



# Electricity customer in the Nordic countries

Annex 1-3, Status Report Retail Markets 2016



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# **Annex 1 - Complaints and queries**

# 1. Complaints and queries in the Nordic countries

NordREG believes that complaints and queries are an important customer activity. It is crucial for customers to have access to efficient complaint handling and get correct answers to their queries. A high number of queries and complaints to the national regulator (NRA) may indicate that part of the market is hard to understand or that there is a discontent. At the same time, a high number of queries and complaints shows that customers are active and know where to turn.

In Denmark, Norway and Sweden the NRA's are the main responsible authorities for the retail electricity market. This applies to Finland as well, but the Finnish Competition and Consumer Authority has a shared jurisdiction with the NRA regarding specific retail market issues, namely contractual matters. This can also be partly seen in the other countries. For example, both the consumer agency and the competition agency are responsible for parts of the Swedish and the Norwegian retail market.

All of the Nordic NRA's have certain obligations to handle customer complaints, follow price development and approve the method for balance responsibility contracts. All NRA's, except DERA, are able to make secondary regulations. The NRAs in the Nordic area have somewhat differing roles and responsibilities regarding consumer contacts. In some cases, the NRA's are responsible for collecting a large number of data and, in other cases, it is another authority that has this responsibility.

According to the EC Consumer Markets Scoreboard, many Nordic customers complain about electrical services.

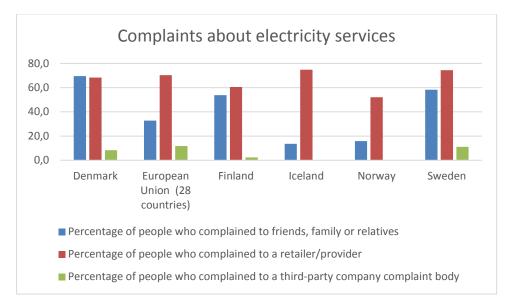


Diagram 4, Complaints about electricity services in 2015, according to the EC Consumer Markets Scoreboard (%)

Customers in the Nordic countries complain about different issues. For example, prices and tariffs cause many complaints in Sweden and Finland, but are not as common in Norway. Issues related to metering cause many complaints in Norway. This is much less frequent in Sweden and Finland.



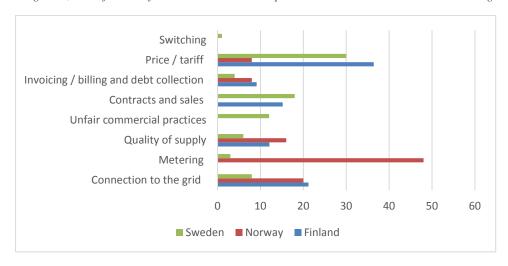


Diagram 5, Classification of household customer complaints addressed to NRAs in 2015 according to CEER database (%)

It is clear that many complaints from customers to the Nordic NRAs about the electricity market concern network issues. In Sweden, network prices and regulation dominate complaints to the NRA (63 % of complaints in 2015). At the same time, 12 % of complaints to the single point of contact concerned the grid. 25 % of complaints to the Norwegian ADR (Elklagenemnda) concerns metering errors and 21 % power outages. A number of customers also turn to the Finnish Energy Authority (EV) with complaints about connection and network access charges, quality of supply and metering.

Here is an overview over roles and responsibilities for consumer contacts in the energy markets in each country.

# 1.2 Complaints and queries - Denmark

Danish Energy Regulatory Authority (DERA) handles and oversees prices as well as terms and conditions for customers in the 'natural monopolies' within the electricity, natural gas and district heating sectors. DERA also regulates certain retail prices for electricity and monitors price developments in the retail market.

The Energy Supplies Compliant Board handles complaints regarding the purchase and delivery of energy services from energy companies to consumers. Electricity, district heating, natural gas and gas for cooking are all within The Energy Supplies Complaints Board's area of competence. Consumers must complain directly to their supplier first, before contacting the board. There are no statistics on complaints and queries about the electricity market available in Denmark.

# 1.3 Complaints and queries - Finland

In Finland, customers contact both the Energy Authority and the Competition and Consumer Authority regarding energy related complaints and queries. Most complaints and queries are registered with the Competition and Consumer Authority. The Energy Authority only registers written complaints regarding suppliers and DSOs, not phone calls or written queries. However, depending on the situation and circumstances, certain written queries other than complaints may also be registered.



Table 7, registered complaints and queries about electricity markets<sup>1</sup>

	Energy Authority	Finnish Competition and Consumer Authority
2013	90	2,233
2014	83	2,806
2015	62	2,110

Customers that contact the Finnish Energy Authority (EV) complain about connection and network access charges, quality of supply, metering, inconsistencies in invoicing and general complaints regarding the supplier's practices. Complaints that only regard the supplier are switching procedures, invoice requirements and procedures for concluding (confirmation notification) and amending the terms of contract (notification of changes in contract). Other queries, mainly not registered in the document management system, concern, for example, price comparison web services and power outages.

Complaints and queries to the Consumer Ombudsman and Consumer Advisory Service<sup>2</sup> on electricity related issues are shown below. Data is categorised according to the European Commission's Recommendations on introducing a harmonised methodology for classifying and reporting consumer complaints. The most common complaints in 2015 and 2016 concerned contracts and distance selling. However, it is worth mentioning that 2016 was an exceptional year due to the huge amount of complaints about network tariffs in one single network company.

Table 6, Complaints in Finland, Reason for contact 1.1.2015-30.4.2016



<sup>&</sup>lt;sup>1</sup> Data for the Competition and Consumer Authority includes not only inquiries on electricity contracts but also water and waste contracts as well as heating.

<sup>&</sup>lt;sup>2</sup> A national service that provides information on consumer rights, and mediation assistance in disputes between consumers and businesses.



The above mentioned categories most often concerned the following topics:

- 1. Unreasonable contract terms/price changes or other terms and conditions of contract
- 2. termination of contract
- 3. unclear / unfounded invoice
- 4. misleading advertising
- 5. statutory defect liability
- 6. no compensation

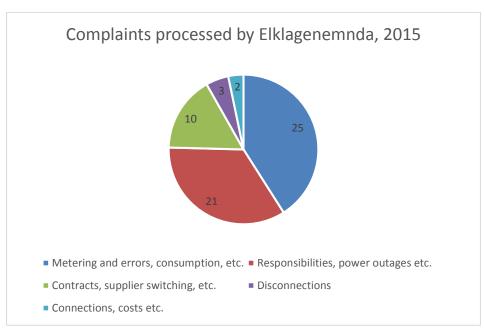
# 1.4 Complaints and queries - Iceland

Orkustofnun registers all written complaints and queries received regarding suppliers, DSOs and the TSO. Orkustofnun does not have an overview of queries received by telephone. The Consumer Agency (Neytendastofa) protects the legal rights of consumers regarding measurements and electricity measuring instruments.

# 1.5 Complaints and queries - Norway

321 complaints were received by Elklagenenmda, the Norwegian ADR, in 2015. Of these, 61 complaints were processed. The most common complaints processed in 2015 fall into the category of 'metering and metering errors, consumption, billing, settlement, consumption profile, stipulation and other tariffs'. 25 out of 61 complaints fall into this category.

Diagram 7, Complaints to the Norwegian ADR 2015



#### 1.6 Complaints and queries - Sweden

Until 2013, all written contact was registered at Ei (Energimarknadsinspektionen). Inquiries were categorised according to subject, without differentiating between complaints and queries. Since 1<sup>st</sup> October 2013, both written contact and telephone calls have been registered according to subject, and categorised as queries or complaints. A special team called Konsumentkontakt (Consumer Contact) does this. Both registration of



incoming consumer complaints and queries, and responses to these, are made by Konsumentkontakt. In some cases, the complaints can be the base for audits. Ei and Konsumentkontakt are responsible for the independent PCT.

Ei has appointed Energimarknadsbyrån (The Swedish Consumer Energy Markets Bureau), as Sweden's single point of contact for customers. Energimyndigheten (The Swedish Energy Agency) is responsible for Swedish energy statistics. Ei and Elpriskollen deliver price statistics to Energimyndigheten.

Between October 2013 and December 2015, Ei had about 3,500 complaints and inquiries. Most complaints concerned the grid.

Table 8, Most complaints to Ei concerned the grid.

	Total number of Complaints & Inquiries supplier and grid	Share complaints supplier/grid (%)	Share queries supplier/grid (%)
2013 <sup>3</sup>	412	34/66	53/47
2014	1,657	32/68	47/53
2015	1,342	37/63	47/53

Half of all complaints in 2014 and 2015 regarding suppliers concern contracts and sales, followed by complaints about unfair commercial practices.

Table 9, Complaints regarding supplier to Ei in 2014 and 2015.

	Number	Share (%)
Contracts and sales	203	50%
Unfair commercial practices	95	23%
Invoicing/billing and debt collection	34	8%
Price/Tariff	33	8%
Disconnection due to unpaid bills	12	3%
Provider change/switching	8	2%
Statistics	5	1%
Metering and consumption	4	1%
Function of the market	4	1%
Microproduction	3	1%

Since 2016, Ei has statistics on each of the above-mentioned categories. For example, complaints about contracts and sales mostly concern changes of price or terms (32%), how the price is set (29%), automatic extension of contract (11%), default price (7%), exit fees (7%), customers' right to certain information (7%) binding period (4%) and right to regret a contract (4%).

In 2015, the Swedish single point of contact, Energimarknadsbyrån, had 750 inquiries and 800 complaints. Most of contact concerned the supplier side of the electricity market. The most common complaints and inquiries regard the supplier contract, followed by network fees and billing.

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<sup>&</sup>lt;sup>3</sup> 1st October to 31st December 2013.



Regarding supplier contract complaints, most of them concerned exit fees, automatic extensions of fixed contracts and cases of prepayment. Here, customers also complain about unclear or unfair terms of contract. When it comes to billing, customers among other things complained that suppliers charge for late payment unlawfully. Certain complaints are connected to switching. Some customers complain about switching against their will or without their knowledge, which resulted in exit fees from the old supplier.

Table 10, Most of the complaints and inquiries to the Swedish single point of contact concern contracts and sales.

Category	Share (%)
Contracts and sales	55
Network fee	12
Invoicing/billing and debt collection	8
Metering and consumption	4
Other	11

Since 2013, the Swedish Consumer Agency has surveyed Swedish consumer conditions in 45 markets, including the electricity market. The findings are presented in the annual Swedish Consumer Report, which has many similarities with the Consumer Markets Scoreboard from the European Commission.

The result from 2013 to 2016 shows that consumers rank the electricity market among the 10 most problematic markets. The most problematic markets are characterised by a combination of a high proportion of expenditure and poorer conditions for consumers. Between 2013 and 2016, the electricity market has fallen from 36th to 38th place in the ranking. Below, you can see how consumers experience the electricity market compared to the other markets.



Table 11, Electricity market compared to other markets

#### Ranking for the electricity market 2016 (out of 45 markets)

	,
Independent information <sup>4</sup>	21
Complexity <sup>5</sup>	31
Understanding <sup>6</sup>	42
Product comparisons <sup>7</sup>	28
Trust in the retailer/provider <sup>8</sup>	39
Competition <sup>9</sup>	29
Range <sup>10</sup>	25
Information level <sup>11</sup>	42
Share of total household Expenditure 2015 12 (%)	3,2

<sup>&</sup>lt;sup>4</sup> That it is easy to find, e.g. product tests or impartial advice before making a purchase. Information provided by companies is often designed to promote their own products.

<sup>&</sup>lt;sup>5</sup> In some markets, it is simple and straightforward to shop, while in others it is perceived to be significantly more difficult. It can be difficult to assess the quality of the product at the time of purchase and, in some cases, specialist knowledge is more or less required. There can also be problems understanding the range and figuring out which purchase is best.

<sup>&</sup>lt;sup>6</sup> In many cases, it is easy to understand what you are buying, but not always. Especially where services with complicated terms and conditions are concerned, it can be difficult to understand what you are actually getting for your money.

<sup>&</sup>lt;sup>7</sup> The opportunity to compare the price and quality of different products, e.g. price comparison sites.

<sup>&</sup>lt;sup>8</sup> Being able to trust the salesperson's information and advice.

<sup>&</sup>lt;sup>9</sup> This is about being able to choose between different companies or suppliers. Choices are based on where you live in the country, access to the internet and aspects of availability.

<sup>&</sup>lt;sup>10</sup> The opportunity to choose between different products that also reflect consumer needs. Needs and desires regarding choices shift as far as, e.g. durability, price and quality are concerned.

<sup>&</sup>lt;sup>11</sup> Before a purchase is made, an informed consumer gathers information and compares different alternatives.

<sup>&</sup>lt;sup>12</sup> Share of total household Expenditure Q4 2014 to Q3 2015



# Annex 2 - Consumer Markets Scoreboard and other studies initiated by the European Commission

#### 1. About the Consumer Markets Scoreboard

The Consumer Markets Scoreboard from the European Commission monitors how markets are functioning from a consumer perspective. The findings are based on the fifth wave (2015) of the Market Monitoring Survey, a large-scale survey on consumers' experiences and perceptions regarding the functioning of key goods and services markets in the 28 Member States of the European Union, as well as Iceland and Norway. The 2016 Scoreboard screens 42 markets, of which 29 are services markets and 13 goods markets. Some of the results from the market of Electricity Services are presented in this annex.

The overall score for electricity services were for the Nordic countries slightly more positive than the EU28 average. The score shows the Market Performance Indicator (MPI), a composite index made of five components: comparability of offers, trust in businesses to respect consumer protection rules, the extent to which markets live up to what consumers expect, choice of retailers/suppliers and the degree to which problems experienced in the market cause detriment.

This annex also refers to "The 2<sup>nd</sup> Consumer market study on functioning of retail electricity markets for consumers in the EU", a study commissioned by CHAFEA acting on behalf of the European Commission.

Table 12, Overall scores for the market for electricity services <sup>13</sup>.

	Overall score for electricity services	Compared to EU 28
Sweden	76.8	+1.5
Denmark	77.6	+2.3
Norway	77.5	+2.2
Finland	81.7	+6.4
Iceland	72.3	-3

#### 1.1 Switching

All Nordic Countries, except Iceland, have higher switching rates than the EU average. 3 % of Swedish customers that have switched in the last three years felt that it was difficult to do so. In Norway, 2 % and in Finland and Denmark only 1 %, felt that this was a difficult process.

11

<sup>&</sup>lt;sup>13</sup> According to Consumer Markets Scoreboard 2016



Switching rate and respondents' experience last three years (%)

25

20

15

Diagram 8, Switching rate and respondents' experience when switching Electricity Company (last three years) 14

When asked about "ease of switching" on a scale from 0 and 10, customers in Finland felt it was slightly easier than the EU-average. The average for Denmark and Sweden were under the EU-average.

ES

■ Switched, but with difficulty

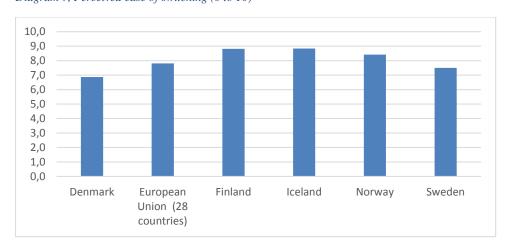


Diagram 9, Perceived ease of switching (0 to 10)15

DK AT SE PT

■ Switched and it was easy

10

5

0

 $<sup>^{14}</sup>$  According to 2nd Consumer market study on functioning of retail electricity markets for consumers in the EU, a study commissioned by CHAFEA acting on behalf of the European Commission.

<sup>&</sup>lt;sup>15</sup> According to Consumer Markets Scoreboard 2016



Customers that did not switch electricity supplier were asked why. The most common answer was that they were not interested. In Iceland, the majority gave other reasons.

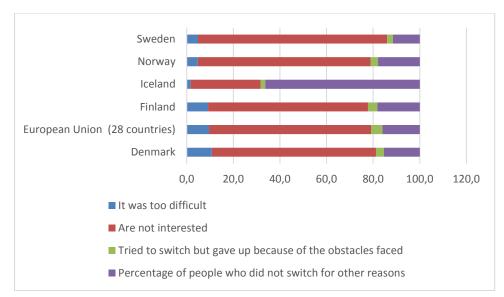


Diagram 10, Reason for not switching (%)<sup>16</sup>

# 1.2 Price Comparison Tools

Around half of the customers in Finland and Sweden compared tariffs offered by different electricity companies before switching. In Denmark, around a third of the customers did the same. The EU average was 41 %.

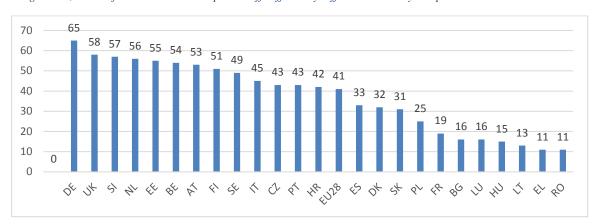


Diagram 11, Share of customers who compare tariffs offered by different electricity companies 17

When customers were asked about the difficulty/easiness to compare offers on a scale of 0 to 10, customers in all Nordic countries except Finland gave a lower score than the EU average. 0 is difficult and 10 is easy.

<sup>&</sup>lt;sup>16</sup> According to Consumer Markets Scoreboard 2016

<sup>&</sup>lt;sup>17</sup> According to 2nd Consumer market study on functioning of retail electricity markets for consumers in the EU, a study commissioned by CHAFEA acting on behalf of the European Commission.



Sweden
Norway
Iceland
Finland
European Union (28 countries)
Denmark

0,0 1,0 2,0 3,0 4,0 5,0 6,0 7,0 8,0

Diagram 12, Customers' difficulty/easiness to compare offers (on a scale of 0 to 10)18

#### 1.3 Contracts and offers

When customers were asked about the availability and quality of information from their electricity companies Icelandic customers were the most negative. In Iceland, 70 % of the customers disagreed that their electricity company provides adequate information. The average for EU was 38 %. Denmark (46 %) and Norway (41 %) had more customers than the EU average that disagreed that they their company provides adequate information, whereas Sweden (30 %) and Finland (29 %) were below the EU average.

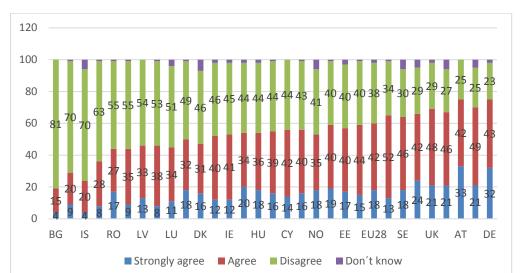


Diagram 13, Availability and quality of information (consumer survey). Do electricity companies inform adequately? 19

<sup>&</sup>lt;sup>18</sup> According to Consumer Markets Scoreboard 2016. Customer were asked: On a scale from 0 to 10, how difficult or easy was it to compare <the services/products> sold by different <suppliers/retailers>?

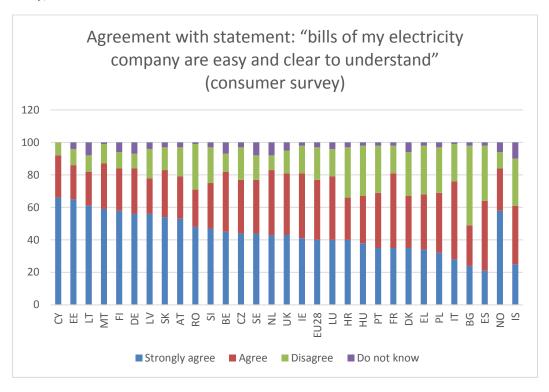
<sup>&</sup>lt;sup>19</sup> According to 2nd Consumer market study on functioning of retail electricity markets for consumers in the EU, a study commissioned by CHAFEA acting on behalf of the European Commission.



# 1.4 Billing

In Finland and Norway, almost 60 % of customers strongly agree with the statement: "bills from my electricity company are easy and clear to understand." In Sweden, 44 % strongly agree, which is just above the EU average. In Denmark, 35 % and in Iceland 25 % of customers strongly agree.

Diagram 14, Agreement with statement: "bills from my electricity company are easy and clear to understand" (consumer survey)<sup>20</sup>



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<sup>&</sup>lt;sup>20</sup> According to 2nd Consumer market study on functioning of retail electricity markets for consumers in the EU, a study commissioned by CHAFEA acting on behalf of the European Commission.



# Annex 3 – National data

# 1. Switching

#### 1.1 Denmark

Since the supplier centric model was launched in Denmark, consumers only have one contract with their supplier. When a consumer wants to switch supplier, the process is as follows:

- 1. Contact the supplier. The consumer has to agree on the terms of switching.
- 2. On behalf of the consumer, the new supplier sends a message to the data hub, which is administrated by Energinet.dk. The supplier informs the data hub that a switch is to be executed and on which date. If the consumer has moved address, the new supplier will communicate the new address and the date of relocation to the data hub.
- 3. The data hub executes the switch within 10 working days from receiving the request from the new supplier unless the consumer wants the switch to be made on a later date.

Switching rates in Denmark have increased from 3,8 % in 2011 to 7,1 % in 2015.

Table 13, Switching rates in Denmark.

Year	Switching rate (%)
2011	3.8
2012	6.4
2013	6.3
2014	6.3
2015	7.1

Danish consumers have is an economic incentive to switch. According to an analysis from 2015 on the Danish electricity market, the price spread between suppliers is significant. 190 products sold by 40 Danish suppliers were analysed. The result showed that:

- 1. A household living in an apartment with an average consumption of 1,800 kWh/year could save up to 36.2 Euro<sup>21</sup>.
- 2. A household living in a detached house (a couple with two kids) with a consumption of 4,900 kWh/year could save up to 68.4 Euro.
- 3. A household living in a detached house with a heat pump to heat the house (a couple with two kids) with a consumption of 15,000 kWh/year could save up to 214.5 Euro.

There are many green products presented on elpris.dk. Approx. 50 products (private) and approx. 20 products (business).

# 1.2 Finland

Most customers in Finland have separate contracts with a DSO and a supplier. However, if a customer enters a supply contract under the suppliers' duty to supply, it is also possible to have a contract that includes the

<sup>&</sup>lt;sup>21</sup> Average exchange rate for 2015: 7,458572289 DKK per Euro according to Danmarks Nationalbank.



network service. The switching process usually takes two weeks. When a customer wants to switch supplier, the process is:

- 1. The customer contacts the new supplier.
- 2. The new electricity supplier notifies the DSO in a PRODAT message.
- 3. The DSO notifies the present supplier about the new contract through PRODAT.
- 4. The present supplier either confirms the switch or rejects it if there is a valid fixed time contract with an ending date later than the starting date of the proposed new contract.
- 5. The DSO reads the meter and sends the meter readings to both the present and the new supplier.

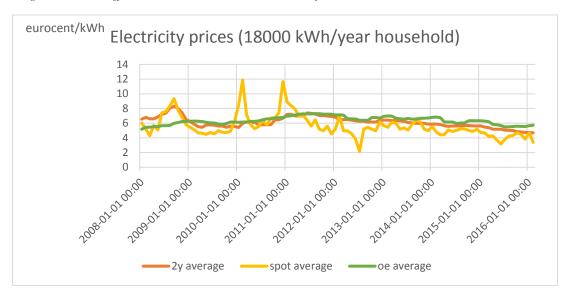
In 2013, the overall switching rate increased compared to previous years. Since then, the switching rate has been relatively high, reaching about 10 % yearly.

Table 14, Switching rates in Finland

Year	Switching rate (%)
2011	7.6
2012	7.7
2013	10.1
2014	9.8
2015	11.4

There is an economic incentive for switching in Finland. Customers on open-ended contracts pay about 20-25 % more than customers who have switched to spot price contracts<sup>22</sup>. In addition, prices on open-ended contracts have been higher than on spot based contracts during most of the period, except a few price peaks in 2010 and 2011.

Diagram 15, Price differences between contracts, 18 000 kWh/year



The cheapest offers differ from the average price in all contract categories, especially in the case of households with a low annual consumption. The spread in the prices indicates that these consumers are not motivated to

<sup>&</sup>lt;sup>22</sup>Price data is based on the average household customers' consumption levels 5000 kWh/y and 18000 kWh/y.



seek low-priced contracts. This is partly due to relatively low electricity prices compared to overall living expenses.

Open-ended contracts are on average more expensive than fixed-term contracts. The high average price of open-ended contracts is assumed to be mainly due to consumers that have never switched contract since the opening of the market, or who have chosen a default contract offered according to the supplier's duty to supply, instead of seeking lower priced contracts.

Tables 16 and 17 show the price of electricity for the three different contract types. During the studied period (2010 and 2015), spot bound contracts have been the most inexpensive choice for both apartment building households and one-family households with electric heating.

Table 16, K1 household, consumption 2 000 kWh/y (Euro/kWh)

2010-2015	Average price	Cheapest price
Open-ended contract	0.085	0.071
Fixed-term contract	0.079	0.071
spot bound contract	0.071	0.063

Table 17, L1 household, consumption 18 000 kWh/y (Euro/kWh)

2010-2015	Average price	Cheapest price
Open-ended contract	0.066	0.056
Fixed-term contract	0.063	0.060
spot bound contract	0.053	0.052

There is a rather large number of different green offers available for customers, but no exact data is available for the time being.

# 1.3 Iceland

Households can switch supplier by informing a new supplier that they want to become their customer. The new supplier informs the Icelandic data hub about the change in contracts and the data hub takes care of the switching process. This process can take up to 60 days. The switching rate 2015 was 0.3 %.

The economic incentive for switching is very low in Iceland since there is no variation in contract types between the suppliers. The price of electricity is also almost the same for the six suppliers in Iceland. The difference between the least expensive supplier and the most expensive supplier for an average yearly household consumption is only 4 % or 6.44 EUR in 2015 for a customer with an average consumption. The incentive is also low because of the fact that electricity prices are in general very low in Iceland.

No supplier has offered green contracts in Iceland, but this might change in the future since two suppliers are considering offering such contracts.

#### 1.4 Norway

Norwegian consumers have the right to switch supplier. Consumers have a separate contract with the supplier and the DSO. The supplier can enter into an agreement with the DSO on behalf of the consumer, if the consumer only contacts the supplier, for example when moving.



The switching rate in Norway has increased from around 11 % 2011 to around 13 % 2013.

Table 18, Switching rate in Norway

Year	Switching rate (%)	
2011	11.1	
2012	12.9	
2013	14.8	
2014	12.8	
2015	13.3	

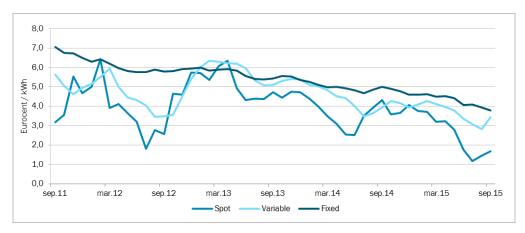
There is an incentive to switch supplier and contract in Norway. The price statistics below compare the average price for different contract types. The statistics show that spot price contracts in the period from September 2011 to September 2015, with an annual consumption of 20 000 kWh, were €524.69 cheaper than variable price contracts and €1058.61 cheaper than fixed price contracts.

However, with a spot price contract, consumers may be exposed to greater variations in electricity price, during certain periods. Despite this, there is an incentive for consumers to switch from standard variable or default contracts to spot price contracts on average. The exception being in periods when wholesale electricity prices peak.

Table 19, 2 000 kWh/year, Sep 2011 - Sep 2015, Euro/year

		Spot	Fixed	Variable
	Sum <sup>23</sup>	3,357	4,415	3,882
	Euro+ vs. Spot	-	1,059	525

Diagram 16, Price for Norwegian spot, variable and fixed-price contracts 2011-2015



The following comparison shows average prices per contract type, in respective years. Spot price contracts in most years are, on average, cheaper than variable and fixed-price contract types.

 $<sup>^{\</sup>rm 23}$  Calculations are based on monthly prices in the period from September 2011 to September 2015.



Table 20, Price difference variable and fixed-price contracts vs. spot contract

	Spot (Eurocent/kWh)	Fixed (Eurocent/kWh)	Variable (Eurocent/kWh)	Price difference variable vs. spot (%)	Price difference fixed vs. spot (%)
2010	7.51	7.38	8.13	8 %	-2 %
2011	6.35	7.75	7.52	16 %	18 %
2012	4.03	5.96	4,57	12 %	32 %
2013	5.01	5.64	5.72	12 %	11 %
2014	3.58	4.90	4.27	16 %	27 %

Certain incentives to switch in Norway are for reasons other than economic. 32 suppliers in the Norwegian retail electricity market offer contracts with guarantees of origin. Statistics are not collected regarding suppliers offering non-economic incentives. Known supplier add-ons are focused on items with individual material value, e.g. ski passes, airline mileage points and similar.

#### 1.5 Sweden

In Sweden, all consumers<sup>24</sup> have two contracts. One with the distribution system operator (DSO) that runs the distribution network, and one with an electricity supplier. The customer can switch supplier but not DSO. The switching process is supplier centric, which means that the customer contacts the supplier and the supplier carries out the switch. The switching process should be carried out within two weeks and can be described in four steps:

- 1. The customer contacts the electricity supplier that the customer wants to switch to.
- 2. Once a contract is accepted, the new supplier will notify the DSO about the switch.
- 3. The DSO reads the meter and sends the readings to the old and the new supplier.
- 4. The DSO notifies the old supplier that the customer has changed supplier.

Around 10 % of Swedish customers switch supplier each year. 480,219 customers switched supplier in 2015 and 2,364,955 customers between 2011-2015. Around 25 % of customers renegotiate<sup>25</sup> their contract each year, which means that in 2015 there were 1,096,358 customers that renegotiated their contract. Between 2011 and 2015 there were 5,815,074 renegotiations among household customers.

<sup>25</sup> The renegotiation rate shows renegotiated contracts as share of all contracts at the market. Source: Statistics Sweden, SCB, customer survey.

<sup>&</sup>lt;sup>24</sup> Customers with a fuse under 63 Ampere



Table 21, Switching and renegotiation rate in Sweden

	Switching rate (%)	Renegotiation rate (%)
2011	10.0	23.7
2012	9.8	24.7
2013	10.6	24.6
2014	10.3	27.4
2015	10.3	25.6

The economic incentive for switching is in order to make an initial choice of supplier, as well as to be able to continue to compare prices once a choice is made. Customers on a default contract pay 25-30 % more than customers that have chosen a supplier and contract. For customers with a yearly consumption of 2,000 kWh average, the designated price was 26 % higher than the average monthly variable price <sup>26</sup> in 2008-2015. For customers with a yearly consumption of 20,000 kWh, the difference was 30 %. In addition, as shown in the following charts, the designated price is higher during most of the period, except for a few price peaks.

Diagram 17, Price difference between designated and monthly variable contracts from 2008 to 2015 for customers with a consumption of 20,000 kWh per year.



There is an economic incentive for shopping around and comparing different supplier prices. A customer with a consumption of 2,000 kWh/year on a 1-year fixed-price contract, has in the five last years been able to save between 23 and 38 % when switching from the most expensive to the least expensive supplier. A customer on a monthly variable price contract has been able to save between 37 and 42 %.

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<sup>&</sup>lt;sup>26</sup> Most common contract 2016



Table 22, Average price difference between highest and lowest supplier price for 2 000 kWh/year in SE3.

	Fixed-price 1-year (EUR/kWh)	Customer can save up to (%) <sup>27</sup>	Monthly variable price (EUR/kWh)	Customer can save up to (%) <sup>28</sup>
2011	0.036	23	0.065	37
2012	0.044	29	0.066	42
2013	0.035	27	0.069	41
2014	0.043	33	0.055	39
2015	0.050	38	0.054	42

Customers with a higher consumption have a lower economic incentive to compare prices with different suppliers. Customers with a consumption of 20,000 kWh per year on a monthly variable contract have been able to save between 11 and 18 % when switching from the most expensive to the least expensive supplier. Customers with a 1-year1-year fixed-price contract have been able to save between 14 and 22 %. However, since these customers use 10 times more energy, it still means substantial possible savings.

There are other types of incentives than economic ones. There is a wide range of green<sup>29</sup> offers for customers to choose from. 90 out of 116 monthly variable contracts and 101 out of 134 fixed 1-year contracts offered in May 2016 in SE3 came from renewable production.

Table 23. Number of green contracts and total number of contracts offered in SE3 in May 2016 (2,000 kWh/year)

Contract type	Number of green contracts	Total number of contracts
Fixed 1-year	101	134
Fixed 2-year	66	90
Fixed 3-year	102	130
Fixed 4-year	7	11
Fixed 5-year	35	44
Monthly variable price	90	116

There are also a number of suppliers that offer contracts where part of the surplus goes to charity or other non-profit organisations, for example organisations that work in developing countries, or local sports clubs.

#### 2. Price Comparison Tools (PCT)

#### 2.1 Denmark

In Denmark, there is one PCT called Elpris.dk, administrated by DERA. The PCT is brand new and was launched on 1st April 2016 when the supplier centric model came into force in Denmark. Elpris.dk addresses private and business customers, with a power consumption of up to 100,000 kilowatt hours (kWh) per year. The PCT shows all the offers and contracts on the market.

<sup>&</sup>lt;sup>27</sup> When switching from supplier with most expensive 1 year fixed-price to supplier with least expensive 1 year fixed-price.

<sup>&</sup>lt;sup>28</sup> When switching from supplier with most expensive monthly variable price to supplier with least expensive monthly variable price.

<sup>&</sup>lt;sup>29</sup> Renewable production (sun, wind, hydro, bio)



Suppliers that sell electricity to Danish customers are obliged to publish their current prices on Elpris.dk. It is the suppliers' responsibility to update products and prices on Elpris.dk. The PCT is not responsible for any errors in the reported rates from suppliers, in data communication with the data hub in Energinet.dk, or any changes in duties, VAT, etc.

Between 1 April 2016 (when the PCT was launched) and 15 November 2016, the PCT had 118,000 unique visitors and 190,000 sessions. It is assumed that the PCT will have around 180,000 visitors annually.

The PCT shows contracts that are offered to private as well as business customers with a consumption less than 100,000 kWh per year. The following contracts are offered:

- 1. Fixed-price contracts
- 2. Variable price contracts
- 3. Green products
- 4. Combination products

All 50 Danish suppliers report to the PCT, and the contracts shown on the PCT cover 100 % of the market.

#### 2.2 Finland

Since 2006, the Energy Authority has maintained a PCT called <a href="www.sahkonhinta.fi">www.sahkonhinta.fi</a> to facilitate price comparison and supplier switching. The system was also developed to better inform private consumers about the origin of the electricity. There are also some, at least three, other commercial PCTs, but the exact number is not available as there is no licensing or registration needed for establishing a PCT.

The independent PCT has approximately 15,000 unique visits, and about 150,000-200,000 price comparisons to the PCT website have been registered monthly.

All 74 suppliers are obligated to maintain up-to-date information on their public electricity price offers on the PCT. The PCT covers all contracts that are publicly offered to customers.

#### 2.3 Iceland

There is one PCT in Iceland operated by the public entity Orkusetur. This tool compares both electricity prices and distribution and transmission costs.

All six Icelandic suppliers report to the Icelandic PCT, which covers all contracts offered to household customers in Iceland.

#### 2.4 Norway

In 2015, a new and improved PCT (PCT) was launched in Norway, following the implementation of new regulations under the Energy Act, which obliged retailers to report all of their offers, not just a selection, in the PCT. The PCT was developed by the Norwegian Consumer Council (Forbrukerrådet) on mandate from the Norwegian government, in close cooperation with the Norwegian Water Resources and Energy Directorate (NVE).

The new PCT has significantly improved the ability of Norwegian consumers to compare electricity offers, by presenting all electricity offers available in the market through a user-friendly web site called



<u>www.strompris.no</u>. Offers are ranked according to the expected total monthly price for the consumer, including network tariff costs. No data on annual visits are available yet.

There is also at least one more commercial PCT - www.elskling.no

Since all suppliers are legally obligated to report to the PCT, the tool should show 100 % of the contracts available on the market at any time.

#### 2.5 Sweden

There is one independent and at least three commercial PCTs in Sweden. The independent PCT, <a href="www.elpriskollen.se">www.elpriskollen.se</a>, was launched in 2008 and is operated by the NRA. A new version was launched in 2016. All suppliers that sell electricity to consumers (with a fuse up to 63A) are obliged to report prices and terms to the NRA. In May 2016, there were 123 suppliers that reported to the PCT. The following contracts must be reported to Elpriskollen:

- Fixed-price 6 months and 1-5 year binding,
- Variable price with 12 month binding
- Variable price without binding
- Mix 50/50 price 1-year binding
- Default price

The PCT must provide information about renewable energy offers and terms and conditions. It is possible to add different rebate offers. The offers must be updated 12 PM the day prices are changed. All offers on the market are, however, not available in the PCT.

There are at least three known commercial PCTs<sup>30</sup>; <u>www.elskling.se</u>, <u>www.compricer.se</u> and <u>www.elprisguiden.se</u>.

The independent PCT had 63,200 unique visits in 2015. Between 2011 - 2015, visits had gone down from around 103,000 unique visits in 2012. A survey <sup>31</sup> from 2014 with 1,500 respondents, showed that 44 % of customers that use PCTs have knowledge of Elpriskollen and 24 % of them have actually used this PCT. Knowledge about this PCT was at the same level as for the most well-known commercial one.

In 2015, 68 of 123 suppliers were active in all of Sweden's four bidding areas. 28 suppliers were only active in one of Sweden's four bidding areas. The table below shows the number of suppliers offering the two most common contract types (monthly variable and fixed 1-year) in each bidding area.

Table 24, Number of suppliers offering at least one contract in each bidding area.

	SE1	SE2	SE3	SE4
Monthly variable price, 20,000 kWh/year	69	70	78	58
Fixed-price 1-year 20,000 kWh/year	65	64	74	38
Monthly variable price, 2,000 kWh/year	69	70	78	58
Fixed-price 1-year, 2,000 kWh/year	65	64	74	38

<sup>30</sup> That Ei is aware of

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<sup>31</sup> Made by TNS Sifo on behalf of Ei.



Surveys made by Statistics Sweden show that 92 % of customers have contract types represented on Elpriskollen. These contracts are monthly variable, fixed one-three year and default contracts. The remaining 8 % of customers have other contracts. Elpriskollen shows nine different contract types (see above). We, therefore, assume that Elpriskollen covers most of the market.

#### 3 Contracts and offers

#### 3.1 Denmark

On Elpris.dk there are four main products:

- 1. **Fixed-price contracts:** The price of the electricity is fixed during the whole contract period.
- 2. **Variable price contracts:** The price of electricity is set differently by each supplier. Each supplier also changes the prices differently.
- 3. **Green products:** Products that limit the emission of CO2.
- 4. **Combination products:** The electricity supply is coupled with the delivery of another product, such as natural gas.

In September 2016, there were approximately 200 contracts available on elpris.dk.

There is no data available; however, the average price for a household consumption in the second quarter of 2016 on 4,000 kWh was 30.74 EUR. Earlier statistics are not available.

#### 3.2 Finland

The most typical contract for household customers in Finland is a contract made for an indefinite period (variable price). There are also fixed-term contracts and spot price contracts available.

Main features of each contract type:

- Open-ended contract (variable contract). A rolling contract that may be terminated with a two week
  notice period. This category also includes certain products where prices follow last month's average
  spot price in Finland. Nevertheless, in the majority of the products categorised as open-ended
  contracts, prices change less than four times a year.
- 2. **Fixed-term contracts.** The most common duration of the fixed-term contracts is one or two years. The supplier may not change the contractual terms and conditions of the contract. If you terminate a fixed-term contract before the contract period ends, the supplier is entitled to charge an early termination fee, if specified and the amount of it is agreed in the terms of the contract.
- 3. **Spot price contracts.** The electricity price in these contracts is determined by hourly prices from Nord Pool Spot. This contract type has recently clearly increased its popularity also among residential customers.

In May 2016, there were 745 contracts offered in the PCT. In the beginning of 2015, the most common contract types were open-ended/variable.

Table 25, Most common contracts in the beginning of 2015 2015

Contract	Share (%)
Variable price	55
Fixed-price	37
Spot price	8



Average yearly costs, for customers that use both 5,000 kWh/year and 18,000 kWh/year, have been lower for spot price contracts than fixed-price or variable price contracts. Also, when comparing 2-year fixed-price contracts to variable price contracts, it can be seen from the following charts that the costs for fixed-price contracts have been lower than for variable price contracts in most of the examined years.

*Table 26, Yearly cost for customer with a consumption of 5,000 kWh/year (Euro/year)* 

	Fixed-price 2 years	Variable price	Spot price
2011		396	353
2012	370	376	275
2013	345	372	303
2014	326	358	273
2015	297	343	234

Table 27, Yearly cost for customer with a consumption of 18,000 kWh/year (Euro/year)

	Fixed-price 2 years	Variable price	Spot price
2011		1295	1182
2012	1236	1222	901
2013	1142	1213	1001
2014	1074	1174	894
2015	977	1124	752

#### 3.3 Iceland

All six suppliers in Iceland provide only one type of contract for household customers. This contract is made for an indefinite period but may be terminated any time without a termination fee. The price is variable and there is very little difference in the prices offered by different suppliers.

#### 3.4 Norway

Main types of contracts that cover the majority of the market

Contracts offered in the Norwegian independent PCT between July 2015 to March 2016, were spot price and purchase price offers, which are the two main varieties of wholesale based pricing, representing 33% of the offers in the PCT. Fixed-term fixed-price contracts represented 28%. Variable price represented 28% of offers. Other offer types represented 17%.

Table 28, Most common contracts at the Norwegian PCT July 2015 to March 2016.

Contract	Share (%)
Fixed-price	28
Variable price	22
Purchase price	17
Spot price	16
Other	17

Main features of the contracts are:



- Spot price and purchase price contracts are settled against the wholesale price of the bidding zone in
  which the consumer is located. Spot price contracts, unless hourly monitored, as typically settled
  according to the unweighted monthly average of the wholesale price for the previous month plus an
  add-on per kWh or monthly fee. A purchase price contract follows a similar structure, with the
  exception that this contract is typically settled using consumption for settlement against the wholesale
  price.
- 2. **Variable price contracts** are contracts where the supplier adjusts the price at regular intervals. Fixed-price fixed-term contracts guarantee a certain price for electricity for an agreed period ahead.

In the Norwegian market, termination fees are only legal where the consumer receives a demonstrable benefit in return. This typically means a type of price hedging, like a fixed-price fixed-term contract where the supplier carries the risk of the price variation. On contracts where the consumer carries the risk of the price variation, such as spot price contracts, termination fees are not legal.

By December 2012, approximately 60% of Norwegian households had spot based electricity contracts. This includes both spot price and purchase price contract options. Approximately 35% of Norwegian consumers had variable price contracts. The trend in 2012 was that consumers moved from variable price contracts to spot price contracts.

Between 2011 and 2014, spot price contracts were on average the cheapest contract type for a household with an annual consumption of 20,000 kWh.

Table 29, yearly cost for customers with a consumption of 20,000 kWh/year, Euro

	Spot	Fixed	Variable
2011	1340.76	1560.05	1571.70
2012	879.64	1202.34	955.64
2013	1027.16	1134.81	1155.48
2014	734.38	984.50	878.34

#### 3.5 Sweden

Almost half of Swedish customers had monthly variable price contracts in 2016, which made it more common than the three most common fixed-price contracts. Between 2008 and 2016, the default price has dropped, from over 35 % to less than 14 %. At the same time, the monthly variable price has increased from around 15 % to 47 %. There is a connection between prices and the customers' choice of contract type. We saw a temporary decline in the monthly variable price during the winters of 2011 and 2012 when we had high prices. Since then, prices have fallen and more customers have chosen monthly variable contracts.

Table 30, Contract type and market share month X 2016

Contract	Share (%)
Designated price	13.9
Monthly variable price	47.6
Fixed-price 1-year	13.7
Fixed-price 2-year	3.4
Fixed-price 3-year	13.3
Other contracts	8.2



#### Main features for common contracts are:

- Monthly variable price. With a monthly variable price contract, the price mirrors developments on the Nordic power exchange Nord Pool Spot. The price can rise and fall during the course of a year. The price is based on last month's average spot price. There are two main types of variable contract: rolling and fixed-term. You can exit a rolling contract with a period of notice. In a fixed-term contract, you have committed yourself to buy your electricity from the same supplier for the entire contract period.
- **2. Fixed-price**. With a fixed-price contract, you pay the same price for the entire contract period. The most common contract periods are one, two and three years. If you terminate a fixed contract before the contract period ends, the supplier will charge you an exit fee. The terms of the exit fee are stated in the terms of the contract.
- 3. **Other contracts.** Includes contracts with other contract lengths than 1, 2 or 3 years or mixed contracts. A mixed contract means that you pay a portion of your electricity at a variable price and another at a fixed-price. There are also hourly variable price contracts.
- 4. **Default contract.** If you do not choose an electricity contract, your DSO will assign you a supplier. You then pay a designated contract, which is usually much more expensive than other contract types.

In May 2016, 122 suppliers had reported 4,205 different contracts to the PCT www.elpriskollen.se. Vattenfall alone, one of the biggest suppliers, had reported 2,544 contracts. However, these contracts are not open to all consumers. Vattenfall has different contracts for customers with different consumption levels. Another way of looking at it, is that each of the 122 suppliers showed on Elpriskollen have three to five different contract types, such as variable price, fixed-price 1-year, etc.

For customers with either an apartment (2,000 kWh/year) or house (20,000 kWh/year), the variable monthly price has been cheaper than fixed-price 1-year.

Table 31, yearly cost for customers with a consumption of 2,000 kWh/year (Euro/year)

	Fixed-price 1-year	Variable price
2011	442	265
2012	398	226
2013	402	245
2014	376	217
2015	216	193

Table~32,~yearly~cost~for~customers~with~a~consumption~of~20,000~kWh/year~(Euro/year)

	Fixed-price 1-year	Variable price
2011	2,619	2,313
2012	2,208	1,912
2013	2,210	2,080
2014	2,028	1,819
2015	1,855	1,598



#### 4 Access to information

#### 4.1 Denmark

Customers can receive information regarding their bill and consumption by visiting their suppliers' homepage. Furthermore, they can receive general knowledge of the market by visiting the homepage of DERA, the ministry of Energy, Supply and Climate, Energinet.dk and Elpris.dk

#### 4.2 Finland

Customers can access information on consumption and prices via their bill, the Internet, the energy companies' homepages or online services.

Both the DSO and the supplier are required by law to provide customers with information concerning, for example, contractual terms and conditions, pricing alternatives, consumption data, quality of supply and the right to compensation for damages and other compensation for delays and faults in connections, supply and distribution (including power cuts). Furthermore, customers have to be informed about available procedures for complaints and dispute settlement.

#### 4.3 Iceland

Customers can access information on their consumption through their bills or through their supplier's website.

#### 4.4 Norway

Consumers can currently gain access to information on consumption volumes and costs on their supplier's or DSOs' webpage, or on their bill. DSOs are obligated by law to provide consumers with consumption information. Consumers can gain access to information about prices and contracts on the independent PCT, strompris.no.

In the future, consumers will be able to access their consumption information, metering and customer data through the Elhub interface.

#### 4.5 Sweden

Customers can access information on consumption via their bill, the Internet and the energy companies' homepages.

Both the DSO and the supplier are required by law to provide customers with information concerning, for example, quality of supply, the right to compensation after a power cut, where to complain, consumption data, information about network tariffs and other terms, contract information, designated contracts and information to customers on contracts about to expire. DSO's and suppliers are also required to provide the customer with information on the bill (see chapter on Billing below).

In 2015, Ei audited how companies in the electricity market fulfilled their obligations. All 151 DSOs and 24 suppliers with a market share of more than 70 % were examined, and the result was that 45 % of the DSOs and 96 % of the suppliers broke at least one of their legal obligations concerning information to customers. The companies corrected the faults and Ei will follow developments in this area in future.



# 5 Billing

#### 5.1 Denmark

Since the supplier centric model was launched on 1<sup>st</sup> April 2016, consumers only receive one bill from the supplier. Consumers pay the bill to the supplier and the supplier allocates payment of taxes and VAT to the DSO. Typically, electricity billing is quarterly.

The supplier must offer consumers a wide choice of payment methods that do not discriminate between customers. When a supplier requires collateral payment, the estimated amount should be fair and reflect the likely consumption for a three-month period. The general terms and conditions for payment must be fair and transparent, as well as given in a clear and comprehensible language and shall not include non-contractual barriers preventing consumers in exercising their rights.

The decision to enforce a one-bill regulation is in line with NordREG's ambition of making billing transparent and understandable to consumers.

#### 5.2 Finland

If the supplier and the DSO are part of the same company group, the customer will usually receive just one invoice. Otherwise, the customer normally receives separate invoices. Since January 1, 2016, suppliers and DSOs may not charge for invoicing. Bills are based on actual consumption and sent at least four times a year. Invoices and consumption data must be given to customers in electrical format if requested.

#### 5.3 Iceland

If the supplier is part of the same group as the local DSO, the customer normally receives one invoice that includes costs for transmission, distribution, electricity and taxes. If the customer has decided to enter into a contract with another supplier that is not part of the same group as the DSO, the customer will receive either two invoices, or a combined invoice from the DSO.

#### 5.4 Norway

In Norway, new regulations have been adopted for voluntary combined billing. This means, that if one supplier offers combined billing with a DSO, this must be available from all suppliers within that area. Pre-payment is limited by regulation to maximum 10 weeks, the calculation of pre-payment volumes and prices must be based on historical consumption and forward electricity prices in financial markets.

Approximately 80 % of electricity consumers in Norway use e-billing or direct debit through their online banking.

NVE is currently working towards implementing a new consumer centric market model, which is anchored in NordREG recommendations.

#### 5.5 Sweden

If the electricity supplier and the network operator are part of the same group, customers just usually receive one invoice. Otherwise, two invoices are sent – one from the network operator and one from the electricity supplier.

Invoicing takes place at least every three months, but customers can also usually choose a monthly bill. The invoice must be clear and contain information about the measured consumption and current electricity prices. If the contract with the supplier requires hourly metering, measured consumption and current electricity prices



may be published on the supplier's web page. The invoice must then refer to that information. Billing must be offered in electronic form if the customer so requires.

A supplier's billing must be based on measured amounts. If a supplier do not have access to consumption data, billing may be based on estimated consumption. However, this is only allowed for a limited period. Since June 2014, suppliers and network companies are not allowed to charge an invoice fee or invoicing in general.

# 6. Pricing

#### 6.1 Denmark

In general, retail prices in Denmark follow wholesale prices, though, it is common that suppliers diverge from that and raise prices in order to gain more profit.

# 6.2 Finland

In 2012-2015, variable prices had the same trend as wholesale prices but less noticeable and with a delay. This is mainly due to the fact that in many variable contracts prices change relatively seldom. Spot price contracts are directly bound to spot prices and follow them respectively.

In 2015 particularly, low wholesale prices were reflected in retail prices. The price under the duty to supply decreased by 7.1 per cent on average over the course of the year 2015, and the prices of new fixed-term contracts decreased by 15–16 % at the same time. In general, the retail prices kept falling for the fourth year in a row.

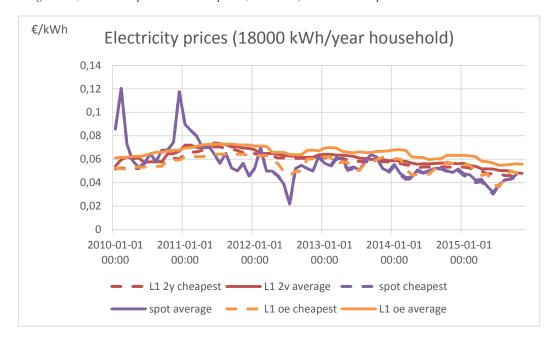


Diagram 18, Relationship between retail price (contract x) and wholesale price.

From 2015 until April 2016, the Finnish Competition and Consumer Authority and Consumer Advisory Service received 615 inquiries concerning prices and tariffs in the energy sector. Most of them (542) took place in the beginning of 2016. The significant variation mainly resulted from one big DSO changing its distribution tariffs.

# 6.3 Norway

From 2013 to 2015, there was a close correlation and low mark-up between wholesale and retail electricity prices in Norway. Spot price contracts followed the wholesale electricity price the most closely, as expected.



Variable price contracts were somewhat, but not precisely correlated. Fixed-price contracts followed a more distanced price correlation trend, with a higher mark-up, exhibiting the risk premium consumers will pay to bind their electricity price.

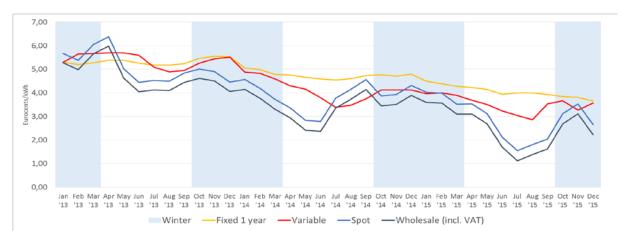


Diagram 19, Relationship between retail price and wholesale price in Norway 2013-2015

#### 6.4 Sweden

There is a close relationship between the spot price and the retail price for customers with monthly variable contracts, the most common contract in Sweden.

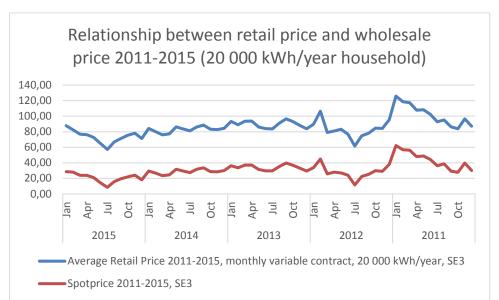


Diagram 20, Relationship between retail price and wholesale price in Sweden 2011-2015



# 6.5 Total price of electricity – all Nordic countries

Diagram 3, Retail prices for the most common contract type in the Nordic region 2013-2015 (excl. VAT, taxes, distribution tariffs etc.)



Retail prices for the most common contract differ between the Nordic countries. In 2015, Finland had the highest retail prices and Norway the lowest.

Table 6, Average retail prices for the most common contract 2012-2015 (excl. VAT, taxes and distribution tariffs)

	Denmark <sup>32</sup>	Finland <sup>33</sup>	Norway	Sweden <sup>34</sup>
2012	5.18	5.26	3.47	4.28
2013	4.39	5.24	4.20	4.91
2014	4.39	5.01	3.31	4.06
2015	4.12	4.78	2.37	3.05

According to Eurostat, the total price that customers pay differs between the Nordic countries. Also, the price development the last five years differs somewhat. Denmark, Iceland, Norway and Finland have to different extents had falling prices. Finland has had a more stable price level.

<sup>33</sup> Variable contract with a consumption of 20,000 kWh/year.

<sup>&</sup>lt;sup>32</sup> Average retail price in Denmark.

<sup>&</sup>lt;sup>34</sup> Customer on monthly variable contract with a consumption of 20,000 kWh/year.



Table 33, Total electricity price 2011-2015 (energy and supply + network costs + taxes and levies) for customers with consumption  $>15,000 \text{ kWh/year according to Eurostat}^{35}$ , Euro/kWh

	Denmark	Finland	Iceland	Norway	Sweden
2011	0.261	0.118	No data	0.119	0.158
2012	0.260	0.117	0.091	0.107	0.159
2013	0.222	0.117	0.052	0.112	0.156
2014	0.230	0.115	0.060	0.104	0.138
2015	0.222	0.114	0.067	0.085	0.134

# 6.6 Total price of electricity in 2015 – Nordic countries compared to all European countries

With all cost included, customers in Iceland have the lowest electricity prices in both Europe and the Nordic countries. Customers in Denmark have among the highest prices in Europe. However, when looking at the table below, it is important to recognise that many of the European countries on the list have regulated supplier prices, which is not the case in any of the Nordic countries.

Table 34, Total electricity price 2015 (energy and supply + network costs + taxes and levies) for customers with consumption >15,000 kWh/year according to Eurostat, Euro/kWh

1	Iceland	0.067	14	Slovakia	0.116	27	Liechtenstein	0.176
2	Bosnia Herzegovina	0.069	15	Estonia	0.118	28	Belgium	0.178
3	Kosovo	0.075	16	Hungary	0.119	29	Ireland	0.181
4	Serbia	0.077	17	Turkey	0.122	30	Cyprus	0.185
5	Albania	0.082	18	Croatia	0.122	31	UK	0.186
6	Macedonia	0.083	19	Romania	0.127	32	Greece	0.196
7	Norway	0.085	20	Slovenia	0.129	33	Netherlands	0.198
8	Moldova	0.085	21	Sweden	0.134	34	Spain	0.200
9	Montenegro	0.091	22	Poland	0.135	35	Portugal	0.207
10	Bulgaria	0.096	23	Austria	0.149	36	Denmark	0.222
11	Czech Republic	0.097	24	Luxembourg	0.152	37	Germany	0.268
12	Lithuania	0.113	25	France	0.153	38	Italy	0.340
13	Finland	0.114	26	Latvia	0.163	39	Malta	0.346

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<sup>35</sup> Electricity price components for domestic consumers