by the 6th day before the announced switch date, there will be no switch (at least not on the requested date). This is not seen as a cancellation of contract (done by the DSO), but rather as that the contract is not completed until the reading is reported.

Finally, the DSO has to report meter value to both the old and new supplier, no later than 3 weeks after the switch.

Cancellation

A customer has a right to cancel a contract within his regret period of 14 days. The time runs from the signing of the contract between the parties. As long as the new supplier informs the DSO about the cancellation of the switch no later than one day before the switch date, the customer will stay with his old supplier. If the announcement of the cancelled switch is later than one day before, there will not be a cancellation in the same sense. The procedure for this situation is not regulated, but the rule worked out by the Norwegian Ediel Expert group (NEE), is that the new supplier will be responsible to sort out the.

The DSO can stop the switch from happening on the announced switch date if there is no approved meter reading or no meter reading at all sent in by the customer or new supplier by the sixth day before the switch. As mentioned earlier, this is not seen so much as a cancellation of contract as of a postponement of the switching date.

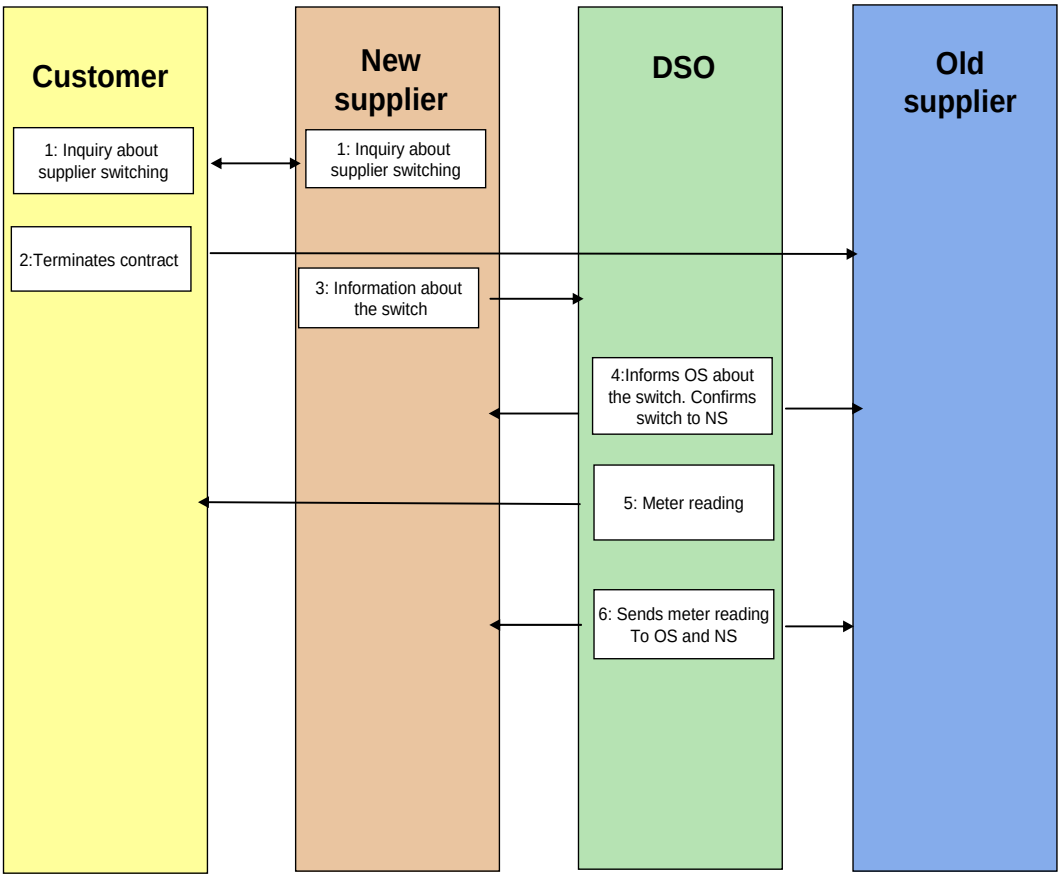
	Type of message	**Content of message**	**Deadline**
New supplier -> DSO	Z03	Metering point ID Date of delivery Customers date of birth or organization number Postal code	The supplier can find the metering point ID at the NUBIX web service run by TSO Statnett.
	UTILTS	Meter reading	20 to 6 working days ahead of the switch

	UTILTS	If the customer moves or acquires a new metering point: Customer’s name and address	maximum 15 working days after start up date
DSO -> new supplier	PRODAT Z04	Confirmation of customer data Metering point ID Meter number Date of delivery The installation's expected annual volume, The settlement method used (adjusted system load profile or hourly metering), Priority (prioritised or disconnectable installation), The end user's name, postal address and installation address, Invoicing address, if the invoicing address is different from the end user's postal address. Information about whether the household is required to pay value added tax. If the metering point is settled on the basis of adjusted system load profile, the notification shall also include: -Meter and/or settlement constant, -Number of digits in the meter's counter, -Date of the first periodic meter reading, -Frequency of meter reading.	2 days after the received information about the request
	UTILTS	Confirmation of meter reading value	3 days after the received meter reading
	MSCONS	Meter value at switching date	No later than three weeks after the switch
DSO -> current supplier	PRODAT Z05	The notification shall include: Metering point ID End user's name and postal address	After the meter reading is accepted but no later than three days before the switching date

	MSCONS	Supply contract termination date Meter value at switching date	 No later than three weeks after the switch
DSO ->new supplier if the meter reading is not accepted	Negative PRODAT ZO4	Same as in PRODAT Z04	If no meter reading is sent by the supplier or customer: 5 days before the switch. If meter reading is not accepted: No later than three days before the switch

Sweden

There are approximately 5,2 million household customers in Sweden. According to a survey made by Statistics Sweden[12] 32% of the household customers changed their supply contract during 2006. 24 % of these customers changed their contract but stayed with the same supplier, the remaining 8 % changed supplier.



[12] SCB, Omförhandling och byten av elavtal 2006

Making a contract

The customer has the responsibility to check if he/she is able to make a new supply contract. If there is a valid contract the customer must contact his old supplier before making a new contract. This is however no prerequisite for being able to make a new contract, the switch will still take place. A switching procedure can therefore take place with the customer only having to deal with one party, the new supplier.

The customer contacts the new supplier or is contacted by the new supplier. This contact can be made in person, by phone or by e-mail. They agree upon making a contract which can be oral or written. If the customer wants a written contract the new supplier is obligated to make a written contract with the customer. According to general terms of contract, made by the industry and the consumer agency, a written confirmation should be sent to the customer as soon as possible. The customer making the contract must be the same person who has the contract with the DSO.

Information on a new contract sent by a new supplier

Information about the metering point ID has to be displayed on the customer's bill from the DSO. The customer then gives the new supplier the necessary information. The new supplier informs the DSO about the switch and also checks to see if the customer has a contract with the DSO.

Information on a new contract sent by a DSO

The DSO informs the former supplier that the switch is taking place. At the same time the DSO confirms the switch with the new supplier. It is only possible to switch supplier on the 1st of every month.

The flow of information between the new supplier, the DSO and the former supplier must be in an EDIEL-format. An EDIEL-contract is made by the parties with the TSO. The content of the information between the parties is regulated in subsidiary law[13], made by The Energy Markets Inspectorate. The TSO is responsible for testing the technical systems.

Meter reading and sending meter information

The DSO is responsible for doing a meter reading, within five days before or five days after the switch. If the customer does not have a smart meter the reading can be done by a person from the DSO or by the customer. Under specific conditions it is allowed to make an estimation. This regulation is binding through subsidiary laws. There are no metering fees related to the switch.

:[13] Mätföreskrifter STEMFS 2007:5

Cancellation

The new supplier may cancel a switch. This cancellation message has to be sent to the DSO within the 5th working day after receiving the confirmation message from the DSO.

From whom to whom	Type of message	Content of message	Deadline
New supplier -> DSO DSO -> new supplier	Z03, subtype L	Ediel-ID, new supplier Ediel-ID, DSO Metering point ID Area ID (områdes ID) Ref. to new contract Ediel-ID, balancing responsible Customer ID Customer name/address Cause for change, new/switch Start date for delivery After check of information in Z03,L – complete/incomplete	At the latest the 15th of the month before the switching month. Only possible to switch on the first day of the month, at 00.00. Customer must be same person who has the contract with DSO. Within 30 minutes after receiving Z03, L
DSO -> new supplier	Z04, Subtype L	Confirmation of switch Customer's name, address Metering point ID Identity of measuring values Confirmation of the date for switch Estimated yearly consumption	Within three working days after receiving Z03.
DSO -> old supplier	Z05, Subtype L	Message customer has a new supplier Old suppliers EDIEL-ID DSO's EDIEL-ID Metering point ID Area ID Balancing responsible EDIEL-ID Cause of change Last date for delivery	Within three working days after receiving Z03.

DSO -> new supplier and old supplier DSO -> customer	MSCONS message	Meter reading Date for switch Cause for the change New supplier's name Metering point ID Area ID Meter identity	10 days after the switch, at the latest. 15 working days after the switch, at the latest
New supplier -> DSO	Z03, Suptype LK	When a customer moves in	The day the new customer moves in.
New supplier -> DSO	Z03, Subtype C	Cancellation of switch	The 5th day after receiving Z04.

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