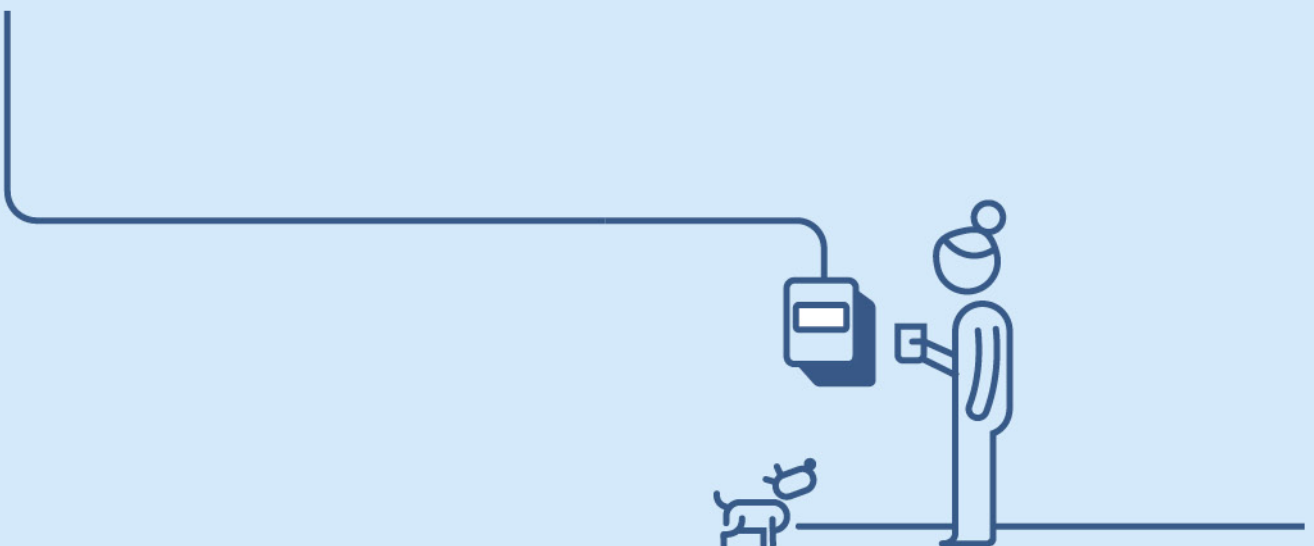


EVALUATION OF NORDIC ELECTRICITY RETAIL MARKETS



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Foreword

The Nordic countries have a common vision of becoming the most sustainable and integrated region in the world. An inclusive and consumer-oriented electricity market is essential to realising this.

The green transition involves the large-scale electrification of Nordic societies which is expected to lead to significant changes in both electricity consumption and production. The increase in electricity consumption will be seen in the industry as well as with end-consumers. In addition, geopolitical risk and other factors have recently led to a surge in energy and commodity prices and exposed the need for more resilient and flexible energy markets and increased consumer protection.

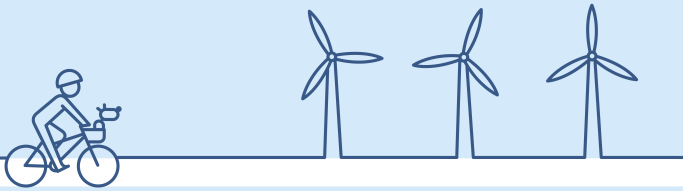
To contribute with knowledge-based evidence to the discussion Nordic Energy Research and the Electricity Markets Group (a working group under the Nordic Council of Ministers) has commissioned this report that examines recent developments and challenges within the electricity retail markets across the Nordic region. This collaborative effort aims to address consumer concerns in response to the recent energy price crises in an informed and coordinated manner.

This report emphasises the significance of cross-country collaboration and knowledge sharing while at the same time highlighting the need for further development of the Nordic electricity market, particularly in the retail market's design and functionality. While encountering similar challenges, each Nordic nation has adopted unique approaches such as for example the Swedish public complaints list. By leveraging shared resources and experiences, the report suggests that mutual learning can lead to more effective solutions, ultimately enhancing the success of the region's energy transition efforts.

With the Nordic 2030 vision in mind, fostering trust and acceptance within the electricity retail markets is crucial. Public acceptance is imperative for realising the ambitious goal of electrifying Nordic societies and advancing the transition towards sustainability. This report gives insights as to how the development of our electricity retail market can help to achieve that, and I hope readers will find it as interesting as I did.

Klaus Skytte

CEO, Nordic Energy Research



Executive summary

Background and mandate

On behalf of the Nordic Council of Ministers, Nordic Energy Research has commissioned an evaluation of the electricity retail markets in the Nordic countries. Oslo Economics, together with Sweco, Gaia and Respons Analyse have conducted the analysis.

The aim of the project has been to evaluate how well the retail markets function in the Nordic countries, including an analysis of the regulatory framework, the competitive landscape and customer satisfaction. The close resemblance between the countries in terms of market organization and structure suggests that there could be a potential for more Nordic collaboration on how to address market issues and learn from the best practices of each other.

The European energy crisis caused by the war in Ukraine has led to a price shock for consumers in the Nordic countries and impacted the market players' financial situation and ability to hedge price risk. The study was also intended to examine the behaviour of market participants, especially households and non-households, and their responses to changing market conditions during the winter 2022/2023. The overall objective of the study is to help policymakers and market participants make informed decisions about how to address the energy crisis, raise awareness of the level of competition in the retail markets, and help identify and remove barriers to a well-functioning electricity retail market.

The European Union has been working on an electricity market design reform (EMD) to address challenges in the electricity retail market, and in December 2023, a provisional political agreement on the electricity market reform was reached between the Council and the European Parliament. The electricity market reform aims to create better protection for consumers, shield customers from price spikes, ensure more stability for companies and increase green electricity. Better protection for consumers includes improved availability of fixed-price and fixed-term contracts, increased flexibility in choosing dynamic pricing through multiple or combined contracts, and improved information to customers before entering into agreements.

The Nordic countries will likely need to adapt to new regulations concerning the electricity retail markets once the EMD reform is enacted as EU law. At the time when our analysis was conducted, the details in the EMD reform had not been agreed upon. Our recommendations should therefore be viewed in accordance with the propositions from the final electricity market reform.

Methodology and data collection

The study is based on the following empirical foundation:

- Five country studies (Denmark, Finland incl. Åland, Iceland, Norway and Sweden), consisting of findings from general and country specific desk research of relevant literature and regulations, interviews with relevant market actors, and a survey conducted among household consumers in all the Nordic countries. In total, 42 interviews were conducted as part of this study. The survey was conducted among 500 participants in Iceland, and between 1,000 to 1,500 participants in each of the other countries. Åland was not covered by the survey.
- A comparative analysis of the country studies, focusing on the regulatory framework and organization of the markets, the competitiveness and functioning of the markets, customer awareness and satisfaction, and the prevalence of challenges for consumers and retailers. An internal workshop with the entire project team from Oslo Economics, Sweco and Gaia was conducted as part of the work with the comparative analysis.
- Recommendations, based on the identified challenges in the different countries. A second internal workshop with the entire project team was conducted as part of this work.

Understanding the Nordic electricity retail markets

Except for Iceland, the Nordic countries have a similar organization of their electricity retail markets. The markets underwent a liberalization in the 1990s, involving the separation of the original monopoly, the electricity grid, from competitive activities, such as electricity production and trading. Denmark, Norway, Sweden and Finland have a common wholesale marketplace, Nord Pool Spot, where electricity producers, traders, and consumers can buy and sell electricity across the Nordic and Baltic regions. Additionally, electricity retailers, producers and other actors can trade financial contracts on the Nasdaq exchange.

In all countries, the end-users can choose their electricity supplier. The suppliers are responsible for buying electricity on behalf of their customers in the wholesale market and to invoice the costumers for their power consumption. In addition to the payment of electricity to the chosen electricity supplier, customers must also pay a grid fee and

taxes to their local DSO for the distribution of power. The DSOs are responsible for the physical delivery of electricity and for enabling customers have access to the market by connecting to the electricity grid. Furthermore, various regulatory and consumer actors play essential roles in ensuring fair competition, consumer protection, and the overall functioning of the market.

Prevalence of challenges for consumers and retailers

As with the European power markets, the Nordic power market was significantly impacted by the energy crisis during the winter 2022/23. The crisis resulted in a price shock for customers, prompting the implementation of electricity support schemes in several countries. The energy crisis also contributed to straining the liquidity in the financial markets, adding to a long period of gradually reduced activity at the exchange. The lack of liquidity in the financial market reduced the robustness of the future prices and increased transactions costs, thereby negatively impacting electricity retailers' ability and costs related to hedge their portfolios. This made it more challenging for electricity suppliers to offer attractive fixed price agreements to their customers.

Electricity retailers' challenges

The lack of liquidity at the organized financial market, where producers, consumers and retailers hedge against the risks associated with future price fluctuations, has negatively impacted all the Nordic markets, except for the Icelandic market, which does not have an organized financial market. To provide fixed price contracts, electricity retailers have shifted from using financial markets to bilateral agreements (OTC trade). This allows producers and retailers in the same price area to contract on the area price, providing advantages over exchange-contracts based on the system price. Since the OTC transactions are unobservable, the shift from the organized market to OTC has reduced the robustness of the future reference prices, which gives valuable information to all market players. The result may be higher transaction costs both in the organized and in the bilateral market for hedging.

OTC trade gives the possibility of tailored hedging products, but it can increase search costs, give less flexibility for suppliers rapidly to change positions, and may provide a 'thin' market in each price area. Thus, for a retailer it may be costly and inflexible to rely solely on OTC hedging, implying that it may not support competitive fixed price contracts for consumers. Retailers with integrated production in areas where they want to offer fixed price contracts, are not necessarily facing the same costs of hedging as the increased costs are mainly associated with market imperfections and transaction costs. This may translate into market power within the supply of fixed price contracts. Overall, having a liquid and efficient financial market improves the conditions for efficient competition in the end-user market and may reduce transaction costs related to hedging, hence increasing the supply and reducing the

premiums on fixed price contracts, or contracts with a fixed price element.

Asymmetric information is a challenge for electricity retailers in all countries. The markets have been characterized by insufficient or inadequate information available to consumers, partly due to the complexity of the market, and partly due to a historical lack of customer awareness due to low electricity prices. For competition to function effectively, consumers need sufficient information to make rational and active choices. Asymmetric information therefore translates into a challenge for serious electricity retailers to signal seriousness, and to compete on parameters such as price and quality. This may, in particular, be a challenge for new electricity retailers as they have no track-record to prove seriousness. Instead, it could encourage short-sighted retailers pursuing hit-and-run strategies to enter the market leading to an increased risk. The result is less efficient competition and a worse outcome for consumers.

The electricity retail market has some inherent properties, which implies that asymmetric information to some degree is unavoidable. Electricity can generally be described as a homogeneous subscription product with low customer interest. However, the product sold is composed by both electricity and additional services provided by different suppliers, and the consolidated bill includes charges for electricity, grid services, and other fees. With numerous retailers in the electricity market offering various types of contracts, each with distinct features, pricing elements, and additional services, it becomes challenging to compare products and choose what is in one's best interest, especially when customers often have limited awareness of their individual power consumption. The prevalence of asymmetric information, coupled with low barriers to entry, makes scope for unserious players. Such challenges appear to have had the most adverse effects in Denmark and Norway. Norway has attempted to address this issue by introducing stricter regulations and enforcement to reduce the prevalence of unfair business practices, which to some degree, combined with increased awareness due to the rising electricity prices, have reduced the information problem.

Some of the interviewed market actors in Sweden, Norway, and Denmark raised concerns regarding as to how certain regulations may impede the development of various types of contracts. For instance, Norway and Sweden have regulated notice periods, which is the time in advance a retailer must inform customers about price changes in a contract. The earlier the price information is required to be sent to the customer, the greater the financial exposure and uncertainty for the electricity supplier, thereby influencing the price that can be offered to the customer. The customers' benefit from early information should therefore be weighed against the costs, which the customer faces through increased premiums on the contracts. In Denmark, the legal framework strongly favours consumer rights, particularly concerning their ability to opt out of fixed price agreements. While this approach on the one hand is consumer friendly, it can on the other hand act as a disincentive for electricity retailers to provide fixed price contracts. However, the legal framework anchoring consumer rights applies to all sectors and changes may therefore be

difficult to implement.

Consumer challenges

Electricity is a low-interest subscription product, where the consumer, unlike in many other markets, does not have to make an active choice of supplier and contract each time he buys the product. Furthermore, when consumers sign an electricity contract with a retailer, both their future consumption and the price they pay can be uncertain. These uncertainties may be even more prevalent in the electricity retail market, compared to other subscription markets. Understanding the relationship between the contract terms and future prices may be difficult for the consumers. The characteristics of the market, and the product complexity, reduce the consumers' incentives and ability to seek information and actively participate in the market. Because of the information asymmetry, inactive consumers have a high risk of entering into contracts with unfavourable terms. Also for active consumers, the complexity and variation of product structures may impede the consumers' ability to identify the contracts that are in their best interest, which in turn may reduce the electricity retailers' incentives to compete on price and quality. In addition, contracts are often sold through channels that provide customers with limited information at the time of purchase, such as telemarketing and stands. Norway and Denmark stand out with the most telephone sales and aggressive marketing strategies.

The complexity of contracts and variations in price structures are also challenging when designing price comparison tools, which is an important source of information to consumers in the Nordic retail market. When the tools are well designed, they can reduce the search costs for consumers and increase information about suppliers and contract terms, making it easier to identify favourable contracts and avoid unfavourable contracts. Some of the tools, however, have been less trustworthy and have in part been used as marketing platforms for suppliers and contracts that may be cheap in the short run, but not favourable for the consumers in the long run. Currently, Denmark in particular faces challenges with their tool, and its usage is less prominent compared to the other Nordic countries.

The electricity retail markets of Finland, Denmark and Sweden offer versions of spot, fixed and variable price contracts. The Icelandic market only offers variable price contracts. The Norwegian market offers mostly spot price to households, while SMEs have access to both spot and fixed price agreements. As of today, variable price contracts are currently not available in Norway, but there are still around 4 percent of customers who hold these 'old' contracts. For some time during the energy crisis, fixed price contracts have not been available for Norwegian households, and the few fixed price contracts available today are sold at a high premium and are most likely not an attractive offer for most customers. The absence of certain contracts may pose a challenge for customers, but does not necessarily do so:

In Norway, the demand for fixed price and variable price contracts has traditionally been low compared to the other Nordic countries. This tendency has been reinforced

with the implementation of the electricity support scheme, which in practice implemented a soft price cap at a rather low level. Hence, the lacking supply of such contracts to households is probably mainly explained by a lack of demand. There may be a higher underlying demand for fixed price contracts in the SME segment, and for this segment there is also a higher supply of contracts with fixed price elements. However, for the moment spot prices are low, relative to the cost of hedging, translating into a rather low expressed demand also in the SME-segment.

There are only variable price contracts available in Iceland as there is no wholesale market for spot prices, and the national power company Landsvirkjun sets the wholesale electricity price. The lack of spot price contracts is not necessarily a weakness in the market that has been unfavourable for consumers, given the current low and stable prices in the Icelandic market. However, the need for a transparent spot market and contracts based on spot prices may be more evident with a development towards increased demand, and potentially also integration of variable energy production, hence also increasing the value of more flexible consumption responding to efficient price signals.

In Denmark, there are only long-term fixed price agreements available for SMEs, and not for households. The lack of long-term fixed price contracts for households is at least partly explained by the increased price variations in the market combined with the consumer's right to opt out of a fixed price agreement, something which significantly increased the risk of offering such contracts. As a result, households were mostly limited to signing three-month fixed price contracts. The absence of favourable fixed-price contracts, along with long-term contracts for households, may be a weakness for the customers who seek fair deals that also offer predictability. However, these issues may be temporary as long-term fixed price agreements existed for Danish households before the crisis and thus may return when market conditions stabilize.

According to our survey results and interviews, the increase in electricity prices has contributed to raise the general customer awareness in the Nordic markets, with Iceland being the exception. Finland stands out with a notably high share of active customers, followed by Denmark, Norway, Sweden, and Iceland. In Norway and Sweden, the activity was often triggered by the consumer's desire to find a more competitive contract. In contrast, the main reason for switching in Iceland, Denmark, and Finland was that a seller contacted the customers. This could imply that in practice, customers in Norway and Sweden are more actively engaged in the market. This trend may be attributed to the substantial prevalence of spot price contracts in Norway and variable price contracts in Sweden, coupled with higher household electricity consumption per year compared to other Nordic countries.

Results from our survey shows that around half of the households in the Nordic countries felt well-informed when switching contracts, except for Finland where around 70 percent felt well-informed. For most consumers, the main motivation for switching contracts in the Nordic countries is to get a better price, which may suggest that many households are adept at identifying competitive electricity contracts since many of the respondents report taking well-informed decisions. However, the results also imply that a large share of household consumers did not feel well-informed when switching contracts, and the share of households who felt poorly informed or somewhat informed were particularly high in Denmark, and to some degree Norway.

The degree of awareness may be higher for SMEs, since businesses should have better incentives to pay attention to their contracts as they often have higher consumption, and their costs for electricity may influence their ability to compete in the market. In addition, as businesses do not necessarily have the same consumer rights as households, they have at the outline, stronger incentives to make sure they understand the deal they are entering into. However, many small SMEs share the same characteristics as households, with low awareness and competence regarding their power consumption, and have difficulties in identifying favourable contracts.

Discussion and recommendations

Based on the findings from this study, our overall assessment is that the electricity retail markets in the Nordic countries are well-functioning. In general, the competition in the Nordic electricity retail markets seem sound, although Denmark and especially Iceland have a higher prevalence of challenges related to competition than the other Nordic countries. Information asymmetry and insufficient enforcement of the existing regulations stand out as the main challenges for well-functioning electricity retail markets in the Nordic countries, both when it comes to the competitive landscape and to the customer awareness and satisfaction. In the following section, we shall discuss the need for addressing the various identified challenges in the Nordic electricity retail markets. We shall also provide recommendations regarding how to address some of these challenges if we believe that our gathered information and analysis provide sufficient basis for doing so. It is important to note that the survey and interviews were made in the context of the energy crisis and thus the responses and findings are influenced by this crisis.

Enforcement of regulations and sanctioning

Generally, the regulations covering the Nordic electricity retail markets seem sufficient, both related to marketing and consumer rights. We have not been able to identify any evident gaps in the legal framework in any of the countries. However, the regulations are distributed among several authorities in all countries and enforcement of the regulations have been upheld to a varying degree. In addition, economic sanctions seem to be fairly weak and other sanctions may not be severe enough. When enforcement and interpretation of the legal framework are limited, electricity retailers may not have a clear understanding of the legal boundaries and may unintentionally be operating in a legal grey area. Furthermore, electricity suppliers may also consider it profitable to operate in the legal grey area, if they find the chances of being caught as low, and the fines minimal. This also makes it difficult for serious actors, who comply with the legal framework, to compete with actors that can take advantage of the legal grey area and use unfair business practices.

The characteristics of the electricity retail market may necessitate a more robust enforcement of regulations compared to other markets. This stems from consumers signing contracts before consumption takes place and prices are set, low customer awareness, and electricity being a homogeneous product, requiring retailers to differentiate themselves to gain a profit. Such characteristics may foster valuable innovations and business models, but can also open the door to 'innovation in deceiving customers', posing a risk that less informed customers may enter into less favourable agreements.

Based on the concerns described above, we generally recommend increasing the enforcement of regulations and ensuring that economic sanctions are sufficiently high to remove the incentives to operate outside the regulatory framework. Enforcement and active interpretation of the regulations reduce the ambiguities and uncertainty about the legal boundaries and the possibility to operate in a legal grey area. The relevant authorities can also consider informational measures to communicate clearly to retailers how the existing regulatory framework is to be interpreted. An example of such an informational measure could be the establishment or, if already existing, the further development of a shared guideline or a practice document that provides information to enhance the electricity retailers' understanding of existing regulations. As an example, such a document could clarify how general sector regulations such as marketing regulations and other consumer protection laws apply and are to be interpreted in the context of the electricity retail market. Several actors could have roles in developing such documents, e.g. the consumer authorities, market regulators and/or industry organizations. The practice or guiding documents should be maintained and updated, for example when new case law or administrative practice is established, or with the introduction of new actors, contract types, or offering of new additional services in the market.

Strengthening the enforcement of regulations and ensuring sufficient supervision and sanctioning should be a particular priority in Denmark as the challenges with unserious actors and unfair business practices appear to be most prevalent in Denmark compared to the other Nordic countries. At the same time Norway, Sweden, and Finland should continue their work in this area, and Iceland should be aware that issues regarding interpretation of regulations might arise when developing a more competitive market.

Enhance information given to customers

Measures that can enhance the information given to customers may reduce the underlying problem with information asymmetry in the market, and hence improve competition and innovation as well as the customer's welfare through better choices of contracts. There is, however, a balance between giving sufficient information and having detailed information requirements, which could potentially impede innovation or increase costs. Relevant measures to consider could be stricter requirements towards the suppliers regarding their information to the customers about features of the different contract types and key differences between them. This may be more important in Finland, Sweden and Denmark, since the markets are more complex than in Norway and Iceland, due to the prevalence of different types of contracts to consumers.

There may also be a potential to improve the format and design of the electricity bills, especially in Denmark and Norway, where the challenges for consumers to understand the bills seem to be more evident than in Finland and Sweden. Several adjustments have recently been made regarding the information requirements on electricity bills in Norway, and one should review the impact of these adjustments before considering new changes. Generally, we recommend that regulations should ensure that electricity bills present information in a clear and concise manner, making sure that the language is easy to understand for customers. Requirements regarding what type of information electricity retailers must provide to their customers, and in what format, will likely be included in the updated Electricity Market Directive.

Before changing the information requirements, the regulator should carefully consider what type of information that is valuable and whether or not it is necessary to tie the information requirements to the bill, or if other channels better suited to give dynamic information could be allowed. In Sweden, electricity suppliers find the requirement to inform customers about prices and other contract terms 60-90 days ahead of delivery (when a fixed-term contract is automatically renewed after the contract period has ended), an important challenge for product development.

Further development of Price Comparison Tools

A price comparison tool can be a highly effective way to decrease search and switching costs for customers. It does, however, require that the portal actually makes it easier for customers to find, compare, and evaluate what contract, including

their current contract, is best suited for their needs. Price comparison tools can be harmful if they are not of a sufficiently high quality. Consequently, it is important that all Nordic countries invest in developing and maintaining well-functioning price comparison tools.

According to the survey results, the price comparison tools are widely used by customers in the Nordic countries to compare contracts. The price portal seems to work relatively well in Norway, Sweden, Finland, and Iceland, while the Danish price portal faces challenges and has potential for improvement. The Danish price portal should be adjusted to correct the issues in the portal today, and the Danish regulatory authorities are already working to solve these issues.

However, the development of the price comparison tools should be a continuing task for all the Nordic countries to ensure that the information within the portal is reliable, and that the offers are not deceptive. There may be changes and developments of both the supply and demand side of the market that necessitate changes in the portal. For example, it is important to ensure that the contracts, which are compared, are relevant to customers and that there are no loopholes for the suppliers to exploit in order to push their deals higher on the list unless they are genuinely favourable. Ensuring that the price portals function properly can address several challenges related to information asymmetry in the market.

A need for Nordic collaboration to develop a functioning financial market

The electricity retailers' ability to hedge in the financial market became a greater challenge during the energy crisis due to poor liquidity at Nasdaq OMX. With vast fluctuations in the area prices, the system price contracts were no longer sufficient to hedge the price risk. This combined with a market that is not liquid or non-existent for EPADSs to hedge the remaining area price risk, as well as rising costs for necessary collaterals, leading to a rapid decline in the trade at the exchange. Yet, based on the availability of fixed price contracts in Sweden, Denmark, and Finland, the illiquidity of the market does not seem to hinder the offering of fixed price contracts completely. The declining trade in the financial markets is at least partly replaced by OTC-trade, where electricity enters into bilateral agreements with producers or intermediaries. However, relying on bilateral markets is a less favourable solution for electricity retailers as it involves higher transaction costs for hedging. At the same time, the electricity retailers with integrated production within their conglomerates have an advantage as they can avoid these increased transactional costs.

Improving the financial market is a crucial joint Nordic task for several reasons. One reason is the need for efficient price hedging options to be able to offer attractive fixed price contracts with more moderate risk premiums. However, efficient price hedging options are important for all market players, including electricity producers and companies developing and investing in new energy production. Furthermore, accessible reference prices reduce the risk and transaction costs related to hedging, both in the organized and in the bilateral market, and facilitates more efficient and

better decision-making among consumers and producers, both in their operations and investments. As the financial market is a common Nordic market, both the future design of the market, possible solutions to increase liquidity and responses to EU proposals require Nordic collaboration.

Reduced liquidity in the financial markets can weaken the competition in the electricity retail market in a situation with vertically integrated players competing with independent retailers

Over the last 20 years, electricity retailers have transitioned from being vertically integrated in energy companies with control of the grid, production, and supply of electricity, to a situation with free competition in the supply of electricity. How far previously vertically integrated actors have progressed in unbundling after the liberalization of electricity markets matters for the level of competition one can expect between companies with and without production. There are both advantages and disadvantages related to vertical integration in the electricity sector. There can be potential efficiencies related to vertical integration, but at the same time this can constitute a barrier to efficient competition in the end-user market. With illiquid financial markets, vertical integration between electricity production and electricity sale may give an advantage when offering fixed price contracts. Furthermore, integration between grid services and electricity sale may give an advantage related to consolidated billing.

Based on the findings from this study, we cannot conclude that increased unbundling is either a necessary or an efficient measure to improve the functioning of the market. Still, we do note that the competitive advantages, which vertical integration can lead to, have become more prominent with reduced liquidity in the financial markets. However, we want to underline that market power related to the supply of fixed contracts may be most efficiently remedied by measures that ensure well-functioning financial markets, which will also have other important benefits to market players. Furthermore, advantages for integrated players that offer consolidated billing can be remedied by these players being obligated to offer other retailers the option of consolidated billing at non-discriminatory terms, or alternatively separating the bills regardless of integration.

Improve customer protection for SMEs

In all Nordic countries, besides Iceland, there seem to be challenges associated with the lack of customer rights for SMEs. There are valid reasons why SMEs are not subject to the same customer rights as households. Strong customer rights can diminish the customer's incentive to choose 'correctly' since the cost of making a wrong choice becomes less substantial, and one party could exploit imbalanced rights and obligations between two commercial actors. Nevertheless, having somewhat stronger customer rights for SMEs may be beneficial due to issues related to information asymmetry in the market, as SMEs are often faced with the same issues related to information asymmetry as household customers. In Denmark, Finland and

Sweden, part of the electricity market specific regulation applies both to households and to SME's. In Iceland, SMEs have considerably similar customer rights as household consumers. In Norway, on the other hand, SMEs have fewer customer rights.

There could be several ways to improve customer protection for SMEs in the Nordic countries. One approach could at least be to introduce a right to withdraw from a contract for businesses of a certain size, similar to the 14-day right to withdraw afforded to consumers under existing consumer rights legislation in many countries. This would provide SMEs the chance to change their minds if they are victim to aggressive sale techniques such as telephone sales, where the buyer has not had much time to think before agreeing to the deal.

Electricity support schemes can have distorting market effects

Due to the sudden rise in electricity prices and the increased volatility during the energy crisis that unfolded in the second half of 2021, numerous governments implemented electricity support schemes. These initiatives aimed to ease the impact of rising electricity costs on households and other relevant entities such as sports clubs and voluntary organizations, as well as the agricultural and greenhouse industries. However, the extent of these support schemes varied among the countries.

In general, support schemes that affect the prices, and hence the consumers' incentives, such as the Norwegian scheme, should be expected to have adversely distorting effects on markets. For instance, if the consumers do not bear the full costs of their consumption, they may become less price sensitive and reduce their response to high prices, which in turn may soften price competition among suppliers. An example is the complete lapse in the offerings of fixed price contracts to Norwegian households, as the scheme introduced a soft price cap at a relatively low price. Both the Nordic wholesale market and the end-user markets are designed to take advantage of the general market mechanisms, balancing supply and demand of electricity at all times. In these markets, distorted incentives that reduces the customer's response to the prices may thus be severe. Given a need to support households or SMEs, this should ideally be done through alternative measures such as flat electricity support payments to customers, which do not affect relative prices. This would have less adverse effects on the functioning of the electricity retail market, the electricity retailers' ability to come up with innovations in contract types, and the offering of fixed price contracts. There may however be other practical and political reasons for the design of the support schemes, which could partly or fully offset the negative impact on the power market.

Introduction of customer awareness campaigns

Reducing electricity consumption is advantageous for various reasons, offering both environmental benefits and cost savings for consumers by lowering electricity bills. Customer awareness campaigns could be an effective measure to reduce electricity consumption among households and SMEs.

Customer awareness campaigns aiming to reduce electricity usage has seemed efficient in Denmark, Finland and Sweden. All these campaigns focused on consumers making small adjustments in their electricity consumption and thus have an impact on their electricity bill. The campaigns reached a wide number of customers and may have contributed to increasing customer awareness and reducing electricity consumption. Launching customer awareness campaigns may be an effective measure in all Nordic countries to enable customers to become more active and conscious. Such customers play a crucial role in fostering competition, and implementing initiatives to encourage such engagement could thus be beneficial. Furthermore, customer awareness campaigns can both be a cost-effective measure and contribute to a general reduction in electricity usage.

Country specific measures

There are certain measures that could be beneficial to address country-specific issues. In Denmark, it is common for customers to have pre-payment of their electricity bill, as much as three months in advance. As a result, many customers have been afraid to switch suppliers because they are uncertain about whether they will get their pre-paid money back. Such terms contribute to increasing switching costs and may lead to an inefficient lock-in effect. However, there is a trade-off between the need for working capital for energy suppliers and ensuring that consumers do not provide energy suppliers with an interest-free loan, thereby being reluctant to switch retailer in fear of not getting their money back. The fact that the Danish market has faced such a problem could indicate that competition in the market is not functioning optimally as the market should be able to correct such behaviour. There could be a need to address the issues related to advanced payments in a way that does not create a lock-in effect, and thereby hinder competition. However, findings from the interviews also suggest that electricity retailers are increasingly offering post payment alternatives in order to market themselves to consumers. This could be a sign that the market is in fact correcting this behaviour. Thus, we suggest that one should wait before addressing this concern and monitor whether the market corrects it on its own.

The authority to create regulations in the electricity market varies between the Nordic countries. In Iceland, the NRA does not have the mandate to develop and update existing regulations. At the same time, our findings indicate that the government lacks the capacity to perform these tasks, and several of the interviewed actors have suggested transferring the regulatory authority to the regulators. We do not have

sufficient information regarding this challenge to clearly recommend how it should be solved, but giving the NRA the mandate to develop and update existing regulations should be a measure to consider.

As an autonomous state, Åland has control over their electricity retail market, and the market functions differently from the other Nordic countries. The competition in Åland is in practice non-existing, as only two integrated DSOs and retailers operate in the market. New electricity retailers can enter the market, but in practice, the entrance barriers are high both due to language barriers regarding the regulations, and to the market being small. We do not, however, have indications that customer satisfaction is particularly low, and customers appear to have access to relatively competitive contracts compared to the other Nordic countries. Creating an official overview of the relevant regulations, and translating all relevant regulations into either Swedish, Finnish, or both, could lower the entrance barriers in Åland and make the market easier to navigate. However, as the market is small, it is not obvious that this will increase the competition in Åland. As of now, the electricity retail market in Åland appears to function relatively well for the customers, and we suggest not making any major changes as long as there are no obvious challenges on the horizon.



1. Introduction and mandate

1.1 Background

European energy prices have been significantly impacted by the war in Ukraine, and the subsequent energy crisis has led to a price shock for consumers in the Nordic countries and impacted the market players' financial situation and ability to hedge price risk. The high electricity prices have been a heavily debated topic in several European countries, and the general consumer trust in the electricity sector is considered to be low. The energy crisis contributed to highlighting some underlying challenges in the European electricity retail markets, for instance regarding the impact of volatile electricity prices.

The European Union has been working on an electricity market design reform (EMD) to address challenges in the electricity retail market, and in December 2023, a provisional political agreement on the electricity market reform was reached between the Council and the European Parliament. The electricity market reform aims to create better protection for consumers, shield customers from price spikes, ensure more stability for companies and an increased proportion of green electricity. Better protection for consumers includes improved availability of fixed-price and fixed-term contracts, increased flexibility in choosing dynamic pricing through multiple or combined contracts, and improved information to customers before entering into agreements. The Nordic countries will likely need to adapt to new regulations concerning the electricity retail markets once the EMD reform is enacted as EU law. At the time when our analysis was conducted, the details in the EMD reform were not agreed upon as yet. Our recommendations should therefore be viewed in accordance with the propositions from the final electricity market reform.

The electricity retail markets in the Nordic countries share many inherent characteristics, indicating that the countries share many of the same challenges such as asymmetric information and costly searches for the consumers. There are, however, differences regarding the prevalence of these challenges, and how the countries are dealing with the challenges in the market. There are also other major differences in the characteristics of the Nordic electricity retail markets such as the prevalence of different contract types and the level of households' electricity consumption.

Nevertheless, the close resemblance between the countries in terms of market structure and challenges suggests that there could be a potential for more Nordic collaboration on how to address the market issues and learn from the best practices of other countries.

1.2 Mandate

In June 2023, Nordic Energy Research, on behalf of the Nordic Council of Ministers, commissioned a constellation led by Oslo Economics to conduct an evaluation of the electricity retail markets in the Nordic countries. The constellation consisted of Oslo Economics, Sweco, Gaia and Respons Analyse. The aim of the project was to evaluate how well the retail markets function in the Nordic countries, including an analysis of the regulatory framework, the competitive landscape and customer satisfaction. The study was also intended to examine the behaviour of market participants, especially households and non-households, and their responses to changing market conditions during the winter 2022/2023.

In particular, the evaluation was supposed to answer the following questions:

- What is the competitiveness of the retail markets in the Nordics due to parameters such as market concentration, changing rates of electricity retailers, market transparency and range of competitive number/type of price contracts available to the customers, etc.?
- What are the prerequisites for electricity retailers to offer competitive fixed price contracts?
- How satisfied are the customers with services, and what are the customer preferences for services of the suppliers?
- Do consumers have confidence in electricity retail companies? What is the customer awareness of various products and prices? Are the customers able to make an informed decision about what product to choose?
- Is the 'general public' aware of the existence of power producers, DSOs and electricity retailers and do customers know what are the tasks of the different companies, and who does what?
- How are the existing legal obligations for retailer companies aimed at securing consumer rights for electricity consumers, and what other measures for securing consumers are there?
- Are there legal restrictions that prevent different types of price agreements (e.g. 1/3 fixed price, 2/3 spot), etc.?
- Discuss and recommend measures to increase the customers' trust in their suppliers, to improve the efficiency and the transparency of the electricity retail market.

The overall objective of the study is to help policymakers and market participants make informed decisions about how to address the energy crisis, raise awareness of the level of competition in the retail markets, and help identify and remove barriers to a well-functioning electricity retail market. In addition, the results could be used when the Nordic countries are to implement the various amendments to the electricity market as a whole when the EU's electricity market reform has been finalized.

1.3 Methodology and data collection

Our evaluation of the Nordic electricity retail markets builds on the following empirical foundation:

- First, we carried out five separate country studies of the Nordic countries, including Åland. The Swedish country study was conducted by Sweco, the Finnish country study was conducted by Gaia and the Danish, Icelandic and Norwegian country studies were conducted by Oslo Economics. The studies are based on an analysis of several information sources. We have conducted desk research of relevant literature and regulations in each Nordic country, interviews with relevant market actors, and a survey conducted among household consumers in all the Nordic countries. Table 1-1 provides an overview of the actors interviewed in each country. In total, 42 interviews were conducted. The survey was conducted among 500 participants in Iceland, and between 1,000 and 1,500 participants in each of the other countries. Åland was not covered by the survey.
- A comparative analysis of the country studies was conducted, focusing on the regulatory framework and organization of the markets, the competitiveness and functioning of the markets, customer awareness and satisfaction, and the prevalence of challenges for consumers and retailers. We conducted an internal workshop with the entire project team from Oslo Economics, Sweco and Gaia as part of the work with the comparative analysis, where we discussed and compared the empirical findings from the country reports.
- Recommendations are based on the identified challenges in the different countries. A second internal workshop with the entire project team was conducted as part of this work.

1.3.1 Document and literature review

We have conducted extensive analysis of existing documents, literature and statistics regarding the electricity retail markets in the Nordic countries. Most of the literature has served as important background information for the analysis but is not necessarily discussed directly in the report. However, we have in particular reviewed relevant regulations for the electricity retail markets in the Nordic countries. A general overview of important aspects from the country specific regulations are included in

the country reports, and a more detailed overview of relevant regulations in each country is included in Appendix A.

1.3.2 Interviews

We have conducted in-depth interviews with relevant market actors in each country. We have interviewed NRAs, industry organizations for electricity retailers, industry organizations representing non-household consumers, consumer and competition authorities, consumer councils, and electricity suppliers. These relevant actors provide good understanding of the different legal and regulatory environments in each country and provide valuable qualitative data on the impacts of the energy crisis, rising energy prices, and the potential electricity market reform. Certain actors have declined to participate in interviews. There is a list of the interviewed actors in Table 1-1.

Table 1-1: Interviewed actors

	Denmark	Finland	Iceland	Norway	Sweden
Regulatory authority	Forsynings-tilsynet	Energia- virasto, Ålands energi- myndighet	Orkus- tofnun	Regulerings- myndigheten for energi	Energi- marknads- inspektionen
Consumer authority	Konkurrence- og Forbruger- styrelsen	Kilpailu- ja kuluttaja- virasto	Neytendas- tofa	Forbruger- tilsynet	*
Competition authority	Konkurrence- og Forbruger- styrelsen	Kilpailu- ja kuluttaja- virasto	Samkeppnis- eftirlitið	Konkurrans- tilsynet	Konkurrens- verket
Consumer council	Forbruger- rådet Tænk	Kuluttaja- liitto		Forbruger- rådet	Konsu- menternas energimark- nadsbyrå
Special interest groups	Dansk Erhverv, Green Power Denmark	Energia- teollisuus, Paikallis- voima	Samorka	Fornybar Norge, NHO, Norsk industri	Energi- företagen, Villa- ägarna
Electricity retailers	3 retailers	2 retailers (Mainland), 2 retailers (Åland)**	3 retailers	3 retailers	2 retailers

*The Swedish Consumer Authority (Konsumentverket) was contacted but referred to the Consumer Council (Konsumenternas Energimarknadsbyrå) ** In addition to retailers, the TSO of Åland (Kraftnät Åland) was interviewed.

1.3.3 Survey

We have conducted a survey amongst household consumers in all five Nordic countries. Respons Analyse has been responsible for conducting the survey, and the results have been analysed by Oslo Economics, Sweco and Gaia.

The purpose of the survey has been to obtain information on consumers' activities and experiences with the retail market for electricity and their current electricity seller. The survey does not cover businesses or their experiences with the electricity

market. The survey consists of 48 questions, excluding questions on demographics. The number of questions displayed to each respondent depends on their answers, and no respondent was asked all questions.

Except for a question related to the household's most important source of heating, the survey data presented in this report is based solely on responses from those who state that they are involved in decisions regarding their household's electricity contract. Hence, the sample size differs for the questions, which leads to different levels of uncertainty. Topics covered in the survey include:

- Energy consumption, current contract, and prices
- Experiences with switching and comparing contracts
- Activity in the retail electricity market
- Negative experiences with electricity seller (last two years)
- Billing and notification of changes in contract

Table 1-2: Number of respondents in household survey

Country	Total	Decision makers
Denmark	1,299	986
Finland	1,156	969
Iceland	562	369
Norway	1,483	1,195
Sweden	1,066	772

Note: The table shows the number of respondents in a survey conducted in the Nordic countries. In the first column, the table provides the total number of respondents, and in the second column the number of respondents who are involved in decisions regarding the household's electricity contract. Only the latter group answers the majority of the questions in the survey.

The same survey was distributed to panels in all five countries. The survey was translated to Finnish for Finland, Danish for Denmark, Icelandic for Iceland, Norwegian for Norway, and Swedish for Sweden. Questions related to contract types and pricing were adapted to the characteristics of each country.

The sample is not necessarily representative of the adult population in each country. Therefore, for each country, the survey data are weighted to match the target population on gender, age, and place of living.

1.4 Definitions and abbreviations

1.4.1 Definition of contract types

The most common contract types that are provided in the Nordic countries can broadly be categorized into spot price contracts, fixed price contracts and variable price contracts. Each contract type has some inherent characteristics, but there are still variations within each contract type, both between and within each country. In Table 1-3, we present descriptions of the most common contract types for household consumers in the different Nordic countries, and how they generally are to be understood. Other contract types than these also exist. For non-household consumers, combination agreements, combining aspects of fixed and spot contracts, is prevalent.

Table 1-3: Description of different contract types

	Spot price	Fixed price	Variable price
General description	The wholesale market price, typically the hourly Nord Pool price, plus a fixed mark-up to the supplier for each kWh and/or a fixed fee to the supplier.	A fixed price per kWh for a period of at least 3 months, including fixed price per kWh for a predetermined volume.	The supplier sets the price per kWh for an open-ended period, or for a predetermined period of less than 3 months.
Denmark	Same as general description	Same as general description.	Same as general description.
Finland	Same as general description	Same as general description. Typically, fixed price for one or two years.	Typically, the price is updated four times a year or monthly. The price can be adjusted with a one-month notice. Contract is open-ended.
Iceland	Not on the market	Not on the market	Only open-ended contracts exist.
Norway	Same as general description	Same as general description.	Typically, the supplier sets the price per kWh for an open-ended period. The price can be adjusted with a 30-day notice.
Sweden	This contract form is called 'hourly prices' and is an hourly based spot price + margin matched with kWh per same hour	Same as general description. Typically, fixed price for one, two or three years.	Based on an average spot price for the month + margin, matched with total kWh for the month. 'Assigned price' is a version with higher margin and open ended (2 weeks' notice period)

Table 1-4: Abbreviations used in the report

Abbreviation	Description
DSO	Distribution system operator
EMD	Electricity market design
TSO	Transmission system operator
EPAD	Electricity Price Area Difference
EEX	The European Energy Exchange
EEA	European Economic Area
NRA	National regulatory authority
SME	Small and medium sized businesses ^[1]

1. Small businesses have up to 50 employees and a turnover less than 10 million euros, while medium-sized businesses have up to 250 employees and a turnover of less than 50 million euros. https://single-market-economy.ec.europa.eu/smes/sme-definition_en.



2. Understanding the Nordic electricity retail markets

2.1 Characteristics of the Nordic electricity retail markets

The Nordic electricity markets, including the electricity retail markets, share many fundamental characteristics. Although Iceland shares some of these characteristics with the other Nordic countries, Iceland is not connected to the European power grid and has several fundamental differences in how the electricity retail market is organized compared with the other Nordic countries. In this chapter, we shall describe some fundamental shared characteristics of the Nordic electricity retail markets. A further description of the characteristics of the Icelandic market is found in chapter 7.

2.1.1 Relevant players

The organization of the electricity retail markets in the Nordic countries is quite similar, with the Icelandic market being the exception. In all countries, the key players in this market include power producers, Transmission System Operators (TSOs), Distribution System Operators (DSOs), Balance-responsible party (BRP), and electricity retailer suppliers. They work together to ensure the functioning of the electricity retail market. Electricity production companies are entities responsible for generating electricity from various energy sources and supplying it to consumers or selling it on the wholesale electricity market. There are several electricity production companies in all the Nordic countries, except from Iceland where Landsvirkjun produces 70 percent of the electricity production. TSOs are responsible for the high-voltage transmission of electricity from power plants to distribution networks. They also manage the operation of cross-border interconnectors. DSOs manage the low-voltage distribution networks and deliver electricity to end-consumers. They are responsible for grid maintenance and connecting new consumers to the grid. BRPs are companies with the authorization to manage the balance responsibility for production and consumption units, as well as engage in the actual trading of electricity. BRPs are also accountable for discrepancies and variations in the anticipated versus real production, consumption,

and trading of electricity. Electricity retailers sell electricity directly to consumers. Retailers offer various pricing plans and services, giving consumers choices in selecting their electricity provider.

2.1.2 A liberalized electricity retail market

Most European electricity markets were liberalized during the 1990s. Before the electricity market liberalization, the electricity retailers owned all aspects of the electricity value chain, from production and transmission to the final distribution of electricity to customers. With the electricity market liberalization, neither consumers nor distribution companies were tied to their own power plants anymore, leading to a separation of the original monopoly – the electrical grid – and the competitive activities, such as electricity production and trading. The main goals of these reforms were to introduce competition, increase efficiency, and reduce electricity prices for consumers. The process also involved establishing a regulatory body to oversee the sector. The liberalization introduced competition in the Nordic electricity retail market, allowing consumers to choose their electricity supplier. This competition has led to innovations in pricing and services, giving consumers more options to select electricity plans that suit their needs. The unbundling process has, however, varied somewhat between the different Nordic countries. Today, there are for instance some differences regarding the degree of separation between some companies' distribution activity, power production and retail activity.

2.1.3 Nord Pool, NASDAQ and OTC agreements

The liberalization of the electricity market also led to the establishment of Nord Pool in 1996. Nord Pool operates as a common marketplace where electricity producers, traders, and consumers can buy and sell electricity across the Nordic and Baltic regions. This integration has led to increased market liquidity and efficiency. Nord Pool operates both day-ahead and intraday electricity markets. In the day-ahead market, market participants trade electricity for delivery on the following day. The intraday market allows for more flexible trading closer to real-time and helps balance supply and demand.

Additionally, entities can trade financial contracts on the Nasdaq exchange. The financial contracts have different durations, ranging from weeks, months, quarters, and annual agreements, with contracts including forward, futures, or options contracts, and EPADs. The financial contracts enable power traders, producers, distributors, and electricity retailers to mitigate electricity price-related risks effectively. Nasdaq Commodities exchange announced in June 2023 that they have agreed to transfer Nasdaq's operations in the electricity futures market within the Nordic region to The European Energy Exchange (EEX). EEX operates a marketplace for the futures market, spot market, and intraday market across extensive portions of the European Economic Area (EEA). Through its subsidiary, EPEX, EEX provides its members with the ability to engage in trading activities within the spot and intraday

markets in Norway and the broader Nordic region. Nord Pool has also stated that they are considering establishing a financial trading platform.

In addition to Nasdaq, trading with standardized contracts can occur on what is known as OTC (Over The Counter), where a broker serves as an intermediary or facilitator. Market participants often prefer exchanges over OTC agreements if exchanges are efficient and have good liquidity. However, if liquidity is low, those in need of price hedging typically use OTC-agreements. OTC-agreements can also be tailored to the specific needs of market participants, and thus be preferred over financial markets. This can for instance be the case if a market participant needs particularly long contracts, or full hedging against differences between the area prices and system prices. The financial markets, however, have positive externalities through the establishment of reference prices for the expected long-term power price that everyone can use in their investment and operational decisions, and as a reference to OTC-agreements.

The energy crisis has contributed to decreasing liquidity in the financial markets. Because of significant variations in the area prices, the products in the financial markets have become less relevant. In addition, they have become more expensive because of high collateral requirements, and typically higher than for OTC trading. Thus, OTC trading has become increasingly common in the Nordic market and is today relatively common for futures contracts that hedge the price in a specific bidding area. OTC trading represents both competition and a supplement to power exchanges like Nasdaq and EEX and is considered a part of the futures market.

2.1.4 Organization of the electricity retail market

The organization of the retail markets in the Nordic countries is quite similar, apart from Iceland. Private customers and business customers purchase electricity for their own consumption through an electricity supplier or a broker. Entities that sell electricity in the retail market acquire electricity in the wholesale market, which they then sell to their customers. Some larger end-users such as major industrial companies, trade directly in the wholesale market or through bilateral agreements with electricity producers, and they do not fall within the scope of the retail market.

Electricity suppliers and consumers have contractual agreements outlining the amount of electricity to be bought and sold. Electricity suppliers bear the responsibility for any imbalances between production and consumption that may arise. BRPs manage discrepancies between production and consumption, ensuring that the difference is zero, which is crucial to maintain grid stability.

Electricity suppliers are not responsible for the physical delivery of electricity. It is the DSOs that ensure the customers' access to the market by connecting them to the electricity grid and distributing electricity to customers. In addition to the payment of electricity to the chosen electricity supplier, customers must also pay a grid fee and taxes to their local DSO for the distribution of power. Distribution network companies

operate as local monopolies and are subject to monopoly regulation. These monopoly regulations cover, for instance, the price setting of tariffs and terms for accessing the grid. Therefore, in the retail market, there is a distinction between monopoly activities (conducted by the distribution network company) and competitive activities (conducted by the electricity supplier).

2.1.5 Key regulatory and consumer actors involved in the electricity retail market

In the electricity retail markets, various regulatory and consumer actors play essential roles in ensuring fair competition, consumer protection, and the overall functioning of the market. Here are some of the key regulatory and consumer actors typically involved:

The National Regulatory Authorities (NRAs) in the Nordic countries are responsible for regulating, monitoring and improving the functioning of electricity markets. They typically aim to ensure a user-friendly and efficient retail market, occasionally imposing fines for breaches. They can propose, and in some of the countries approve, regulations. In Iceland, laws must be approved in parliament and regulations by the ministry. Typically, the NRAs also enforce specific sector regulations regarding consumer rights.

The Consumer Authorities in the Nordic countries function as supervisory authorities that work to make the electricity markets simpler and safer for consumers. The Nordic Consumer Authorities are responsible for monitoring the business practices and contract terms of traders. Their primary focus is on preventing and stopping illegal marketing, unfair contract terms, and other forms of unlawful trading practices directed towards consumers. The Consumer Authorities can impose various types of financial sanctions, either infringement fines, penalty payments, or both. There are also a National Board for Consumer Disputes in the Nordic countries that handles complaints arising from contractual relationships between energy companies and consumers.

Furthermore, there are also Consumer Councils in the Nordic countries that represent the consumer interests and influence businesses and government authorities to become more consumer-friendly. The Nordic countries typically also have industry organizations to represent electricity retailers that are members of the organization. Their goal is to forward the mutual interests of its members, guard their interests in mutual projects, foster research and gather information for its members as well as for public authorities, hosting seminars and conferences and acting on behalf of the members. The industry organizations in Denmark and Norway have industry standards such as the standard electricity supply agreements. In Denmark, this regulates the cooperation between grid companies and electricity suppliers. The standard electricity supply agreement in Norway provides a summary of the rights, which consumers and businesses have under current legislation and practices.

The Competition Authorities also play a role in the electricity markets by working to promote competition for the benefit of consumers and businesses. In their daily operations, the Competition Authorities have limited involvement in the retail electricity market. However, they are, for example, involved in acquisitions and mergers among electricity retailers, and they typically comment on proposals or activities that influence the competition in the electricity retail market.

2.1.6 Regulatory framework in the Nordic electricity retail markets

The regulatory framework governing the electricity retail market in the Nordic countries is designed to ensure fair competition, protect consumers, and promote the efficient functioning of the market. The main regulations that cover the electricity retail market generally involve an electricity market act, a marketing act, and a price information act. Additionally, there may be other laws specific to each country.

An electricity market act typically specifies the need of a license from the regulatory authority for engagement in trading of electrical energy. Furthermore, it introduces requirements for the structural and functional separation of vertically integrated companies. All Nordic countries have implemented measures to split up traditionally vertically integrated companies, but the degree of vertical integration with production and/or grid companies varies.

Most regulations concerning information to the consumers in the electricity retail market fall under general marketing or consumer protection acts. These laws typically lay out the general consumer protection for contracts and states that the seller must use good market practice and that unfair trade practices are illegal. The consumer authority in each country holds the authority to impose financial sanctions on entities found to be in violation with the marketing act. Notably, while households benefit from consumer protection, the same level of protection is not extended to SMEs in all the Nordic countries. This particularly applies to Finland and Norway, where the customer rights of SMEs are limited in comparison to households. Legislation pertaining to the protection of non-household consumers is, in practice, nearly non-existent. Additionally, regulations in the Nordic countries encompass requirements for invoicing information and the procedures for entering into agreements, typically outlined in regulations on settlements.

2.1.7 The energy crisis

In the last two years, starting from the second half of 2021 and into 2023, there was an unexpected and significant increase in electricity prices in the Nordic countries and in Europe in general. The primary reason for this was the energy shortage resulting from Russia's invasion of Ukraine. The war in Ukraine also unfolded concurrently with a more long-term climate-driven transformation of the energy landscape in Europe, gradually phasing out both coal and nuclear power, while actively introducing renewable electricity as a replacement.

The energy crisis did not impact the physical distribution of power; electricity remained available but at an elevated cost. In addition to the price shock that customers suddenly experienced, leading to the implementation of electricity support schemes in several countries, a major challenge was the low liquidity within the financial markets and the retail supplier's ability to hedge their portfolio.

Most market participants in the Nordic electricity retail market have traditionally used the system price to hedge their portfolio and take the risk that the difference between the system price and the price in the bidding area does not fluctuate more than what the retail supplier can tolerate. This has been a common practice due to the relatively low variations in the area prices compared to the system price. The system price is a computed index based on bids in the spot market for Norway, Sweden, Denmark, and Finland and does not provide the same rights for physical delivery. The system price does, however, not consider the different area prices due to constraints within the Nordic countries' power grids. The term often used for the current electricity price in a specific bidding area is the area price. If a market participant has bought or sold electricity on NASDAQ, they have the option to physically deliver electricity at the prevailing area price in that particular region. Norway has five bidding areas, Sweden has four, and Denmark has two, while both Iceland and Finland only have one.

During the energy crisis, the Nordic electricity retailers did not find it sufficient to hedge only the system price due to the vast fluctuations in the different price areas. Electricity retailers in specific bidding areas thus wanted to hedge a larger volume in their own area in addition to the system price. The electricity retailers therefore needed a contract for the system price as well as an agreement for the difference between the system price and the price in the bidding area of interest. The market for futures contracts based on the system price has been efficient and liquid because there are more participants who want to hedge their price exposure to the system price rather than to individual bidding areas. The agreement that provides price hedging in a bidding area is called EPAD (Electricity Price Area Difference). EPADs are potentially available for each bidding area in all the Nordic countries. There are fewer participants interested in any EPAD than there are in contracts based on the system price. This poses a significant risk that the market for each individual EPAD contract is inefficient and lacks liquidity. The lack of liquidity in the financial markets thus posed a significant challenge for the electricity retailers during the energy crisis in terms of the ability to effectively hedge their portfolio. This made it, for instance, challenging for electricity retailers to offer attractive fixed price agreements to their customers.

Over the last decade, the liquidity in the financial futures markets have been steadily decreasing regardless of the energy crisis. The negative trend began when American entities withdrew from Europe in the aftermath of the financial crisis in 2008. To reduce the risk of a future financial crisis, Europe gradually introduced requirements

that clearing of exchange-traded futures contracts had to be backed by cash or exchange-listed securities, and that the market would no longer accept bank guarantees. Following this change, liquidity declined. The price shock during the energy crisis in 2021 did, however, further weaken the liquidity in the market. This has led to a gradually shift towards bilateral agreements.

2.2 Characteristics of an efficient electricity retail market

2.2.1 The value of an efficient retail market

An efficient retail market for electricity brings value to the society through ensuring that the needs of the end-users are met efficiently. Furthermore, as explained above, the retail market also constitutes the financial link between the end-users and the producers, while the distribution network constitutes the physical link. In addition to having direct negative effects on the end-users, disturbances or inefficiencies in the retail market may therefore reduce the efficiency in the power system as a whole. Thus, efficient retail markets are of great importance.

An efficient production level is characterized by the consumers' marginal willingness to pay for an increased consumption that equates the producers' marginal cost of expanding the production. As the retailers buy electricity in the wholesale market and sell it in the end-user market, the functioning of the market will determine the difference between the cost of producing – and consuming electricity. The bigger the difference, the bigger the dead-weight loss due to too little production for the given willingness to pay for increased consumption.

2.2.2 The value of competition in the retail market

Market power will typically result in high mark-ups and thus increase the difference between the cost of producing and consuming energy. In addition to high mark-ups, both fixed and variable costs at the retail level will typically increase the difference because the suppliers need to cover their costs of operating. Competition is considered an effective means of ensuring low costs and mark-ups. To attract customers, the suppliers have incentives to reduce the prices, which implies lower mark-ups for a given variable cost. Suppliers with low costs can more profitably reduce prices. Thus, all things being equal, suppliers having low costs can be expected to capture a larger share of the market than suppliers with high costs – thereby creating incentives for cost efficiency.

In a competitive environment, innovations that create an advantage relative to other players are highly valuable. Furthermore, inefficient suppliers will obtain too low margins and sales to cover their fixed costs and thus leave the market, while entry will occur if outsiders more efficiently than established players can serve customers. Hence, given that the competition works as intended, the result will be an efficient retail market, characterized by low costs and mark-ups, and innovations that can

further reduce costs or increase the value of the product to the customers. For the competition to work as described, several conditions need to be met. They are described below.

2.2.3 General criteria for efficient competition

First, barriers to entry should be low so that entry actually occurs if the profit opportunities in the market increase due to weak rivalry or if outsiders can operate with lower costs. Second, no supplier should enjoy an artificial advantage – for instance due to regulations allowing a supplier to operate with higher costs or charging higher mark-ups than those of other established or potential suppliers. Furthermore, as a situation with zero entry costs is impossible in practice, the threat of future entry is normally not sufficient to ensure a competitive outcome in the short run. Thus, rivalry between established suppliers normally matters. All things being equal, the rivalry increases with the number of suppliers, which implies that the number of suppliers should be sufficiently high.

As the rivalry for customers is the motor of competition, the suppliers need to have capacity to serve an increased number of customers and the consumers need to respond to more attractive offers. If capacity restrictions bind a supplier, it has low incentives to improve its offers as it cannot serve more customers. It also increases the market power of its competitors, as they face less risk of losing customers if they increase their prices. Thus, capacity restrictions are a source of market power.

Responsive consumers require search and transaction costs that are not too high. If the search costs are high, the consumers have low incentives to perform search, which in turn makes it harder for the suppliers to win customers by improving their offers. Hence, search costs at the consumer level reduce rivalry at the supplier level. Likewise, if the transaction costs are high, an alternative offer must be substantially better to make up for the consumer's costs of contracting with a new supplier. This reduces the consumers' incentive to search for better deals, making the demand facing each supplier less elastic. In a situation with high transaction costs, the suppliers may thus have weak incentives to reduce prices in order to win new sales. Hence, search and transaction costs both have a chilling effect on the rivalry among suppliers and is a source of market-power.

2.2.4 Other important characteristics of a well-functioning retail market for electricity and the role of regulation

Electricity is a scarce resource, a basic necessity and crucial for the functioning of the society as a whole. Production and use of electricity must be balanced in all areas, in all time frames. Furthermore, the necessary transition to more renewable energy production implies integration of a more volatile production, increasing the need for flexibility in the consumption. All this has implications for the requirements to the retail market.

As delivery of energy is crucial for the society, a temporal breakdown of the market will have considerable consequences. Hence, the market must be resistant to different kinds of shocks. To enhance efficient use of scarce and volatile production resources, it is important that the retail market conveys short- and long-term price signals to both producers and end-users. Furthermore, the retail market should be able to adjust to challenges that may arise due to decarbonisation and technological changes at both the production and consumption side. This implies among other things that the market should facilitate innovation, i.e. that the suppliers are able to provide new products and services to the consumers and adopt new technology to serve the consumers more efficiently.

Even though electricity is a basic necessity, the end-users may have heterogeneous preferences for their contracts for delivery of electricity. This implies that the end-user market should provide a product range that caters well for heterogeneous needs – for instance end-users with different consumption levels and costs of bearing risks. It also requires for systems and means to be in place, so that no consumers are excluded from participating in the market.

Competition may contribute to efficiently conveying price signals, innovation and product variety. However, even perfect competition may not necessarily give the desired outcome. For example, profits are normally low in a competitive market, which may make the market vulnerable to shocks. The market conditions may limit the unregulated competition, and in the presence of market failure, the unregulated market will not provide the most efficient allocation and use of resources. For example, in markets with severe information asymmetry, customers will not necessarily be able to choose contracts in line with their preferences, thus reducing the competition on important factors such as price and quality. Hence, it may be necessary to complement competition with regulation to obtain an efficient market in line with important policy goals.

2.2.5 Market conditions with implications for degree and outcome of competition

Promoting competition to facilitate efficient utilization of resources and benefits to consumers is a strategy applied in most markets in a free-market economy. However, how unregulated competition leads to the desired outcome and whether the outcome may be improved by regulations, depend on the underlying conditions of the market in question.

The underlying product, electricity, is a homogenous product and the delivered electricity is not affected by the choice of retailer. This limits the opportunities to build market power through differentiation related to the underlying product. However, in the retail market, the products traded are in fact contracts, which are differentiated through terms. Thus, the retail market itself cannot be characterized as a homogenous commodity market. Furthermore, the electricity retailers use marketing

and add-on services to create actual and perceived differentiation. Hence, from an analytical perspective, the market should be treated as a differentiated commodities market, where the retailers are price-setters. However, some differentiation variables, i.e. contract terms, are not protected by intellectual property rights. This implies that contracts may easily be copied.

At least in most traditional retail markets, significant investments are necessary to enter the market. This may stem from setting up stores and logistic operations, investments in technology and capacities. It may also be necessary to have physical presence close to the customer, making expansion very costly. However, presence close to the customer is of low importance in the retail market for electricity relative to other retail markets. Furthermore, there is no cost associated with physical infrastructure or logistics. The set-up costs are limited to IT-systems and an office from which to run the operations. Being a retail market, the structural barriers to entry should be considered low. However, to supply contracts, license and deposits are required. Thus, regulatory barriers to entry come in addition to the relatively low structural barriers to entry. Although there are low barriers to entry, there are higher costs related to growing. There are significant capital requirements needed to trade electricity for many customers, comply with the balance responsibility and the guarantee requirements that one undertakes when trading in the wholesale market and possibly also on the stock exchange or bilaterally, and also towards the DSOs if the power supplier is responsible for invoicing on behalf of the DSO.

As no retailer has a real advantage of distance in the market for electricity, having a strong brand may be more important than in other retail markets. This is reflected in the electricity retailers' investments in marketing and advertising, which contribute to advantages of scale in the industry. However, due to price comparison tools, it is possible to inform potential customers about an offer without heavy investments in marketing and advertising. Customer support and billing are other important activities for the electricity retailers, but the costs associated with these activities are probably to a rather high degree correlated with the number of customers. In the retail market for electricity, economies of scale are most likely smaller than in most other retail markets – where such advantages may stem from logistics, procurement etc. in addition to marketing and support activities.

Compared to many retail markets, products are less prone to differentiation, while both economies of scale and entry costs are lower. This implies that the supply side in the retail market for electricity seems conducive for well-functioning competition.

Turning to the demand side of the market, there are also conditions that depart from more standard retail markets. In many markets, there are natural triggers for consumer activity the consumers need for example to buy groceries regularly. Such triggers do not exist in the retail market for electricity. Electricity is a subscription-based commodity, which implies that when the consumers have signed a contract, they can in theory consume electricity for the rest of their life, or at least until moving

to another apartment or house, without undertaking further activity.

Electricity is a commodity that is consumed indirectly, through units that run on electricity. This implies that the consumers' lack a natural source of information about their consumption. Thus, it requires activity from the consumer to obtain an understanding of what drives the total consumption. However, just as there are no natural triggers for purchasing activity, there are no natural triggers for gathering information about consumption. If the consumers are not aware of their consumption, it may be difficult for them to identify possible gains from actively searching for a new contract. This may limit the incentive to search in the first place. Furthermore, lack of information about consumption may complicate the search for an appropriate contract.

As explained above, the electricity retailers use contract terms as a means of differentiation. Furthermore, different contracts and terms are also a result of heterogeneous preferences and needs, while low barriers to entry may result in many suppliers. Thus, three drivers contribute to a large selection of contracts. A large number of contracts may, however, increase the search cost for the consumers, as well as introducing a (perceived) risk of choosing a contract that does not match one's actual need. This may also reduce the incentive to search in the first place. Furthermore, the total cost of consuming electricity depends on several prices. Some of these prices depend on the contract with the retailer, and some do not. This contributes to a complexity, which in turn may result in the consumer finding it difficult to identify possible gains from switching supplier or contract.

In addition to no natural activity triggers and rather high search costs, electricity has traditionally constituted a small share of the consumers' total budgets, which alone may reduce incentives to undertake costly search. Thus, from the consumers' point of view, there are several conditions in the retail market for electricity that may have contributed to making electricity contracts a low interest product for a large group of customers.

In many retail markets, the electricity retailers lack both information about who are active and dormant and may lack possibilities to discriminate between the two groups. Thus, dormant customers may in practice benefit from the rivalry of active customers. In the retail market for electricity, however, the suppliers may deduct what type a given consumer is, for example from the customer's history. Furthermore, the retailers may launch new and attractive contracts to compete for active customers, while the dormant customers are moved to unattractive contracts. Hence, dormant customers are to a lower degree protected by the existence of active customers in the retail market for electricity.

Inactive consumers and search costs, are sources to market power that may affect the suppliers' strategies, for instance by increasing their incentives to invest in customer acquisition to win customers that can be ripped-off down the road. In

combination with low entry barriers and high complexity for consumers, these factors may also create an environment where short-sighted retailers aim to capture uninformed customers and exploit them through contracts with unbalanced terms.

On the demand side, search costs and low awareness seem like conditions that may affect the competitiveness of the retail market for electricity. Although actual transaction costs related to switching are low, for instance due to price-comparison insights, smart-meters for digital reading of consumption, data hubs for information sharing, and regulations ensuring that suppliers take the necessary steps to transfer the customer from one supplier to another, the perceived transaction costs may be high for consumers with low experience. However, the energy crisis received much attention in media and among consumers and had a significant impact on the consumers' budgets. Because of that, the consumers as a whole may have gained more insight into the market for energy, including the retail market for electricity. Thus, a long-term effect of the energy crisis may be higher awareness among the consumers.

The above discussion indicates that the retail market for electricity in theory may have some underlying conditions that adversely can affect the efficiency of the market, where inactive customers and search costs are the most prominent. This implies that an evaluation of retail markets should in particular assess implications of behaviour on the demand side.

2.3 Assessing the competitive landscape in the electricity retail market

A well-functioning market should provide the customers with the goods in demand, by using as few resources as possible. Competition is considered the most effective means of efficient utilization of resources, and all the Nordic electricity retail markets are deregulated and open to competition. According to standard economic theory – see for instance Becker (2015)^[2] – the conditions contribute to well-functioning competition, and a low degree of market power can be summarized as:

- A high number of symmetric firms and/or low barriers to entry
- Low degree of product differentiation and low barriers to expand production/sales
- Low search and transaction/switching costs
- All agents acting like price takers

2. Becker, G., (2015), "Perfect Copmetition", Wiley Encyclopedia of Management

When competition is fierce, the firms' ability to raise prices is generally low. However, a supplier that has a better product may charge a premium for this, and firms that are more efficient may operate with higher mark-ups. This incentivizes firms to be cost efficient, innovative and to respond to signals from the demand side. Thus, well-functioning competition facilitates that heterogeneous preferences are catered for.

Economic theory considers market power as the ability to price above costs, which implies that the price-cost mark-up is often assumed to be a good proxy for market power. Thus, in a competitive market, the firms have little market power. However, measuring market power directly is not straightforward in all industries, and data are not necessarily available. Furthermore, the suppliers need to cover their fixed costs – including a normal return on capital. The price-cost mark-up that supports coverage of fixed costs and a normal return on capital will thus vary between industries. Considering one particular industry, increased mark-ups over time are not necessarily a sign of a less competitive market. If, for instance, one or a couple of firms become more efficient than the other firms in the industry, they may be able to increase their mark-ups despite increased rivalry in the market in general.

Thus, to assess the competitive situation, it is often necessary to take a holistic approach and to take several variables into account. In this report, we will assess the competitive landscape based on:

- Number of suppliers, market shares and concentration
- Major players' ability to charge a premium relative to minor players
- Customers' behaviour, awareness and perceived switching costs – including share of customers having 'expensive' contracts
- To what degree the consumers find contracts that match their preferences
- Negative experiences and win-back activity

If the consumers have many suppliers that they consider as relevant alternatives, this should at the outset discipline the suppliers and contribute to a competitive market. However, 'relevant alternatives' implies that concentration may be a more informative measure than the actual number of registered suppliers, as concentration takes into account what suppliers the consumers actually have chosen and may thus provide a better measure on the set of relevant alternatives.

In a perfectly competitive market, it would only be rational for the consumers to switch if their supplier become unavailable, for instance because the supplier leaves the market or the consumer moves. Thus, consumers switching activity is not in itself a perfect measure of rivalry. However, few markets are characterized by perfect competition. In a market where consumers are active, both in terms of searching for better offers and willingness to switch, the scope for exploiting market power may be limited. On the other hand, if the consumers perceive the search and switching costs to be high, there may be scope for exploring market power. Thus, we will assess switch and search activities.

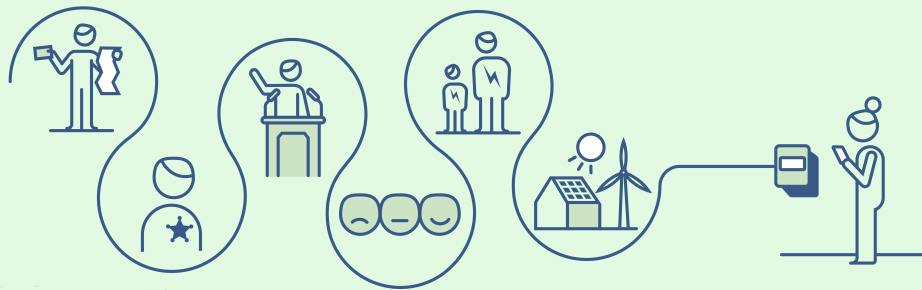
The consumers' needs and preferences vary. If the market is well-functioning, the consumers should find contracts that match their needs and preferences from several suppliers. If they do not find any contracts, there may be practical obstacles related to providing the contract or the innovation incentives may be inefficiently low. If few suppliers provide the relevant contracts, competition for customers demanding the contracts may be limited, and the contracts priced too high.

It is well known that the customer satisfaction is rather low in many electricity retail markets. Unfortunately, economic theory provides limited guidance on how to interpret negative experiences. In a dynamic setting with imperfect information about product quality, competition may incentivize behaviour that creates a good reputation. Hence, negative experiences may simply stem from suppliers exploiting market power, but there are also other possibilities. For instance, in a highly competitive market, profit margins are low, which reduces the cost of losing customers. It may therefore be tempting for suppliers to exploit customers, for instance by providing lower quality than advertised – see e.g. Armstrong and Chen (2009)^[3]. Moving customers to less attractive contracts may be one example of cheating with the level of quality. More suppliers may also create incentives to make price signals noisier – see Spiegler (2006)^[4] – which may result in more negative experiences as customers end up paying more than expected.

Despite complicated relationships, most models predict the prevalence of negative experiences to decrease with the share of active and informed customers. Thus, in our assessment of the competitive landscape we will consider both the prevalence of negative experiences, the type of negative experiences and how consumers typically respond to negative experiences.

Subscription-based industries may be characterized by win-back activities. However, the ability and incentive to spend resources on convincing a leaving customer to stay, will typically increase the profit margin. Furthermore, the opportunity to win back customers may have a chilling effect on the incentive to charge existing customers competitively. Thus, a high level of win-back may indicate market imperfections.

3. Mark Armstrong, Yongmin Chen (2009), Inattentive Consumers and Product Quality, *Journal of the European Economic Association*, Volume 7, Issue 2-3.
4. R. Spiegler (2006) Competition Over Agents with Boundedly Rational Expectations, 1(2) *THEORETICAL ECON.* 207-31.



3. Similarities and differences between the Nordic countries

3.1 Regulatory framework and organization of the market

In this chapter, we shall describe similarities and differences between important aspects of the regulatory frameworks in all the Nordic countries. Given that the regulatory framework in Åland aligns closely with the Finnish regulatory framework, we will specifically mention Åland only in cases where exceptions arise. A brief description of all these aspects for each Nordic country is provided in Table 9-3 in Appendix A. A more detailed description of the country-specific regulatory frameworks is provided in the country reports 5-9.

3.1.1 Unbundling requirements

Denmark, Finland, Norway and Sweden have requirements for the structural and functional separation of vertically integrated entities. The unbundling requirements apply for DSOs with more than 100,000 connected customers in Denmark, Norway and Sweden. In Finland, it applies to the DSOs that meet a threshold of 200 GWh for more than three consecutive years. In Åland, the electricity retailers can be vertically integrated with the DSO, which both of the electricity retailers in Åland are. In Iceland, a single power company can function as generator, distributor and supplier, but accounting for separation is required between concession and competitive activities.

3.1.2 Invoice

All the Nordic countries except for Iceland have specific requirements for information on the invoice of electricity contracts. Requirements regarding information to be provided on the invoice are a consequence of government regulation in Iceland. The survey shows that 37 percent of the respondents in Iceland do not read any information on the invoice and 60 percent only read the amount to be paid, which may explain why there are no specific requirements to the invoice. Only a small percentage of the respondents in the other Nordic countries reports that they do not read any information on the invoice. In Denmark, Finland, Norway and Sweden, the

requirements for information on the invoice are occasioned by the NRA. The requirements vary for these countries as there is more required information to be included in Denmark, Norway and Sweden compared to in Finland.

The Nordic countries are different in terms of whether the invoice from retailer and DSO can be combined or not. Denmark offers only one invoice from the electricity supplier. Finland, Norway and Sweden offer both one invoice and two invoices. In Finland, most customers receive two invoices, one from the DSO and one from the electricity supplier, but some receive only one if the DSO and supplier are owned by the same entity. This does also apply to Sweden, but there are also suppliers that offer joint invoicing even if they are not part of the same entity. In Norway, an electricity retailer can choose to include DSO tariffs in their invoice, and if they do, they must implement this for all customers in the DSO area.

3.1.3 Changing supplier

In all of the Nordic countries, the customers can freely switch their electricity supplier as long as they do not break a contract. The new supplier will notify the previous supplier in Denmark, Finland, Iceland or Norway, while the customer should contact the current supplier to terminate their current agreement in Sweden as the switch to a new agreement does not occur automatically.

3.1.4 Win-back strategies

Win-back involves targeted marketing towards customers who have decided to end their contract and change supplier, where customers are typically offered a new contract with possibly better terms than the original contract. All the Nordic countries allow win-back strategies and it can happen through various channels. However, in Denmark, the customer must have consented to be contacted, but this does not apply to SMEs. In Sweden, electricity suppliers must follow certain rules to use win-back strategies. Win-back strategies are commonly used in Finland as customers have to renew or switch contracts periodically.

3.1.5 Licenses and certifications

Electricity retailers are required to have a license in Iceland and Norway, which is issued by the regulatory authority. The retailer license can be withdrawn in both countries if the retailers do not comply with regulations. In Denmark, Finland and Sweden however, the retailers are not required to have a license. In Sweden, the trade association Energiföretagen has developed the certification 'fair electricity trading', which verifies that the electricity retailer has functional procedures to clarify what the customer is buying and what the agreement entails. The certification can be withdrawn if the retailer does not adhere to the customer promises. The Norwegian industry organization has a similar certification scheme for certifying the electricity retailers. Electricity retailers in Denmark are required to have a certificate when

communicating with DataHub. As for the other countries, the retailers can lose their certificate and therefore be deprived of the right to be registered at DataHub.

3.1.6 Prepayment or post-payment

In Denmark, Finland, Norway and Sweden it is possible for the customers to both prepay and post-pay. In Finland, invoicing of electricity is usually based on post-payment based on meter readings, while pre-payment is explicitly limited to mitigation of credit risks stemming from a weighty reason related to an individual customer. It is only possible with post-payment in Iceland.

3.1.7 Lock-in periods and right of withdrawal

Both Denmark, Finland and Norway have a maximum lock-in period. Denmark has a maximum lock-in period of 6 months for households and no corresponding rule for SMEs. If contracts are of longer duration, the customer can terminate the contract such that it ceases after 6 months. Finland has a maximum lock-in period of 24 months. The maximum lock-in period in Norway is 12 months, with the exception of fixed price contracts. The customer can terminate such contracts by paying a reasonable termination fee. In Iceland, customers can terminate their contract with three months or shorter notice. The lock-in period in Sweden varies between electricity supplier and contract type. A lock-in period of 1-3 years is the most common for fixed price contracts, but it can range from 1 month to 10 years. Variable contracts have either no lock-in period or a lock-in period of 1 month.

There is a 14-day right of withdrawal from contracts that are regarded as a remote sale for all the Nordic countries except Iceland. The right of withdrawal period is extended by up to one year in Norway if the customer has not received sufficient information regarding the right of withdrawal before entering into the agreement and/or the customer has not received a withdrawal form on a durable medium after entering into the contract. Extension of the right of withdrawal period by up to one year also applies in Sweden if the customer has not received sufficient information regarding the right of withdrawal. As soon as sufficient information is provided, the right of withdrawal period of 14 days begins (applicable only for contracts that are regarded as a remote sale).

3.1.8 Requirements on how to find information about contracts

The requirements on how to find information about contracts vary for the Nordic countries. There are no requirements on how to find information about contracts for electricity suppliers in Iceland, but the information is available at the price comparison tool. Electricity suppliers in Finland are obligated to report contract prices for small customers to the price comparison tool, but in Åland the suppliers must inform customers on their website and on the government's website. In Denmark and Norway, electricity suppliers are required to ensure that relevant and correct

information about all of their products, including price and terms, are available on their website. In addition, they are obligated to register their prices at the price comparison tool. Electricity suppliers in Sweden are required to provide certain information about their products and services, such as price and terms of the contract, on their website or in other easily accessible channels. Furthermore, electricity retailers in Sweden have an obligation similar to that of electricity retailers in Finland to report certain contracts, which are published on the price comparison tool Elpriskollen.

3.1.9 Requirements when making changes in existing contracts

In Denmark, Finland, Norway and Sweden, the electricity supplier must inform the customers about changes in the existing contracts, but the time of notifying varies for the countries. In Denmark, the electricity supplier must notify households directly at least three months in advance and SMEs at least 14 days in advance. The customers have the right to terminate the contract if they do not accept the changes. In Finland, changes to pricing or terms of an open-ended contract require a one-month (consumers) or a two-week notice (non-consumers) from the supplier. Electricity suppliers must inform the consumer no later than 30 days in advance in Norway; this applies to both households and SMEs. The notification should include information about whether the consumer has the right to terminate the agreement at no cost. In Sweden, the notification must take place at least 2 months in advance for households and 14 days for SMEs. The supplier must inform the consumers about their right to terminate the agreement in a separate notice. The electricity retailer can change the contract whenever they want to in Iceland. The retailer can publish information about the changes on their website and customers, who have signed up for it, can get an email about the changes.

3.1.10 Required information to include in marketing of contracts

The required information to include when marketing contracts varies for the Nordic countries where some have specific regulations regarding marketing of electricity contracts, while others have general marketing regulations. In Denmark, Finland, Iceland and Sweden, requirements for marketing of electricity contracts follow the general marketing regulations. Thus, there are no particular requirements for marketing of electricity contracts in these countries. In Norway, the requirements follow the general marketing regulations, but new and stricter rules have been introduced. These rules were largely a clarification of requirements from the Norwegian marketing act.

3.1.11 Sanctioning

In addition to the regulatory authority, several actors can impose sanctions in all the Nordic countries. Different authorities have the authority to address violations of the laws and regulations, which they oversee in all countries. The NRA in Norway have the

authority to withdraw retailer licenses for violating the license conditions, the Energy Act and associated regulation, but not for violating the Marketing act of 'Angrerettsloven'. Hence, the NRA has limited ability to withdraw a license. The NRA can, among other things, suspend electricity retailers from the price comparison tool for misconduct related to pricing information. In Sweden, the regulatory authority Ei can issue injunctions to ensure compliance with applicable regulations and conditions, with the right to issue fines for actors who do not comply to the injunctions. Additionally, the complaint list provided by the Swedish Consumer Energy Market Bureau acts as a form of self-sanctioning as it is not imply any sanction but nevertheless electricity retailers try to avoid ending up on the complaint list.

3.1.12 SMEs' customer rights

SMEs have the same customer rights as households in Iceland. In Denmark and Finland, a lot of the electricity market specific regulation applies both to households and to SMEs. Changes have also recently been made in the Swedish legislation according to the Electricity Markets Directive, making the provisions between household consumers and other customers more aligned^[5]. For instance, the content of the agreement and the complaint process shall now cover all customers. The change also implies that SMEs should be able to switch suppliers without paying a fee. Under some circumstances however, it shall be possible to charge a fee if the contract is terminated prematurely. In Norway, however, SMEs generally have considerably fewer customer rights compared with households.

3.1.13 Government response to energy crisis

All the Nordic countries, except for Iceland, implemented different measures as a response to the energy crisis. As the electricity grid in Iceland is not connected to any other country, the electricity prices in Iceland have largely been unaffected by the energy crisis in Europe and no measures have been deemed necessary. The measures implemented vary across the countries according to their electricity market. Most of the measures in the Nordic countries were customer-oriented measures, but there were some measures implemented oriented at SMEs.

Norway stands out among the countries that have implemented measures as a response to the energy crisis with a large and long support to the households. Norway has implemented a direct support to households' electricity bills, lasting until the end of 2024. This electricity support scheme acts as a quasi-fixed price for households, which has removed the incentives to enter into fixed price contracts. The other countries have not implemented direct measures to households' electricity bills with such a long duration. The governments in both Denmark and Finland implemented several customer-oriented measures to help vulnerable households. In Denmark, the

5. https://www.riksdagen.se/sv/dokument-och-lagar/dokument/betankande/genomforande-av-elmarknadsdirektivet-nar-det_ha01nu9/. Date: 31.01.24

general electricity tax was reduced during a period from 1 October 2022 up to the first half of 2023. From February 2022 to the beginning of 2023, the Danish government introduced several tax-exempted payments to vulnerable households and disadvantaged citizens affected by the increasing energy prices. In addition, a temporary and voluntary freezing scheme was introduced for parts of electricity, gas and district heating bills. In Finland, the Value Added Tax of the energy component on the electricity bill was reduced for a five months period from 1 December 2022 to 30 April 2023. In the period from January 2023 to April 2023, customers in Finland could apply for a reduction in their personal taxation for 2023. An electricity benefit was also introduced in the same period for such households that were not able to take full advantage of the compensation through personal taxation due to low personal taxes. These schemes were also available in Åland. In Sweden, electricity and natural gas support were provided to households as well as SMEs, with two support rounds of electricity support directed at households and two at SMEs. In addition, one natural gas support round was directed at household customers, with all rounds being based on consumption.

To prevent bankruptcy, the Danish state offered a guarantee of DKK 100 billion to the energy sector, specifically to energy companies with production facilities or responsibility for market balance, enabling them to secure liquidity. As a result, several of these companies ended up having a result better than any previous year in 2022, in stark contrast to facing bankruptcy without this guarantee. Finland also implemented activities to support the financial situation of electricity retailers and producers. An up to EUR 10 billion programme for debt and guarantees to companies operating in the electricity forward markets was implemented in order to manage the increase in collateral requirements due to increased price volatility. This programme did, however, not receive any applications. Another implemented measure that was not used was the loans to electricity retailers in Denmark. They were loans that the state provided to the electricity retailers, which were equal to the amounts requested by customers to be frozen, and guaranteed the frozen debt to the electricity retailers. In Sweden, state credit guarantees were also offered to electricity producers in order to provide support regarding securing liquidity, but the scheme was never used. Åland had the same electricity support scheme as Finland, but did not implement the automatic compensation scheme through suppliers' billing for high energy component costs, which was also in place to cover half of the costs over 10 cents/kWh for spot price or fixed price customers in Finland for a four-month period during the winter 2022-2023. The government in Norway made changes to the resource rent tax on hydropower in order to facilitate better fixed price contracts to end-users. The government introduced a contract exemption for electricity sold through standardized fixed price contracts available for periods of three, five and seven years. In these contracts, the electricity is valued at the contract price instead of the spot price for the basis of resource rent taxation, with the maximum mark-up set at 2.5 øre/kWh.

3.2 Competitiveness and the functioning of the market

3.2.1 Competitive landscape

In all Nordic countries, the formal barriers to entry are regarded to be low, both relative to the market size and in absolute terms. Furthermore, the industry is characterized by low fixed costs and a low degree of sunk-costs investments. In all countries, there are also price comparison tools, which reduce the need to invest in marketing when entering the markets.

Table 3-1: Market characteristics of the Nordic electricity retail markets

Country	HHI	Retailers above 1% market share	Share receiving counter-offer	Share accepting counter-offer
Denmark	1200	15	27%	23%
Finland	1200	14	34%	16%
Iceland	1900	8	7%	N/A
Norway	800	18	43%	9%
Sweden	700	19	24%	19%

Note: HHI is the Herfindahl-Hirschman index. It indicates the level of competition in the market. A lower value indicates higher competition. Share receiving counteroffer shows the share that was contacted by their previous supplier after switching contracts. The share accepting is the share of those getting an offer who accepted it. N/A = Too few respondents. Survey conducted in October and November 2023 amongst Nordic households.

The HHI-index is a measure of concentration that is often used to give a rough indication of the degree of competition in a market^[6]. It takes into account the relative size distribution of the firms. It approaches zero when a market is occupied by a large number of firms of relatively equal size and reaches its maximum of 10,000 points when a single firm controls a market. The index is derived from a model where it is assumed that firms compete in quantities, i.e. Cournot-competition – see for instance Matsumoto et al. (2012)^[7]. This implies that the measure is somewhat less informative when firms compete on prices. Despite this, it is generally accepted that the lower concentration, the more competitive the market. This follows from the assumption that firms with large market shares have considerable market power.

6. <https://www.justice.gov/atr/herfindahl-hirschman-index>. Date: 30.11.23

7. Akio Matsumoto, Ugo Merlone & Ferenc Szidarovszky (2012) Some notes on applying the Herfindahl–Hirschman Index, *Applied Economics Letters*, 19:2, 181-184.

Competition agencies normally consider HHI below 1,500 as low concentration, between 1,500 and 2,500 as moderate concentration and above 2,500 as high concentration – and assumes that the market is more competitive, the lower concentration. This is also intuitive as low concentration requires a relatively large number of firms, of equivalent size, that compete for the consumers. Such a market would normally imply well-functioning competition.

The HHI-index should, however, be interpreted with caution, and it is critical to apply the right geographical market. For instance, if the competition is local, HHI measured at national level will normally not be informative. HHI measured at a national level will for instance be low in a situation where there are many local monopolies. In electricity markets, suppliers with local affiliation may have loyal customers in their respective areas – and thus market power. Therefore, HHI may underestimate the rivalry in spite of most suppliers having national offers.

In Iceland, the practical barrier to entry is, however, significantly higher than in the other countries as there is no well-functioning wholesale market and because the market is much smaller than the other markets. Furthermore, our assessment indicates that the retail market in Iceland suffers significantly from the lack of a well-functioning wholesale market, as this facilitates market power for the retailers with integrated production. Due to low consumption, the Icelandic consumers also have weaker incentives to participate actively in the market, for instance to switch retailer as a response to higher price. Based on this, we conclude that the competition in the Icelandic retail market is significantly weaker than indicated by the concentration measure.

In markets with low barriers to entry, low concentration is to be expected. In Norway and Sweden, the concentration is particularly low. However, the concentration measure does not capture that in some areas, retailers with a local affiliation have high 'market' shares and that consumers are loyal to their local supplier. Despite this, the consumers in all areas apart from Iceland can choose from a large number of retailers. Furthermore, none of the retailers enjoys a significant cost advantage for supply of physical electricity, as they all trade at equal terms in the wholesale market. A large number of suppliers that compete on equal terms will normally translate into efficient competition. For supply of fixed price contracts, however, large retailers, and in particular those with integrated production, seem to enjoy an advantage due to imperfections in the hedging markets. Perhaps not from the electricity price itself, but from the availability of long-term power agreements, transaction costs associated with trading, and also credit costs if they are considered more solvent. On the supply side, the markets in Denmark, Finland, Sweden and Norway seem to support a well-functioning market, perhaps with the exception of fixed price contracts.

Despite favourable conditions on the supply side, conditions on the demand side have historically led to imperfections in all countries' retail markets, where search and switching costs and asymmetric information are the most prominent issues. It follows

from economic theory that search and switching costs are an important source of market power. The conditions on the supply side have probably led to higher mark-ups than what theoretically was to be expected, given homogenous commodities, low fixed costs and few expansion barriers. High mark-ups may in turn explain why the retail markets have supported a rather high number of active suppliers.

There are some indications that the asymmetric information has had the most adverse impact on the Norwegian retail market. There are probably compounded reasons for this. First, an average Norwegian customer uses more electricity than an average customer does in the other countries. Second, wholesale prices have historically been so low that electricity has remained a low-interest commodity, despite relatively high mark-ups and high consumption. Combined, this has made it very profitable to win customers, which has incentivized heavy and aggressive marketing of contracts that have not been in the consumers' best interest. In the other countries, the incentives to invest in such marketing practices may have been lower due to lower consumption and higher wholesale prices.

Variable contracts have been common in all Nordic countries, probably due to meters that had to be read manually. Fixed price contracts also work well with manual reading, and such contracts exist in large numbers, especially in the Finnish market. Norway has on the other hand stood out with a very low share of fixed price contracts, and hence they have probably had the highest share of variable contracts.

In most of the Nordic countries, variable contracts appear to be the least competitive type of contract as the price of electricity is then under the electricity retailers' control and changes regularly. The retailer may thus exploit the combination of low awareness and switching costs to charge high mark-ups to existing customers. Hence, in contrast to fixed price contracts, the retailer may charge a low price on variable contracts to get customers on-board, for subsequently to increase the price. Spot contracts are on the other hand much more transparent, as the mark-up in contrast to a variable price contract is directly observable to the customer – making it more difficult to increase the mark-up without it being noticed by the customers. The variable price contracts that are most common in Sweden are an exception, as these contracts are based on the average spot prices in the previous month. Such contracts can be beneficial for the consumers if the timing of their electricity consumption corresponds with the time when spot prices are high. These contracts stem from the implementation of smart meters in Sweden, as the first smart meters were only read on a monthly basis.

Finland has traditionally had, and still has, a very high share of fixed price contracts. However, a higher share of fixed price contracts may have contributed positively to competition in Denmark and Sweden as well. However, today Norway has the lowest share of variable contracts and few, if any, retailers offer variable contracts. There are at least two reasons for this. First, smart meters became mandatory and spot contracts fit very well to smart meters, as they measure the exact consumption at

every time. Thus, consumers may save money by adapting to price signals. This is especially valuable to the high share of the population that has electrical cars. Furthermore, spot contracts have been heavily promoted over a long time by for instance the Consumer Council. However, this cannot be the full explanation for the lack of fixed price contracts, as the retailers in the other countries face the same challenges related to hedging as in Norway. Smart meters, similar to the Norwegian, are also widespread in both Denmark and Finland. Thus, some of the explanation must be related to differences between the countries on the demand side.

In contrast to the other countries, electricity is the most common source of heating in Norway. This implies a higher consumption, which may make the consumers more price sensitive and aware. Furthermore, the prevalence of electrical cars is also much higher in Norway than in the other countries. Households and SMEs that use electrical cars can be expected to have a higher consumption of electricity than counterparts without such cars do. They also have incentives to charge the cars in low price periods, which in turn may contribute to more awareness and higher demand for contracts, which expose the consumers to the price variations.

In addition, in Norway different actors have warned against variable price contracts over time. The Consumer Council, which operates the official price comparison tool, have also made changes in the tool such that it is not tempting to choose a variable price contract. The price support scheme for households, which the Norwegian government introduced as a response to the energy crises, worked in practice like a price ceiling. This further reduced the households' demand for fixed-price contracts, which always have been low in Norway. Consequently, the supply of other than spot price contracts to households have more or less stopped. Data from Statistics Norway show for instance that the share of households with variable contracts decreased from 22 to 4 percent between the fourth quarter of 2021 and the third quarter of 2023, while the share with spot price contracts increased from 75 to 93 percent^[8].

Spot price contracts have a simple price structure, consisting of a fixed mark-up on the wholesale price and a fixed monthly fee. This makes it easy for the consumers to compare contracts and identify changes in a running contract, at least compared to variable contracts. This has probably alleviated the information problem, which historically has given scope for market power in the Norwegian market. Price comparison tools and smart meters have probably also contributed to lower search and switching costs. Thus, the current conditions in the Norwegian market may facilitate a healthy and competitive retail market.

In the Finnish and Danish retail markets, there has also been a development towards more spot contracts, something that we expect will continue. We expect to see the same development when smart meters, which can report real-time hourly-based

8. Statistics Norway, table 09364, <https://www.ssb.no/statbank/table/09364/tableViewLayout1/>

electricity consumption, become common in Sweden. Thus, we also expect these markets to become more competitive in the future. However, as demand for fixed price contracts have historically been higher in these markets, retailers that are vertically integrated with production may have more scope for market power in these markets than in Norway, if the imperfections in the markets for hedging are not resolved and the consumers continue to prefer fixed price contracts.

The competitive landscape in Åland is quite different compared to the Nordic countries, and the competition is in practice non-existing. New electricity retailers can enter the market, but currently there are two electricity retailers in Åland, who are also integrated DSOs. According to the interviews, one third of the customers are living in the grid area of one of the retailers, and the remaining two thirds are in the grid area of the second retailer. The switching rate between these two retailers appears to be almost zero, indicating almost full correlation between the customers' electricity supplier and their DSO. The organization structure of the retailers impacts their market behaviour. The two suppliers in Åland are either owned by the municipality or operate as an economic cooperative owned by the customers, which can mean that the companies might not focus on financial targets, but rather on giving customers a stable and reliable electricity supply. Neither of the companies seem to actively try to win customers from the other. For instance, one of the retailers only offers fixed price contracts to the customers located in their DSO area. In addition to the general requirements of setting up a supplier company in Åland, the fact that the legal framework is based on the Finnish regulation while the price area belongs to Sweden SE3, makes it more difficult for electricity retailers from either Finland or Sweden to enter the market. Although new retailers can enter the market, the functioning of the market appears to be similar to the electricity retail markets in Finland and Sweden before the deregulation (Finland 1995 Sweden 1996).

3.2.2 Impacts of energy crisis

The energy crisis has increased awareness and knowledge of the electricity markets in all countries. The experience with high and volatile prices may also have increased the interest in spot contracts in terms of consumers being able to adjust their energy consumption to the prices throughout the day. The prevalence of spot contracts has increased in Denmark, Finland and to some extent Sweden. In addition, Norwegian retailers have stopped offering variable price contracts. Part of the explanation is probably linked to that variable price contracts require more hedging than spot price contracts and that the energy crisis illustrated the advantage of being able to move consumption to low price periods. The demand is also low as it poses a risk for consumers to enter into variable price contracts when the electricity support is based on spot prices. In Sweden, there has also been challenges regarding large differences between bidding zones for hedging possibilities, leading to large price differences between the areas. Further, hedging possibilities have also been affected by increased risks when electricity production is located in other bidding zones.

The development on the demand side may contribute to more active and informed consumers, and thereby to more well-functioning markets. However, for the retailers, it has become significantly more difficult and expensive to hedge, which has led to a reduction in offering and more expensive fixed price contracts. In Sweden, contrary to Denmark, Finland, and Norway, many electricity meters are not yet on an hourly level, which can impose a challenge regarding customers who want to be more active. However, consumers in Sweden can choose an hourly electricity contract, which requires hourly metering without any additional cost, and the DSO must replace the meter if necessary even if most meters can be reconfigured at a distance.

Another consequence of the energy crisis was some bankruptcies among the retailers. There were not a lot of bankruptcies, but the bankruptcies that did occur may have made the consumers more aware of the risks associated with entering into contracts with smaller retailers. Thus, the consumers' preferences for solid retailers may have increased, especially related to fixed price contracts or contracts with pre-payments. At least in Sweden, there has been a significant diversion from small to large retailers, which is compatible with such a hypothesis. If customers have preferences for large retailers, this may allow these to charge higher mark-ups and also to increase the practical barriers for entry.

However, we consider increased consumer knowledge and awareness as the most prominent effect of the energy crisis. Unaware customers are perhaps the biggest obstacle for a well-functioning electrical retail market, as the existence of such customers may reduce the electricity retailers' incentives to compete on price. Thus, the crisis has probably alleviated the information problem, which can be expected to improve competition. However, it is too early to say anything about the duration of the effect on awareness.

3.2.3 Availability of fixed price contracts, or contracts with fixed priced elements

In Norway, fixed price contracts are offered to SMEs, and only a few fixed price contracts are available to household customers. The explanation is probably imperfections in the hedging markets combined with the price support scheme for the households. The lack of fixed price contracts may in particular be a challenge to SMEs that are not protected from high prices by the price support scheme. In Denmark, Finland, and Sweden, fixed price contracts are still offered, but the realized demand is slightly lower than before the crisis due to unusual high mark-ups. As explained above, the competition in the segment may be adversely impacted by advantages for large retailers with integrated production. In Åland, two contract types are available, and most household customers have open-ended variable price contracts, with fixed price elements, similar to Finnish variable price contracts.

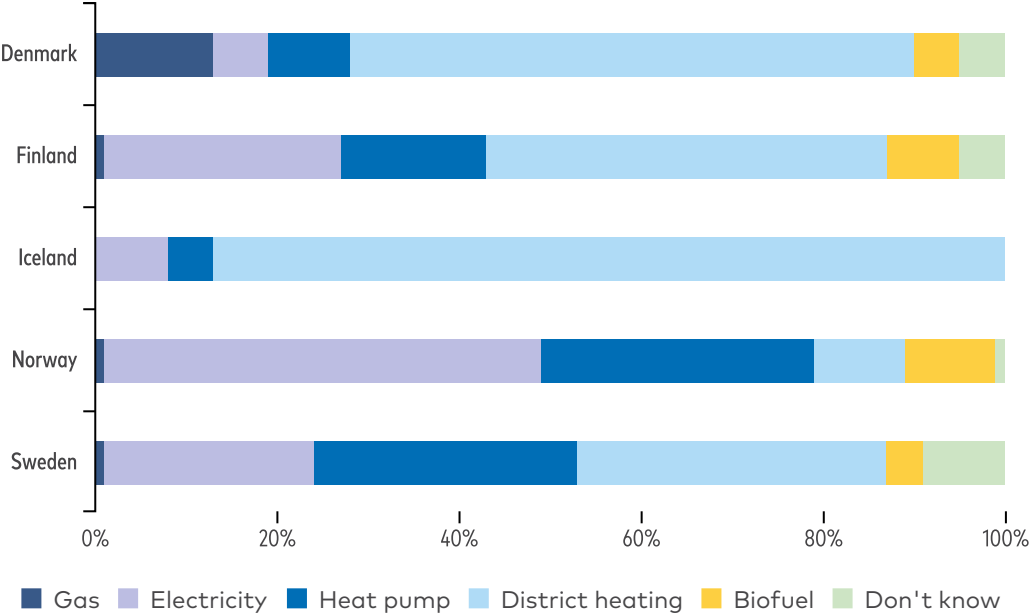
3.3 Customer awareness and satisfaction

3.3.1 Importance of the market and demand for different contracts

The size of the electricity bill is likely to be highly correlated with the customer awareness and satisfaction. The greater the sum due on the electricity bill, the more conscious consumers will be on their electricity usage and the quality of their electricity contracts. Furthermore, customers with high electricity consumption will be more adversely impacted if a retail supplier switches them to a suboptimal contract or modifies the contract's terms and conditions in a negative manner. To sum up, the higher the consumption, the stronger the incentive for being an active and aware customer.

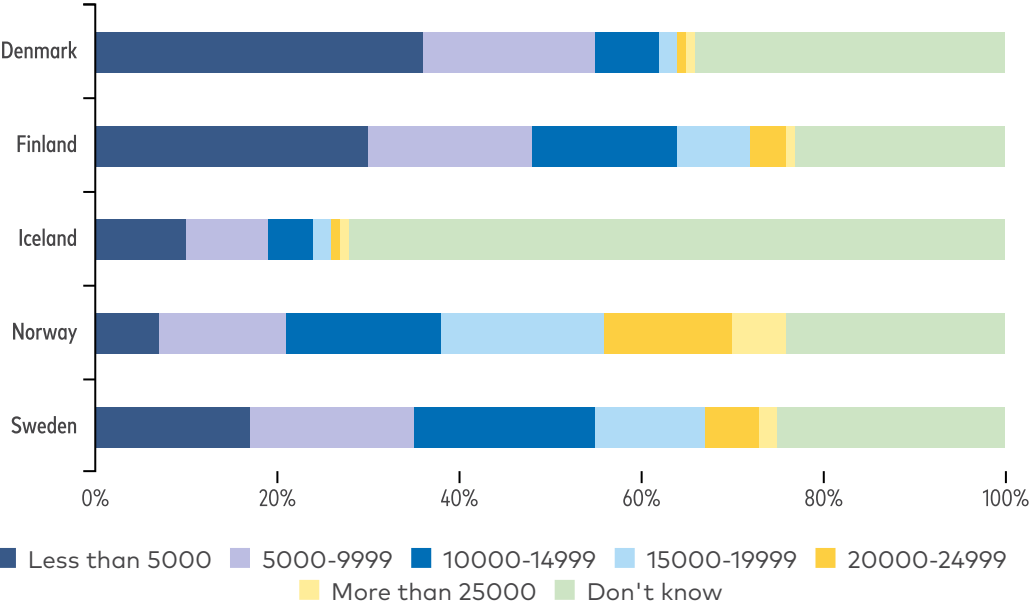
The use of electricity as a source of heating varies in the Nordic countries (Figure 3-1). Norway has the highest electricity usage, as electricity is the most important source of heating for almost 50 percent of the population. For Sweden and Finland, electricity is the most important source of heating for approximately 25 percent of households. For Iceland and Denmark, electricity is the most important source of heating for as few as 8 and 6 percent, respectively. Most customers in Iceland and Denmark have district heating as the main source of heating, and the customer cannot influence the price by changing electricity suppliers. As a result, Norway, Sweden and Finland naturally have a higher electricity consumption compared to Denmark and Iceland. This implies that Norway, followed by Sweden and Finland should have a higher customer awareness in the electricity market. The degree of awareness is also revealed when examining household awareness of their annual electricity consumption. The results show that around 25 percent of households in Finland, Norway and Sweden lack awareness of their annual electricity consumption. In contrast, the figures are 70 percent for Iceland and 35 percent for Denmark, respectively (Figure 3-2).

Figure 3-1: Most important source of heating



Note: The graph shows the most important source of heating in the household. Survey conducted in October and November 2023 amongst Nordic households.

Figure 3-2: Household electricity consumption per year



Note: The graph the reported yearly electricity consumption. Survey conducted in October and November 2023 amongst Nordic households.

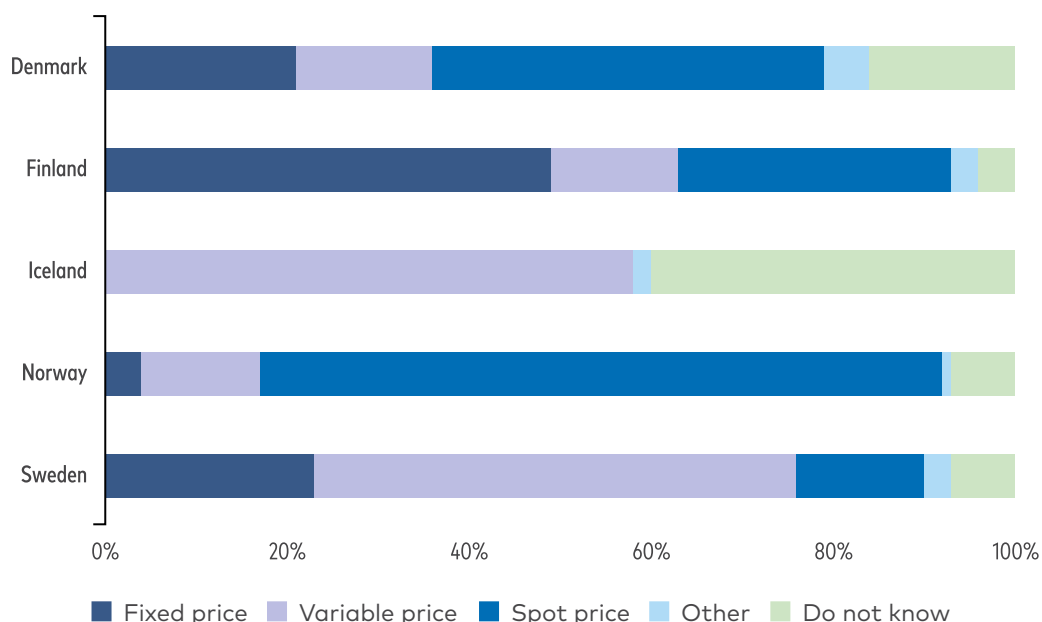
The predominant electricity contract differs across the Nordic countries (Figure 3-3). Among the Nordic countries, Norway has the highest share of spot price contracts with 75 percent of households having a spot price contract. Followed by Denmark, where 45 percent have spot price contracts. Variable price contracts are the main contract type in Iceland and Sweden, with a share of 58 and 53 percent, respectively. In Finland, almost 50 percent have a fixed price contract, while 30 percent have spot price contracts.

Generally, consumers on spot price contracts tend to be more conscious of their electricity usage because they gain advantages by aligning consumption with periods of low electricity prices. Moreover, these consumers are not bound by any contractual obligations and retain the flexibility to switch electricity retailers when desired. This suggests that Norwegian customers have the strongest incentive to understand and follow the electricity retail market. This is driven by a significant number of customers on spot price contracts, coupled with high electricity consumption. Consequently, the customers would face the most significant negative impact if a retail supplier switches them to a suboptimal contract or modifies the contract's terms and conditions in a negative manner. The customers on a spot price contract will also have a higher incentive to follow the hour-by-hour price development and adjust their electricity consumption accordingly.

In contrast, the Finnish and Swedish customers with fixed or variable price contracts, especially those bound by binding long-term contracts, are less likely to actively engage in the market. Their lack of flexibility and the absence of incentives to adapt consumption based on electricity price fluctuations should be expected to make them less active participants in the energy market. At the same time, those on fixed price contracts, in particular Finnish consumers, will have the incentive to search and compare contracts when they have to renew their fixed price contracts. Those customers who actively need to renew their fixed price contract have a rather strong incentive to stay informed compared to other countries where one can be a passive customer for many years. Thereafter, those on variable price contracts in Sweden and Iceland have the incentive to understand whether they have a contract that is in their best interest and should to some extent be active when it comes to comparing and switching contracts.

We do not have survey results about households' contract types in Åland. However, there are only two contract types available; a variation of tariff-based prices, which is open-ended, similar to Finnish variable price contracts, and dynamic price spot contracts. The open-ended tariff-based contracts appear to be by far the most common contract type among household customers, while spot price contracts are mainly favoured by businesses.

Figure 3-3: Contracts across the Nordics



Note: The contract shares are those reported by respondents in a survey conducted amongst Nordic households in October and November of 2023.

In summary, customer awareness is contingent on both the type of contract, to what extent electricity is the main source of heating and the household electricity usage. Customers on spot prices, especially in a market where electricity serves as the primary heating source, are typically the most attentive to market price developments. However, they might less frequently find the need to switch contracts as they have a contract that follows the price developments in the market and also because spot price contracts are more similar to each other than fixed or variable price contracts. In contrast, those on fixed price agreements who actively need to renew the contract might have a stronger incentive to assess whether they have the most competitive contract. This suggests that Norwegian customers should exhibit a high level of awareness, given that the majority are on spot price contracts and electricity serves as the primary heating source for most households. Next comes Finland, characterized by a substantial share of fixed price contracts that customers need to renew frequently and electricity having a fairly important role in heating. In the subsequent ranking is Sweden, where the majority holds variable price agreements, influenced by spot price developments, and electricity serves as a crucial heating source. Then comes Denmark with about 40 percent on spot price agreements, signifying a high level of awareness. However, since electricity is not a primary heating source in Denmark, overall consumption is limited. This suggests that Denmark may be relatively less aware than Norway, Finland and Sweden. In Iceland, where the electricity consumption is very low, the only contract available is variable price contracts, which in addition to the low price level results in a low level of both

active customers and customer awareness.

3.3.2 Share of active customers in The Nordic countries

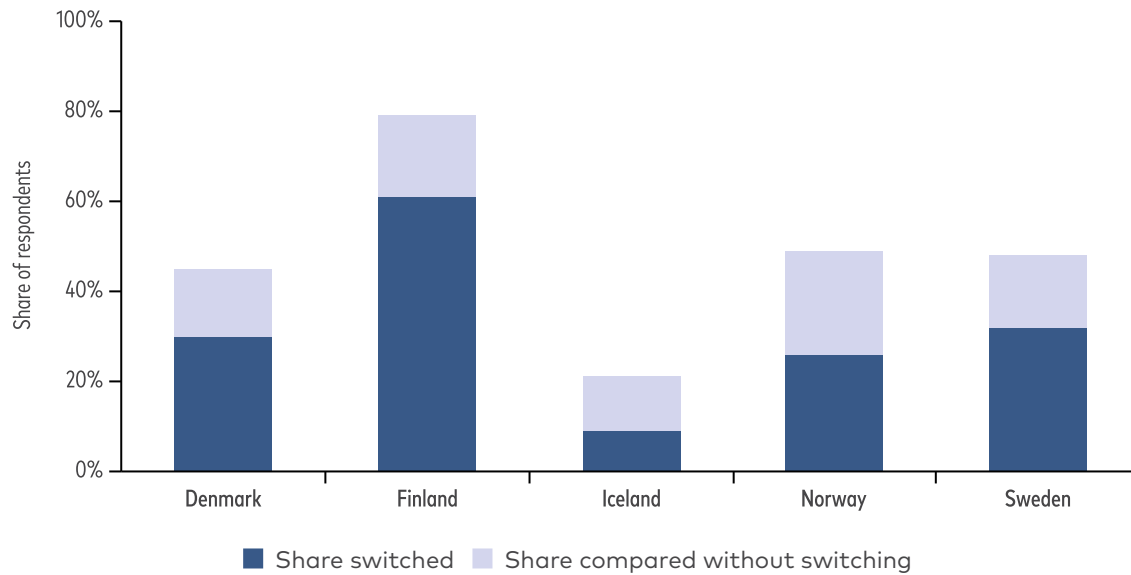
In the Nordic countries, Finland stands out with a notably high share of active customers, as shown by how 80 percent of respondents in the survey either switched or compared contracts within the past year (Figure 3-4). Within this group, 61 percent signed a new contract and about half of the customers signed with a new supplier. The high number of active customers compared to other Nordic countries may be attributed to a high share of fixed price contracts, where the customers are forced to switch or renew contracts periodically compared to contract types without a fixed term. Among the customers in Denmark, Norway, and Sweden from 45 to 50 percent are considered active in the market, supporting the notion of a relatively well-functioning competition in the electricity retail market. It is, however, important to note that the energy crisis may have spiked the share of active customers and that these shares may have been lower prior to the crisis. In Iceland, only 22 percent of respondents have engaged in either switching or comparing electricity contracts in the preceding 12 months. This suggests that the Icelandic households are for the most part inactive, which supports the notion that the competition in the Icelandic market does not function optimally.

There appears to be no clear correlation between the share of active customers and electricity consumption levels in Finland, Denmark and Norway (Figure 3-5). In Sweden, a modest correlation is observed for consumption levels of 20,000 kWh or higher annually. In Iceland, a notable spike in active customers is evident when electricity consumption exceeds 20,000 kWh per year. It is noteworthy, however, that the prevalence of households with such high electricity consumption in Iceland is limited, given that the majority rely on district heating. The analysis does not consider the personal financial circumstances of the consumers; for instance, individuals with higher incomes might exhibit relatively lower concern regarding saving money in a new contract compared to those with lower incomes, despite potentially having higher electricity usage. This effect may explain why in some instances the share of active customers decreases when the electricity consumption increases.

The reason for being active varies between actively seeking a new contract and being contacted by a seller. In Norway and Sweden, the search for a new contract was often triggered by the consumer's desire to find a more competitive contract. In contrast, the main reason for switching in Iceland, Denmark, and Finland was that they were contacted by a seller. This could imply that customers in Norway and Sweden are more actively engaged in the market. This trend may be attributed to the substantial prevalence of spot price contracts in Norway and variable price contracts in Sweden, coupled with higher household electricity consumption per year compared to other Nordic countries. At the same time, it seems that the large share of fixed or variable price contracts in Finland and Iceland, coupled with the low electricity usage in Iceland, make the customers not actively seek a more competitive contract but rather

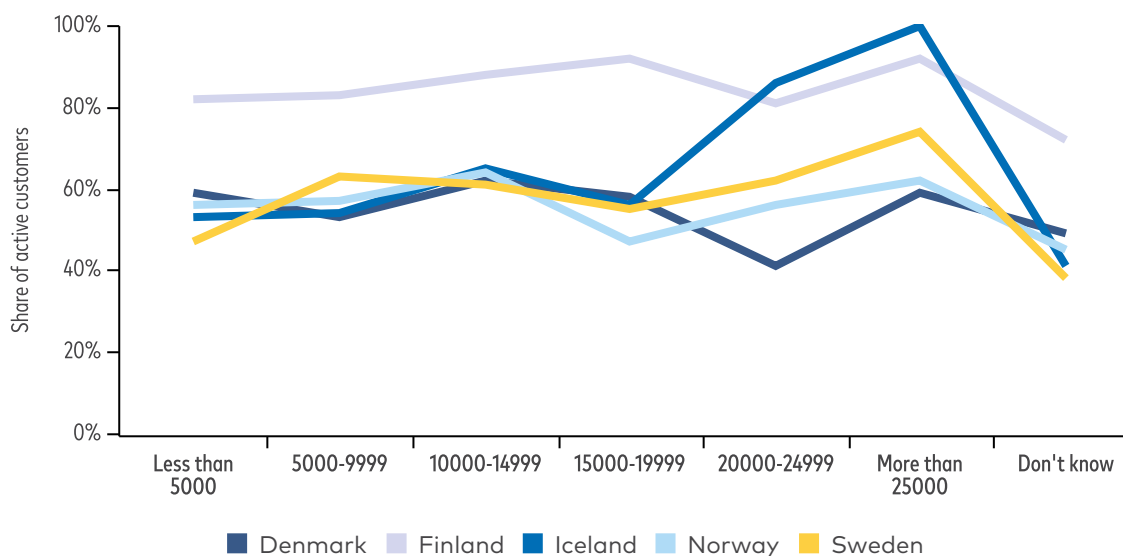
accepting an offer when being contacted. In Denmark, the customers seem to be inactive despite the large share of spot price contracts, and even though the electricity consumption increases (Figure 3-5). This does not necessarily promote a well-functioning market, as the 'active' customers do not search for contracts that are more competitive. Furthermore, when sellers approach consumers, they may be led into contracts that are not in their best interest especially if they are not well informed about their current contract.

Figure 3-4: Share of consumers active in the electricity market last 12 months



Note: The graph shows the share of respondents who have either switched or compared electricity contracts during the previous 12 months. Survey conducted in October and November of 2023 amongst Nordic households.

Figure 3-5: Share of active customers based on electricity consumption levels



Note: The graph shows the share of respondents who are active customers based on electricity consumption level. Share of active customers is defined by having either switched or compared electricity contracts during the previous 12 months. Survey conducted in October and November of 2023 amongst Nordic households.

3.3.3 Customer awareness during comparing and switching contracts

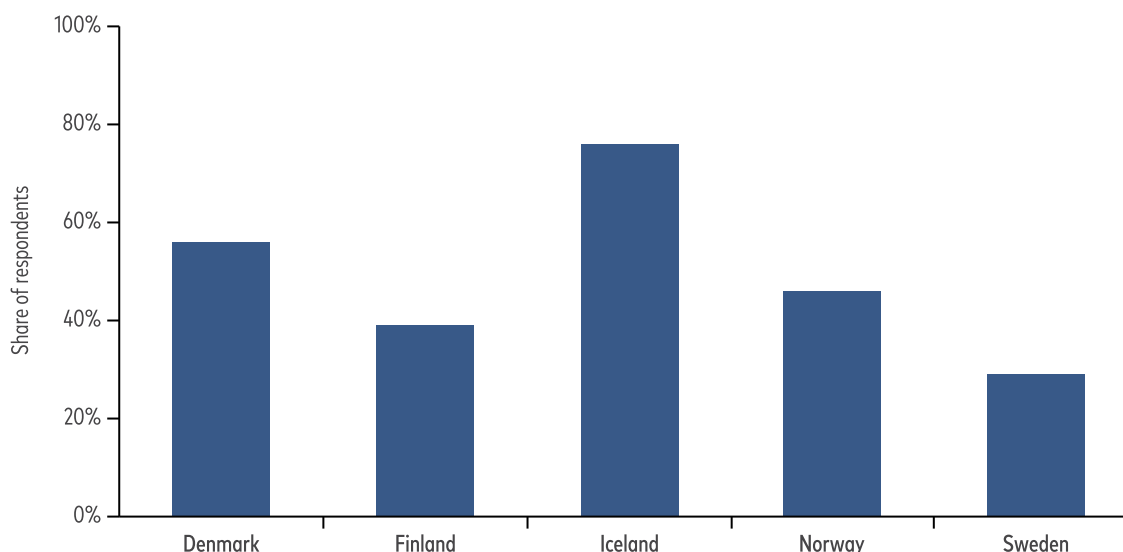
Electricity is and traditionally has been a low-interest product in the Nordic countries due to for instance low and stable prices. Customer awareness has, however, increased due to the high electricity prices, which in turn have affected the mobility of customers and the customers' choice of contracts. Although there have been several improvements in the recent years, information asymmetry is still the main challenge for a well-functioning electricity retail market.

The market is complex for customers. The starting point is that electricity is a homogeneous subscription product with low interest. The product sold is composed of both electricity and grid services provided by different suppliers, and the consolidated bill includes charges for electricity, network usage, and other fees. With numerous retailers in the electricity market offering various types of contracts, each with distinct features, pricing elements, and additional services, it becomes challenging to compare products and choose what is in one's best interest, especially when there is limited awareness of individual consumption. In such a market, it is to be expected that inactive consumers enter into contracts that may not be in their best interest. This can be due to the complexity of navigating the market, making it difficult to make well-informed choices. In sum, even though the customer awareness is increasing in the Nordic countries in terms of more search and switching, complaints,

and use of informative apps, the complexity of the market serves as a significant barrier for customers to properly understand the electricity market.

Despite electricity being a low interest product, there are still many customers, who switch suppliers. Getting a better price is, according to the survey, the main motivation for switching contracts in Denmark, Finland, Iceland, and Norway. At the same time, among those who had compared contracts, the main reason for not switching was the lack of considerable savings associated with switching, in all Nordic countries. Overall, this indicates that consumers are drawn to low prices, giving suppliers an incentive to compete on price. Sweden was the exception when it comes to the motivation for switching, where over 60 percent of the respondents stated to have switched for other reasons than better price, negative experience, or access to new services. Based on results from the interviews, this may explain the shift from smaller retail companies towards larger, more well-known companies.

Figure 3-6: Price as main motivation for switching electricity contract



Note: The graph shows the share of respondents who states that price was their main motivation for having switched contracts during the last twelve months. Data from household survey conducted in October and November of 2023 amongst Nordic households.

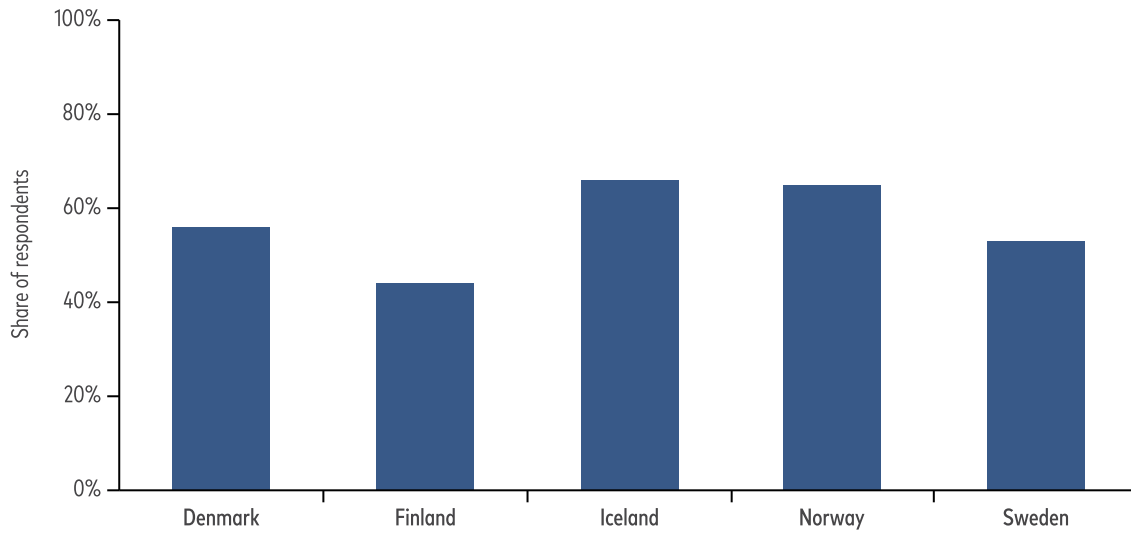
The main reasons for not switching in Norway, Finland, Sweden and Iceland is the high level of satisfaction with existing contracts or due to a perception of limited potential for savings in a new contract. In Denmark, approximately half of the individuals, who refrain from switching or comparing contracts, attribute this decision to the perceived complexity and time-consuming nature of the process, which is often related to difficulties in finding reliable information. This is not surprising, given that search and switching costs are independent of consumption, while the gain from a more competitive contract increases in consumption, and the average customer in Denmark has a low consumption.

In sum, the limited potential for savings, coupled with the considerable time and effort required to seek out a more favourable contract, prevents consumers from engaging in the process of switching or comparing contracts. It should however be noted that a high switching rate is not a goal in itself, but that consumers who are aware and willing to switch are a prerequisite for a well-functioning market.

Challenges associated with comparing or switching contracts

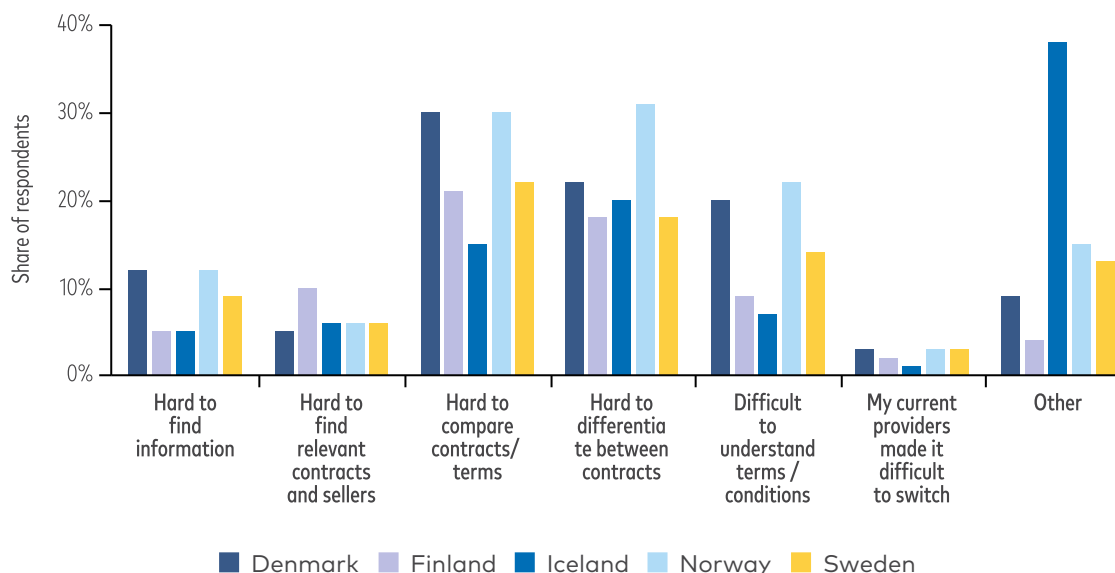
Among the households that have switched or compared contracts in the Nordic countries, more than 50 percent report challenges while doing so. The main challenges in the Nordic countries when comparing contracts were (i) the complexity of comparing contract terms and (ii) the difficulty in distinguishing between various contracts. In Iceland, more than 40 percent responded that they also had other reasons for experiencing challenge. Norway and Iceland were the two countries experiencing the most challenges, followed by Denmark and Sweden. Finland had the least share of households reporting challenges. However, a rather high share of the switches in Finland was initiated by the supplier and may therefore have occurred without the consumers undertaking any real search. Based on this, we should be careful about concluding that search costs in general are lower in Finland than in the other markets.

Figure 3-7: Share experiencing issues when switching or comparing contracts



Note: The graph shows the share that experienced issues when switching or comparing contracts. Survey conducted in October and November of 2023 amongst Nordic households.

Figure 3-8: Issues experienced whilst switching or comparing contracts (Multiple choices allowed)



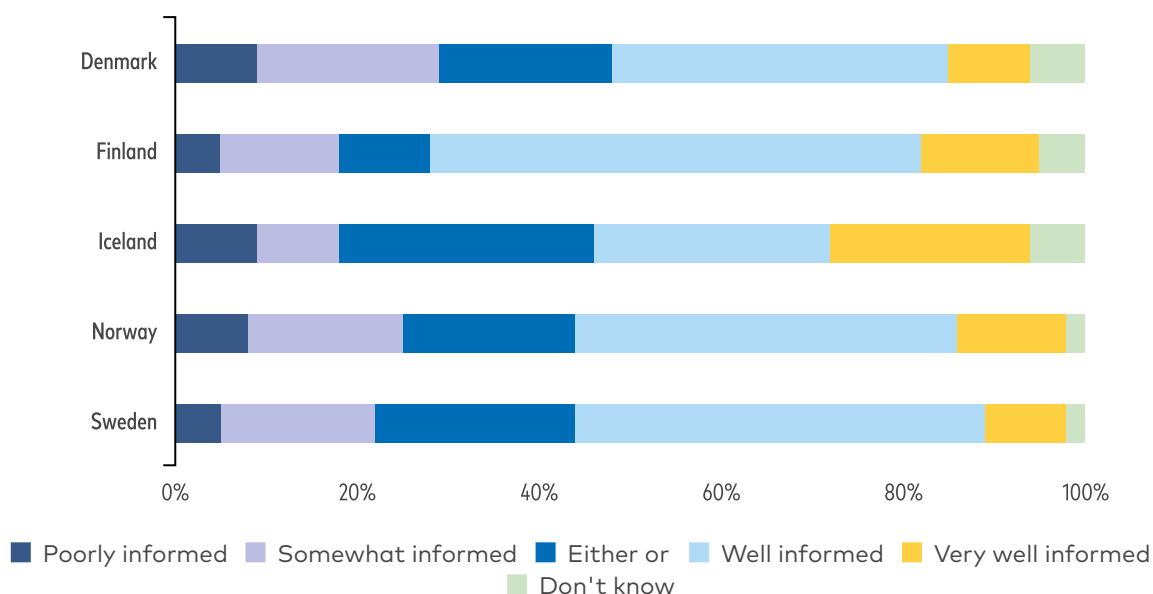
Note: The graph shows the share who report having experienced an given issue whilst switching or comparing contracts. Multiple choices allowed. Survey conducted in October and November of 2023 amongst Nordic households.

The nature of the contracts that the consumers are searching for may also affect the search costs and experienced challenges. Variable contracts may be inherently difficult to compare, as the retailer will have the flexibility to change prices in the future. The retailer’s reputation may thus be an important variable in the choice of supplier and may be a reason why there are fewer negative experiences with electricity retailers in Sweden. Fixed price contracts should on the other hand be relatively easy to compare, but different terms related to contract breach, volume requirements, etc., might increase the experienced complexity. Spot price contracts may be very difficult to compare in a situation without smart meters, as the real mark-up will be affected by the assumed consumption profile set by the retailer. With smart meters, the contracts should be relatively easy to compare, but without information about own consumption, it may be challenging to compare contracts with different mark-ups and monthly fees. Based on this, and the fact that now mostly spot price contracts are offered in Norway, the share of customers that report having experienced difficulties appears higher than expected. However, there can be different types of spot price contracts in terms of bundling with other products, which makes them difficult to compare. In addition to many different contract types that are difficult to differentiate, there are also many suppliers, who offer these types of contracts.

Based on the survey, where a high proportion of households reported that they had encountered challenges related to comparing and switching contracts, we conclude that measures that reduce search and switching costs may lead to more well-functioning retail markets in the Nordic countries. However, as markets and contracts have undergone some changes during the energy crisis, the experienced challenges may be related to new and unfamiliar contract types. Here the Norwegian retail market may serve as an illustration; almost all consumers now have a spot contract. For consumers, it should be relatively easy to compare their running contract with other contracts on the market, for instance by using a price comparison tool that presents all the current contracts available in the market. This applies to all the Nordic countries, but mostly to the Norwegian retail market as most consumers have a spot contract, which makes it easier to compare.

Despite the high share of customers who experienced challenges when comparing contracts, many customers felt well informed when switching contracts. In most of the Nordic countries, about half of the households responded that they felt either well informed or very well informed when switching contracts. This may suggest that many customers in the Nordic countries are adept at identifying competitive electricity contracts, as getting a better price is the main motivation for switching contracts in all countries. Finnish customers appear to be the most well-informed among the Nordic customers, as 70 percent reported feeling either well informed or very well informed. Seen in context with Finland that has the most active customers as well as the lowest share of households experiencing challenges, this may suggest that the electricity market in Finland is less complex, households are better informed or they perceive themselves as more informed, possibly due to the substantial prevalence of fixed-price contracts. However, the results also imply that a large share of household consumers did not feel well informed when switching contracts, and the share of households who felt poorly informed or somewhat informed were particularly high in Denmark, and to some degree in Norway. The high share of poorly informed customers in Denmark could, in part, be due to challenges related to the price comparison tool.

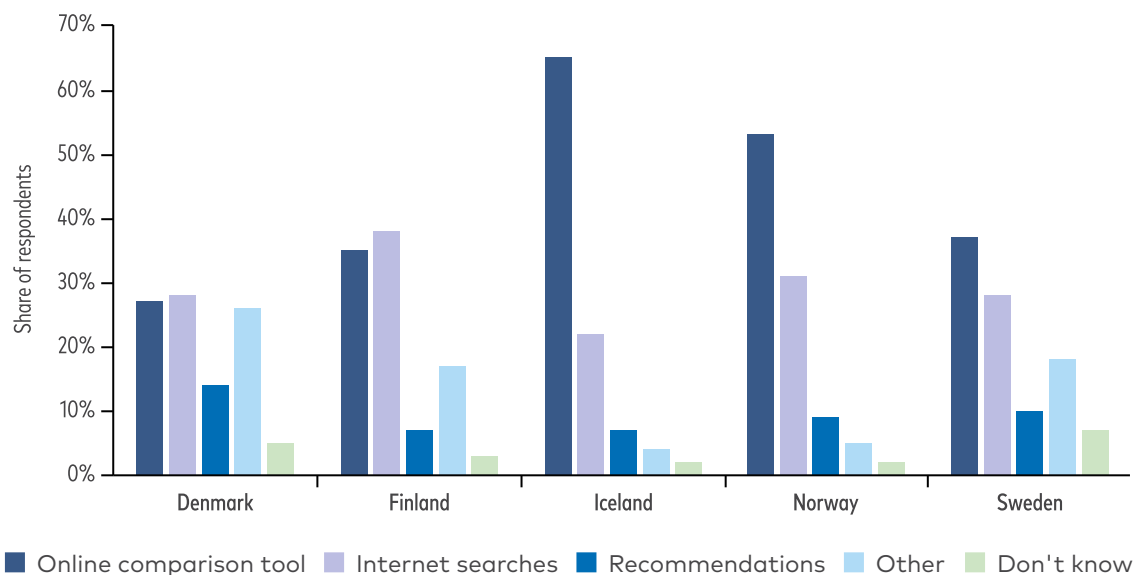
Figure 3-9: Level of informedness whilst switching or comparing contracts



Note: The graph shows how informed respondents felt before switching or after comparing contracts. Survey conducted in October and November of 2023 amongst Nordic households.

The online comparison tool is important when comparing contracts in all the Nordic countries, which implies that the efficiency of the market depends to a high degree on a price comparison service that provides relevant and reliable information, and that the consumers are well-informed about these services. Nevertheless, the online comparison tool varies across the Nordic countries, differing in both content and customer satisfaction levels. Among all the Nordic countries, the Norwegian comparison tool seems to be the most developed when it comes to regulations that hinder 'bad deals'. On the other hand, the Danish comparison tool is noted for having the lowest customer satisfaction, attributed to challenges in customers' discerning the reliability of presented deals. Sweden, Iceland, and Finland generally express satisfaction with their respective tools, emphasizing their widespread use for comparing and switching contracts. However, there is room for improvement in the Nordic price comparison tools.

Figure 3-10: Most important source of information when switching or comparing contracts



Note: The graph shows the most important source of information when switching or comparing contracts. Survey conducted in October and November of 2023 amongst Nordic households.

3.3.4 Customer satisfaction

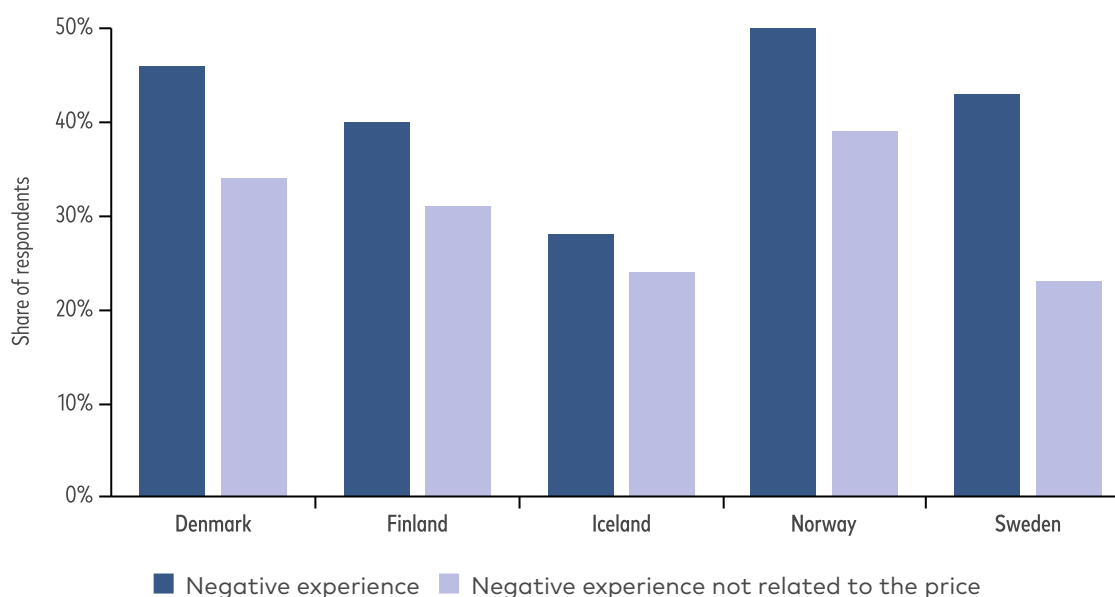
All the Nordic countries suffer from a large share of customers who have negative experiences with the retailers. While a share of these negative experiences is attributed to high electricity prices, it is noteworthy that many customers still report negative experiences that are not related to price (Figure 3-11).

Among the Nordic countries, Norway, Denmark and Finland struggle the most with a lack of trust in the electricity retailers in the market. Approximately 40 percent in Norway, 35 percent in Denmark, and 30 percent in Finland report negative experiences, which are not related to price. In Sweden and Iceland, approximately 25 percent of the households report negative experiences with the electricity retailers, which are not related to price. Sweden generally has a lower number of customers with negative experiences due to the high trust in the electricity retailers as there is a limited number of suppliers that are classified as unfair. It is interesting that the Swedish customers report fewer negative experiences, as the share of variable price contracts are the highest in Sweden and such contracts may be more prone to retailers making changes that are not in the consumer's interest. Sweden also has a public complaint list, which contains electricity retailers that have received a high amount of complaints, and this may have disciplined the retailers from practices like

moving customers to unattractive contracts, etc.

Transparency in the market is mainly needed for the customers to understand the market. The Icelandic market does not have the same problem with lack of trust in the retailers, but this might be attributed more to a lack of awareness and attention to the market than to the electricity retailers' conduct standing out positively or negatively. The Icelandic market is also characterized by a limited number of electricity retailers, of whom the majority are well-known and trusted companies.

Figure 3-11: Negative experiences



Note: The figure shows the share of households who report having a negative experience with their electricity supplier during the last two years. Survey conducted amongst Nordic households in October and November of 2023.

The main issue, which the households reported in all the Nordic countries, was that the price was much higher than expected. It is difficult to say whether the negative experience regarding the price development was related to the contract with electricity retailers' or rather related to the general development of the electricity price in the spot price market.

It also seems to be a general issue in the market that the bill is difficult to understand, indicating an opportunity for improvements to make it more consumer-friendly, especially in Norway, Denmark and Iceland. For Finland and Sweden, the percentage who reported difficulties in understanding the bill was much lower. This

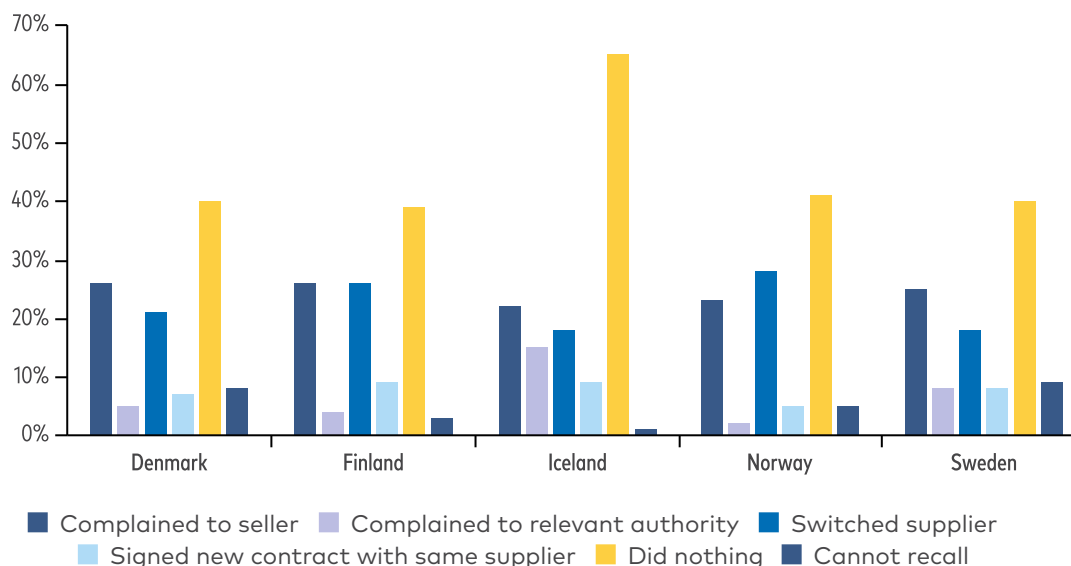
may be because Finland and Sweden have a high percentage of fixed and variable price contracts, respectively, which makes the price per kWh on the bill easier to understand. It also may indicate that the layout of the invoice is indeed more comprehensible with respect to for instance the inclusion of the grid usage fee in the bill.

Another negative experience, which consumers have with electricity retailers, is aggressive marketing techniques, for instance by phone, that provide customers with limited information to make good decisions, and misguiding information on the electricity retailers' websites and electricity bills. This is especially a challenge in Norway. Currently, the ministry considers addressing such conduct with the introduction of a cooling-off period, stating that the offer must be presented in writing before being accepted by the customer.

Lastly, customers in the Nordic countries were in general dissatisfied with the electricity retailers' customer service, which was difficult to contact during the energy crisis, primarily stemming from a mismatch between the number of complaints and the capacity of customer service employees, resulting in prolonged wait times.

Surprisingly, few customers take action in response to the negative experiences. The survey shows that a little under half of the households in the Nordic countries did nothing in response to the negative experience with the retailers (Figure 3-12). Iceland stands out with over 65 percent choosing not to take any action, which is also in line with the high number of inactive customers in the market. Generally, approximately 20 percent of the customers chose to complain or switch retail supplier. There may be several reasons for this behaviour. First, it makes sense not to do anything if the negative experience with the retailer is due to the price being higher than expected, as this is highly defined by the development of the spot price market. Also, if the perceived search costs are high and it is challenging to determine if one is switching to a better contract, it can also make sense to stay. It may also be because the main issue, apart from the price, is that the bill is difficult to understand. The difficulties with respect to understanding the bill may be a market-wide issue, thus giving little incentive to change supplier.

Figure 3-12: Action taken in response to a negative experience (Multiple choices allowed)



Note: The graph shows actions taken by consumer in response to a negative experience with their electricity seller. Survey conducted amongst Nordic households in October and November of 2023.

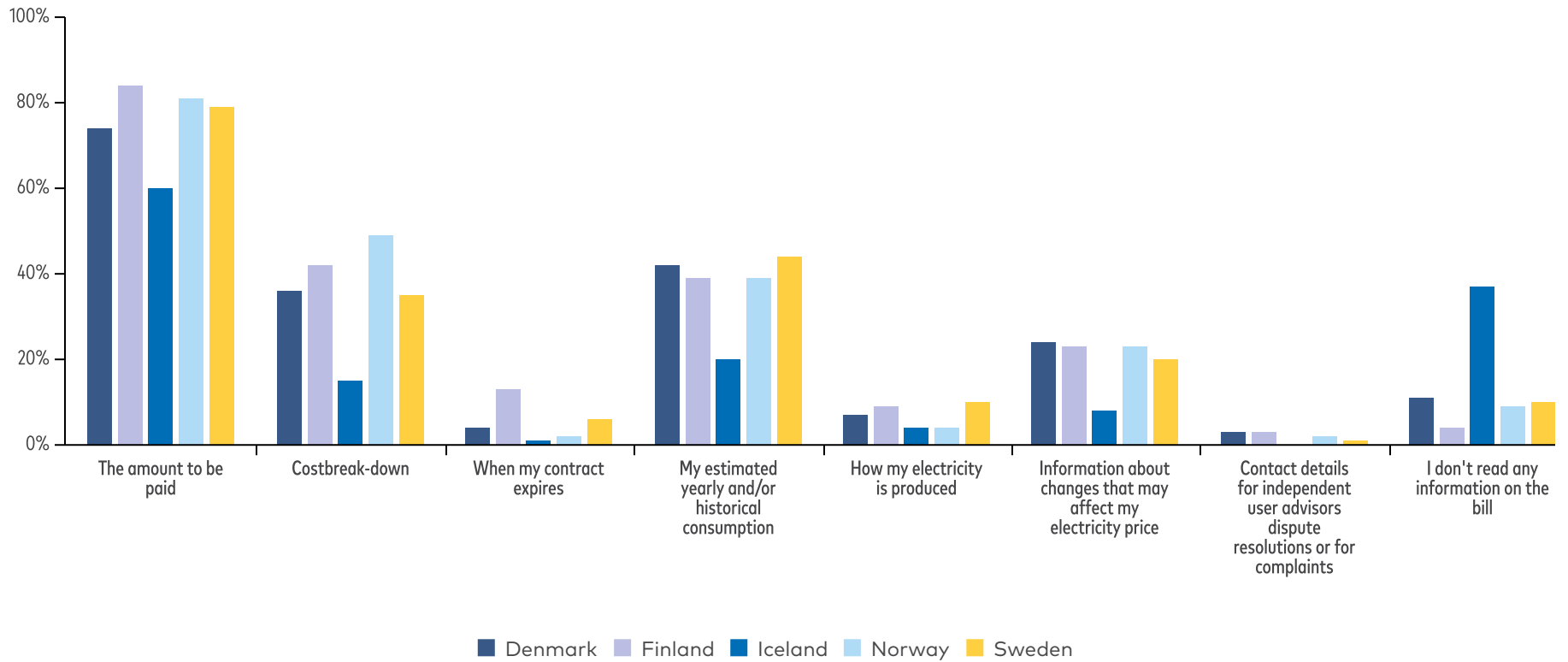
Challenges associated with the bill

According to the survey results, a substantial challenge for customers is the difficulty in understanding the electricity bill. This should be considered a fundamental issue. Understanding the invoice is a prerequisite for verifying that the billed amount is in accordance with the contract. Furthermore, if the consumers find it hard to compare contracts, their incentive to check the invoice and the details may be low. Thus, the more difficult it is to understand the invoice, the more scope and temptation for exploitative practices.

Customer awareness related to their invoice is quite similar in the Nordic countries, with Iceland being the exception. Common for all countries is that the respondents read the amount to be paid (Figure 3-13). Apart from this, in Norway, Denmark, Sweden and Finland, a little less than half of the households show interest in the break-down of costs and the estimated annual and/or historical consumption. In Sweden, it has been emphasized that the requirements regarding the level of detail on the invoice served as a barrier to product innovation and was a source of confusion for consumers trying to comprehend the information. In Iceland, the households do not show interest in the invoice and 40 percent reported that they did not read any information on the electricity bill. This further highlights that electricity is a low interest product in Iceland, as neither the choice of retail supplier nor the information

on the bill, apart from the sum to be paid, is of particular importance to the customer.

Figure 3-13: Information read on the invoice (Multiple choices allowed)



Note: The graph shows actions taken by consumer in response to a negative experience with their electricity seller. Survey conducted amongst Nordic households in October and November of 2023.

3.3.5 Impact of energy crisis

The energy crisis had an impact on customer awareness and satisfaction in the Nordic countries, with Iceland standing out as an exception due to its isolation from the European grid. Primarily, the spike in electricity costs transformed electricity from a low-interest product into a commodity that gained significant attention from customers and media. Customers grew more aware of the need to comprehend the electricity market, understand contractual terms and conditions, and ensure that they secured an electricity contract in alignment with their best interests.

Furthermore, there was a noticeable increase in mobility within the Nordic countries, particularly in Sweden and Denmark, where mobility had traditionally been low. The crisis, in this sense, fostered a positive effect on market competition. Customers switched from fixed to spot price contracts, seeking more flexibility and responsiveness to market changes. In Norway, a considerable number of customers transitioned from variable price contracts to spot price contracts, with this shift beginning slightly before the onset of the energy crisis. Moreover, a small trend emerged in Sweden, where some customers moved from smaller retailers to larger well-known companies, driven by increased trust in more established actors.

The energy crisis also prompted a heightened focus on energy consumption. Customers expressed a desire to shift their usage from peak hours to hours with lower prices. To achieve this, many installed various solutions such as solar cells, heat pumps, and smart-charging systems for electric cars. This type of behaviour was mostly seen in Norway and Denmark where a higher share of the customers was on spot-price contracts. Customers with fixed or variable price contracts in Finland and Sweden did not have the same incentive to shift their electricity consumption but did have an incentive to reduce it. Finland, for example, implemented a campaign to encourage consumers to "lower their home temperature by one degree," proving to be an effective strategy in the reduction of electricity consumption among consumers.

However, challenges emerged in customer service during the crisis. Many electricity suppliers experienced constraints in their customer service channels, leading to situations where consumers were unable to contact customer service. This limitation impacted consumers' ability to exercise their legal rights, including cancellation rights related to distance selling or the ability to submit complaints. Overall, the energy crisis had far-reaching effects, reshaping not only customer behaviour and market dynamics, but also the landscape of customer service in the Nordic countries.

The energy crisis appears to have had limited impacts on the customer awareness and satisfaction in Åland compared to the other Nordic countries. While the customers were not surveyed in Åland for this study, the interviewed stakeholders reported no significant increase in customer complaints or congestion of customer service channels, and few cases have been lifted to the consumer and competition authorities regarding the electricity retail market. The interviews also indicated that

there have been no large shifts in contract type preferences due to the price shock. The switching activity in Åland is generally low, regarding both electricity retailers and contract types. The low switching activity could be due to customers trusting their retailers because of the vertical integration, and because the customers have experienced relatively low and stable prices over time. However, the low switching activity could also be due to customers being unaware of the possibility to switch retailers or contract types.

3.4 Prevalence of challenges for consumers and retailers

Similar to the other European power markets, the Nordic power market was significantly impacted by the energy crisis during the winter 2022/23. The crisis resulted in a price shock for customers, prompting the implementation of electricity support schemes in several countries. The energy crisis also contributed to straining the liquidity in the financial markets, adding to a long period of gradually reduced activity at the exchange. The lack of liquidity in the financial market reduced the robustness of the future prices and increased transaction costs, negatively impacting electricity retailers' ability and costs related to hedge their portfolios. This made it more challenging for electricity suppliers to offer attractive fixed price agreements to their customers.

3.4.1 Retailer challenges

On the retail side, we have identified two main challenges that may adversely affect the functioning of the retail markets. The first challenge is related to the electricity retailers' ability to offer the full range of products in demand and the other is related to asymmetric information.

Challenges related to fixed price contracts

Fixed price contracts are currently offered in Finland, Sweden and Denmark. In Norway, fixed price contracts are available for SMEs, and some fixed price contracts are available to households. The supply of fixed price contracts to Norwegian households is limited and has been non-existent in periods during the energy crisis. Iceland has variable price agreements that in practice functions as a fixed price contract. In Finland, fixed price contracts are the most common agreement, Norway and Denmark has a high share of spot price contracts, while Sweden and Iceland have a high share of variable price contracts.

The Nordic countries, except for Iceland, utilize Nord Pool as their wholesale electricity market, which is a marketplace for the wholesale trading of electricity. Iceland is the only Nordic country that does not have a functioning wholesale market. This can be a challenge as some electricity retailers have integrated production, allowing them to shift market power from the production stage down to the retail level. This results in less equal competition conditions on Iceland.

Common for the Nordic electricity retail market is the challenge connected with hedging the risk associated to future prices. In a well-functioning market, retailers should have the capability to hedge against the risks associated with future price fluctuations. Without such a possibility, the retailers will have to carry much risk, which ultimately will result in high premiums for fixed-price contracts. Furthermore, the retailers will be vulnerable to fluctuating prices and facing risk of bankruptcy. This may reduce the consumers' trust in the retailers as counterparts. In particular, it may make the customers reluctant to enter into fixed price contracts, as the contract is of no value if the retailer goes bankrupt when the power prices increase. Iceland is a unique case in the sense that they do not have a financial market for electricity, making risk management and price hedging difficult. In addition, the lack of a functional financial market also removes essential price signals in the market.

In the Nordic market, the Nasdaq exchange is the marketplace for financial contracts. Over time, it has become more difficult for the retailers to hedge through Nasdaq. The contracts exchanged are linked to the Nordic system price, for which the correlation with the price areas has decreased significantly as a result of the energy crisis. The lower the correlation is between the system price and the area price, the less efficient hedging is for both retailers and producers, and thus low supply and demand for financial contracts. In turn, this has led to an illiquid market, with high premiums. High premiums reduce the consumers' demand for fixed price contracts.

Bilateral OTC contracts are an alternative to exchange hedging. An important advantage of OTC trading is that a producer and a retailer in the same price area can contract on the area-price rather than the system price, on which exchange-contracts are based. The disadvantage is high transaction costs, low flexibility and possibly a 'thin' market in each price area. Thus, for a retailer it may be costly to base fixed price contracts on OTC hedging, implying that OTCs may not support competitive fixed price contracts. The prices in OTC contracts are also unobservable, and hence OTC trade does not support the formation of robust long-term reference prices on the exchange, which is open and valuable to all market players.

Retailers who have integrated production in areas where they want to offer fixed price contracts are not facing the same costs of hedging, as the increased costs mainly are associated with market imperfections and transaction costs. However, few retailers are integrated with production and very few have production in several price areas. This may translate into market power within fixed price contracts. Thus, competitive offerings of fixed price contracts cannot be expected despite not all retailers are facing equally large challenges.

The challenges related to hedging seem to be caused partly by fundamental conditions in the power market. Thus, it cannot be expected to vanish in a situation with increased underlying demand for fixed price contracts. However, achieving an improvement in the financial market with increased liquidity in listed products and robust futures prices will help level out the differences in competition.

Asymmetric information

Asymmetric information is a challenge in the electricity retail market. The information problem on the consumer side makes it difficult for the consumers to distinguish between serious and unserious suppliers, as well as good and bad contracts. This translates into a challenge for serious retailers because it makes it difficult and costly to signal seriousness, and to compete on parameters such as price and quality. This may in particular be a challenge for new electricity retailers as they have no track record to prove seriousness. In turn, this may adversely affect the type of retailers who enter the market, for instance, by promoting short-sighted firms that pursue hit-and-run strategies to enter the market. The result is less efficient competition and a worse outcome for consumers.

Unserious retailers may speculate on charging low 'on-boarding prices' to capture consumers that later can be exploited. Serious retailers will on the other hand have less ability to finance low 'on-boarding prices' through future profit on the customers. The more difficult it is for the consumers to distinguish between serious and unserious retailers, the less the scope is for serious retailers. Furthermore, if the consumers do not trust the retailers and expect to be ripped-off in the future, it becomes rational for the consumers to choose the lowest 'on-boarding price'. This may reduce the profitability of serious retailers and make it tempting to exploit captured customers. Furthermore, it will decrease the incentives for serious retailers, resulting in a population with a high share of unserious retailers.

The situation has similarities to what economic theory refers to as the lemons problem or adverse selection due to asymmetric information. This was first introduced by Akerlof (1970)^[9] where he showed that asymmetric information between sellers and buyers of used cars translates into a market with only 'bad cars', as the sellers of 'good cars' cannot demand a higher price than the sellers of bad cars due to the inability of customers to distinguish between them.

The electricity retail market has some inherent properties, which implies that asymmetric information to some degree is unavoidable. Generally, electricity can be described as a homogeneous subscription product with low customer interest. The product sold is, however, composed of both electricity and additional services provided by different suppliers, and the consolidated bill includes charges for electricity, grid services, and other fees. With numerous retailers in the electricity market offering various types of contracts, each with distinct features, pricing elements, and additional services, it becomes challenging to compare products and choose what is in one's best interest, especially when costumers often have limited awareness of their individual power consumption. The prevalence of asymmetric information, coupled with low barriers to entry, makes scope for unserious players. Such challenges appear to have had the most adverse effects in Denmark and

9. George Akerlof (1970) "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism", Quarterly Journal of Economics.

Norway. Regulations are in place to reduce the prevalence of bad business practices, and we believe that this and increased awareness has contributed to reducing the problems. However, suppliers are creative and tend to find ways around regulations and measures to protect consumers. One example of such measures is that suppliers must guarantee the price for at least 12 months in order to obtain an attractive ranking at the official comparison tool in Norway, Strømpris.no. Furthermore, new regulations have been introduced in Norway to deal with these challenges, and the authorities have signalled stricter enforcement of existing regulations. The complaint list in Sweden, listing electricity retailers who have received many complaints during the past year, is an example of another measure to deal with such challenges.

Regulations

Regulations in the Nordic electricity retail market is generally considered sufficient. However, there are concerns, especially in Sweden, Norway, and Denmark, regarding how certain regulations may impede the development of various types of contracts.

In Norway and Sweden, there are regulations as to what information is necessary to be provided to the customers and how. Sweden has for example an obligation of informing customers 60-90 days before a contract expires, with several obligations as to what the information should include. In Norway, electricity retailers are obligated to inform customers, who are not on spot price contracts, of the upcoming price in their contract at least 30 days in advance. The earlier the price information is required to be sent to the customer, the greater the financial exposure and uncertainty for the electricity supplier, thereby influencing the price that can be offered to the customer.

In Denmark, the legal framework strongly favours consumer rights, particularly concerning their ability to opt out of fixed price agreements. Since the legal framework anchoring consumer rights applies to all sectors it can be difficult to adapt. While the current approach is undoubtedly consumer friendly, it can act as a disincentive for retailers to provide fixed price contracts. Alternatively, the increased risk for retailers raises the prices of these contracts.

The risk of procuring power for fixed price contracts and engaging in hedging strategies is elevated when consumers have the freedom to terminate their contracts at any time. The existing quarterly fixed price contracts can also be restrictive due to how the opt-out option forces the retailers to charge a significant premium, especially if the market is volatile.

Sweden also has issues in connection with the strict requirements related to the information that needs to be included on the invoice. These requirements can help customers improve their understanding of their bills, but it can also make it more difficult for the customers to understand when there is too much information. The retailers argue that it hinders product development. It specifically hinders the development of new products, which are more complex than the ones offered today, as the increased complexity of a new product would be difficult to present correctly on an invoice according to the regulations of the information that must be included.

Therefore, it is crucial to evaluate what information is relevant for the customer and introduce regulations accordingly.

In Iceland, it is the market's design itself that imposes limitations on the types of contracts that can be offered. The absence of a wholesale market and a financial market restricts the contract types that can be offered, resulting in only variable contracts being available.

Other challenges

Some market participants also find it questionable that the markets allow 'greenwashing'. Purchasing electricity agreements with guarantees of origin is a way for consumers to support renewable energy producers. However, it does not impact the electricity that consumers receive in their homes through their power agreements. Therefore, some market participants find it strange that electricity retail companies can market that they are selling green power.

3.4.2 Consumer challenges

On the consumer side, we have identified four main challenges that may adversely affect the functioning of the retail markets. The first challenge is related to information asymmetry, followed by the electricity retailers' ability to offer the full range of products in demand, customer awareness and customer protection.

Information asymmetry

Electricity is a low-interest subscription product, where the consumers, unlike in many other markets, do not have to make an active choice of supplier and contract each time they buy the product. Furthermore, when consumers sign an electricity contract with a retailer, both their future consumption and the price they pay can be uncertain. These uncertainties may be even more prevalent in the electricity retail market, compared to other subscription markets. Understanding the relationship between the contract terms and future prices may be difficult for the consumers.

Although there have been several improvements in recent years, information asymmetry is still the main challenge for a functioning electricity retail market. Consumers have little confidence in electrical retailers due to for instance the information asymmetry, and households in especially Norway, Denmark and Finland have considerable scepticism regarding the electricity retailers' credibility. This may be a result of the consumers themselves having had negative experiences or that they have heard about unfair retailer practices through media coverage.

The characteristics of the market, and the product complexity, reduce the consumers' incentives and ability to seek information and actively participate in the market. Because of the information asymmetry, inactive consumers have a high risk of entering into contracts with unfavourable terms. Also, for active consumers, the complexity and variation of product structure may impede the consumers' ability to identify the contracts that are in their best interest, which in turn may reduce the

electricity retailers' incentives to compete on price and quality. In addition, contracts are often sold through channels that provide customers with limited information at the time of purchase, such as telemarketing and stands. Norway and Denmark stand out with the most telephone sales and aggressive marketing strategies.

Results from the survey show that approximately 50 percent of customers in the Nordic countries who compared or switched contracts, had difficulties while doing so. The main challenge related to comparing contracts were (i) the complexity of comparing contract terms and (ii) the difficulty in distinguishing between various contracts due to varying price components and variations in supplementary services within the same contract type.

In Sweden and Finland, there is a higher degree of asymmetric information due to the presence of both variable and fixed prices in their electricity market. This is because both fixed and variable contracts are often more complicated to understand, as well as how there are many different versions of these contracts, such as customer profile, duration, etc. Electricity retailers can also have different hedging strategies, which in turn result in different prices for the customer. Moreover, understanding the expected price development also poses an information challenge for consumers. In sum, the risk that the consumers enter into an agreement, which is not in their interest, is higher for these types of contracts. In Norway and Denmark, where spot price agreements are more dominant, it should be less complicated to compare contracts as spot contracts have a more unitarian design. In practice, the absence of variable and fixed agreements in Norway prevents customers of going into impractical or less favourable contracts.

The complexity of contacts and variations in price structures is also challenging when designing price comparison tools, which is an important source of information to consumers in the Nordic retail market. When the tools are well designed, they can reduce the search costs for consumers and increase information about suppliers and contract terms, making it easier to identify favourable contracts and avoid unfavourable contracts. Some of the tools, however, have been less trustworthy and in part been used as marketing platforms for suppliers and contracts that may be cheap in the short run, but not favourable for the consumers in the long run. Currently, in particular Denmark faces challenges with its tool, and its usage is less prominent compared to the other Nordic countries.

Electricity retailers' ability to offer the full range of products

The retail electricity markets in Finland, Denmark and Sweden offer spot, fixed and variable price contracts to households and SMEs. The Norwegian market offers spot price, fixed price and other types of contracts to households, and spot and fixed price contracts to SMEs. The availability of fixed price contracts is variable, and there is no guarantee for Norwegian customers always to be able to find an offer in their price area. Variable price contracts are currently not available in Norway, but there are still around 4 percent of customers on 'old' contracts. At the same time, the Icelandic

market only offers variable price contracts, while in Åland, open-ended variable price contracts with fixed price elements and spot contracts are available.

The absence of fixed and variable price contracts in Norway, and spot and fixed-price contracts in Iceland does not necessarily pose a challenge with finding a good contract for customers. In Norway, the lack of supply of fixed and variable price contracts is mainly due to the demand, which is in practice non-existing. This should be considered as consequence of the electricity support scheme, which in practice implements a soft price cap at a rather low level. Hence, without bearing the cost, the households are protected from very high prices. In this situation, the willingness to pay a premium for a stable price, in the form of a fixed price contract, is understatedly low. The demand for fixed price contracts was also low prior to the electricity support scheme. Considering that Sweden, Finland, and Denmark offer fixed-price contracts, it is probable that Norway could provide similar contracts if there was a sufficient demand. However, there may be a higher underlying demand in the SME segment. However, at present spot prices are low, relative to the cost of hedging, translating into a rather low expressed demand, also in the SME segment. Despite the current low demand for fixed price contracts, in a well-functioning market, consumers and producers should be able to secure the future price for a competitive and acceptable premium. Furthermore, an electricity support scheme is only temporal, and a higher demand for fixed price contracts is expected when the scheme is terminated. The consumers' experience with unexpectedly high prices during the energy crisis may also translate into a higher demand for fixed price contracts in the Norwegian market than what historically has been the case. Given that Sweden, Finland, and Denmark are able to provide fixed price contracts, it is likely that this would be possible in Norway, too, had the demand been there.

The Icelandic market only offers variable price contracts due to the absence of a wholesale market for spot prices, and the wholesale electricity price is set by Landsvirkjun. Landsvirkjun is the main power producer in the electricity retail market, and electricity retailers purchase power from Landsvirkjun through fixed contracts. The electricity prices in the consumers' variable price agreements are typically adjusted once a year, often on 1 January, when Landsvirkjun also adjusts its prices. In practice, the Icelandic customers have typically a fixed price for a year without a binding time-period with a chosen retail supplier. The lack of spot price contracts is not necessarily a weakness in the market that has been unfavourable for consumers, given the current low and stable prices in the Icelandic market. The need for a transparent spot market and contracts based on spot prices may, however, be more evident with a development towards increased demand and potentially also integration of variable energy production, hence also increasing the value of more flexible consumption responding to efficient price signals.

In Denmark, there are only long-term fixed price agreements available for SMEs and not for households. This is because the SMEs do not have the right to opt out of a fixed price agreement as households do. As a result, households are limited to signing 3-month fixed price contracts. Consumer rights to terminate agreements on relatively short notice contribute to reducing the availability of 'favourable' long-term fixed price contracts for households, especially considering the volatility of prices. The absence of favourable fixed price contracts, along with long-term contracts for households, may be a weakness for the customers who seek fair deals that also offer predictability.

Finland and Sweden offer several different types of agreements. However, in Finland the fixed price contracts that used to be 24 or 12 months are now also offered at shorter durations due to hedging difficulties. The customers who traditionally have had the long duration agreements may find shorter-term contracts inconvenient. In addition, offering consumption-effect contracts is now a common thing in the market, which might stem from the difficulty of offering pure fixed price contracts. In Sweden, most customers have been on variable price contracts. A possible explanation of the high prevalence of variable price contracts is that the meter reading collection for households takes place on a monthly basis in Sweden, making the spot price contracts in Sweden less attractive. Last year, a new generation of smart meters was introduced, and more customers have started to have spot prices with hourly measurements and hourly spot prices. This may indicate that there is an underlying demand for spot price contracts, and that a broader introduction of smart meters is necessary.

The future demand for fairly priced fixed price contracts in all the Nordic countries is likely to increase as the European energy production becomes more volatile with the introduction of sources like wind and solar power. This volatility in the European power system is expected to lead to fluctuating prices for customers in the Nordic market. Consequently, there may be an increased need for price hedging among customers who are price sensitive. This may further emphasize the importance of a well-functioning Nordic financial market that enables the availability of fixed-price contracts with reasonable risk premiums.

Customer awareness

Electricity has been seen as a low interest product, due to electricity being a homogenous product and prices historically being low and stable. There is some evidence that the rising energy prices has contributed to raising the general customer awareness in the Nordic market, with Iceland being the exception.

Finland stands out with a notably high share of active customers, followed by Denmark, Norway, and Sweden. Iceland has without comparison the least active customers in the Nordic markets. In Norway and Sweden, the activity was often triggered by the consumer's desire to find a more competitive contract. In contrast,

the main reason for switching in Iceland, Denmark, and Finland was that a seller contacted them. This could imply that customers in Norway and Sweden are in practice more actively engaged in the market. This trend may be attributed to the substantial prevalence of spot price contracts in Norway and variable price contracts in Sweden, coupled with higher household electricity consumption per year compared to other Nordic countries. In sum, this increases the customer awareness, as electricity constitutes a relatively bigger part of their monthly expenses.

In addition, a little under half of the households in the Nordic countries felt well-informed when switching contracts, except for Finland where around 70 percent felt well-informed. For most consumers, the main motivation for switching contracts in the Nordic countries is to get a better price, which may suggest that many households are adept at identifying competitive electricity contracts since many of the respondents report that they take well-informed decisions. However, the results also imply that a large share of household consumers did not feel well-informed when switching contracts, and the share of households who felt poorly informed or somewhat informed was particularly high in Denmark, and to some degree in Norway. In addition, the survey indicates that the market is still characterized by a significant group of inactive consumers. Measures to further increase the awareness of customers is likely beneficial to further increase the efficiency of the market.

The degree of awareness is likely to be somewhat higher for SMEs since businesses have better incentives to pay attention to their contracts as they often have higher consumption, and their costs of electricity may influence their ability to compete in the market. Also, as businesses do not necessarily have the same consumer rights as households, they have, at the outline, stronger incentives to make sure that they understand the deal they are entering into. In Norway, the majority of businesses have chosen to actively hedge around half of their portfolio through fixed price contracts. Nevertheless, there are still many SMEs that, in practice, have the same starting point when it comes to knowledge of the electricity market as households, and many SMEs face similar challenges in distinguishing between attractive and unattractive contracts.

Consumer protection

Households benefit from strong consumer rights in the electricity retail markets across the Nordic countries. No area was highlighted as needing improvement, according to the interviews with actors in the Nordic countries. Denmark stands out as the Nordic country with the strongest consumer protection, as customers are allowed to opt out of fixed price agreements.

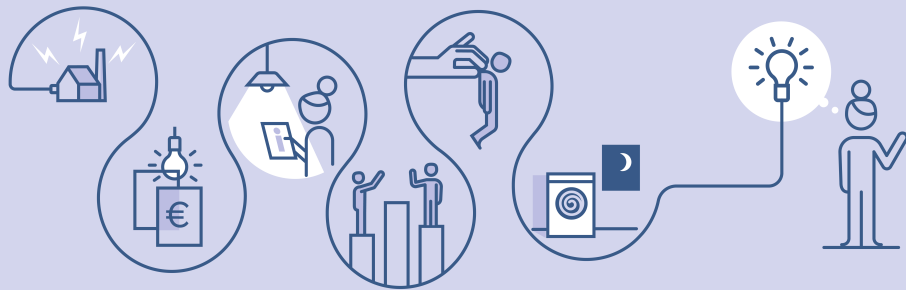
There are still instances of electricity retailers in the Nordic countries that do not adhere to existing laws and regulations. An example of retailers not adhering to existing laws and regulations is aggressive marketing techniques, for instance giving the customer an introductory offer, where customers are transitioned to more

expensive contracts without notification after a short period of time. There have also been challenges with tele sales, where retailers make promises regarding a price that they do not actually offer. Some retailers may pursue such practices due to a lack of understanding of the legal framework, while others may breach regulations intentionally. Some actors we interviewed in Denmark claim that certain retailers believe the sanctions are so low that they have potential sanctions incorporated in their marketing budgets. If so, the expected cost of breaching regulations related to consumer protection, meaning a combination of the size of potential fines and the probability of being fined, is too low to prevent illegal practices.

Another issue concerning consumer protection is how electricity retailers can take advantage of legal grey areas in the legislation, thus creating a situation where companies may deceive customers without technically violating the law.

To address these challenges, there is a need for strengthened enforcement of the existing legislation. This is particularly important in Denmark, where the issue of more unserious actors appears to be most prominent. First and foremost, the relevant regulations and legal framework must be effectively enforced, practiced and communicated to electricity retailers to enhance their understanding of what is allowed. This communication can also help alleviate issues in the market related to 'grey areas'. Regular controls are important to establish a sense of risk for retailers that might be tempted to deviate from complying with the law. Furthermore, informing the consumers about their rights and how to respond to illegal practices may also have a deterrent effect on incentives to pursue illegal practices, while at the same time increasing the likelihood of detecting such practices.

The fines imposed on retailers for legal violations must also be sufficiently high to provide them with strong incentives to adhere to legislation. In Norway, for instance, sanction fees have been increased to offer additional incentives for electricity retailers to comply with the laws.



4. Discussion and recommendations

4.1 Overview of the competition, customer awareness and satisfaction and regulatory framework

Based on the findings of this study, our overall assessment is that the electricity retail markets in the Nordic countries are well functioning. Generally, the competition in the Nordic electricity retail markets seems to be good, although Denmark and especially Iceland have a higher prevalence of competitive challenges than the other Nordic countries. Customer awareness has traditionally been low in all the Nordic countries due to low and stable prices. The energy crisis has, however, caused an increase in customer awareness due to the high electricity prices. This has in turn affected the mobility of customers and the customers' choice of contracts. The electricity retail markets in Denmark and Norway, and to some extent in Finland, have for some time been characterized by a high level of customer dissatisfaction, which likely further increased during the energy crisis. Regulations in the Nordic electricity retail market generally appear to be sufficient, both with respect to marketing and to consumer rights. However, the regulations are distributed among different authorities, enforcement of the regulations has been upheld to a varying degree, and sanctions can be low. This may contribute to some retailers not having a clear understanding of the legal boundaries and therefore they may unintentionally be operating in a legal grey area. In sum, the information asymmetry stands out as the main challenge for a well-functioning electricity retail market in all the Nordic countries, both when it comes to the competitive landscape and customer awareness and satisfaction.

In Denmark, the competition in the electricity market is characterized by low margins for the electricity retailers, combined with many electricity retailers operating in the market. This includes established companies, local providers, and newer, innovative companies. These characteristics could indicate a healthy competition, but it is important to note that there are still companies who hold high market shares in regional areas, which weakens the competition. The Danish market is also characterized by a large passive customer base compared to Norway, Sweden and Finland. If the willingness to switch is low for other reasons than the customers already having the most competitive contract, it may affect the functioning of the

market adversely, as it will constitute a source of market power to active suppliers, and a challenge for new entrants. Lack of customer awareness and satisfaction due to information asymmetry is also a threat to the functioning of the electricity retail market, as customers do not understand the market, and whether the contracts they are entering into are competitive or not. Denmark has also had challenges with retailers not complying with the law, for instance by luring customers into bad contracts or introductory offers where the customer is moved to a contract that are more expensive without being notified. This issue does not caused by a lack of regulations, but rather by a lack of enforcement and sanctions. Some electricity retailers also argue that the regulations are too consumer friendly as the customers for instance have the right to opt out of fixed price agreements.

The competition in Finland functions fairly well. There is a high number of suppliers, but the number of electricity suppliers has been steadily decreasing since 2019 due to consolidations. Vertically integrated companies are unbundled, but many are still not fully unbundled from an ownership perspective. The Finnish market is characterized by a high share of active customers. The high mobility may be attributed to a high share of fixed price contracts, forcing customers to switch or renew contracts periodically. The customer satisfaction is generally be considered low, especially due the energy crisis. Many customers report negative experiences related to the price being higher than expected, but also related to misinformation from suppliers and bad customer service. The regulatory framework in Finland generally seems sufficient, but the regulations are not necessarily enforced sufficiently.

In Iceland, the competition is weaker than in the other Nordic countries. The practical barrier to entry is significantly higher than in the other countries, as there is no well-functioning wholesale market and because the market is much smaller than the other Nordic countries. The lack of a well-functioning wholesale market facilitates market power for the retailers with integrated production. Low electricity consumption weakens the Icelandic customers' incentives to participate actively in the market, like switching retailer as a response to higher price. The customer satisfaction seems high, with a generally low level of complaints. The high customer satisfaction may likely be attributed to electricity being a low interest product, because of the low and stable electricity prices combined with low electricity consumption. Although the Icelandic market seems to function well in several areas, the interviewed Icelandic actors expressed that there was some room for improvement regarding the regulatory framework. Our findings indicate that the government lacks the capacity to perform tasks such as developing and updating existing regulations, which can cause future challenges for the electricity retail market in Iceland.

Competition in the Norwegian electricity retail market appears to be quite robust, with numerous retailers operating in the sector, including large established companies, various small local providers, and new players that profile themselves as innovative. The market conditions are favourable for a healthy competition, but

asymmetric information is still a significant challenge. For a long time, the electricity retail market has been considered a market with relatively high levels of customer dissatisfaction compared to other markets. Customers have for instance had issues with electricity retailers who fail to provide essential information about the electricity agreement in their marketing, such as price, invoice fee, commitment period and breaching fee. Such information challenges make it difficult for customers to compare products and make well-informed decisions. The customer awareness has, however, increased due to the rising prices during the energy crisis. Overall, the prevalence of challenges in the Norwegian electricity retail markets seems to have decreased during the past years. The regulatory framework generally seems sufficient, with many adjustments made recently. There have, however, been issues with electricity retailers that failed to understand legal boundaries, leading them to operate outside the regulatory framework. Furthermore, there have been retailers taking advantage of this legal grey area. Thus, there seems to be room for improvement regarding the enforcement of the regulatory framework.

The Swedish electricity retail market is characterized by low market concentration and a high degree of competition. There are many electricity retailers, with a mix of local companies who only offer contracts in certain areas or bidding zones, and large companies who have customers all over the country. The customer satisfaction is high, although the average customer satisfaction has declined due to increasing prices. There generally seems to be a difference in customer satisfaction between larger and smaller retailers, with larger retailers enjoying greater trust by their customers than the smaller ones.

Because it is an autonomous state, Åland has control over its electricity retail market, and the market functions differently from the other Nordic countries. The competition in Åland is in practice non-existing, as only two integrated DSOs and retailers operate in the market. New electricity retailers can enter the market, but in practice, the entrance barriers are high, both due to language barriers regarding the regulations and to the market being small. We do not, however, have indications that customer satisfaction is particularly low, and although customers only have access to a handful of different contracts, these contracts appear to be relatively competitive compared to contracts in the other Nordic countries. Overall, the electricity retail market in Åland appears to function relatively well for the customers.

4.1.1 The energy crisis' effect on the Nordic electricity retail market

The energy crisis had an effect on several aspects of the electricity retail market. The energy crisis contributed to increasing customer awareness in the Nordic countries, with Iceland standing out as an exception due to its isolation from the European grid. The spike in electricity costs transformed electricity from a low-interest product into a commodity that gained significant attention from customers and media. Customers grew more aware of comprehending the electricity market, understanding contractual terms and conditions, and ensuring that they secured an electricity

contract that aligned with their best interests. The high and volatile electricity prices combined with higher customer awareness increased the demand for spot price contracts, most likely due to the possibility of moving consumption to periods with lower electricity prices.

The energy crisis contributed to further straining the liquidity in the financial markets. Significant variations in the area prices have made products in the financial markets less relevant. Furthermore, these products have become more expensive due to high collateral requirements, typically higher than for OTC trading. Thus, OTC trading has become increasingly more common in the Nordic electricity retail markets and is today relatively common for futures contracts that hedge the price in a specific bidding area. OTC trading represents both competition and a supplement to power exchanges like Nasdaq and EEX and is considered a part of the futures market.

All the Nordic countries, except for Iceland, implemented various measures as a response to the energy crisis. Norway stands out with sizeable and long-lasting measures directed towards reducing households' electricity costs. Norway implemented a direct support to households' electricity bills that will last until the end of 2024. This electricity support scheme acts as a quasi-fixed price for households, which has removed the incentives to enter into fixed price contracts. The other countries have not implemented direct measures to households' electricity bills with such a long duration.

4.2 Discussions and recommendations

In the following section, we shall discuss the need for addressing the different identified challenges in the Nordic electricity retail markets. We shall also provide recommendations as how to address some of these challenges if we believe our gathered information and analysis will provide sufficient basis for doing so. It is important to note that the survey and interviews were done in the context of the energy crisis and thus the responses and findings are influenced by this crisis.

4.2.1 Enforcement of regulations and sanctioning

Electricity retail markets are distinguished from most other retail markets due to consumers signing a contract with a retailer before the consumption takes place. At the time when the contract is signed, the future consumption is uncertain and, in many cases, the price to be paid per unit of consumption is not specified in the contract. Furthermore, understanding the relationship between the contract terms and future prices may be difficult for the consumers. This creates an environment where suppliers may exploit consumers, especially consumers with low awareness. Thus, consumer protection and regulation may be more important in the electricity retail market than in other retail markets.

Generally, the regulations covering the Nordic electricity retail markets seem sufficient, both related to marketing and consumer rights. We have not been able to identify any evident gaps in the legal framework in any of the countries. However, the regulations are distributed among several authorities in all countries and enforcement of the regulations has been upheld to a varying degree. This has contributed to challenges regarding the electricity retailers' knowledge and interpretation of the relevant regulatory framework. Since rules in many countries are general and not sector-specific, such as marketing laws, interpretation of the regulations may be difficult to understand. Some retailers may not necessarily have a clear understanding of the legal boundaries and may unintentionally be operating in a legal grey area. Electricity retailers also bundle the sale of electricity with other products such as advisory services, thus leading to the need to comply with numerous and diverse regulations simultaneously. The lack of a clear understanding of the regulatory framework is a challenge in all the Nordic countries but has been especially evident in Denmark and Norway. A Norwegian informant emphasized that numerous electricity retailers in Norway face challenges in comprehending the regulatory framework, even after the consumer authority has provided explanations to retailers on multiple occasions.

Furthermore, electricity retailers may also find it profitable to operate in a legal grey area. Economic sanctions seem to be fairly low and other sanctions may not be severe enough. Electricity retailers may consider it profitable to operate in the legal grey area if they find the chances of being caught low and the fines minimal. This also makes it difficult for serious actors who comply with the legal framework to compete with actors that can take advantage of the legal grey area and use unfair business practices. The issue of retailers exploiting the regulatory framework seems at present to be most evident in Denmark. For instance, there has been a problem in Denmark with smaller retailers calling the customers and luring them into bad contracts. There have also been several cases of customers thinking that they have fixed price contracts for a longer period than the usual three-month period, suddenly paying a higher price without being notified. In Norway, several electricity retailers have violated the legal requirements by not providing the legally required price list on their website, failing to provide essential information about the electricity agreement in their marketing, and not providing information regarding the right to withdraw from the contract.

These described challenges are most often not due to the lack of regulations, but rather that the regulations are not sufficiently enforced, or that sanctions are not severe enough. We generally recommend increasing the enforcement of regulations and ensuring that economic sanctions are sufficiently high to remove the incentives to operate outside the regulatory framework. Enforcement and active interpretation of the regulations reduce the ambiguities and uncertainty about the legal boundaries, and the possibility to operate in a legal grey area. Increasing economic sanctions for potential breaches can dissuade electricity retailers from violating the regulations due to the perceived severity of the consequences. Increased enforcement and sanctions have already proven successful in Norway, Sweden and Finland. Unserious actors

were a more prominent challenge in Norway a few years ago, but efforts have been made to both enhance enforcement and increase the upper limits for economic sanctions, which appear to have had a positive effect, although there are still challenges. Sweden and Finland have generally been successful in avoiding retailers with unfair business practices operating outside the regulatory framework. Sweden, for instance, has introduced an informational measure by creating a public complaint list that includes electricity retailers with many complaints, with the intention of incentivizing retailers to avoid practices like moving customers to unattractive contracts. Such a complaint list may work in the other Nordic countries, but the effectiveness of the measure is not proven. This list is published and is updated every quarter by The Swedish Consumer Energy Markets Bureau. The complaint list may remove the most 'unserious' electricity retailers, but its success is contingent upon customers being aware and informed sufficiently to consult and act upon such a resource. A similar measure was also introduced in 2020 by the Norwegian industry organizations Fornybar Norge and Distriktsenergi, in the form of the certification programme 'safe electricity trading' (trygg strømhandel). The certification programme includes a set of requirements for the sales and marketing of electricity to which the retailers must adhere.

Some of the challenges with electricity retailers breaching the regulations are due to the retailers not being aware of or understanding the current regulations. Therefore, the relevant authorities can also consider informational measures to communicate clearly to retailers how the existing regulatory framework should be interpreted, and to promote increased awareness among retailers. Increased awareness among retailers promotes compliance and a fair marketplace. An example of such an informational measure could be the establishment or, if already existing, the further development, of a shared guideline or a practice document that provides information to enhance the electricity retailers' understanding of existing regulations. Such a document could, for instance, clarify how general sector regulations, such as marketing regulations and other consumer protection laws, apply and should be interpreted in the context of the electricity retail market. Several actors could have roles in developing such documents, like the consumer authorities, market regulators or/and industry organizations. Informational measures may enable the electricity retailers to understand and navigate the regulations more effectively, but they may also pose challenges as it necessitates significant resources from the responsible party to develop and maintain them. Moreover, the effectiveness of such guidelines hinges on the interest and engagement of electricity retailers to understand the regulatory framework better. However, together with active enforcement and sufficient sanctioning, the retailers' willingness to understand the regulations may increase because the consequences of not complying with the law are higher. It is also important to note that the practice or guiding documents should be maintained and updated, for example when new case law or administrative practice is established, or with the introduction of new actors, contract types, or offering of new additional services in the market.

Strengthening the enforcement of regulations and ensuring sufficient supervision and sanctioning should be a particular priority in Denmark, as the challenges with unserious actors and unfair business practices appear to be most prevalent in Denmark compared to the other Nordic countries. At the same time Norway, Sweden, and Finland should continue their work in this area, and Iceland should be aware that issues regarding interpretation of regulations might arise when developing a more competitive market.

4.2.2 Enhance information given to customers

Information asymmetry is a challenge in the electricity retail markets in all Nordic countries, as the electricity retail market is, for several reasons, complex for customers to understand. There is often inadequate information available to consumers about aspects such as the functioning of the market, contract types, and terms and conditions. This may reduce the consumers' incentives to actively participate in the market. At the same time, the information asymmetry makes it difficult for the consumers to distinguish between serious and unserious suppliers, as well as good and bad contracts. This exemplifies the 'lemons problem', where reputable retailers are unable to get a higher price for a good contract, given that customers cannot distinguish between good and bad contracts. The information asymmetry can also hinder innovation in contract types. When consumers lack understanding of a contract, the contract is unlikely to garner a significant customer base making the costs of bringing new products to market high compared to revenues/margins from the product. Consequently, the products available to the customer becomes more limited.

Measures that can enhance the information given to customers may reduce the underlying problem with information asymmetry in the market, and hence improve competition and innovation, as well as the customers' welfare through better choices of contracts. There is, however, a balance between providing sufficient information and having detailed information requirements, which could potentially impede innovation or increase costs. For instance, in Sweden, strict regulations ensure that information is included in the invoice, which can help customers understand their bills well, but it also introduces difficulties for the customers in understanding when there is too much information. The retailers also argue that the comprehensive information requirements hinder product development. Therefore, it is crucial to evaluate what information is relevant for the customer and introduce regulations accordingly. Some information may be more appropriate for inclusion in the electricity bill, while other information may be more relevant in other places such as through a price comparison tool. For instance, Finland has recently implemented rules to make certain information accessible through the portal of suppliers or data hubs, which could also contribute to addressing this issue.

Relevant measures to consider could be stricter requirements on the retailers regarding the information directed towards the customers about features of the

different contract types and key differences between them. This may be more important in Finland, Sweden, and Denmark, since the markets are more complex than in Norway and Iceland, due to the prevalence of different types of contracts to consumers. Norway has already introduced several measures to reduce differences between the electricity retailers' different contracts. Covering most of the Norwegian electricity retailers, the industry organization Fornybar Norge offers standard electricity agreements for retailers to utilize. Such standard contracts may contribute to both clarifying the information that is given to the consumers, and more uniform contract terms. This type of regulatory interpretation, which clearly defines what information the supplier should provide to the consumer in a contract, can be a useful way to reduce the information asymmetry, or at least to ensure that consumers are offered balanced contractual terms. Norway's introduction of a standard agreement also allows suppliers to add special conditions. However, if suppliers choose to add numerous additional terms to the agreement, deviating significantly from standard contract terms, there is a higher risk of legal violations of which customers should be aware. The consumer council in Denmark, Forbrugerrådet Tænk, has also recommended that the Danish electricity market should standardize and simplify the consumers' electricity bills^[10]. This is to address the issue that the electricity bills in the Danish market contain many terms that are difficult to understand, which for instance is related to how the bill only shows an average price for the electricity used during the billing period. In their report, the consumer council states that the bill should include the most important information, including spot surcharge per kWh. The consumer council argues that this will enable a real comparison across electricity providers. Additionally, detailed consumption and price information should be easily accessible for the group of consumers who want to understand their consumption. The consumer council is clear on the recommendation that if the industry does not address these tasks, they should be resolved through a tightening of the billing regulation in the electricity sector.

In several of the Nordic countries, there is a need for stricter regulations regarding how the electricity retailers inform the customer about adjustments in their contract. This is to ensure that electricity retailers do not change the contract terms, increase the price or make other significant changes without the customer noticing it. Both Norway and Sweden have regulations to handle this issue. In Norway, new regulations are proposed but not yet adopted, stating that if the electricity retailer intends to modify an existing electricity agreement in a way that makes the agreement less favourable for the customer, these changes can only take effect at least 30 days after notice is received. This means that the consumer is not bound by the change until then. If the consumer disagrees with the changes, they should be able to terminate the agreement without incurring any costs. However, such regulations may have adverse effects if they are too strict. In Sweden, the electricity suppliers find the requirement to inform customers about price adjustments 60 to 90 days ahead of

10. Forbrugerrådet Tænk (2023), "Forbrugernes 20 forslag til et trygt energimarked," https://taenk.dk/system/files/2023-03/Energjudspil_Forbrugerradet_Taenk_2023.pdf, (published 2023, downloaded December 2023)

delivery (when a fixed term contract is automatically renewed after the contract period has ended) as an important challenge for product development.

There may be a potential to improve the format and design of the electricity bills, to make them more consumer friendly. Challenges for consumers to understand the bills appear to be most prevalent in Denmark, and to some degree in Norway. Several adjustments have recently been made regarding the information requirements on electricity bills in Norway, and one should review the impact of these adjustments before considering new changes. In Denmark, however, the design and format of the electricity bills were highlighted as a challenge both by informants and in the survey. Informants highlighted that customers were challenged in understanding the different price elements and what elements in the bill they can affect, and that the bill contains too much information. Although there are Danish regulations regarding the content of the electricity bills, there could be a need for considering whether adjustments should be made in these regulations.

4.2.3 Further Development of Price Comparison Tools

A price comparison tool can be a highly effective way to decrease search and switching costs for customers. It does, however, require that the portal actually makes it easier for customers to find, compare, and evaluate what contract, including their current contract, is best suited to their needs. Price comparison tools can be harmful if they are not of sufficient quality. It is therefore important that all Nordic countries invest in developing and maintaining well-functioning price comparison tools.

The Norwegian price comparison tool, strompris.no, has undergone several major changes in recent years due to challenges related to the design of the tool. For some time, the price portal essentially became a channel for electricity retailers that offered customers cheap contracts, before quickly switching them to a more expensive contract. These issues were evident up until 2019-2020, when several adjustments were made to the tool, and several adjustments have been made since then. The adjustments have included showing contracts with contract terms that are guaranteed for at least one year at the top of the list, and stricter notification requirements if customers are moved to contracts that are more expensive. Furthermore, since November 2022, all electricity contracts must refer to the price comparison tool. In Sweden the price comparison tool Elpriskollen manages transparency through displaying symbols for electricity retailers who have been subjected to supervision regarding one of the consumer protection provisions of the Electricity Act or if they are on the complaint list provided by the Swedish Consumer Energy Markets Bureau.

As of now, the price portals in the Nordic countries seem to function relatively well, with the exception of the Danish price portal. The Danish consumer council, Forbrugerrådet Tænk, recently published a report stating that companies providing inaccurate information hinder identifying and comparing prices and products^[11]. This is made possible due to insufficient supervision by the regulatory authority that operates the price comparison tool. The portal fails to give the customers a realistic and correct view of what the price will be, and therefore the trust in the comparison tool is low. The Danish regulatory authority has, however, planned the development of a new price portal for electricity in 2024. The Danish consumer council suggests that the regulatory authority should make comprehensive changes so that electricity retailers in the future report the real competition parameters, such as spot surcharges per kWh on top of the market price for electricity, subscription fees, and all other fees. The Danish consumer council further recommends that the regulatory authority should ensure that consumers have an overview of customer satisfaction with the companies, complaint rates, the percentage of upheld complaints, and results from supervision and control, preferably taking inspiration from the insurance sector's price portal.

According to the survey results, the price comparison tools are widely used by customers to compare contracts in the Nordic countries. The price portal seems to work relatively well in Norway, Sweden, Finland, and Iceland, while the Danish price portal faces challenges and has potential for improvement. The Danish price portal should be adjusted to correct these challenges in the portal today, and the Danish regulatory authority is already working to solve these challenges. However, the development of the price comparison tools should be a continuing task for all the Nordic countries, as it is necessary to consider the design of the price portal based on the changes and development of both the supply and demand sides of the market. For example, it is important to ensure that the contracts that are being compared are relevant to customers and that there are no loopholes for suppliers to exploit to push their deals higher on the list unless they are genuinely favourable. Ensuring that the price portals function properly can address several challenges related to information asymmetry in the market.

11. Forbrugerrådet Tænk (2023), "Forbrugernes 20 forslag til et trygt energimarked," https://taenk.dk/system/files/2023-03/Energjudspil_Forbrugerraadet_Taenk_2023.pdf, (published 2023, downloaded December 2023).

4.2.4 A need for Nordic collaboration to develop a functioning financial market

The electricity retailers' ability to hedge in the financial market became a greater challenge during the energy crisis due to poor liquidity at Nasdaq OMX. With vast fluctuations in the area prices, the system price contracts were no longer sufficient to hedge the price risk. This combined with an illiquid or non-existent market for EPADs to hedge the remaining area price risk, as well as rising costs for necessary collaterals, led to a rapid decline in the trade at the exchange.

Yet, based on the availability of fixed price contracts in Sweden, Denmark, and Finland, the illiquidity of the market does not seem to have prevented the supply of fixed price contracts completely. The declining trade in the financial markets are at least partly replaced by OTC-trade, where electricity enters into bilateral agreements with producers or intermediaries. However, relying on bilateral markets is a less favourable solution for electricity retailers, as it involves higher transaction costs for hedging. At the same time, the electricity retailers with integrated production within their conglomerates have an advantage, as they can avoid these increased transactional costs.

Overall, the market is able to offer fixed price contracts despite low liquidity in the financial market, but likely at a higher cost due to increased transaction costs associated with hedging. Fewer customers may find the agreements appealing due to the increased premium. The lack of a well-functioning financial market increases the prices, reduces the availability of fixed price contracts and may lead to competitive disadvantages for suppliers with limited access to production or bilateral hedging. The existence of a liquid and efficient financial market that gives transparent and robust future prices, reduces the cost of hedging for all actors, and may reduce the premiums on fixed price contracts. It will also reduce the competitive disadvantages for suppliers that are not integrated with production or do not have an established network in the bilateral market.

Hedging against area prices was one of the major challenges for electricity retailers when the prices rose. All financial markets refer to the common Nordic system price, using EPADs to account for price differences. The current discussion revolves around whether the Nordic countries should adopt the European system with area price hedging, or continue with a financial market that pools liquidity in system price contracts that mitigates some of the risk, while handling the risk associated with area prices through individual products. The latter strategy has proven challenging, particularly with significant price differences. It is, however, difficult to know whether a system with area price hedging would function better in the extraordinary situation during the energy crisis. Nevertheless, the Nordic countries share a common market and a system distinct from Europe. The future design of the market, solutions to increase liquidity in the financial markets, and response to EU proposals require Nordic collaboration.

In sum, improving financial markets is a crucial joint Nordic task for several reasons. One key reason is the desire for efficient price hedging options to offer attractive fixed price contracts with more moderate risk premiums. At the same time, it is important for companies planning to build new energy production facilities to be able to hedge their prices. Moreover, accessible reference prices are crucial for effective decision-making in operations and investments. A well-functioning financial market will contribute to enabling electricity retailers and customers to make better decisions overall.

4.2.5 Reduced liquidity in the financial markets can weaken the competition in the electricity retail market in a situation with vertically integrated players competing with independent retailers

Before the electricity retail markets were deregulated, the markets were served by vertical integrated players with local monopoly that controlled production, grids and supply to end-customers. Vertical integration is an effective means to ensure efficient coordination in the vertical value chain and may thus be associated with welfare enhancing efficiency gains. However, in a situation with natural monopoly activities at one level, vertical integration may give rise to several regulatory complications. For instance, cost-based regulation of the natural monopoly activity is difficult if the entity can cross-subsidize market activities by allocating costs to the monopoly activity. Furthermore, the entity that controls the natural monopoly may use its position to exclude downstream competitors such as independent retailers.

Grid operation is a natural monopoly activity, which needs to be regulated. Creating a level playing field by unbundling grid operations and retail activities, in addition to establishing wholesale marketplaces for physical electricity, was therefore crucial in the deregulation of the Nordic markets. The unbundling process started with a requirement for separate accounts in order to limit cross subsidization of retail activities. It has become stricter over time, but structural separation is still not a requirement. Competition challenges related to obtaining information from grid companies in the Nordic countries have been addressed through electricity hubs (el-hubs). Furthermore, most Nordic countries have a solution to provide a consolidated bill regardless of whether a company is integrated or not. Iceland is an exception, where two bills are offered.

Thus, most of the challenges associated with integration of retail and grid activities have been resolved. However, several of the incumbents are still organized as groups with activities within production, grid operations and supply of electricity to end-users. The largest retailers are still owned by, or originates from, the largest incumbents. This indicates that incumbents still enjoy some competitive advantages, relative to independent retailers established after the deregulation.

Sources for advantages may be a well-known brand name, loyal customers locally, or financial and organizational capacities that stem from their size. Having production and supply within the same conglomerate may be particularly advantageous. For

instance, electricity retailers who have access to production do not have to contact any intermediaries to arrange hedging agreements. This can result in lower transaction costs associated with internal trading.

The benefits associated with having production within the same corporate group became particularly evident during the energy crisis. Lower liquidity in the financial markets increased the cost of hedging through markets, which made it difficult for retailers without production to supply fixed-price contracts at competitive terms. Consequently, the market power of retailers with production increased for fixed-price contracts. This challenge may have been more pronounced in Finland, Sweden and Denmark, where demand for fixed price contracts has historically been significantly higher than in Norway. In Iceland, this issue is particularly substantial as they lack a wholesale market, giving an advantage to entities with access to production within the same corporate structure.

We do note that the competitive advantages, which vertical integration can lead to, have become more prominent with reduced liquidity in the financial markets. However, based on the findings from this study, we cannot conclude that increased unbundling is either a necessary or an efficient measure to improve the functioning of the market. Market power related to the supply of fixed contracts may be most efficiently remedied by measures that ensure well-functioning financial markets, which will also have other important benefits to market players. Furthermore, integrated players that practice single billing may be obliged to offer other electricity retailers the option of single billing at non-discriminatory terms. Such a regulation is, for instance, in place in Norway. Alternatively, one can have separate bills regardless of vertical integration, as in Finland. Separate bills can potentially also provide the end-users with more relevant and accurate information and make the customers more informed about the different roles in the market.

4.2.6 Improve customer protection for SMEs

In all Nordic countries, besides Iceland, SMEs have significantly fewer consumer rights than household consumers, and there appears to be certain challenges associated with the SMEs' lack of certain customer rights. As SMEs often lack the resources and bargaining power of larger companies, they are more vulnerable to unfair business practices. There are, however, valid reasons why SMEs are not subject to the same customer rights as households. Strong customer rights can diminish the customer's incentive to choose 'correctly' since the cost of making a wrong choice becomes less substantial, and one party could exploit imbalanced rights and obligations between two commercial actors. Nevertheless, letting SMEs have somewhat stronger customer rights may be beneficial due to issues related to information asymmetry in the market, as SMEs often are faced with the same challenges as household customers.

There is some variation between the Nordic countries with regard to the customer protection of SMEs. SMEs have the same customer rights as households in Iceland. In Denmark, Finland and Sweden, some of the specific regulation of the electricity market applies both to households and to SMEs. In Denmark, for instance, SMEs are not equally protected when it comes to fees for switching. SMEs can, however, complain to the Danish Energy Supplies Complaint Board if their complaint is not significantly different from a complaint concerning that of a private customer^[12]. In Finland, non-household customers do not enjoy the same consumer protections; however, the electricity market-specific regulations applied to small customers provide some additional protection compared to larger businesses. There have also recently been changes in the Swedish legislation according to the Electricity Markets Directive, making the provisions between household consumers and other customers more similar^[13]. For instance, the content of the agreement and the complaint process shall now cover all customers. The change also implies that SMEs should be able to switch suppliers without incurring a fee. Under some circumstances, however, it shall be possible to charge a fee if the contract is terminated prematurely. In Norway, on the other hand, SMEs have fewer customer rights. If SMEs are exposed to illegal behaviour from electricity retailers, they cannot complain to the electricity complaint board or the competition authority as households can. SMEs must contact lawyers to receive help regarding these issues or solve the problem themselves. Nor do they have the same type of withdrawal rights as household consumers.

There could be several ways to improve customer protection for SMEs in the Nordic countries. One approach could, as a minimum be to introduce a right to withdraw from a contract for businesses of a certain size, similar to the 14-day right to withdraw afforded to consumers under the existing consumer rights legislation in many countries. This would provide SMEs with the chance to change their minds if they are victim to aggressive sales techniques, such as telephone sales, where the buyer has not had much time to think before agreeing to the deal.

4.2.7 Electricity support schemes can have distorting market effects

Due to the sudden rise in electricity prices and the increased volatility during the energy crisis that unfolded at the end of 2021, numerous governments implemented electricity support schemes. These initiatives aimed to ease the impact of rising electricity costs on households and other relevant entities such as sports clubs and voluntary organizations, but the extent of these support schemes varied in the countries.

In general, support schemes that affect the market players' incentives should be expected to have adversely distorting effects on markets. For instance, if the consumers do not bear the full costs of their consumption, they may become less

12. <https://businessindenmark.virk.dk/guidance/utility/electricity/>. Date: 23.11.23

13. https://www.riksdagen.se/sv/dokument-och-lagar/dokument/betankande/genomforande-av-elmarknadsdirektivet-nar-det_ha01nu9/. Date: 31.01.24

price sensitive, which in turn may soften the competition. Furthermore, the Nordic markets are designed to take advantage of general market mechanisms. In these markets, distorted incentives may thus be very considerable.

The Nordic countries had different approaches regarding the design of their electricity support schemes, and the extent of the potential distorting effects are contingent on the design of the scheme. Finland and Denmark have implemented means-tested electricity support schemes, which have not been linked to electricity consumption. In Sweden electricity and natural gas support schemes have been implemented based on consumption and electricity price area. In Norway, there has been a more extensive electricity support scheme where households as of 2024 have 90% of the amount over 73 øre/kWh without VAT covered, calculated on an hourly basis.

The Norwegian support scheme is more extensive than what has been implemented in the other countries, potentially resulting in stronger distorting effects. However, there are also natural reasons why Norway has a more extensive support scheme. Norwegian households were significantly more impacted by the high prices, because the electricity consumption for heating, etc. is significantly higher in Norway than in the other Nordic countries. However, the Norwegian scheme significantly influences the market in Norway and is likely an obstacle to a functioning fixed price market, where the result has been a complete lapse in the supply of fixed price contracts to Norwegian households. Furthermore, it significantly weakens the consumers' response to price signals. Until recently, the support scheme was based on average prices over a month, and consequently there were still incentives to move consumption from peak hours to low price periods. However, with the current support scheme, where the support is calculated based on the hourly price, the incentives to reduce consumption is lower.

Generally, we recommend keeping direct interventions to a minimum. Given a need to support households or SMEs, this should ideally be done through alternative measures, such as flat electricity support payments to customers that do not affect relative prices. This would have less adverse effects on the functioning of the electricity retail market, the electricity retailers' ability to come up with innovations in contract types, and the market for fixed price contracts. There may, however, be other practical and political reasons for the design of the support schemes, which could partly or fully offset the negative impact on the power market.

4.2.8 Customer awareness campaigns

Reducing electricity consumption is advantageous for various reasons, offering both environmental benefits and cost savings for consumers by lowering electricity bills. Customer awareness campaigns could be an effective measure to reduce electricity consumption in households and SMEs.

Customer awareness campaigns with the aim to reduce electricity usage have appeared to be efficient in Denmark, Finland and Sweden. In Denmark, the DEA has implemented a national energy saving campaign, which reached a wide range of customers. The campaign also focused on how to save energy in the workplace, as this is an important part of electricity consumption. The campaign is likely to have increased awareness and contributed to electricity and heat savings. The consumption statistics from the DEA shows that electricity and gas consumption in the second half of 2022 was reduced by 6 percent and 19 percent, respectively, compared to the expected consumption. In Finland, a successful information campaign also started at the end of 2022, with the slogan "lower your temperature by one degree". The Finnish electricity consumption was reduced by 7 percent in the temperature-adjusted consumption. The reduction cannot be solely attributed as a direct outcome of the campaign, given the parallel media focus on high electricity prices. However, the campaign probably played a role in reducing the electricity consumption. Furthermore, the Swedish energy agency launched a customer awareness campaign in October 2022 with the slogan "every kilowatt hour (kWh) counts". The campaign aimed to inform customers about what measures to take to lower their electricity consumption as well as how they can contribute to flatten the load curve and not use electricity during peak-load hours. The campaign is likely to have had an impact on increasing customer activeness and shifting more customers to signing hourly price contracts during the crisis.

Launching customer awareness campaigns, similar to those already conducted in Finland, Denmark and Sweden, can be an effective measure in all Nordic countries. Such customer awareness campaigns can contribute to enabling customers to become more active and conscious. Such customers play a crucial role in fostering competition, and implementing initiatives to encourage such engagement could thus be beneficial. Furthermore, customer awareness campaigns can both be a cost-effective measure and contribute to a general reduction in electricity usage.

4.2.9 Country specific measures

There are certain measures that could be beneficial for addressing country-specific issues. In Denmark, it is common for customers to have pre-payment of their electricity bill, as much as three months in advance. As a result, many customers have been afraid of switching suppliers because they are uncertain about whether they will get their pre-paid money back. Such terms contribute to increasing switching costs and may lead to an inefficient lock-in effect. However, there is a trade-off between

the need for working capital for energy suppliers and ensuring that consumers do not provide energy suppliers with an interest-free loan, and thereby are reluctant to switch retailer in fear of not getting their money back. The fact that the Danish market has faced such a problem could indicate that competition in the market is not functioning optimally, as the market should be able to correct such behaviour. There could be a need to address the issues related to advance payments in a way that does not create a lock-in effect, and thereby hinder competition. However, findings from the interviews also suggest that electricity retailers are increasingly offering post payment alternatives, to market themselves to consumers. This could be a sign that the market is in fact correcting this behaviour. Thus, we suggest that one should wait before addressing this concern and monitor whether the market corrects it on its own.

The authority to create regulations in the electricity market varies in the Nordic countries. In Iceland, the NRA does not have the mandate to develop and update existing regulations. At the same time, our findings indicate that the government lacks the capacity to perform these tasks, and several of the interviewed actors have suggested transferring the regulatory authority to the regulators. We do not have sufficient information regarding this challenge to clearly recommend how it should be solved, but giving the NRA the mandate to develop and update existing regulations should be a measure to consider.

The competition is practically non-existent in the electricity retail market in Åland, as only two electricity retailers operate, who are also integrated DSOs. The entrance barriers to Åland can be considered high, firstly due to the market being small, but also due to relevant regulations being difficult to navigate for potential market actors, as they are partly Finnish law, and partly local legislation in Swedish. Creating an official overview of the relevant regulations, and translating all relevant regulations into either Swedish, Finnish, or both, could lower the entrance barriers to Åland, and make the market easier to navigate. However, as the market is small, it is not obvious that this will increase the competition in Åland as market participants may find it difficult to secure a market share sizable enough to operate effectively. Furthermore, it appears that the current electricity retailers have a good understanding of the energy consumption of their stable customer base, enabling them to keep hedging costs low. This attribute allowed the retailers to offer relatively low prices during the energy crisis. As of now, the electricity retail market in Åland appears to function relatively well for the customers, and we suggest not to make any major changes as long as there are no obvious challenges on the horizon.

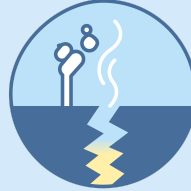
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Copenhagen, Denmark. Photo: Unsplash / Kate Chenkova

5. Denmark

5.1 Regulatory framework and organization of the market

5.1.1 Relevant authorities and actors

Several authorities have a role in regulating and overseeing the retail market for electricity. Going forward, we will describe these and the relevant regulations the authorities manage (Table 5-1). Further, we will describe the Consumer Council's role as responsible for the public electricity price portal and as a public interest organisation for consumers.

Table 5-1: Actors and relevant regulations

Role	Name	Responsibility
Regulatory authority	Danish Utility Regulator (DUR) / Forsyningstilsynet	The national regulatory authority in Denmark for the markets for electricity, natural gas and district heating. Responsible for monitoring and analyzing conditions in the utility sector with the purpose of securing consumer interests. Responsible for establishing and maintaining the electricity price guide, Elpris.dk.
Consumer authority and competition authority	Konkurrence- og Forbrugerstyrelsen (DCCA)	The primary tasks are to contribute to the development of new policies and regulations. Considers both competition and consumer aspects when analysing the market and putting forward recommendations to consumers and companies.
Consumer council	Forbrugerrådet Tænk	Works to secure and promote consumer rights and ensures that all consumers can make safe choices by strengthening consumers agency. Provides consultancy to customers regarding their rights as customers.
Electricity appeal board	Ankenævnet på Energiområdet	Handles complaints regarding the purchase and delivery of electricity, natural gas, district heating, and other associated commodities and services. Provides information regarding several topics for consumers and electricity retailers in the electricity market to prevent future complaints and provide broad information.
Industry organization for electricity retailers	Green Power Denmark	Work to ensure that Denmark is electrified with green electricity as soon as possible. Green Power Denmark has around 1 500 members, where around 36 are electricity suppliers. They have industry standards such as the Standard Agreement ("Standardaftalen") which regulates cooperation between grid companies and electricity suppliers.

5.1.2 Regulatory framework

There are different acts and executive orders that apply to the electricity market in Denmark.

Retailer requirements

DataHub handles the communication and business processes between the market players in the electricity market. In order to communicate with DataHub, grid companies and energy suppliers are required to use a certificate. The certificate encrypts messages and verifies the sender's identity when communicating with DataHub. There should be one certificate for testing and one for production. A certificate provider must be contacted in order to obtain a certificate.^[14]

Provisions in the Danish Electricity Supply Act and executive orders issued pursuant to this act transpose the requirements of the Electricity Directive regarding the legal and functional unbundling of vertically integrated Distribution System Operators (DSO). The unbundling requirements are applicable to vertically integrated DSOs with more than 100 000 connected customers. It is DUR that monitors the extent to which the DSOs comply with the rules.^[15]

Invoicing

The electricity suppliers are responsible for all communication with consumers due to the implementation of the supplier-centric model in the Danish electricity market. Executive Order no. 1696 of 2020 presents several requirements for the invoice. These requirements are: electricity consumption during the period, the product name, the customer's take-up numbers or metre point ID for the delivery point, the date or expiry of the contract, information about the possibility and benefits of changing products or suppliers, a link to elpris.dk for customers with a consumption of up to 100 000 kWh, the name and contact details of the electricity supplier, information about the customer's rights regarding dispute resolution and contact information to ANE, and a direct link to DEA's website with information about the customer's rights.^[16] The customer receives only one invoice from the electricity supplier. Customers can choose whether to receive the invoice every quarter or every month, and the payment can happen before and after the period.^[17]

The purpose of the executive order is to ensure transparency about prices, tariffs, discounts, reimbursement, and terms, as well as comparable invoicing information. Importantly, it must be ensured that the information is accurate, easy to understand, clear, concise, user-friendly and presented in a way that makes it easy for the

14. <https://energinet.dk/data-om-energi/datahub/certifikater/>. Date: 22.11.23

15. <https://forsyningstilsynet.dk/Media/638223421700646103/national-report-2022-opdateret-oktober-2022.pdf>. Date: 22.11.23

16. [Bekendtgørelse om elhandelsvirksomheders regninger, fakturering og faktureringsoplysninger til slutkunder \(retsinformation.dk\)](https://www.energifyn.dk/kundeservice/kundeservice-el/faq-el/hvornar-modtager-jeg-min-elregning-og-hvornar-skal-den-betales/)

17. <https://www.energifyn.dk/kundeservice/kundeservice-el/faq-el/hvornar-modtager-jeg-min-elregning-og-hvornar-skal-den-betales/>. Date: 23.11.23

customers to make comparisons. It applies to electricity supplier bills, invoices and invoice information for end customers.^[18]

DUR monitors electricity suppliers' compliance with the legal requirements concerning billing information. Consumers can receive a simplified bill and a specified bill. They have the right to receive a specified bill free of charge; however, the simplified bill is intended to increase consumer awareness.

Contracts

It is free for the customer to change the electricity supplier and contract type as long as they don't break a contract. The supplier obtains access to the customer's data in the DataHub when a customer enters into a supply contract.¹⁵ The customer can enter into a contract with a new electricity supplier, and the previous supplier will automatically be notified by the new supplier.^[19]

The Electricity Supply Act ("Elleveringsbekendtgørelsen") and the Consumer Contracts Act ("Forbrugeraftaleloven") set many requirements for the electricity retailers' information when entering into contracts with customers. Electricity suppliers have a maximum lock-in period of 6 months for households. For SME's, there are no corresponding rules. It is possible with contracts with a longer lock in period, but the consumer can terminate the contract such that it ceases after 6 months. Generally, the consumer can terminate a contract with a notice of the current month plus one month. However, some electricity suppliers operate with shorter termination notice.^[20] The contract must include information regarding the customer's right to withdraw. The customer has a 14-day right of withdrawal if the contract is concluded as a street sale, by telephone, or on the internet. Thus, the customer has a right to withdraw if the contract is a distance sale or entered into outside of the electricity supplier's place of business. In addition, the contract must include information about where up-to-date applicable prices and fees can be obtained.^[21] Electricity suppliers must ensure that relevant and correct information about all of their products, including price and terms, is available at all times on their website. In addition, electricity suppliers are obligated to publish their current prices and their products on Elpris.dk. Thus, the suppliers are responsible for products and prices on Elpris.dk being updated.

The Electricity supply act ("Elleveringsbekendtgørelsen") concerns the duties and legal obligations related to the supply of electricity to consumers, both for households and SME's. It includes several legal obligations for electricity suppliers that are aimed at securing a number of fundamental consumer rights for electricity consumers. Among other things, the Executive Order contains specific requirements linked to the content

18. <https://forsyningstilsynet.dk/Media/638223421700646103/national-report-2022-opdateret-oktober-2022.pdf>. Date: 22.11.23

19. <https://www.energianke.dk/temaer/forstaag-din-elregning/>. Date: 16.11.23

20. <https://elpris.dk/#/questions?cacheBust=1700042782310>. Date: 17.11.23

21. <https://forsyningstilsynet.dk/Media/638223421700646103/national-report-2022-opdateret-oktober-2022.pdf>. Date: 22.11.23

of contracts that are related to the delivery of electricity, changes to the terms and conditions of the contract, and statutory requirements for advance notice prior to changes to contractual terms.

The Electricity Supply Act contains information regarding the approach of electricity suppliers in connection with changes in contracts. The electricity customer must be given prior notice of changes in the contract conditions from the electricity supplier, including price changes that are unfavourable to the customer. The notice must be at least three months for households and at least 14 days for SME's. This notice should be clearly presented by either email, invoice, or similar individual communication. Changes in taxes, fees, and PSO do not have to be notified by the electricity supplier. If the customer does not accept the changes, it has the right to terminate the contract with effect from the entry into force of the change. The electricity supplier must also inform the customer of its right to terminate the contract.^[22] If the customer is notified about significant changes in the contract, it has the opportunity to terminate the contract.

Marketing

The Marketing Act regulates electricity suppliers marketing towards consumers and contains rules that implement EU directives. The requirements for marketing electricity contracts follow the general marketing regulations. The electricity supplier can market themselves as "cheaper" or "cheapest," but this should be correct and documented. If the electricity supplier compares their prices with the prices of other suppliers, the products should be identical.^[23]

There is a general ban on telephone sales in Denmark. This means that a salesperson may not call you without your consent. There are quite a few exceptions to this rule, but none of these apply to the electricity market. However, the ban on telephone sales does not apply to SME's. It is therefore legal, among other things, for electricity suppliers to call SMEs, as the Consumer Contract Act does not apply to them. The rules can be found in § 4 and 5 of the Consumer Contract Act and § 5 of the Marketing Act, which deal with the prohibition of unsolicited contracts.^[24] According to the Consumer Contract Act, the consumer can withdraw a telephone agreement for up to 14 days after they have entered into it.

Winback strategies are allowed, but the electricity retailer must note that the customer must consent to the inquiry. The electricity retailer may not contact a former customer by electronic inquiry or telephone with the aim of winning the customer back without prior request. An electricity retailer may, without consent, contact the customer by physical letter with the name of the customer on it, unless the customer is registered on the so-called Robinson list or has announced that the

22. <https://www.retsinformation.dk/eli/ltg/2021/2648>. Date: 17.11.23

23. <https://www.forbrug.dk/emner/bolig-og-byggeri/el/elselskabers-markedsfoering/>. Date: 22.11.23

24. <https://www.energianke.dk/temaer/telefonsalg/>. Date: 22.11.23

customer does not wish to be contacted by the retailer. Without consent, the electricity retailer can also send a physical letter without a name attached, where the recipient of the letter is the "household" or the "resident," unless the household is registered in the so-called "No-Thanks Scheme".^[25]

SME's customer rights

The electricity supply regulation applies to both households and SMEs. However, as SMEs are not as exposed as households, some points apply to SMEs to a lesser degree. They are not equally protected when it comes to switching fees. SME's can complain to the Danish Energy Supplies Complaint Board if their complaint is not significantly different from a complaint concerning a private customer.^[26]

Sanctioning

The Danish Energy Agency regulates the Danish electricity sector to ensure competition in the electricity market, ensure a high level of consumer protection, increase the use of renewable energy, and ensure that there is electricity in the socket at all times. The Energy Authority, DUR, supervises electricity retailers and can impose daily or weekly fines on the retailers as a coercive measure, unless a higher penalty is due under other legislation. If the electricity retailer grossly or repeatedly defaults on its obligations, DUR can inform the Minister for Climate, Energy, and Supply about this.^[27] Energinet can impose compulsory fines on the retailer to enforce actions that the retailer is required to carry out.

Regarding competition matters, the DCCA has the authority to impose sanctions on violations of the Competition Act. The sanction is based on the seriousness of the violation, its duration, and the retailer's turnover.^[28] In the case of violations of consumer protection legislation that are punishable, the Consumer Ombudsman processed cases with a view to criminal sanctions.^[29]

In addition to fines and other sanctions, the retailer can also be deprived of the right to be registered at DataHub. If an electricity retailer fails to comply with an order, the Minister for Climate, Energy and Supply can deprive the electricity retailer of the right to be registered at DataHub. If the electricity retailer is deprived of the right to be registered at DataHub, their customers are transferred without delay to other electricity retailers by Energinet.^[30]

25. <https://www.forbrugerombudsmanden.dk/longreads/markedsfoering-paa-energiomraadet/>. Date: 21.11.23

26. <https://businessindenmark.virk.dk/guidance/utility/electricity/>. Date: 23.11.23

27. <https://www.retsinformation.dk/eli/lta/2022/1452>. Date: 22.11.23

28. <https://www.kfst.dk/konkurrenceforhold/om-konkurrencesager/sanktioner-for-at-overtraede-konkurrenceloven/>. Date 11.01.24

29. <https://www.forbrugerombudsmanden.dk/om-os/om-forbrugerombudsmanden/>. Date 30.11.23

30. <https://www.retsinformation.dk/eli/lta/2023/1248?id=198530>. Date 22.11.23

5.1.3 Government response to energy crisis

A number of political agreements were concluded in Denmark with the aim of addressing the challenges of the energy crisis and accelerating the transition to renewable energy sources. It was important for the Danish government to not interfere with the functioning of the market.

Subsidies to be distributed by municipalities to vulnerable households

The Danish government set aside a pool of DKK 100 million for municipalities in November 2021 to provide assistance to pensioners and vulnerable households affected by the energy price increases.

Energy payments to vulnerable households

In March 2022, the Danish government decided to provide one-time energy subsidies for households that both have a low income and one of the heat sources that has been particularly affected by extraordinary price increases in the heating season 2021-2022. The heat check was distributed to over 400 000 households at a value of DKK 6 000, for a total of DKK 2.4 billion. The heat check was the result of two political agreements concluded in February and March 2022 and a new law adopted in April 2022 called the Act on one-off subsidies for low-income households and heat sources covered by extraordinary price increases in the heating season 2021-2022.

On 14 September 2022, additional financial support for a number of disadvantaged citizens affected by the increasing energy prices was entered into force. Senior citizens were a part of the target group who would receive the first instalment of DKK 2 500 of the total DKK 5 000 in tax-free additional financial support from the end of September 2022. By mid-October, recipients of SU disability allowance or SU dependency allowance as single parents would receive a lump sum of DKK 2000 tax-free. At the beginning of 2023, recipients of retirement benefits would receive a lump sum of DKK 2000 tax-free.

National energy-saving-campaign

The DEA launched an energy-saving-campaign at the end of June 2022 with guidelines to help Danish consumers save energy. The campaign reached a wide range of customers with concrete saving advice to help them save energy. It also focused on how to save energy in the workplace, as this is an important part of energy saving. The DEA especially encouraged the workplace to follow six saving tips regarding different solutions to reduce electricity consumption.^[31] The energy saving campaign increased the knowledge of saving advice and contributed to significant electricity and heat savings.^[32]

31. <https://ens.dk/presse/energistyrelsen-opfordrer-danske-arbejdspladser-til-spare-paa-energien>. Date: 28.11.23

32. <https://ens.dk/presse/national-energisparkampagne-bidrog-til-markante-el-og-varmebesparelser>. Date: 28.11.23

Guarantee of DKK 100 billion to Danish electricity retailers

Denmark planned on 9 September 2022 to provide DKK 100 billion in guarantees to energy firms to ensure the necessary liquidity for companies facing major collateral requirements triggered by the high energy prices. The guarantee was specifically offered to energy companies with production facilities or responsibility for market balance, enabling them to borrow billions from the government to secure liquidity. As a result, these companies ended up having their best year ever in 2022, in stark contrast to facing bankruptcy without this guarantee. The guarantee scheme extended a safety net under the Danish electricity market, so that consumers could get the electricity that has been ordered.^[33]

Temporary and voluntary freezing schemes

A temporary and voluntary freeze scheme when it comes to expenditures on electricity, gas, and district heating was introduced by the Danish government on September 23, 2022. Both households and businesses had the opportunity to freeze the payment of part of the electricity bills for electricity and gas that exceeded the prices set in the fourth quarter of 2021.

The state provided loans to the energy companies equal to the amounts requested by customers to be frozen and guaranteed the frozen debt to the energy companies. The scheme is valid for 12 months, and the frozen amount is repaid to the energy companies for a period of 4 years after the 12 months. As the customers pay back the energy companies, the energy companies must repay the loan to the state.

Reduction of the electricity tax

The Danish government reduced the general electricity tax twice. The general electricity tax was reduced by EUR 0.5 kWh on October 1, 2022. In the first half of 2023, the general electricity tax was temporarily reduced to the EU's minimum rate of EUR 0.11 kWh.

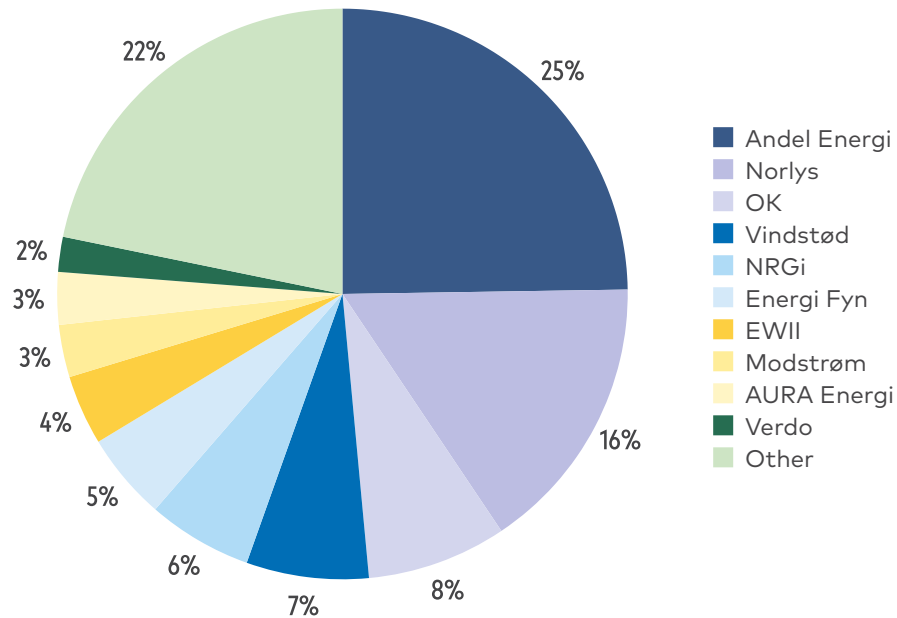
33. <https://www.thelocal.dk/20220909/denmark-ready-to-offer-billion-kroner-loan-guarantee-to-energy-firms>

5.2 Competitiveness and the functioning of the market

5.2.1 Competitive landscape

The liberalisation of the electricity retail market in 2003 allowed for competition among various electricity retailers in the market and made it possible for all Danish consumers to freely choose their electricity supplier. Since then, the competition in the electricity retail market has grown and become quite robust. Danish customers have beneficial prices, represented by a low margin between the electricity retail price and wholesale price. There are also several electricity retailers operating in the market, including established companies, local providers, and innovative companies. The market shares of the largest electricity suppliers are high, the market is characterized by a few large electricity retailers and numerous smaller ones. The former regional monopolies are gradually losing market shares in their regional areas, but still hold high market shares in their regional areas. Statistics from the household survey indicate that the three largest electricity retailers (by market shares), account for more than half of the market, and the single largest retailer has a market share of 25 percent (Figure 5-1). Using the results from our Danish household survey, we estimate the Herfindahl–Hirschman index of the retail market to be 1200, indicating low market concentration and a moderate to high degree of competition. The competition in the market for small and medium-sized businesses (SMEs) is similar to that of household customers.

Figure 5-1: Market shares of the ten largest retailers (Denmark)



Note: The market shares are estimated from a survey conducted amongst Danish households in October and November of 2023. The shares are weighted. N=986.

Currently, about 40 electricity retailers are active on the market, and barriers to entry can be considered rather low. The mandatory requirements for entering as a new retailer are., among other things, a certificate for testing and production, an agreement with a balancing responsible party and the relevant grid company, in addition, Energinet may demand a security deposit from electricity suppliers when there isn't sufficient information for Energinet to assess whether the retailer will be able to pay for the services provided. As expected in a competitive market with low barriers to entry, there are instances of both entries and bankruptcies.

Some argue that low margins at the retail level work as a barrier to entry by making it challenging to invest in marketing, develop new products, and expand in the market. However, in general, low margins should be considered an indication of a competitive market where there is only room for new entrants that are more efficient than the active players. Some of the actors we interviewed have argued that margins are artificially low due to cross-subsidisation among previously vertically integrated entities. However, the explanation may also be that the previously integrated electricity retailers may be large and thus enjoy significant economies of scale, making them efficient. We have not investigated the hypothesis, but based on the available information, we consider it most likely that low margins are a result of ordinary rivalry in a market with low barriers to entry.

There are multiple choices of suppliers and products on the market. However,

switching between electricity retailers has traditionally been somewhat low. One possible explanation may be that the potential gains from switching have been low relative to the cost and effort of switching, due to electricity making up a low share of consumers total energy consumption in combination with relatively competitive contracts. According to economic theory, the mere option to switch may, under some conditions, be sufficient to ensure competitive prices. If the willingness to switch is low for other reasons, it may, however, affect the functioning of the market adversely, as it will constitute a source of market power for active suppliers, a challenge for entrants looking to gain market share, and the expense of the supplier that exploits market power.

The number of switches did, however, increase during the energy crisis, according to actors we interviewed. DURs national report also shows that the switching rate increased by approximately 1 percent from 2021 to 2022.^[34] A large portion of the consumers who switched were customers who opted out of fixed-price agreements. This was typically done by the customers who entered into fixed price agreements in October 2022 when electricity prices were at an all-time high. Subsequently, when spot prices began to decline in November 2022, many customers with fixed-price contracts found their agreed prices to be significantly higher than the prevailing spot prices. Consequently, a considerable number of customers opted to exit their fixed-price agreements. Those with fixed price agreements were typically those who were less active before the crisis. Some actors we interviewed argue that the number of switches is likely to be further accelerated by the growing adoption of electric cars, making consumers more aware of electricity prices.

In addition, market dynamics are shifting, with various electricity retailers bundling the sale of electricity with other services to distinguish themselves and increase profits. These changes introduce complexity to the market, making it more difficult for consumers to compare different electricity retailers.

34. <https://forsyningstilsynet.dk/Media/638282924096043761/The%20Danish%20Electricity%20and%20Natural%20Gas%20Markets%202022.pdf>. Date: 25.01.24

Impacts of energy crisis

The energy crisis did not result in bankruptcies for electricity retailers, but it posed a substantial threat, especially during the challenging winter months. This may indicate that the retail electricity market was indeed efficient. At the same time, the Danish electricity retailers were able to offer both fixed, variable, and spot price agreements during the crisis.

Electricity retailers had a significant number of customers on fixed price contracts when the price shock occurred during the energy crisis. It was a common hedging strategy before the crisis to hedge only half of their portfolio and leave the rest open in the market. Consequently, when prices surged dramatically, the fixed price contracts they had already sold to customers became exceptionally expensive as the electricity retailers had to buy the electricity at high prices and sell it at low prices. Thus, issues related to not having solid hedging strategies became obvious during the crisis. The challenge related to a lack of hedging was more substantial for smaller companies compared to electricity retailers that had traditionally been vertically integrated, as the smaller firms typically have less financial strength compared to the more established larger firms.

Another challenge electricity retailers faced as a result of the energy crisis was that consumers opted out of fixed price agreements. This issue was especially relevant when the market had record-high prices in October 2022, but just a few weeks later, in November 2022, prices plummeted significantly. The prices the consumers had in their fixed price agreements were substantially different than the spot prices in November 2022, causing an unexpected surge in customers opting out of their fixed price agreements. This presented a significant challenge for electricity retailers, as they had previously procured power to cover the fixed price agreements at historically high prices as a part of their hedging strategy. Consequently, many electricity retailers had to sell excess power back into the market at considerably lower rates.

Furthermore, the crisis brought a liquidity challenge for certain electricity retailers as the working capital requirements associated with many electricity retailers' operations increased substantially. An actor expressed in an interview that many electricity retailers experienced the security requirements on NASDAQ to be ten times what they were before. This created a considerable strain on the many electricity retailers' liquidity, and also restricted many companies ability to make further investments. The problem in this context was not necessarily tied to poor results but rather to cash flow limitations arising from the stringent security deposit requirements. Smaller retailers were typically more vulnerable than larger and more established electricity retailers. Consequently, many electricity retailers sought alternative routes, such as going bilateral through banks, which, although slightly more expensive in regard to interest rates. Ultimately, the core issue revolved around the substantial amount of cash required for security deposits and provisions to

sustain essential operations, leading to cash flow challenges that pushed many companies to the brink of insolvency.

Many electricity retail companies also focused on product development and campaigns related to promoting energy savings for customers because of the energy crisis. These initiatives involved educating consumers on ways to optimise their energy consumption and reduce their energy bills through, for instance, national campaigns and webinars.

During the crisis, electricity retailers encountered a significant challenge due to an inadequate number of employees on their customer support teams to handle the overwhelming volume of phone calls. These calls ranged from customer complaints to inquiries about the billing details, reasons for specific charges, and requests for payment extensions. The high demand for customer support often resulted in prolonged wait times for callers. In some instances, if customers called just five minutes after the customer service phone lines opened, they were required to wait throughout the entire day before receiving a response due to the sheer volume of inquiries. This issue highlighted the strain placed on customer support resources during the energy crisis.

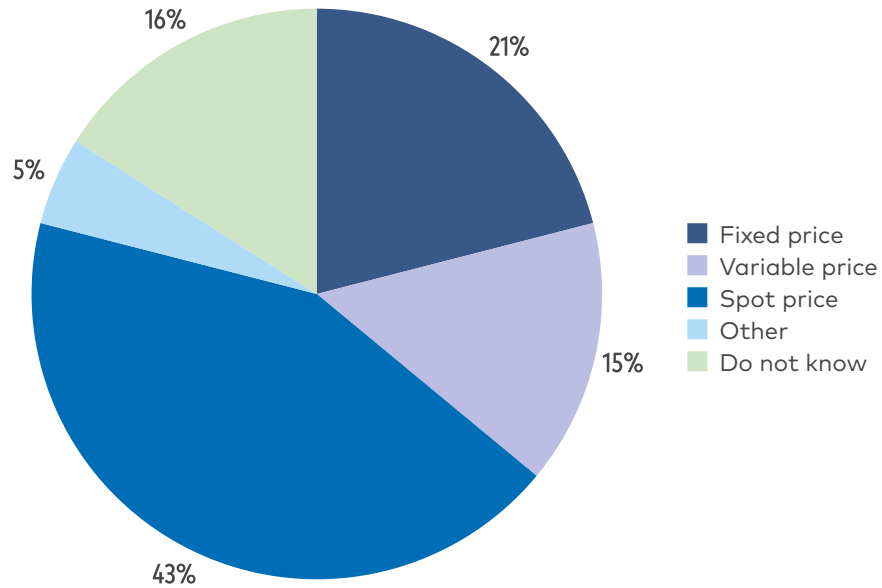
From our interviews, most market participants view that while prices have indeed surged, the market has continued to function. Note that price volatility in Denmark exceeds that of other Nordic countries due to stronger interconnections with continental Europe, particularly Germany, where electricity prices are higher and more volatile. The high prices do not imply market dysfunction; rather, they reflect market dynamics. Prices observed on Nordpool and passed directly on to consumers may not appear politically accepted or accepted by households as electricity prices traditionally have been relatively low and stable, but the actors we interviewed emphasised that it is essential to understand that this doesn't indicate a market failure.

5.2.2 Contracts and prices

The available contracts on the market cater to the requirements of the majority of consumers. According to our survey, 67 percent of respondents indicated that they could find at least one contract that aligned with their needs and preferences, while 27 percent did not know if the available contract types met their needs. For those who did find at least one relevant contract, 27 percent found just one, 25 percent found two or three, and 15 percent found more than three.

The most prevalent electricity contract amongst Danish households is a spot price contract. In the survey, 43 percent of respondents had a spot price contract (Figure 5-2). The second most common contract type are fixed-price contracts. The fixed price contracts have a maximum duration of 3 months, while long-term fixed-price agreements are available for SMEs. Lastly, 15 percent have variable price contracts. A surprising 15 percent report not knowing which electricity contract they have.

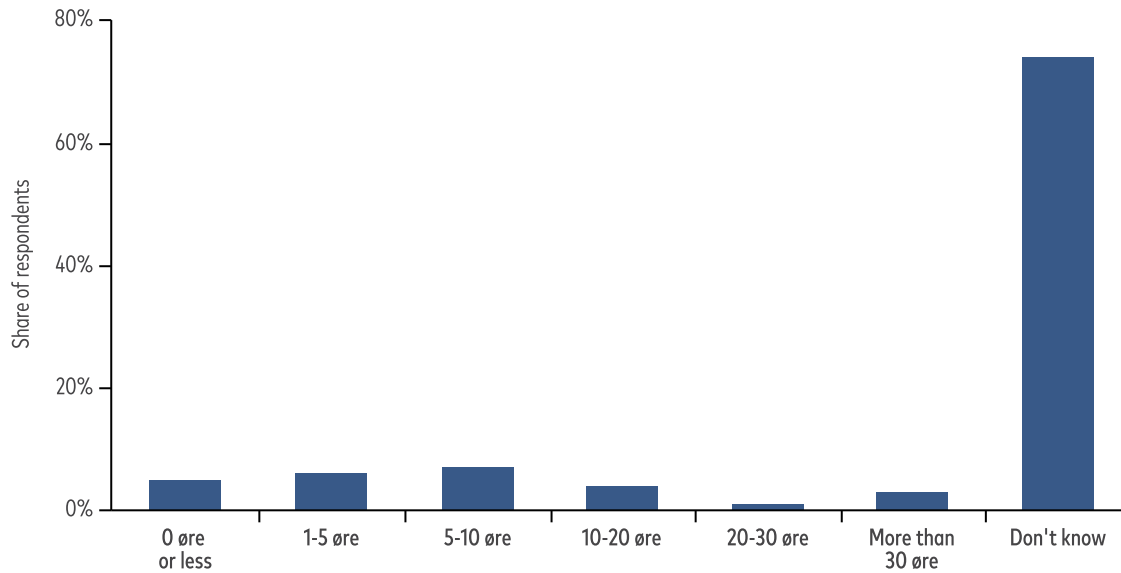
Figure 5-2: Contracts (Denmark)



Note: The contract shares are those reported by respondents in a survey conducted amongst Danish households in October and November of 2023. The shares are weighted. N=986.

In the survey, we assessed households' awareness of the pricing details in their contracts. For spot price contracts, customers typically have an additional surcharge per kilowatt-hour (kWh), whereas in fixed or variable price contracts, this surcharge is typically integrated into the overall price structure. In addition to the surcharge, the majority of households probably pay a fixed monthly fee. In the survey, about 75 percent of households reported not knowing their surcharge, indicating a lack of awareness in this regard. This can also be related to the low switching activity in the market, making the households less active and thus less aware of the price elements in their contracts as they are not searching for other types of contracts or more competitive contracts. Of those who were aware of their surcharge, the most common answers were 1-5, 5-10 or 20-30 øre.

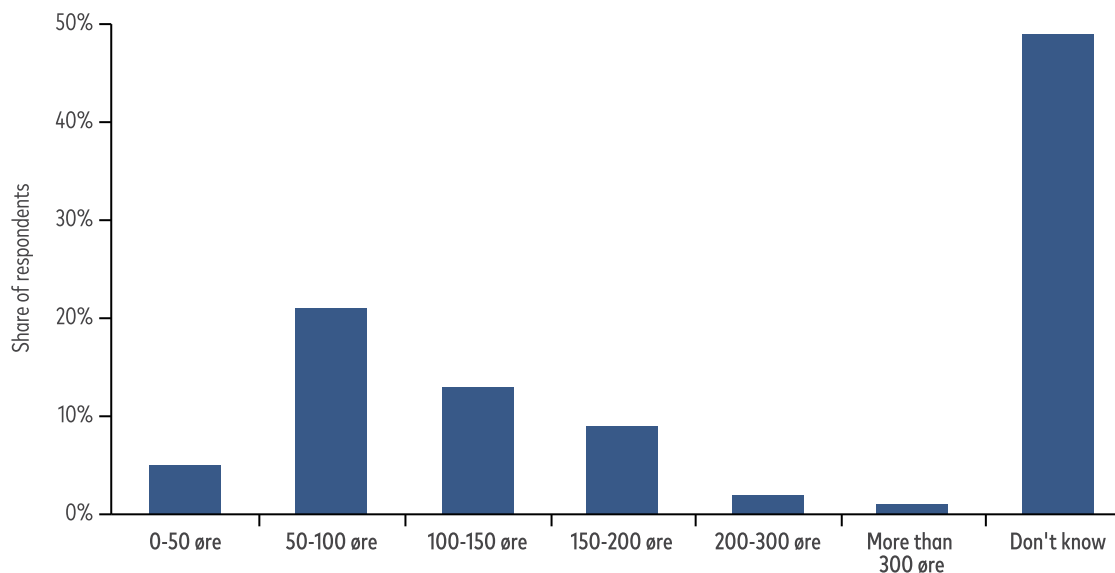
Figure 5-3: Per kWh surcharge in spot price contracts (Denmark)



Note: Surcharge per kWh for respondents with a spot price contract. In Danish øre with 1 øre = 0.01 Danish kroner. Survey conducted in October and November of 2023 amongst Danish households. N=419.

For fixed price contracts, the spread of results tends to be more evident compared to spot prices due to how the customers enter into agreements at different entry times and that the agreements have different durations. In the survey, 20 percent of respondents reported a price range of 51-100 øre per kilowatt-hour (kWh), while around 15 percent fell within the 100-150 øre range. Additionally, 10 percent report prices as high as 150-200 øre. Surprisingly, approximately 50 percent of respondents express uncertainty about what their fixed price per kWh is, emphasising a lack of awareness in this regard. Household customers did, however, express a higher awareness of the price in their fixed price contracts compared to variable and spot price contracts.

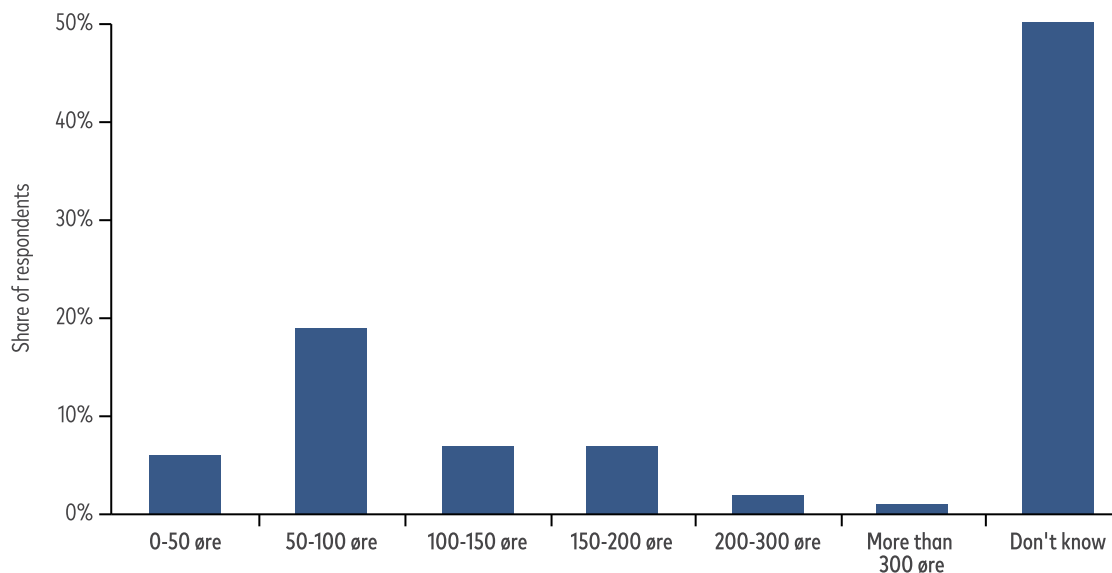
Figure 5-4: Per kWh price for fixed price contracts (Denmark)



Note: Price per kWh for respondents with a fixed price contract. In Danish øre with 1 øre = 0.01 Danish kroner. Survey conducted in October and November of 2023 amongst Danish households. N=211.

For variable price contracts, the spread of results from the respondents is similar to fixed price contracts. Approximately 20 percent of respondents in the survey have a price range of 51-100 øre per kilowatt-hour (kWh), while around 10 percent fall within the 100-150 øre range or 150-200 øre, respectively. There are also approximately 60 percent who do not know the price per kWh for variable price contracts. In the case of variable price contracts, the reason why there are so many customers who are not aware of their price is due to the customers entering the contract a while back. For the variable price contracts, the retail supplier sets a fixed price for a period of less than three months that can change with a warning beforehand based on the spot price development. It is therefore difficult to continuously know what the price of your current contract is unless you are an active customer. However, as variable price contracts are typically more expensive, it is likely that a majority of those who have entered a variable price contract are non-active customers who do not follow the development of the price of their variable price contract.

Figure 5-5: Per kWh price for variable price contracts (Denmark)



Note: Price per kWh for respondents with a variable price contract. In Danish øre with 1 øre = 0.01 Danish kroner. Survey conducted in October and November of 2023 amongst Danish households. N=152.

5.2.3 Impacts of energy crisis

Availability of fixed price contracts, or contracts with fixed priced elements

There are various contract types available in the Danish market, including spot price agreements, quarter wise fixed price agreements for households, and long-term fixed price contracts for SMEs. SMEs also have combinations of both spot and fixed price arrangements.

Spot price agreements are available to both households and SMEs. Approximately 50% of consumers opt for such agreements, an increase from before the energy crisis, according to actors we interviewed. Many customers prefer spot price contracts that allow them to adjust their consumption to the hourly fluctuations in the market. In Denmark, the Consumer Council advises that if you have substantial energy consumption and are willing to adjust your usage patterns, having a spot price contract can lead to long-term savings. While authorities recommend reducing electricity consumption in general, they do not specify which electricity contracts to choose. Combination products are also available at the market, offering a blend of both fixed and variable pricing options. These products are typically 50 percent spot and 50 percent fixed price. This type of agreement functions as a hedging strategy for both electricity retailers and customers.

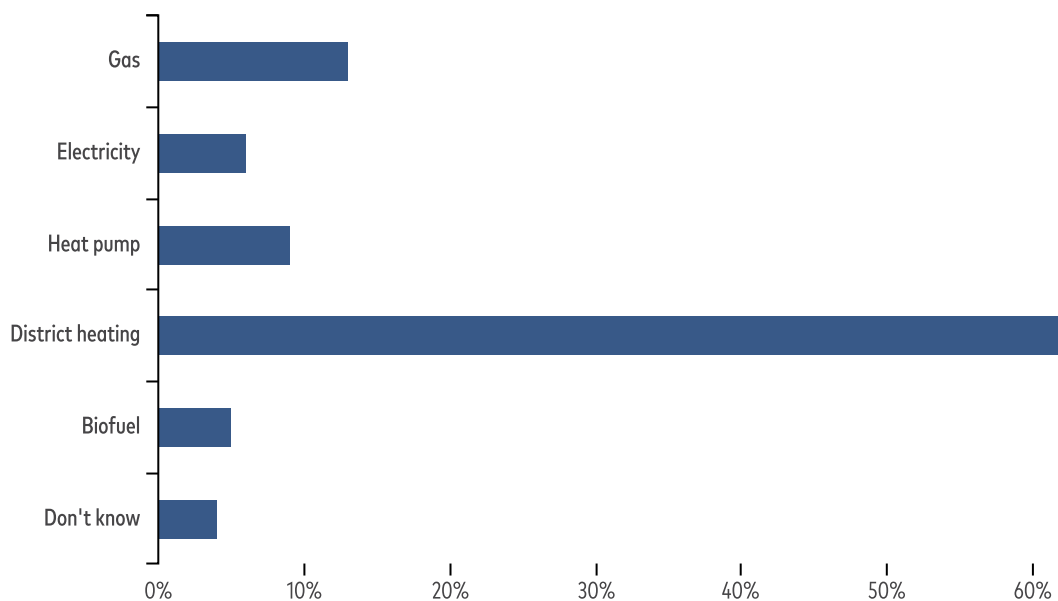
Fixed price agreements valid for a three month period (quarter agreements) are in high demand in Denmark. These agreements are available for both households and SMEs. These contracts may include certain volume thresholds, transitioning to a more expensive product if exceeded. There are challenges in the market in supplying long term fixed price agreements, especially for households. The legal framework strongly favours consumer rights, particularly with regards to their ability to opt out of fixed price agreements. While this approach is undoubtedly consumer friendly, it can act as a disincentive for electricity retailers to provide favourable and long-term fixed price contracts. This is because the risk of procuring power for fixed-price contracts and engaging in hedging strategies is elevated when consumers have the freedom to terminate their contracts at any time. The existing quarter wise fixed price contracts can also be restrictive due to how the opt-out option forces the electricity retailers to charge a significant premium, especially if the market is volatile. The risk premium increases as there is greater variation in prices, which is reflected in the prices towards consumers. Another challenge lies in the high costs associated with hedging on NASDAQ due to the substantial security deposit requirements, which can strain the financial resources of electricity retailers. However, long-term fixed price agreements existed for households before the crisis and may reappear when the market 'stabilises' again. Offering favourable fixed-price contracts is, however, a remaining challenge post crisis, as long as customers retain the option to opt out, necessitating electricity retailers to impose a higher risk premium. A scenario where opting out wouldn't impact the risk premium is if electricity prices remain stable, and thus result in low hedging costs for electricity retailers. However, there is no assurance that future electricity prices will not remain volatile, particularly with the introduction of more unpredictable renewable energy sources into the European electricity market.

The market participants believe the design of contracts could be market-driven. There is a continuous development of new products on the market, but these are not experiencing a rise in popularity. It is spot prices and quarterly fixed price agreements that dominate the market. Several market actors that were interviewed expressed that consumers seem increasingly to be able to adjust their energy consumption to the pricing during the day. However, fixed-price agreements may stay popular as the forward prices in the market are declining.

5.3 Customer awareness and satisfaction

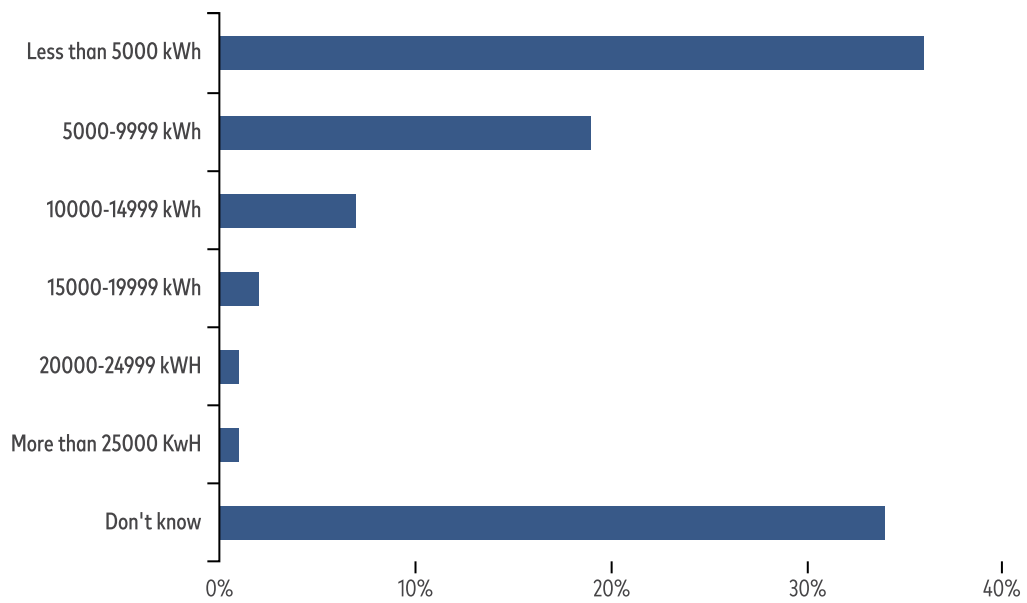
The most important source of heating is an important factor when considering customer awareness and satisfaction. The survey shows that district heating is the most important source of heating for households in Denmark (Figure 5-6). Electricity as a source of heating in the household is only 6 percent, and most of the respondents say that they either have a low electricity consumption per year or don't know their electricity consumption (Figure 5-7). The price paid for district heating is not affected by the development of electricity prices.

Figure 5-6: Most important source of heating (Denmark)



Note: The graph shows the most important source of heating in the household. Survey conducted in October and November 2023 amongst Danish households. N=1299.

Figure 5-7: Household electricity consumption per year (Denmark)

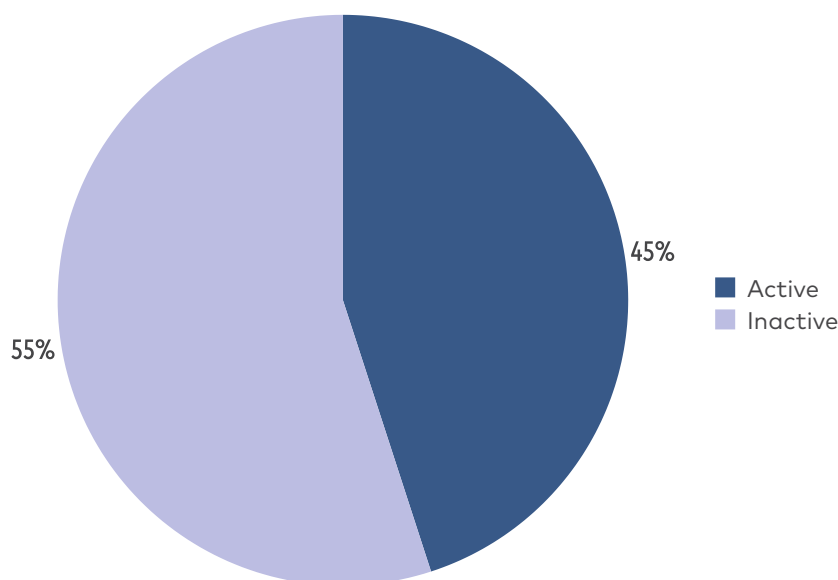


Note: The graph the reported yearly electricity consumption. Survey conducted in October and November 2023 amongst Danish households. N=986.

5.3.1 Awareness during search and switching

The graph in Figure 5-8 illustrates that 45 percent of respondents have engaged in either switching or comparing electricity contracts in the preceding 12 months. This suggests that Danish consumers are for the most part active, especially with rising prices, which supports the notion that the Danish electricity retail market is well-functioning.

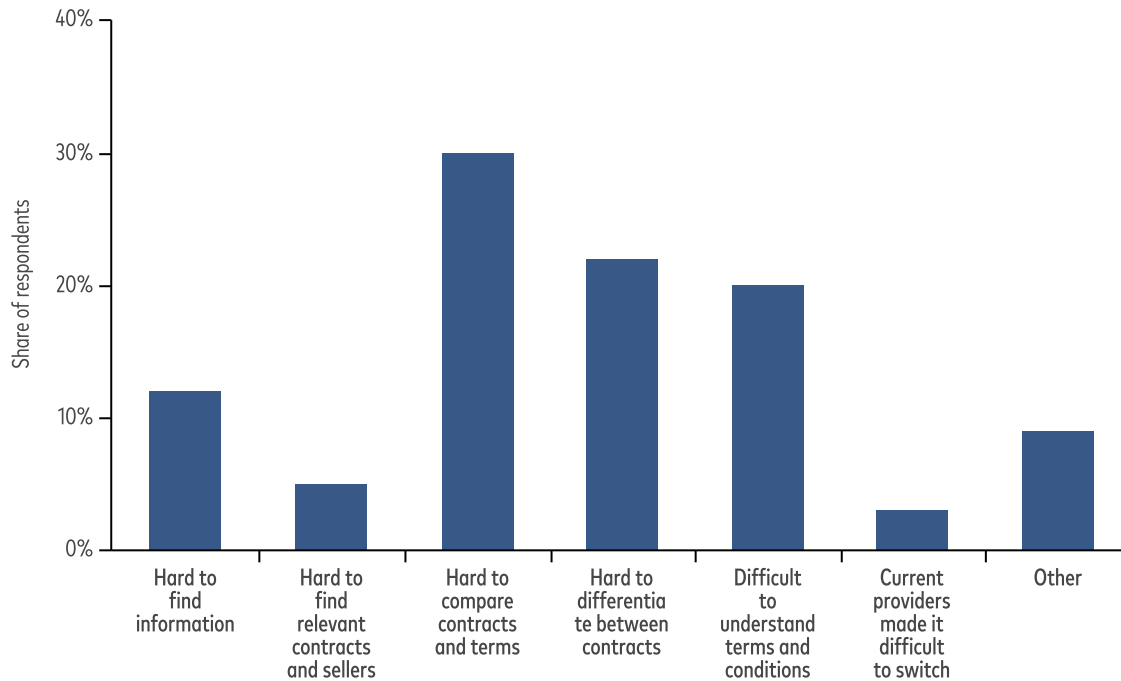
Figure 5-8: Share of consumers active in the electricity market last 12 months (Denmark)



Note: The graph the reported yearly electricity consumption. Survey conducted in October and November 2023 amongst Danish households. N=986.

The respondents were asked about issues related to comparing and switching contracts in the survey. This includes challenges related to comparing or switching contracts, if the respondents felt well informed, and other relevant issues related to the process of comparing and switching contracts. The respondents who reported facing challenges when switching or comparing contracts had one or multiple reasons for the difficulties they encountered. The results emphasised two main challenges: the complexity of comparing contract terms and the difficulty in distinguishing between various contracts. Additionally, understanding the terms and conditions posed a significant challenge. Respondents also mentioned struggling to find information.

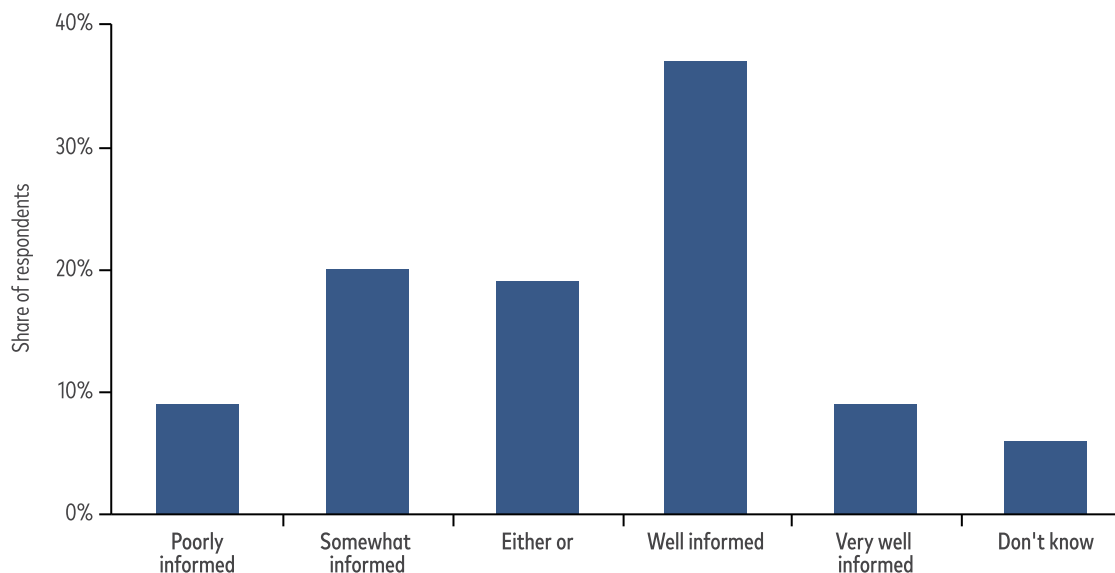
Figure 5-9: Challenges in switching or comparing contracts (Denmark)



Note: The graph shows the percentage of respondents who have recently switched or compared contracts that experienced challenges when doing so. Multiple choices were allowed. Survey conducted in October and November 2023 amongst Danish households. N=294.

Among the respondents, approximately 40 percent reported feeling well-informed, while 20 percent felt somewhat informed when it came to switching or comparing contracts. Conversely, less than 10 percent expressed feeling poorly informed in these situations. These results may appear somewhat surprising, considering that a significant portion of respondents reported challenges in differentiating between contracts, comparing contract terms, and comprehending terms and conditions. This may suggest that the respondents are able to grasp the necessary information to make an informed decision, but the process may be unnecessarily difficult and time-consuming.

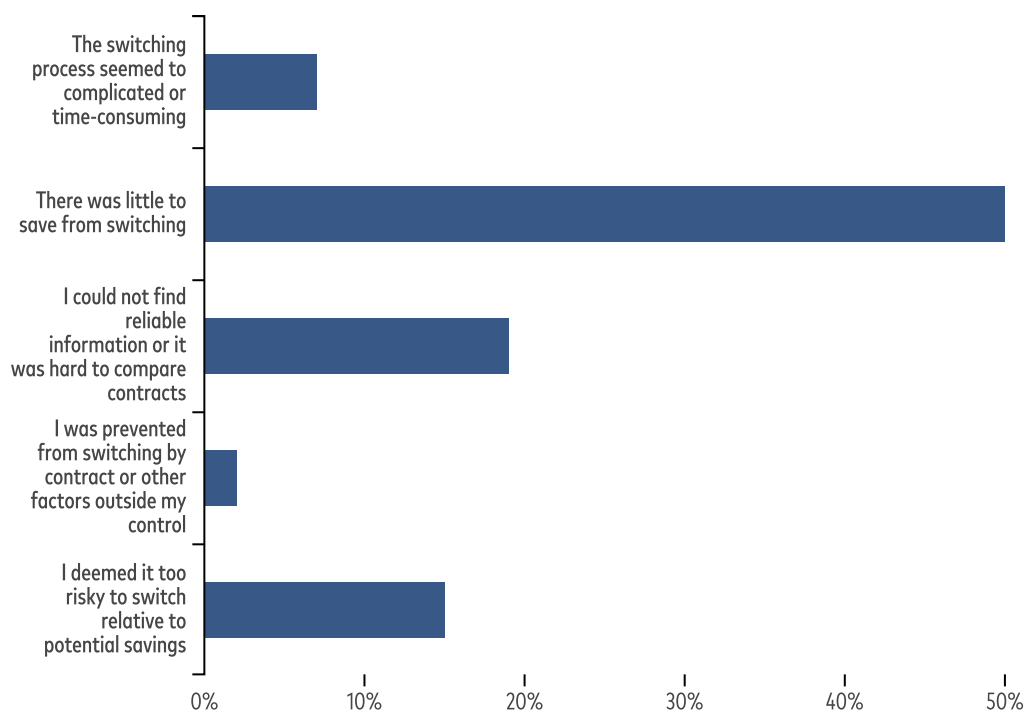
Figure 5-10: How informed respondents felt when switching or comparing contracts (Denmark)



Note: The graph shows how well-informed respondents who have recently switched or compared contracts felt. Survey conducted in October and November of 2023 amongst Danish households. N=294.

Half of the respondents who have compared contracts ultimately chose not to switch contracts. While these individuals mentioned various reasons for their decision, the majority (50 percent) stated that the primary reason was the lack of considerable savings associated with switching. This can be related to electricity not being an important source of heating, such that changes to the electricity contract will be of little importance for the customer's personal finances. In addition, the survey results indicate that customers don't know the price elements of their contracts, which may suggest that they lack an understanding of what they can potentially save by switching contracts. Furthermore, approximately 20 percent of the respondents chose not to switch due to the lack of reliable information and that it was hard to compare contracts. (Figure 5-11). Lastly, 15 percent of the respondents said that the reason for not switching was the perceived risk of switching relative to potential savings. This suggests that the primary driver for switching is the offered price, and the challenge of discerning whether a switch would lead to cost savings serves as a notable barrier.

Figure 5-11: Reason for not switching after comparing contracts (Denmark)



Note: The graph shows why those who have compared but not switched contract, ultimately chose not to switch. Survey conducted in October and November of 2023 amongst Danish households. N=149.

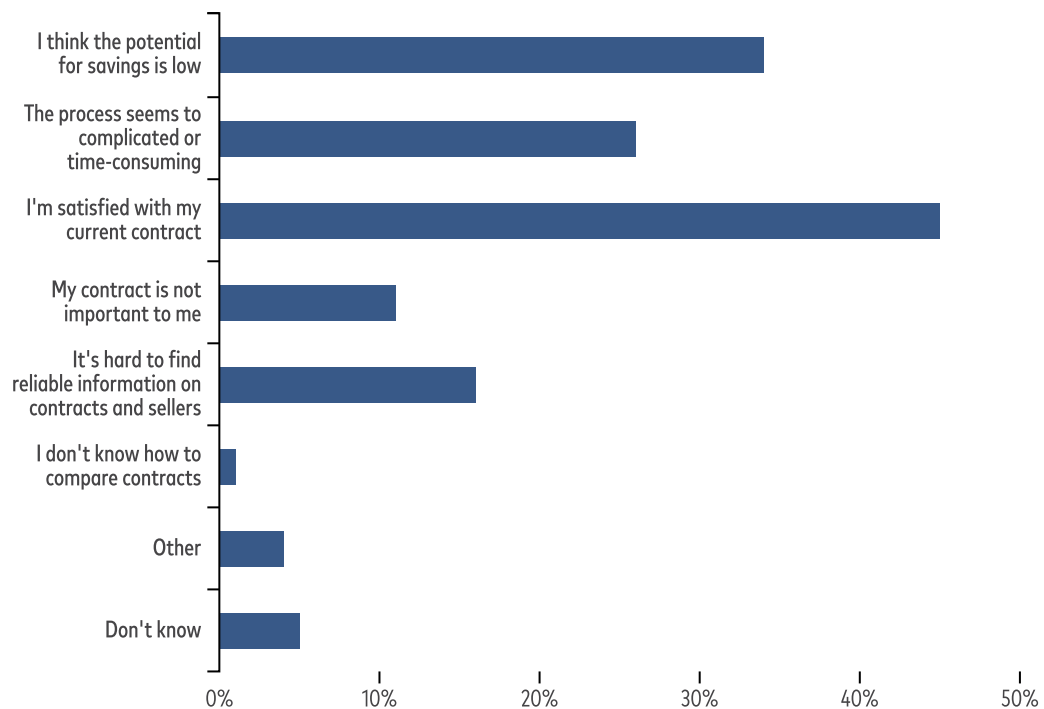
The Danish market has traditionally not been characterised by high mobility. The switching rate has, however, increased due to rising electricity costs during the energy crisis. Consumers refrain from switching and comparing contracts for different reasons. The survey results show that the primary reason is the high level of satisfaction with existing contracts (Figure 5-12). The second most prevalent reason is the perception of limited potential for savings in a new contract. Other reasons mentioned were that the switching process seemed both complicated and time-consuming, and that it was hard to find information on contracts and sellers.

This suggests that there is a perception in the market that switching is difficult and/or there is little to gain. Consequently, customers remain inactive which can pose a problem, especially for those who are less active, as they may end up with unfavourable contracts.

As shown in the survey, approximately half of individuals who refrain from switching or comparing contracts attribute this decision to the perceived complexity and time-consuming nature of the process, which is often related to difficulties in finding reliable information. Simultaneously, a significant portion believes that the potential for savings is minimal, whereas saving money is the primary motivation for switching.

This dual challenge acts as a strong disincentive for consumers, discouraging them from engaging in the process of switching or comparing contracts.

Figure 5-12: Reason for not switching or comparing contracts more often or at all (Denmark. Multiple choices allowed)



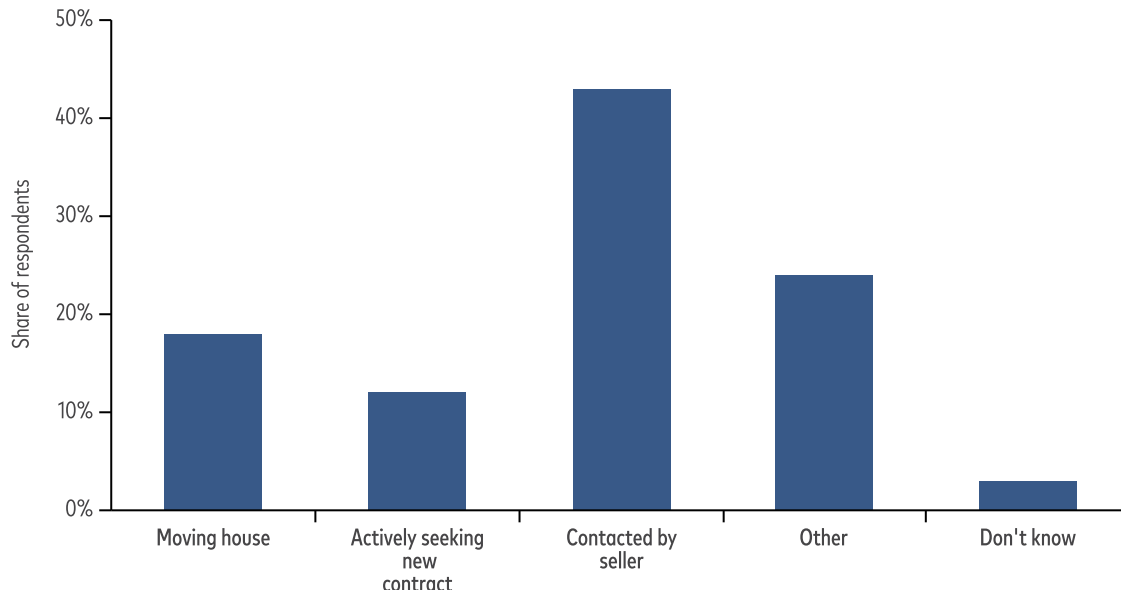
Note: The graph shows why those who have not compared or switched contracts within the last 13 months, have not done so more often. Survey conducted in October and November of 2023 amongst Danish households. N=490.

Approximately 40 percent of those who have switched contracts did this because they were contacted by a seller, while 20 percent did so because they were moving. Approximately 10 percent of the respondents report that they switched contracts because they were actively seeking a new contract. This may indicate that, despite 45 percent of customers being active, the majority is not actively seeking a more competitive contract but rather accepting an offer when being contacted. This does not necessarily promote a well-functioning market, as the "active" customers do not search for more competitive contracts. Furthermore, when consumers are approached by sellers, they may be led into contracts that are not in their best interest – especially if they are not well informed about their current contract.

Win-back strategy is also a strategy some electricity retailers use, with 27 percent of consumers reporting in the survey that they were contacted by their previous supplier after switching to a new one (N=180). Among these, 23 percent accepted their former

supplier's offer. This may be due to the limitations in the current regulatory and legal framework stating that electricity retailers must have consent from the customer in order to use a win-back strategy.

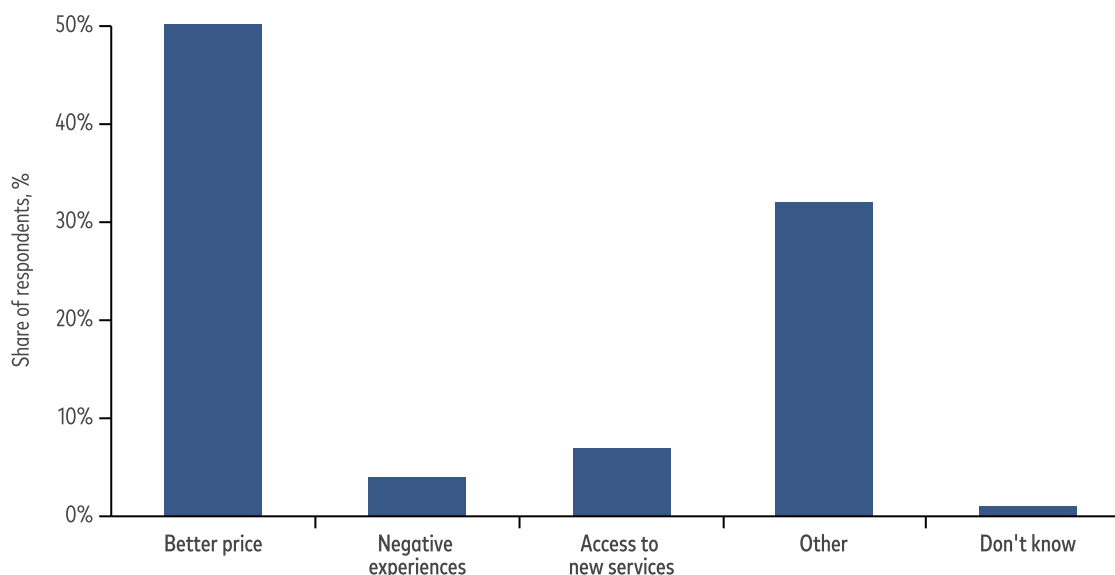
Figure 5-13: Context for switching contract (Denmark)



Note: The graph shows the context for having switched contract. Survey conducted in October and November of 2023 amongst Danish households. N=294.

The survey reveals that the main motivation for switching among those who already have switched contacts, is that the new contract offers a better price (Figure 5-14). This is in line with how 50 percent of the households in the survey responded that the reason for not switching was that there was little money to save (Figure 5-11). Overall, this indicates that consumers are drawn to low prices, giving suppliers an incentive to compete for price. Among other reasons, a little under 10 percent reported access to new services as a motivation for switching.

Figure 5-14: Main motivation for switching (Denmark)



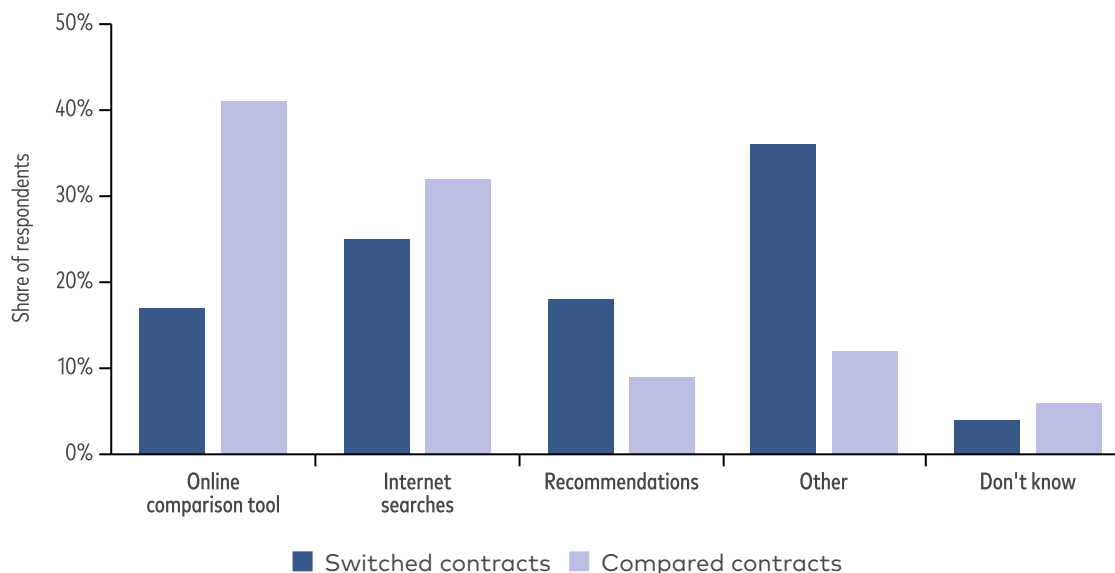
Note: The graph shows the respondents main motivation for having switched contract. Asked to those who reported having switched contracts within last 12 months. Survey conducted in October and November of 2023 amongst Danish households. N=294.

The most important source of information the respondent used the last time they switched contracts were 'others'. If we view these results in connection with the customers main context for switching, it may seem like the most important source of information when switching contracts was the information provided when contracted by the seller. The second main source of information when switching contracts was internet searches, followed by recommendations and an online comparison tool.

The most important source of information the respondent used the last time they compared contracts were an online comparison tool, followed by internet searches (Figure 5-15). This may imply that a large share of the customers who are active, not due to being contacted by a seller, use the online comparison tool. However, since a much lower share actually switch contract due to the online comparison tool it may indicate that the customer is satisfied with their current contract. Hence, these results from the survey do not explain whether the online comparison tool is well functioning or not.

Of those who didn't switch or compare contracts during the last 12 months, 24% reported it to be likely that they would use an online comparison tool if they were to compare contracts in the future. On the other hand, on the same question a surprisingly high share (53%) reported that they were not familiar with any online comparison site.

Figure 5-15: Most important source of information when switching or comparing contracts (Denmark)



Note: The graph shows the most important source of information the last time the respondent switched or compared contracts. Survey conducted in October and November of 2023 amongst Danish households. Switched contracts: N=200. Compared contracts: N=149.

5.3.2 Customer awareness and demand for different contracts

There are three main contract types available in Denmark: spot price, fixed price, and some combination contracts. Both households and SMEs are offered these contract types. Fixed price contracts are historically the most used contract type, but the interest in spot price contracts has increased with the energy crisis. The demand for different types of contracts changes over time. Fixed price contracts were more attractive before the energy crisis, while spot price contracts have become more attractive after the energy crisis. Thus, fixed price contracts may become more attractive again when prices are falling.

The fixed price contracts in Denmark are contracts that last for a minimum of three months, where the price is calculated from the previous three months. The Danish consumer protection law states that a retailer can obligate a customer to buy a new product for a maximum of six months. However, not all electricity retailers use this as a term in their contracts, so the customer can opt out whenever they want. Fixed price contracts exist, but because the customer can opt out, the electricity retailers need to have a large premium. Prices could be better for the customer if there were binding periods such that the retailer didn't need the premium. However, only households can opt out of the contract, as private consumers are protected on a

different level than SMEs.

A lot of customers have maintained their fixed price contracts, but the supply of new fixed price contracts is limited due to a lack of incentives. The energy crisis led to the electricity retailers not offering fixed price contracts to households and SMEs, as these were not feasible for the retailers due to the uncertainty of the purchase prices. Thus, it is difficult to explain the demand for fixed price contracts. Spot price contracts have become more attractive after the energy crisis, as this product allows the customer to reduce their use of energy by shifting usage to off-peak times during the day.

Forbrugerrådet Tænk has advised the customers to have a spot price contract if they use a lot of electricity and can move their consumption to off-peak times during the day to save money in the long run.^[35] They have therefore recommended that the customers reduce their use of electricity, but not specific contract types they should choose. The customer only pays for their actual consumption with spot price contracts, which contrasts with fixed price contracts where the customer prepaays. Spot price contracts are more attractive for customers that have electric vehicles, as the customer only pays for their actual consumption and can move consumption to off-peak times during the day.

The combination contracts are not as widespread as the other contract types and were mainly made as a reaction to the energy crisis. These combination contracts can, for example, be a mix of a spot price and a maximum price or include combination products such as heat pumps. The combination contracts with a spot price and a maximum price are costly for the customer as there is a price protection at the maximum price.

The interviewed market actors state that customers in Denmark have little interest and are generally poorly informed about the electricity market. Many customers in Denmark are not aware of the terms in the contracts or which retailer they have contracts with. The lack of information makes it complicated for the customer to consider what type of product they are buying. Several actors in the interviews state that the price portal is not well functioning as the prices in the portal do not reflect the real prices. Electricity retailers report incorrectly on the price portal, which makes it impossible to review prices and products.^[36] This is related to the fact that electricity retailers can adjust their products so that they are ranked higher without having the best product, and some do not provide true information on their products. The online comparison tool was the most important source of information that the respondent used the last time they compared contracts, but it was not the most important source for information of the respondents who actually switched contracts. Some of the interviewed actors would also advise the customer not to use the price

35. <https://taenk.dk/forbrugertiliv/bolig/skal-du-vaelge-fast-eller-variabel-elpris>. Date: 24.11.23

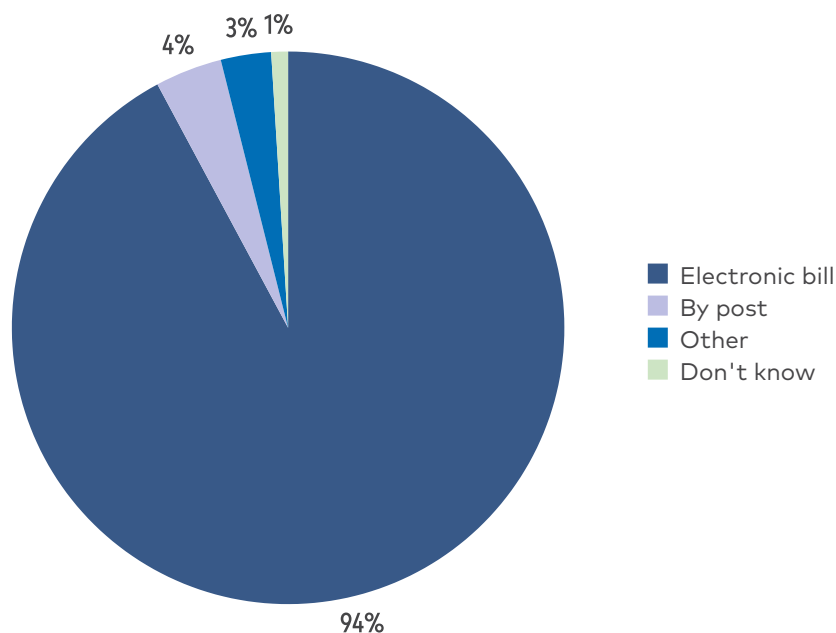
36. <https://taenk.dk/forbrugertiliv/bolig/svaert-sammenligne-elaftaler>. Date: 30.11.23

portal.

Most customers understand their contract if they read it, but the electricity bill is more complicated to understand. Both the consumer council and electricity retailers explained that the customers do not understand their contract and which elements in the bill they can affect, which therefore makes transparency important. Some of the electricity retailers stated that there is too much information on the bill, which is not always in the best way for the customer. They don't understand what different electricity retailers can provide; some electricity retailers in Denmark have dynamic prices that follow Nord Pool, while others have fixed prices. In addition, they don't understand the difference of price, tariffs, and fees. There is Danish legislation on how the invoice should be made, but electricity retailers can do this in various ways. The customers can choose between a simple and a detailed invoice. It is, however, costly for the retailer to send the detailed invoice. In addition, the electricity retailers are free to add a cover letter to the invoice, explaining the main features of the more complicated information in the actual invoice.

5.3.3 Invoicing and billing

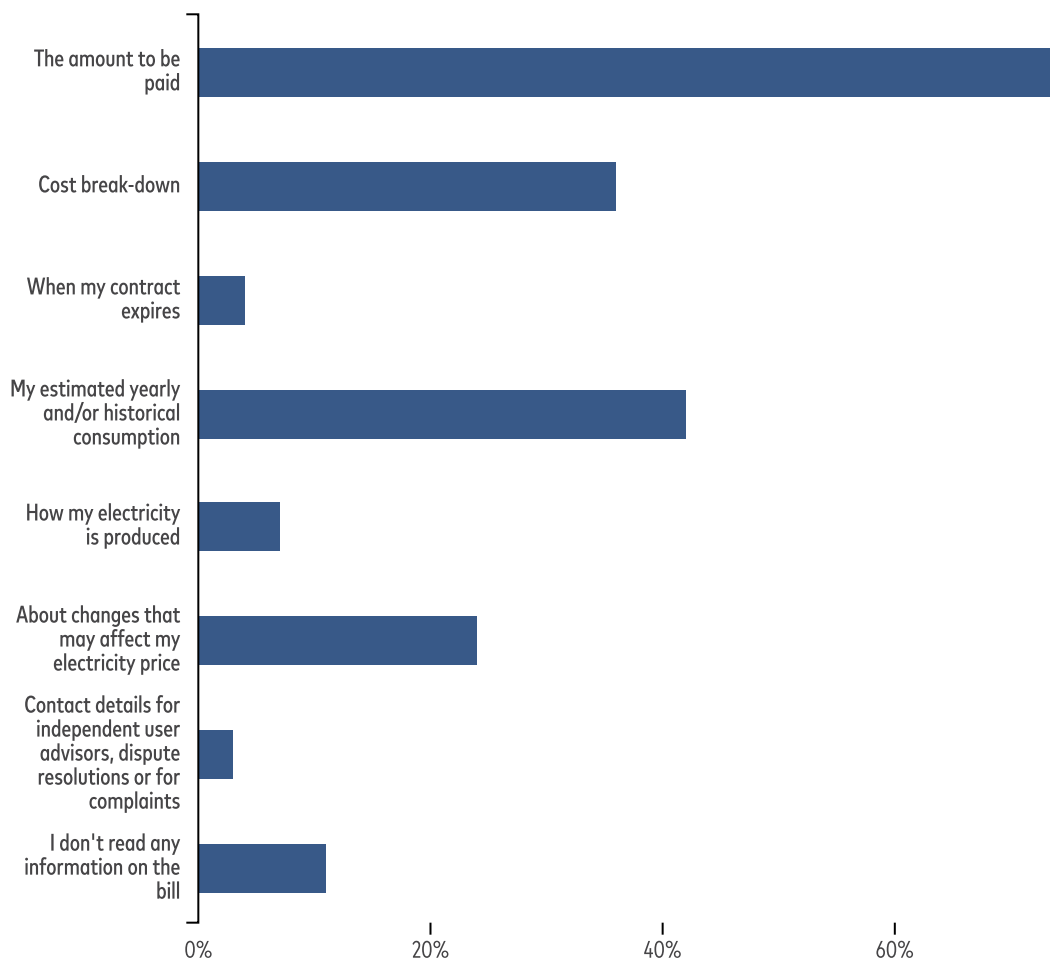
Figure 5-16: How electricity bill is received (Denmark)



Note: The graph shows how respondents receive the bill from their electricity supplier. Survey conducted in October and November of 2023 amongst Danish households. N=986.

Almost all respondents report that they receive their electricity bill electronically (Figure 5-16). Among the respondents seeking information on their electricity bills, three specific aspects of the invoice were highlighted (Figure 5-17). 75 percent were interested in the amount to be paid, while 40 percent of respondents indicated that they were specifically interested in information regarding their estimated early and/or historical consumption. Subsequently, 35 percent were interested in their cost-breakdown, and approximately 25 percent were interested in information that may affect their electricity price.

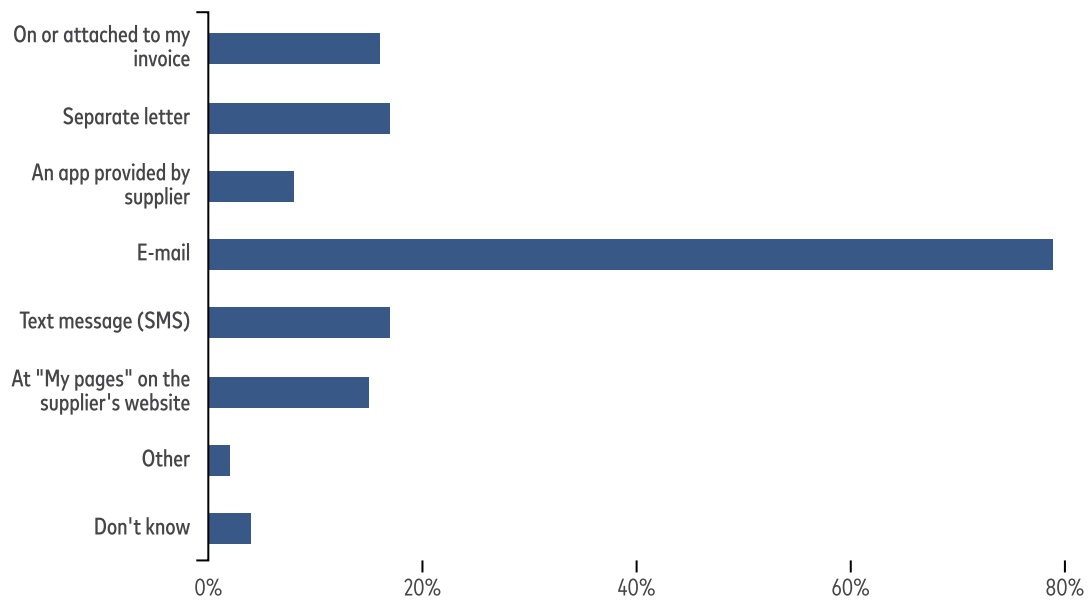
Figure 5-17: What information respondents read on their invoice (Denmark. Multiple choices allowed)



Note: The graph shows the fraction of respondents that report looking for each type of information on their bill. Multiple choices allowed. Survey conducted in October and November of 2023 amongst Danish households. N=986.

For 80 percent of the respondents, the preferred method of receiving notifications about changes to the electricity contract or other relevant aspects is through email. This was followed by a variety of different methods, such as text message or separate letter (Figure 5-18).

Figure 5-18: Preferred method of being notified of changes to the electricity contract or other aspects that may affect the customer (Denmark. Multiple choices allowed)



Note: The graph shows the methods by which respondents prefer to be notified of changes by the electricity seller that may affect the customer, for example changes to the electricity contract. Survey conducted in October and November of 2023 amongst Danish households. N=986.

5.3.4 Customer satisfaction

The retail market in Denmark is characterised by being complex, which is problematic for customers. Thus, there is a focus on how to heighten transparency for customers. The customers in Denmark generally did not care about the electricity market before the energy crisis. The increasing prices caused concerns for the customers, which changed their view of the market from indifferent to negative. Customers can complain to a private appeal board, where it costs 160 Danish kroner for the customer to complain, so that the customer avoids going to court. The Energy Supplies Complaint Board received 428 complaints in 2022, which is an increase of 130 percent compared with 2021. 341 of these complaints were related to the electricity market, which is also an increase of 130 percent compared to 2021.^[37] Customers are therefore less satisfied than before since their interest in the market has increased due to the energy crisis.

247 of the 431 complaints related to the electricity market were closed by the Complaint Board. Around 45 percent of the complaints were related to complaints regarding the bill and consumption. 11 percent were related to telephone sales, and 30 percent were related to other complaints.³⁵ The result from the survey also shows that respondents negative experiences with electricity retailers were related to the bill and price. The Complaint Boards hotline also experienced an increasing number of inquiries, with 1 400 inquiries in 2022, which is an increase of 81 percent compared to 2021. 2022 was a year characterised by a great focus on energy bills. At the same time, it was also a year in which customers sometimes experienced difficulty getting through to the energy companies.³⁵ Some of the actors in the interviews also commented on the customers having difficulty getting through to the energy companies.

The customers have not been satisfied with the electricity retailers in the period where the prices have fluctuated. However, one of the interviewed actors explains that there is a misunderstanding that the electricity retailers have earned a lot of money on the back of their customers, which shows the customers lack of insight in the electricity market. There were some electricity retailers that ended up having their best year ever in 2022 due to the guarantee offered by the Danish state to the energy sector, but this was not on the back of the customers. Another actor thinks that there is a huge challenge to regain trust.

The customers can change retailers from day to day and can do this by contacting a new retailer, and this retailer has to contact the old one. However, the customers trust in the market is generally low. It was mentioned in our interviews that customers do not dare to switch retailers, which leads to poorly functioning competition and a higher electricity price for customers.

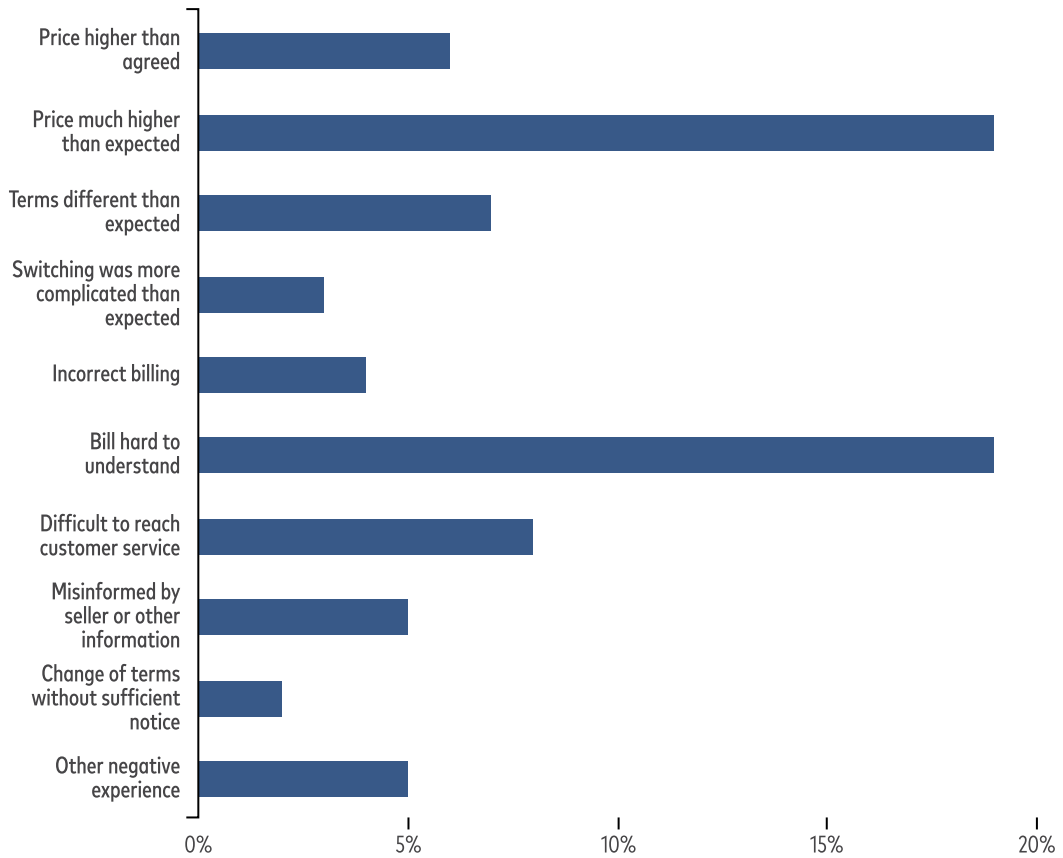
37. <https://www.energianke.dk/media/xtgpeshw/%C3%A5rsberetning-2022.pdf>. Date: 24.11.23

The complaints from the customers increased as the price of electricity increased. Typical complaints from consumers regarding fixed price contracts were that the electricity retailers stopped offering these contracts as they were not beneficial to them.

- There have been some problems in Denmark with electricity retailers not following the law the way they should.
- There has been a problem with smaller electricity retailers calling customers and luring them into bad contracts. This is also something that is worsening trust in the market.
- A lot of customers think that they have fixed price contracts for a longer period than the usual three month period, and suddenly get a higher price. Changes in prices should be notified three months ahead. The notification of customers has been a mixed experience for customers.
- There are examples of contracts with a low price for three months, and then the customer gets a more expensive contract later. The customer has in some cases been notified about changes, but in other cases they have been given no notice.
- There have been problems with introductory offers where the customer is moved to a contract that is more expensive without being notified. There have also been problems with telephone calls where the electricity retailers promise a price they don't actually offer.
- There are some aggressive marketing strategies that result in a poor customer experience.

Approximately 45 percent of the respondents report having negative experiences with the retail supplier, and 35 percent report negative experiences not related to the price. However, many of the respondents report that there is little to save by switching, which can be related to customers having little interest in the market due to electricity not being an important source of heating. According to the survey, the main problem for the customer was that the price was much higher than expected and that the bill was hard to understand (Figure 5-19). Identifying the origin of dissatisfaction with price development proves challenging. Some discontent may stem from abrupt spikes in electricity prices, while other sources of dissatisfaction may arise when electricity retailers shift customers to more expensive contracts. The bill being difficult to understand seems, however, to be a general issue in the market, indicating an opportunity for improvement in making this aspect more consumer friendly. Other problems mentioned were related to difficulty in reaching customer service, terms being different than expected, or prices being higher than agreed. Negative experiences with customer service emerged as a significant issue during the energy crisis, primarily stemming from a mismatch between the number of complaints and the capacity of customer service employees, resulting in prolonged wait times.

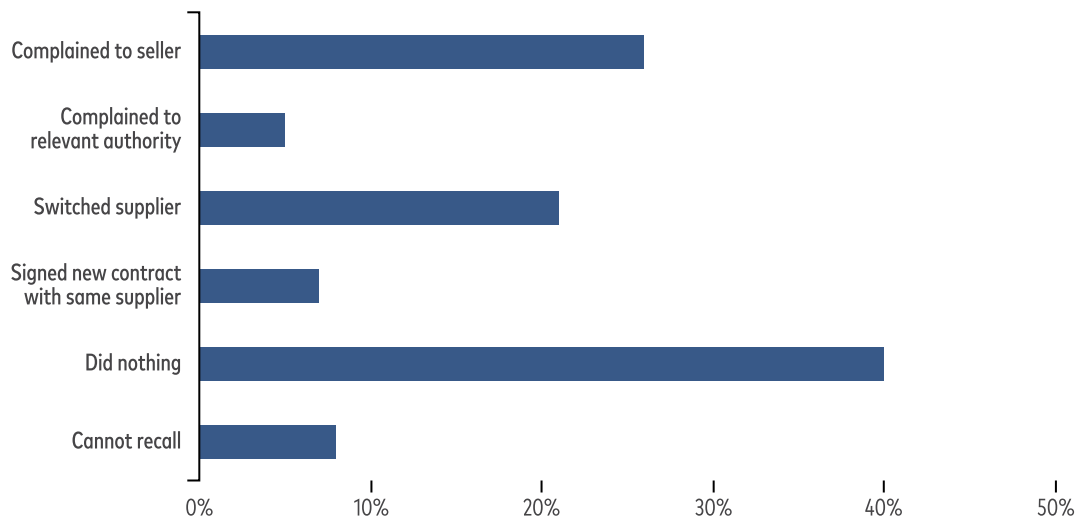
Figure 5-19: Negative experiences with electricity seller (Denmark. Multiple choices allowed)



Note: The graph shows the fraction of respondents that reports a negative experience with their electricity provider during the last two years. Multiple choices allowed. Survey conducted in October and November of 2023 amongst Danish households. N=986.

The households' responses to the negative experience varied. In the survey, we have chosen to exclude those who justified their negative experience by stating that the price was higher than expected. This is because it is difficult to separate between those who had a negative experience due to the price development in the market and those who had a negative experience due to actions taken by the electricity retailer. Among those who had other reasons for having a negative experience, 40 percent reported taking no action in response to their dissatisfaction. Approximately 20 percent switched to a different supplier as a result of the negative experience, while 25 percent chose to complain to the electricity retail supplier (Figure 5-20).

Figure 5-20: Consumers' response to a negative experience (Denmark. Multiple choices allowed)



Note: The graph shows action taken by consumer in response to a negative experience. Survey conducted in October and November of 2023 amongst Danish households. N=495.

5.3.5 Impacts of energy crisis

The price of energy increased, thus increasing the awareness of consumers. The consumers were hit financially because of increasing electricity prices. The customers therefore became more aware of their use of electricity, and many changed their contracts from fixed price to spot price as the prices increased. All over Europe, there was a reduction in demand for non-household consumers, which shows that the price mechanism is working. Danish customers did also behave rationally in general by cutting demand and using energy more efficiently. The customers have also reacted by changing their retailer, paying more attention to the size of their consumption, and installing apps to move consumption to off-peak periods during the day. Numbers from the DEA show that as many as 40 percent of Danish households have made energy improvements to their homes in the past year.^[38]

The energy saving campaign by the DEA has played a significant role in customers becoming aware of their energy consumption. The DEA implemented a national energy saving campaign, which reached a wide range of customers. It also focused on how to save energy in the workplace, as this is an important part. The campaign increased awareness of saving advice and contributed to significant electricity and heat savings. The consumption numbers from the DEA show that electricity and gas consumption in the second half of 2022 were reduced by 6 percent and 19 percent, respectively, compared to the expected consumption.^[39]

Before the energy crisis, customers did not follow up on their electricity bills the way they do now. The customers in Denmark have become more aware of what they can do to change their consumption. Customers realised that the price they paid for the fixed price contracts was a lot higher than the spot price, which resulted in many customers changing to spot price contracts. The spot price contracts allowed the customer to monitor the prices, so they could switch consumption to off-peak times during the day. Before, customers had to pay in advance, but now they pay for what they actually use.

The increase in awareness led to increased pressure on customer service at electricity retailers. The customers had questions about their product and how to save money. Some customers questioned the price of their contracts, either because they misunderstood the contract, or the retailer had increased the price. There have also been questions about the energy bills, as customers generally don't understand these.

During the crisis, there were some problems with customers not being able to pay their electricity bill. The subsidy to handle these challenges has primarily been through grants. The Danish government created a loan scheme both for households and non-household consumers, which made it possible to freeze the electricity bill when it exceeded a fixed amount. The scheme was created such that electricity retailers

38. <https://ens.dk/presse/danske-husejere-er-flittige-til-energiforbedre>. Date: 27.11.23

39. <https://ens.dk/presse/national-energisparekampagne-bidrog-til-markante-el-og-varmebesparelser>. Date: 27.11.23

entering the electricity market had to handle it. If customers had problems paying, they could contact their local retailer and get help. Not that many customers, however, used this loan scheme. The government also handed out some direct grants to the most vulnerable households with low income, gas furnace, old electricity heating system, etc. The electricity tax was also lowered to the lowest possible level allowed in EU legislation, but the tax has increased back to previous levels this year.



Isoisänsilta Bridge in Helsinki, Finland. Photo: Unsplash / Taipo Haaja

6. Finland

6.1 Regulatory framework and organization of the market

The Finnish regulatory framework is based on alignment with the EU and Nordic common electricity market. However, there are some national differences given the leeway in the international regulation.

6.1.1 Relevant authorities and actors

The Finnish actors in the electricity markets resemble those of the other Nordic countries. The central authorities overseeing the market are the Energy Authority, the NRA of Finland, and the Consumer and Competition Authority. The market participants' representation is focused on a few special interest groups on both supply side and demand side, taking part in the public discourse, acting as proponents of their interest groups in different regulatory development forums, and providing support services for energy companies and consumers. These actors in the electricity market are described further in Table 6-1.

Table 6-1: Actors and relevant regulations

Role	Name	Responsibility
Regulatory authority	Energy Authority (Finland)	The Energy Authority (Finnish, Energiavirasto) is the authority regulating the energy sector, covering the electricity and gas markets and networks, renewable energy, EU emissions trading, and energy efficiency domains. The role and mandate of the Energy Authority is dictated by the Energy Authority Act and includes the tasks to regulate, monitor and improve the functioning of electricity markets. The Energy Authority maintains the comparison tool Sahkonhinta.fi.
Consumer and competition authority	Kilpailu- ja kuluttajavirasto, KKV	The Finnish Competition and Consumer Authority's (FCCA) role is to ensure the efficient functioning of the market to benefit the national economy and consumers. The tasks of the FCCA are given in the Act on FCCA, including a proactive role in initiating activities regarding developing competitiveness, dismantling anti-competitive practices, and developing consumer policies. In addition, it is tasked to monitor competitiveness based on the Competition Act, to organize studies within its domains, and to organize consumer guidance, as well as a separate role as Consumer Ombudsman. The Consumer Ombudsman role is focused on monitoring marketing activities and contractual matters related to consumers.
Alternative dispute resolution body (Consumer)	Consumer Disputes Board	The Consumer Disputes Board is the alternative dispute resolution (ADR) body for consumer matters in Finland. The board consists of independent experts offering a free-of-charge resolution alternative to court proceedings in matters related to all consumer goods and services.
Alternative dispute resolution body (Non-Household)	Energy Market Disputes Board	The Energy Market Disputes Board is an alternative dispute resolution body in matters between an energy company and a non-consumer end-customer, established in 2023. The board is governed by the Energy Market Disputes Board Act that came into force at the beginning of September 2023, which gave the mandate to provide resolution recommendations in the limited context of rights and responsibilities, as well as contractual matters defined in the Electricity Market Act.
Industry organization for electricity retailers	Finnish Energy	A special interest representing a wide range of companies in the energy sector in Finland, including energy producers, distributors, electricity retailers, and service providers.
Industry organization for electricity retailers	Kuluttajaliitto	Kuluttajaliitto is a general consumer association advocating for consumer rights and offering support services to consumers.

6.1.2 Regulatory framework

The legislation of the electricity markets in Finland is primarily derived from the EU legislation, which is implemented within the leeway given to member states. The latest changes in regulation have included implementing new EU legislation as well as the outcomes of the Finnish Smart Grid Working Group (2016–2018), led by the Ministry of Economic Affairs and Employment, which aimed to provide guidelines towards a national smart grid vision for 2025. For example, the latest package, approved in early 2023, included regulation updates and implementations related to enabling independent aggregators, clarifying DSOs' rights to operate energy storage from the point of view of decoupling, electricity price comparison tools management and the Energy Market Disputes Board.

Retailer requirements

Retail electricity sales do not require a separate licence; as a result, formal barriers to entry do not exist. However, when starting operations, Finnish electricity retailers do need to organise their electricity procurement for the electricity to be sold, along with the balance settlement responsibilities and those to the centralised electricity data exchange, Datahub, thus creating some practical barriers to entry.

A retailer's vertical integration with DSOs is regulated by law. The integration requirements depend on the size of the DSO operations and include requirements for legal and management unbundling. Vertical integration is further discussed in Appendix A.

Suppliers are obliged to report contract prices for small customers to the Energy Authority, and these prices are made available on the Sahkonhinta.fi comparison tool. Changes to contract terms and prices must be updated with the Energy Authority before they are applied. In addition, electricity retailers report their annual sales records and other customer-related key figures to the authority.

Invoicing

Currently, most customers receive two invoices for their electricity consumption: one from the DSO and one from the electricity supplier. In some cases, the invoices may be combined if the DSO and supplier are owned by the same entity; however, the Ministry of Economic Affairs and Employment is seeking to enable a one-invoice model offered through the electricity supplier irrespective of the DSO.^[40] The minimum information to be presented in the supplier's customer-facing electricity invoice is as follows:

40. <https://tem.fi/hanke?tunnus=TEM087:00/2019>. Date: 28.11.23

- Information on cost elements formulating the price
- The units of consumption forming the basis for billing
- For each cost element, the unit price and the sum to be paid
- Total sum to be paid
- Tax determination principle and total taxes to be paid.

In addition, contact details for customer complaints and dispute resolution must be given on the invoice. In October 2023, the Energy Authority updated the decree on invoicing information, focusing on the availability of consumption and price data to enhance customers' understanding and capability to act. By June 2024, suppliers and DSOs must provide monthly invoicing data to the customer through the centralized Datahub service or through the company's own portal. In addition, the Energy Authority is in the process of updating the decree to take into account further invoice information update requirements. Invoicing of electricity is typically based on post-payment based on meter readings; since June 2023, pre-payment is explicitly limited to mitigation of credit risks stemming from a weighty reason related to an individual customer.

Contracts

The Electricity Market Act of 1995 guarantees the right to make a so-called "obligation to deliver contracts" for electricity supply for small customers with a maximum of 3 x 63 A main fuse connection and up to 100,000 kWh of annual consumption. This is done by designating the retailer with the highest market share in each DSO's network area as a designated or default supplier, which then needs to guarantee access to a fair price obligation to deliver contract. This "designated supplier" is required to make their prices and pricing mechanisms publicly available with the condition that the obligation to deliver contract cannot be a dynamic price contract. Obligation to deliver contracts generally cannot be terminated by the supplier.

Although obligation to deliver contracts were included in the Electricity Market Act of 1995, there has been no precedent for the definition of fair pricing within these contracts. As a result of this, along with the high electricity prices during the energy crisis, multiple Energy Authority investigations are ongoing related to pricing. The pricing of obligation to deliver contracts should be fair to the customer, but the retailer is not required to sell electricity at a loss.

In addition to obligation to deliver contracts, the Electricity Market Act includes protections for customers in case of a reason stemming from the electricity retailer according to the EU requirements for the supplier of last resort. Here, the DSO is responsible for supplying the consumer's electricity for at least three weeks. In the event that the customer has not selected a new supplier after three weeks of receiving a notification from the DSO, the customer must be supplied until the Energy Authority transfers the customer to the supplier with obligation to deliver. In cases

where the supplier stopping deliveries is the supplier with obligation to deliver, a new obligation to deliver supplier is assigned by the Energy Authority. Aside from regulations on obligation to deliver contracts, no specific regulations or obligations to offer certain types of contracts are in place.

Electricity market regulation in Finland does not include protections against energy poverty or for vulnerable household customers. These protections are instead governed by social policy. In addition, the Electricity Market Act includes some limitations on how non-payment situations are handled. These give additional payment time for households running into financial difficulty due to reasons such as serious illness or unemployment and restrict the supplier's ability to disconnect supply due to non-payment during the winter months in a household reliant on electric heating.^[41]

The termination of an electricity contract, as set in the Electricity Market Act, allows non-fixed term and non-obligation to deliver contracts to be terminated by either party with a two-week notice period. The same notice period is applied to fixed-term consumer contracts longer than 24 months, once the first 24 months of the contract period have passed. A fixed-term contract is binding for both parties; however, consumers can usually terminate a fixed-price contract when they move if the Finnish General Terms of Electricity Sales are used in the contract. These terms are a common practice in the electricity retail market and are maintained by the Finnish Energy Industry in cooperation with other interest groups. They are typically used as reference terms in addition to the terms outlined in the contract between the supplier and the customer. Changes to pricing or the terms of an open-ended contract require a one-month notice period to consumers and a two-week notice period to non-residential customers. When contracting a new supplier, the new supplier terminates the contract on behalf of the customer, meaning that no separate termination of an old contract is necessary when switching.

Marketing

The Consumer Protection Act outlines the general consumer protections for contracts between a consumer and a business. The Act contains many relevant protections related to the electricity retail market for consumers, including how electricity contracts can be marketed, or related to unfairness of contracts. Oversight of adherence to the Consumer Protection Act is one of the key responsibilities of the Consumer Ombudsman.

41. <https://energjavirasto.fi/documents/11120570/13026619/National+Report+on+electricity+and+gas+markets+in+2022+in+Finland+20230712.pdf/f2ad1a51-a453-0979-8fbd-2e1d4e00672d/National+Report+on+electricity+and+gas+markets+in+2022+in+Finland+20230712.pdf?t=1689235460237>.
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As electricity contracts are often made remotely, consumer protections related to telemarketing and remote sales are applied. One of the more important protections is the 14-day cancellation period in remote sales. In addition, since the beginning of 2023, a specific rule requires a separate confirmation of purchase after the phone call when sales are made via telemarketing. In addition, the requirements relate to information given before making a contract and for details to be given after making a purchase remotely.

Win-back strategies are allowed and commonly utilized in the Finnish retail market. The large demand for fixed-price contracts with fixed terms may also contribute to Finnish win-back activities, as many customers are periodically due to renew or switch their contracts.

SMEs' customer rights

Commercial customers do not enjoy the abovementioned consumer protections. However, the electricity market-specific regulations applied to small businesses provide some additional protections compared to larger businesses. According to electricity market regulation, small customers are usually categorized as customers with annual consumption below 100,000 kWh and a maximum 3 x 63 A connection to the grid.

Sanctioning

The Energy Authority has a mandate to oversee conformance to legal requirements in the energy sector. In the retail electricity market, the Authority monitors the fulfilment of these legal requirements retrospectively and therefore does not monitor contractual matters between parties. The Authority can impose conditional fines for non-compliance, order compensation to parties in non-conformance situations, and suspend suppliers from the Sahkonhinta.fi comparison tool for misconduct related to pricing information.

The Consumer and Competition Authority also holds sanctioning powers related to consumer protection or competition infringements. In consumer protection matters, the Consumer Ombudsman's primary tool is negotiation with businesses. However, it only has a limited mandate to impose bans on legally non-conforming activities and can raise issues to be decided in the Market Court. In competitive matters, the competition authority can impose penalties based on competition law.

6.1.3. Government response to the energy crisis

In August 2022, a working group was established by the Ministry of Finance to identify measures to minimize the potential effects of high electricity prices in the coming winter. The working group consisted of participants from the Ministry of Finance and the Ministry of Economic Affairs and Employment, and the target was to identify measures related to, for example, electricity markets, taxation, energy efficiency, or direct forms of support. The working group issued the following four statements in late August 2022:^[42]

1. High electricity prices for household customers could be compensated by a temporary reduction of Value Added Tax, and
2. by increasing the level of heating costs considered in the housing benefit determination.
3. Information sharing should be utilized to decrease energy consumption.
4. Finland should present an initiative to the European Commission to seek a moderate decrease in wholesale electricity prices in the EU.

In addition, several other measures were investigated, including other forms of taxation, direct forms of benefits, price ceilings in different markets, utilization of capacities in reserve power and connectors, and other energy efficiency activities.

The Finnish Government ultimately implemented several different measures for customers during the winter of 2022–2023 in response to high prices and price volatility in the electricity market. The following measures sought to ease the financial impact of increased electricity prices on private customers:

- A VAT reduction from 24% to 10% for the energy component (5 months, Dec 2022 – April 2023)
- Compensation through personal taxation (4 months, Jan 2023 – April 2023)
- Electricity benefit (4 months, Jan 2023 – April 2023)
- Compensation in billing through energy retailer (4 months, Nov 2022 – Feb 2023)
- Electricity bill payment time extension (4 months, Jan 2023 – April 2023).

It is notable that Finland, other Nordic EU countries, and Ireland did not implement any interventions on price setting,^[43] while other EU member states and the UK did. In addition to consumer-facing measures, company-facing measures were implemented to stabilize their financial situation.

42. <https://vm.fi/hanke?tunnus=VM104:00/2022> Date: 23.11.23

43. https://www.acer.europa.eu/Reports/2023/MMR_Energy_Retail_Consumer_Protection.pdf Date: 30.11.23

Value Added Tax reduction

The rate of Value Added Tax was decreased to 10% from 24% for the five-month period of 1.12.2022 to 30.4.2022 for the energy component of the bill.

Compensation through personal taxation

Those households whose electric energy costs exceeded 2,000 Euros during the four-month period from January to April 2023 were able to apply for a reduction in their personal taxation for 2023. The magnitude of the reduction amounted to 60% of costs exceeding 2,000 Euros, with the total upper limit for the reduction being 2,400 Euros. The deductible of the reduction is 100 Euros from the reduction sum.

Compensation is managed by the Finnish Tax Authority.

Electricity benefit

The electricity benefit is directed to those households that were not able to obtain compensation through personal taxation in full due to low personal taxes. Those households whose taxes were less than the sum calculated based on the personal tax reduction sum were able to apply for an electricity cost benefit through the social security system (Social Insurance Institution of Finland, KELA). The application period for the benefit lasted until the end of 2023. A household receiving compensation through personal taxation is not eligible for the electricity benefit through the social security system.

Compensation in billing through energy retailer

The government imposed automatic compensation for the energy component of electricity bills for private households and housing cooperatives (limited liability housing companies) with a spot-price contract or a fixed-price contract exceeding 10 cents/kWh during the period November 2022 to February 2023. For households, the monthly compensation was 50% of the bill's energy component exceeding 90 Euros, with a total upper limit of 700 Euros of compensation. For housing cooperatives, the compensation was limited to cooperatives with direct electric heating. Compensation was provided retroactively based on a separate act, which came into force in March 2023. Retroactive compensation was determined for November–December 2023 based on actual billing, while for January–February 2023, double compensation was paid based on January energy component costs. The government estimated the maximum total cost of the measure to be 400 million Euros.

Electricity bill payment time extension

Electricity retailers were obligated to extend the payment time for electricity bills for consumption during the January–April 2023 period. Consumers were entitled to an extension of up to 120 days of payment time without additional fees or interest accrual. In addition, businesses were entitled to an extension of up to 60 days, at an annual interest rate of 1.53% for the extended payment time.

Astetta alemmas – Campaign for energy savings

A campaign organised by Motiva, a government-owned company focusing on the promotion of sustainable development, the Prime Minister's office, the Ministry of Economic Affairs and Employment, the Ministry of the Environment, and Sitra was launched in August 2022 in preparation for expected high energy prices over the coming winter. The campaign, "astetta alemmas" or "reduce temperature by a degree", focused on enabling energy savings across Finnish households by means of knowledge-sharing on aspects such as energy consumption of different devices and encouraging energy-saving activities, such as reducing temperatures of heating appliances such as boilers and thermostats. The campaign was perceived to be successful, and significantly less electricity was consumed during the winter of 2022–2023 when compared to 2021–2022.

Company-facing government actions

In addition to customer-facing measures, the government also implemented activities to support the financial situation of electricity retailers. In September 2022, an up to 10 billion Euros debt and guarantee programme was launched for companies operating in the electricity forward markets to manage the increase in collateral requirements due to increased price volatility.^[44] However, in late November 2022, it was reported by a director in the Ministry of Finance that they had received no applications through the programme.

As a separate package, the government organized a 2.35 billion Euros debt package through the government-owned company Solidium to stabilize the operations of the partly government-owned company Fortum. Solidium was able to collect interest and Fortum's shares in return for the package.

44. <https://vm.fi/-/valtiovarainministerio-julkisti-energiayhtioiden-lainoahjelman-hakuohjeet>. Date: 27.11.23

6.2 Competitiveness and the functioning of the market

6.2.1 Competitive landscape

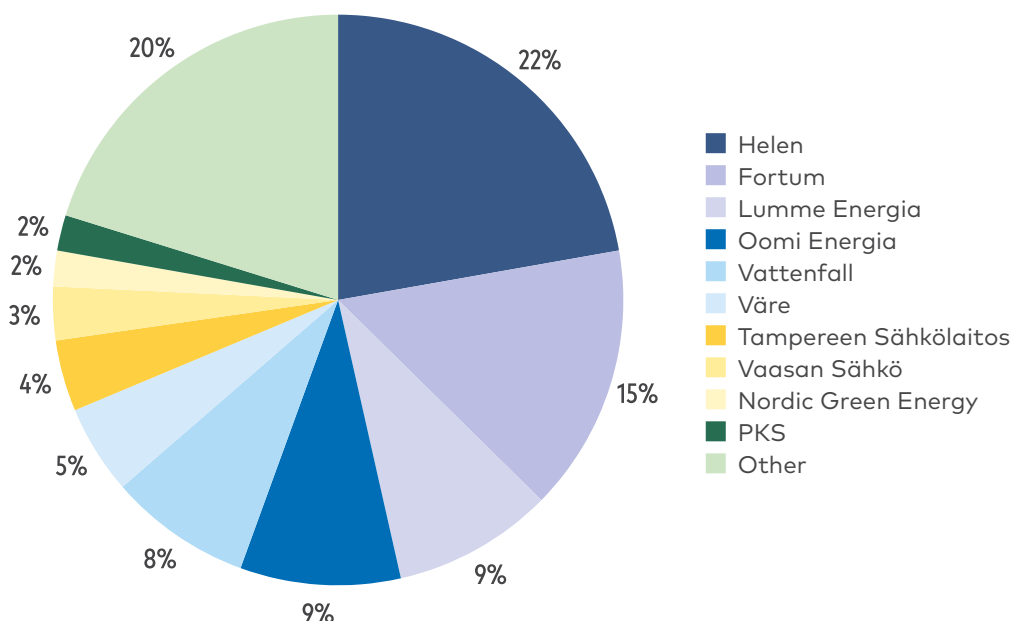
The number of electricity suppliers has been decreasing in Finland in recent years, mostly due to consolidations. From 2019 to 2022, the number of suppliers declined from 71 to 53. In 2022, there were six electricity retailers with a larger than 5% market share, as well as six electricity retailers with a number of customers exceeding 5% of total customers. The three largest suppliers covered 48% of all metering points in 2022. The total number of customers was 3,590,000, of which 417,000 were non-household customers.^[45]

In Finland, DSOs are required by law to be legally unbundled when a threshold of 200 GWh is met for more than three consecutive years. In total, there were 77 DSOs in Finland in 2022, of which 37 were required to be legally unbundled. In total, 54 were unbundled. In addition, 20 DSOs are required to have a separate management as they have 50,000 or more customers. However, only a relative few retailers remain unbundled from DSO operations from an ownership perspective.^[46]

Our survey results in Figure 6-1 are in line with the 2022 data from the Energy Authority: the six largest electricity retailers in the survey exceeded 5% market share, with 14 retailers exceeding 1% market share (HHI = 1,200). The barriers to entry for suppliers are relatively low in the Finnish market, as new suppliers do not need to acquire a separate licence to start operating in retail sales. However, some practical barriers exist, such as organizing electricity procurement and balancing responsibilities. In addition to the consolidation of traditionally integrated suppliers, there have been some entrants with no background in integrated companies, who may seek competitive advantages through, for example, operational efficiencies enabled by no historic legacy; this edge may be enabled by a smaller organization size and reliance on digitalized services, or by differentiation through offering only renewable electricity supply.

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45. <https://energjavirasto.fi/documents/11120570/13026619/National+Report+on+electricity+and+gas+markets+in+2022+in+Finland+20230712.pdf/f2ad1a51-a453-0979-8fbd-2e1d4e00672d/National+Report+on+electricity+and+gas+markets+in+2022+in+Finland+20230712.pdf?t=1689235460237>.
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46. <https://energjavirasto.fi/documents/11120570/13026619/National+Report+on+electricity+and+gas+markets+in+2022+in+Finland+20230712.pdf/f2ad1a51-a453-0979-8fbd-2e1d4e00672d/National+Report+on+electricity+and+gas+markets+in+2022+in+Finland+20230712.pdf?t=1689235460237>.
Date: 27.11.23

Figure 6-1: Market shares of the ten largest retailers (Finland)



Note: The market shares are estimated from a survey conducted amongst Finnish households in October and November of 2023. The shares are weighted. N=969.

6.2.2 Contracts and prices

Generally, in the Finnish retail electricity market, there have been three main types of contracts on which the price for energy component of electricity bills is determined:

- Fixed-price contracts, with a fixed term of up to 24 months.
- Variable-price contracts, or open-ended contracts, typically with a fixed price for a predetermined period. The price is usually periodically updated in advance, with a minimum one-month (consumers) or two-week (non-consumers) notice period. The pre-set price update interval is usually four times a year. These contracts can be terminated by the consumer with two weeks' notice.
- Spot-price contracts, based on the electricity spot market price plus the retailer's marginal.

In addition to the energy component cost, it is common practice in all contract types that the supplier charges a monthly fixed fee of approximately 0 to 5 Euros.

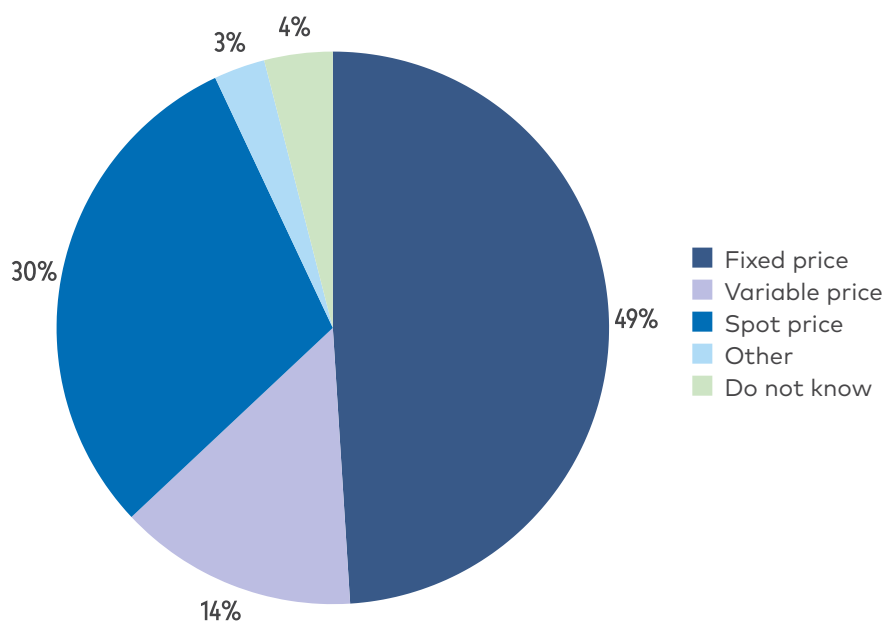
Finnish end-customers have traditionally shown high demand for fixed-price price contracts: a share of 49–54% of all contracts issued between 2019 and 2022. Fixed-price contracts have tended to be followed by open-ended variable-price contracts, with a 36–40% share during the same period. Spot contracts have not been as popular in Finland as in other Nordic countries, with only a 8–14% share of contracts

during the 2019–2022 period.⁶ As a result of the energy crisis, many companies also initiated a new hybrid contract type, consisting of a fixed component and a two-way dynamic component based on the spot price during the customer's consumption.

According to our survey (Figure 6-2), there was a significant uptake in spot contracts in 2023 compared to the 14% share at 2022 end figure by the Finnish Energy Authority, as 30% of the survey respondents reported having a spot contract in October–November 2023. At the same time, the share of variable-price contracts was low compared to the 2019–2022 figures: Only 14% reported having a variable price contract, indicating a shift from variable-price contracts to spot contracts at the start of the year. The share of fixed-price contracts has remained stable compared to the 2019–2022 level, as 49% of the respondents had fixed-price contracts. The uptake of alternative contract types, such as a consumption-effect contract, remains at a rather low level based on the survey at only 3%. Of the total respondents, 3% did not know which contract type they had.

According to the survey, a large majority (81%) of respondents indicated that they were able to find at least one contract that aligned with their needs and preferences, while 14% did not know if the available contract types met their needs. For those who did find at least one relevant contract, 25% found only one, 43% found two or three, and 13% found more than three.

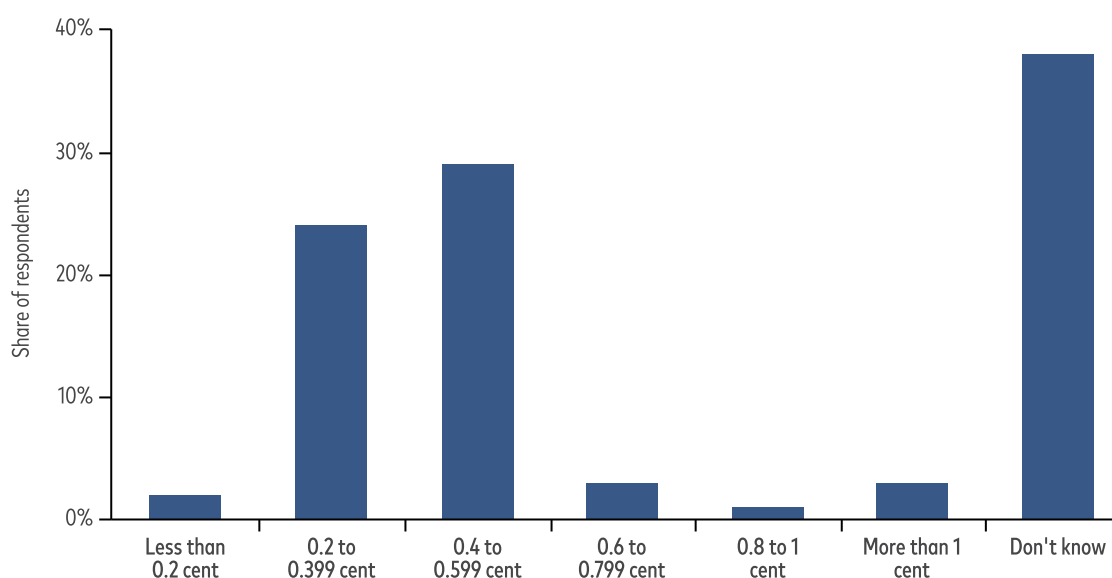
Figure 6-2: Contracts (Finland)



Note: The contract shares are those reported by respondents in a survey conducted amongst Finnish households in October and November of 2023. The shares are weighted. N=969.

The pricing of variable- and fixed-price contracts, as well as the electricity retailers' marginals for spot contracts, were also surveyed. Figure 6-3 shows the spot contract marginals for survey respondents with a spot contract. The largest group of respondents (37%) did not know their marginal, signalling that many consumers are not fully aware of this aspect; 27% had a marginal of between 0.4 and 0.599 cents, followed by 24% in the 0.2–0,399 cent range. In addition, some respondents had a marginal higher than 1 cent, which could indicate, for example, a spot contract from renewable sources, or an otherwise higher-than-usual marginal.

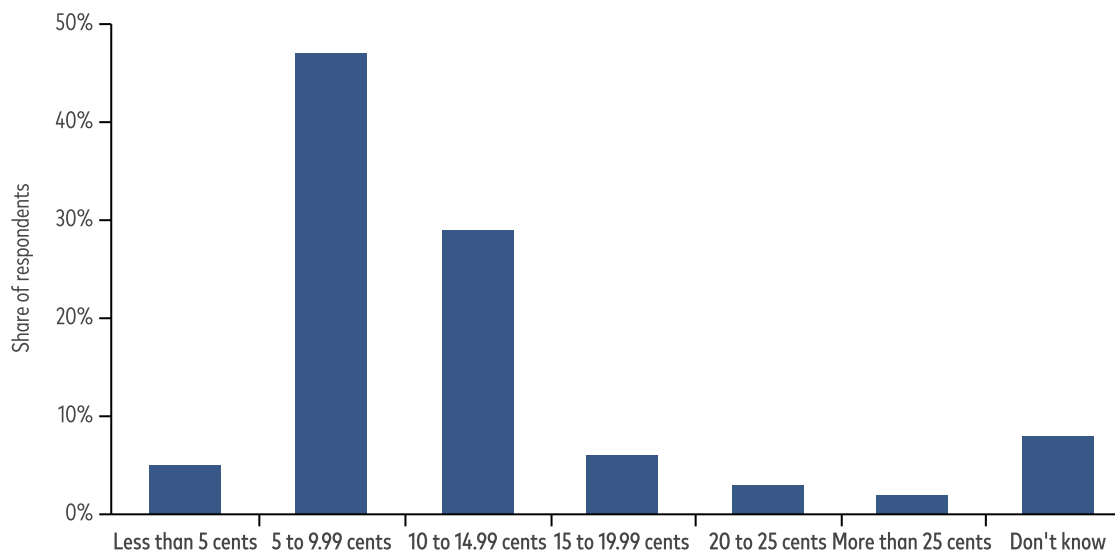
Figure 6-3: Per kWh surcharge in spot price contracts (Finland)



Note: Surcharge per kWh for respondents with a spot price contract. In eurocents. Survey conducted in October and November of 2023 amongst Finnish households. N=291.

For October–November 2023, the survey indicates significantly higher prices in fixed-price contracts compared to pre-crisis levels (Figure 6-4). While the majority had a fixed-price contract in the range of 5 to 9.99 cents, corresponding to the range of fixed-price contracts offered in early 2021 (Figure 6-6), over 40% of respondents had a fixed-price contract for 10 cents or more, with the majority of these higher-price contracts being less than 15 cents (29%). Therefore, some customers have very high fixed-price contracts compared to the usual fixed price of around 10 to 12 cents offered in September 2023 (Figure 6-6). This indicates that some customers are still left with very high electricity costs due to price volatility in the second half of 2022 and in early 2023.

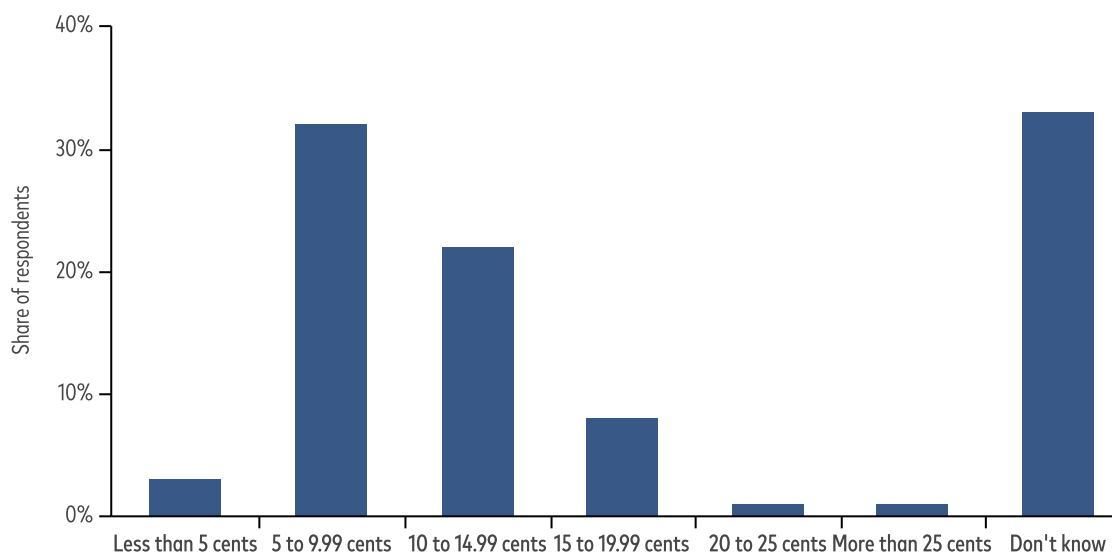
Figure 6-4: Per kWh price for fixed price contracts (Finland)



Note: Price per kWh for respondents with a fixed price contract. In eurocents. Survey conducted in October and November of 2023 amongst Finnish households. N=482.

Compared to fixed-price contract prices, the distribution of variable-price contract prices is rather similar based on the survey. That said, a significant share of 32% of variable-price contract customers were unable to tell their current pricing (Figure 6-5). This could be due to the fact that in Finland, variable contract prices are often updated monthly or quarterly, leaving some customers in a position where they are unaware of the exact price they currently have. The survey gives a snapshot of prices in October–November 2023, heading into the autumn-winter period. The tendency of variable-price contracts to have lower prices during the summer and higher prices during the winter could have had an effect on their similar pricing to fixed-price contracts during the survey period; it is notable, however, that a consumer with a variable-price contract is able to switch suppliers with a 14-day notice, meaning that they could switch suppliers or contract type to a spot- or fixed-price contract at short notice.

Figure 6-5: Per kWh price for variable price contracts (Finland)



Note: Price per kWh for respondents with a fixed price contract. In eurocents. Survey conducted in October and November of 2023 amongst Finnish households. N=482.

6.2.3 Impacts of the energy crisis on suppliers

The liquidity of the financial markets related to electricity suppliers has had a large impact on electricity retailers' ability to offer fixed-price contracts, as retailers need to fix the price for the electricity to be provided to the customer for the duration of the contract. Due to the volatility of the prices, the collateral requirements for the financial markets' participants have increased significantly and, at the same time, electricity retailers have seen liquidity in the financial markets decrease significantly. This has had a sizable effect on their capability to offer fixed-price contracts to customers, as well as on the pricing of their fixed-price contracts. The limited liquidity has raised the risk profiles of retailers and shifted some of the hedging activity from derivative exchanges to over-the-counter contracts. The increase of price volatility has also raised the importance of collateral management for companies operating in the financial markets.

In addition to fixed-price, fixed-term contracts, electricity retailers also hedge their positions on open-ended variable-price contracts. These contracts tend to have a two-week termination period, giving customers the opportunity to switch their contracts rather quickly. The electricity retailers have seen increased activity in switching between open-ended variable-price and spot contracts. As the retailer also needs to hedge their position on the open-ended variable-price contracts, increased switching behaviour has brought additional complexity to the forecasts they use as the basis for securing hedging from the financial markets.

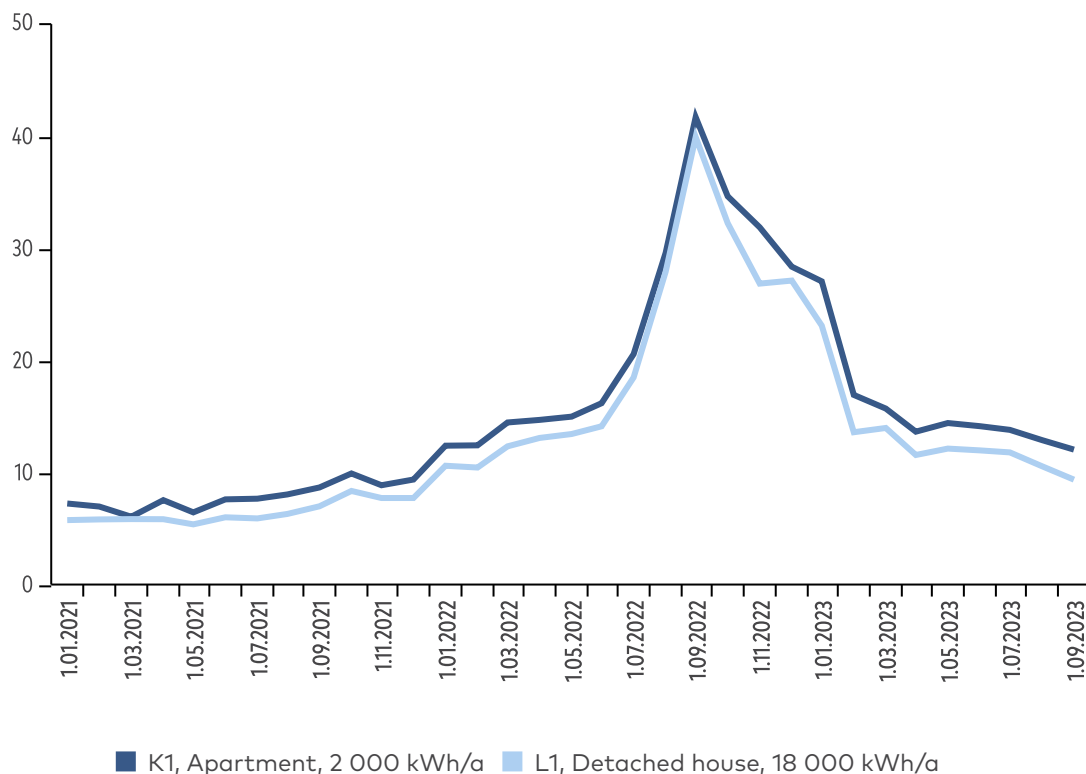
The increased cost of hedging and collateral requirements, as well as other risks related to price volatility, have had an impact on the financial stability of suppliers. The impacts were more significant for some electricity retailers, with at least two Finnish retailers filing for bankruptcy in the autumn of 2022. One of these electricity retailers served approximately 20,000 and 70,000 customers, and the other served as an obligation to deliver supplier in two DSOs' areas. However, other companies did not need to, for example, resort to the government emergency debt and guarantee package offered to companies operating in the derivatives markets.

In response to the energy crisis and the heightened attention on pricing as well as the energy sector in general, media coverage relating to energy retailers has also increased. As a result of this increased interest, and to increase knowledge and understanding of electricity pricing and contracts, electricity retailers have increased their PR and communications efforts both on a societal level and towards customers. The objective of these efforts has been to increase understanding of the retail electricity sector, including the role of retailers and pricing structures, as well as to better provide customer service to customers. For example, one of the topics gathering a lot of attention and requiring increased customer service efforts was fixed-price contracts at high prices during the autumn 2022 to early 2023 period. The discussion was focused on the fairness of pricing from the point of view of the customer, given that prices have since fallen significantly from their autumn 2022 peak. The need for communications efforts was also shown by increased demand for customer service due to different types of enquiries, to which electricity retailers have responded by increasing customer service capacity to relieve congestion in their customer service channels.

Availability of fixed-price contracts or contracts with fixed-price elements

As Finland has traditionally had a high share of fixed-price contracts, the energy crisis had a twofold impact on end-customers in the context of fixed-price contracts. First, the availability of fixed-price contracts dropped significantly as a result of the price volatility during the autumn of 2022, making it difficult for customers to secure fixed-price contracts at competitive prices. Second, some customers were able to maintain low electricity prices during the highest price period during 2022–2023 as result of having entered into up to 24-month fixed-term and fixed-price contracts, for example in late 2021, when 24-month fixed-price contracts were still offered at under 10 cents/kWh.

Figure 6-6 Average price for 24-month Fixed Price Contract Offers for Type user K1 and L1 end-customers



Note: From August 2022 forward, the data is based on a low number of offers available to customers^[47]

As seen in Figure 6-6, the average price of 24-month fixed price contracts was relatively stable in 2021. In contrast, prices started to rise in 2022, peaking sharply at around 40 cents/kWh in September 2022 when market uncertainty was at its highest. As a result, electricity retailers faced significant issues in acquiring hedging against the fixed-price contracts from the financial markets. Therefore, they either offered customers fixed-price contracts at very high prices compared to historical levels, or they were forced to pull fixed-price contract offerings from the market. Those customers whose fixed-price contracts ended during the period of highest uncertainty had only the options to switch to variable-price or other types of contracts, or to accept higher prices for new fixed-price contracts, if they were able to acquire these.

One of the results of the increased market disruption around fixed-price contracts was that hybrid consumption-effect contracts emerged as a contract type offered by

47. <https://energiavirasto.fi/sahkon-hintatilastot>. Date: 30.11.23

many suppliers. From the energy system standpoint, these contracts also support the aim of increasing demand-side flexibility. They generally contain a fixed base-price per kWh component and a two-way consumption-effect component, usually calculated based on the average spot price of the consumption, which is subtracted by the average spot price of the month. The fixed component and consumption-effect component are then summed to give the billing price for electricity for the month. As these contract types also contain a fixed component, they are also hedged by the retailer and are therefore not isolated from the requirements for liquidity in the financial markets. However, such contracts can lower the retailer's risks when compared to fully fixed-price contracts.

As part of the updates to the Electricity Market Act in June 2023, an addition was made to contract type requirements for obligation to deliver contracts. It was defined that the only type of obligation to deliver contract offered by the obligation to deliver supplier could not be a spot-price contract, meaning that there needed to be some type of fixed-price contract offering available to all small customers. In June 2023, 16 Energy Authority investigations were ongoing in relation to obligation to deliver supplier matters. In one of the decisions, given the same month, the Authority found that one of the largest retailers in Finland was non-compliant when it offered variable-price spot contracts as the only obligation to deliver contract type from September 2023 onwards.^[48] In addition, in at least seven of the other investigations, the matter of spot-price contracts as the only obligation to deliver contract type offered was under scrutiny.^[49]

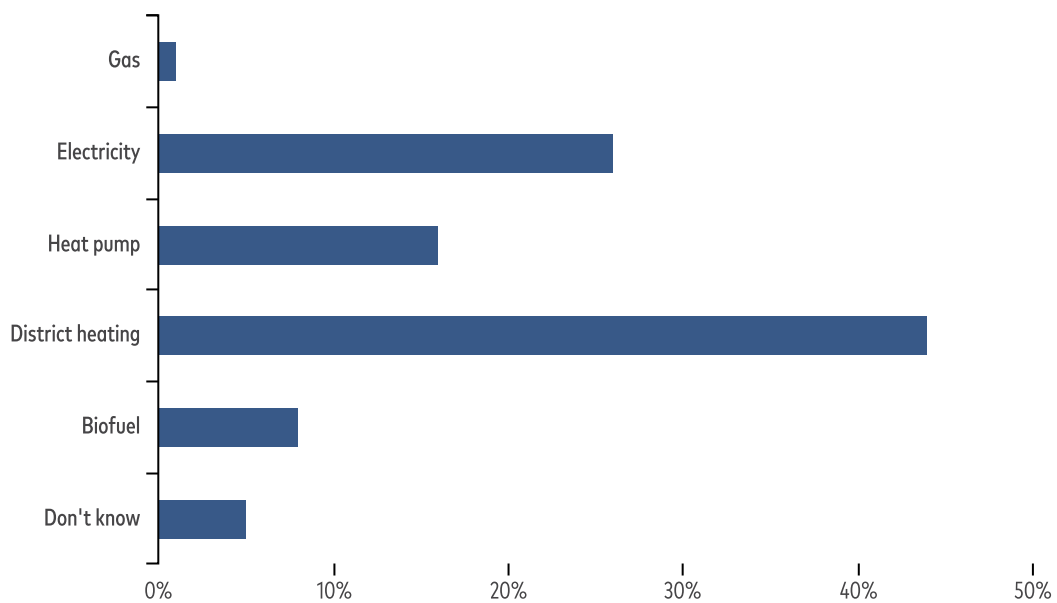
48. <https://energjavirasto.fi/-/sahkon-toimitusvelvollisuushintaa-arvioidaan-markkinapohjaisesti>. Date: 28.11.23

49. <https://energjavirasto.fi/tietoa-kotitalouksille>. Date: 28.11.23

6.3 Customer awareness and satisfaction

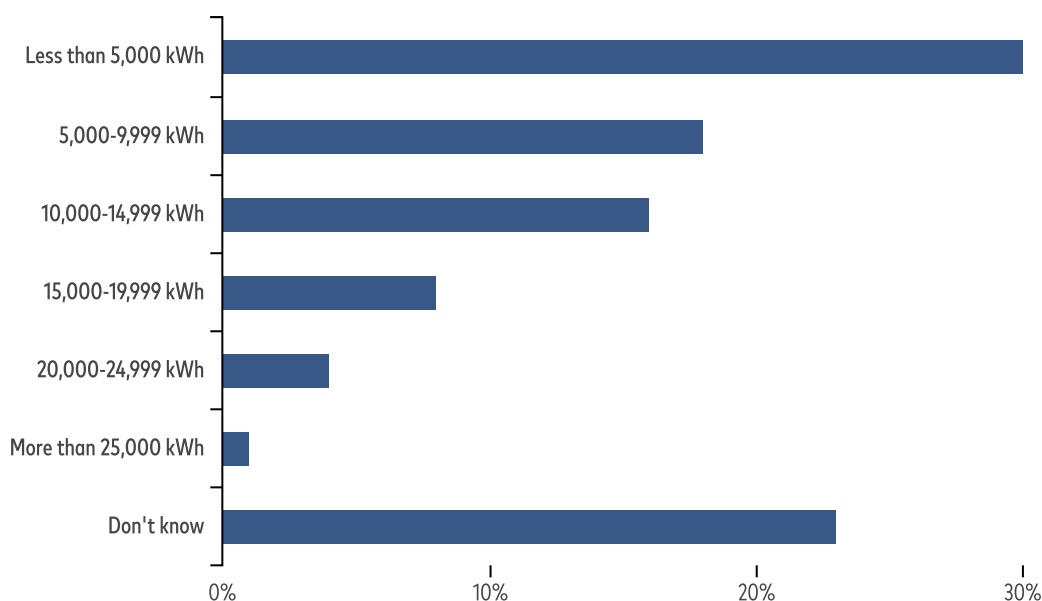
For households in Finland, the most important source of heating is district heating, and the second most important is electricity. District heating is the most important source of heating for around 45% of households, and electricity for approximately 25% (Figure 6-7). Approximately 25% of households do not know their electricity consumption per year, while around 30% say that they use less than 5,000 kWh annually (Figure 6-8).

Figure 6-7: Most important source of heating (Finland)



Note: The graph shows the most important source of heating in the household. Survey conducted in October and November 2023 amongst Finnish households. N=1156.

Figure 6-8: Household electricity consumption per year (Finland)



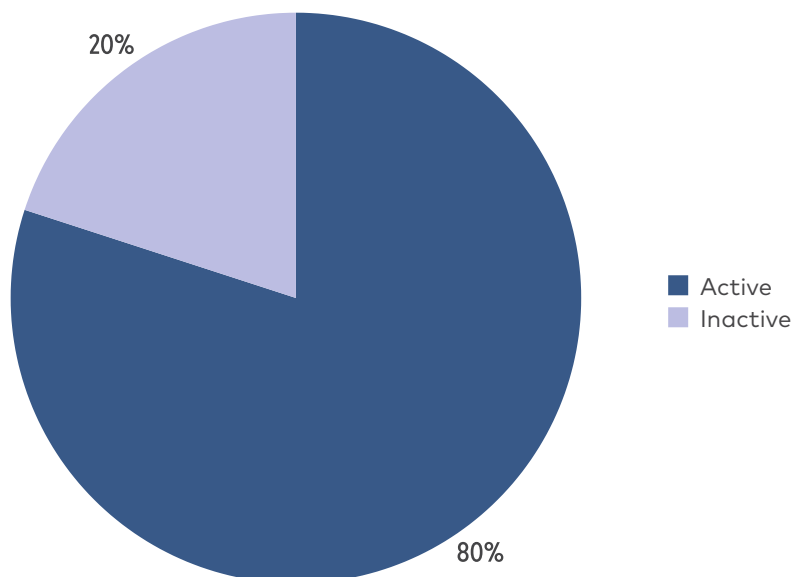
Note: The graph the reported yearly electricity consumption. Survey conducted in October and November 2023 amongst Finnish households. N=969.

6.3.1 Awareness during search and switching

Overall, during the period of high price volatility, the customers had an increased incentive to gain further understanding of the electricity retail market and to shop around for a better contract. The common view is that the overall awareness of customers was raised as a consequence. However, the retail electricity market and electricity as a product remain a complex topic in Finland, as seen by evidence from the survey and interviews conducted in this study.

Compared to other Nordic countries, Finland had a relatively high share of active customers, as indicated by the 80% share of respondents who had either switched or compared contracts within the last year (Figure 6-9). The overall share of respondents who had signed a new contract within the last 12 months was 61% in Finland, indicating a rather high level of activity in the market compared to other Nordic countries. One reason for this could be the high proportion of fixed-price contracts causing added natural switching compared to contract types without a fixed term. Of these new contracts, 51% were with a new supplier. Finnish suppliers also took part in win-back sales activities during the past year: 34% of respondents who had entered a new contract with another supplier were contacted by the previous supplier. However, suppliers' win-back proposals were largely not seen as attractive, with only 16% accepting the win-back proposal.

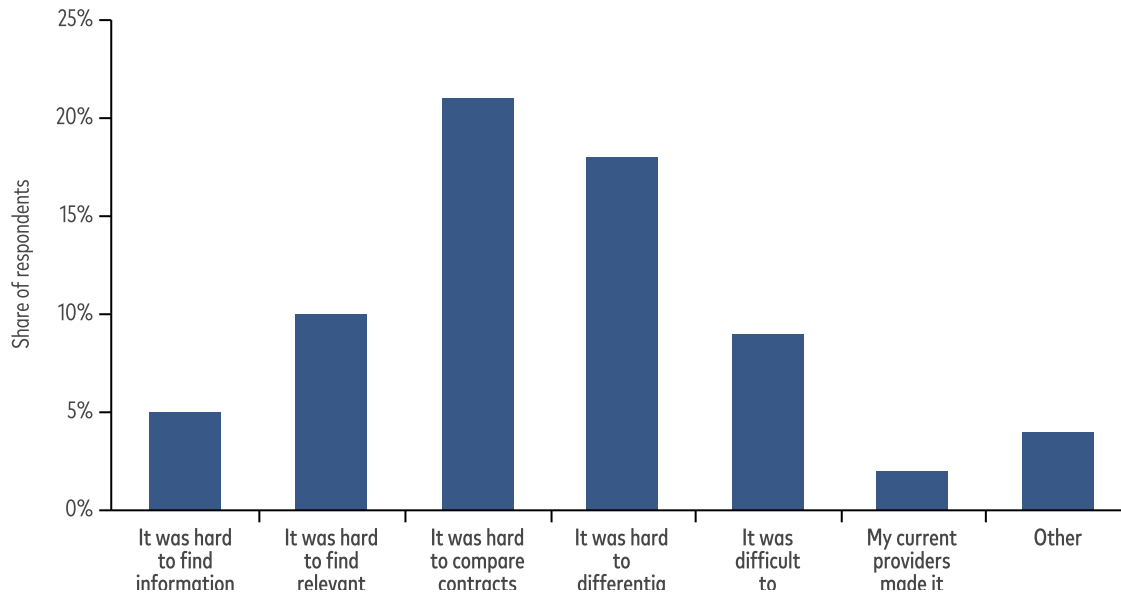
Figure 6-9: Share of consumers active in the electricity market last 12 months (Finland)



Note: The graph shows the share of respondents who have either switched or compared electricity contracts during the previous 12 months. Survey conducted in October and November of 2023 amongst Finnish households. N=969.

Figure 6-10 shows that the largest challenge for customers during switching is to compare different contracts and terms (21%), leaving room for improvement in both the electricity retailers' information provision and awareness raising on the consumer side. This is supported by the 17% and 9% of respondents who found it difficult to differentiate between contracts and to understand the terms and conditions, respectively. In addition, some respondents found it hard to find information or relevant contracts of sellers. However, the difficulty stemming from the actions of the current provider were not seen as a major challenge, as only a 2% share in responses indicated this issue.

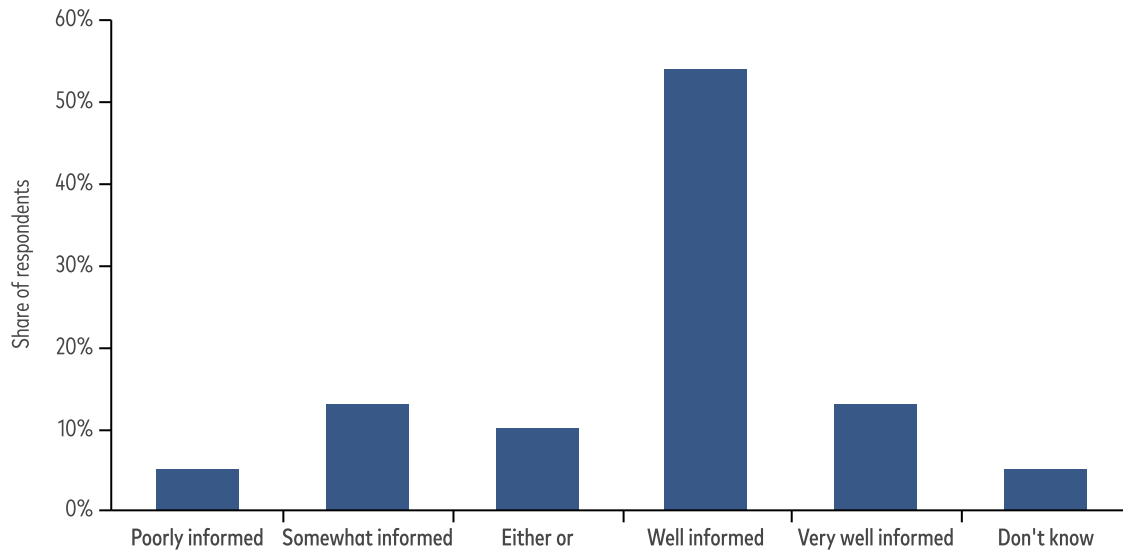
Figure 6-10: Challenges in switching or comparing contracts (Finland)



Note: The graph shows the percentage of respondents who have recently switched or compared contracts that experienced challenges when doing so. Multiple choices were allowed. Survey conducted in October and November 2023 amongst Finnish households. N=593.

The awareness of customers when making a decision during comparison or switching was also studied (Figure 6-11). Two-thirds of the respondents found that they were either well or very well informed, indicating that a large share of customers had a good basis on which to make a decision. However, 6% of customers felt poorly informed to make a decision. The effects of price volatility and media coverage of the energy markets may have had an effect on customers' awareness in a decision-making situation; however, this statement would need support from previous study results to draw further conclusions.

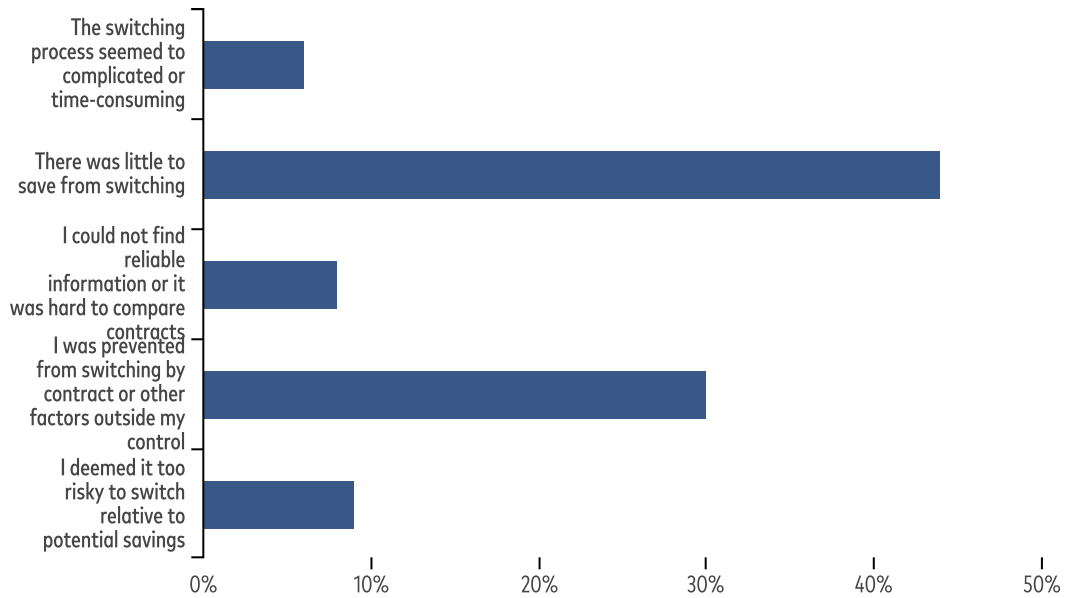
Figure 6-11: How informed respondents felt when switching or comparing contracts (Finland)



Note: The graph shows how well-informed respondents who have recently switched or compared contracts felt. Survey conducted in October and November of 2023 amongst Finnish households. N=772.

Of those respondents who had compared contracts, 23% ended up not switching. The most common reason (at 44%) was that there was too little to save from switching, as seen in Figure 6-12. In addition, a further 9% found that the risks of switching outweighed the potential savings. Together, these findings indicate that economic reasons were the most significant. In contrast, only a small proportion (6%) found switching too complicated or time-consuming, while only 8% were unable to find information or to compare contracts.

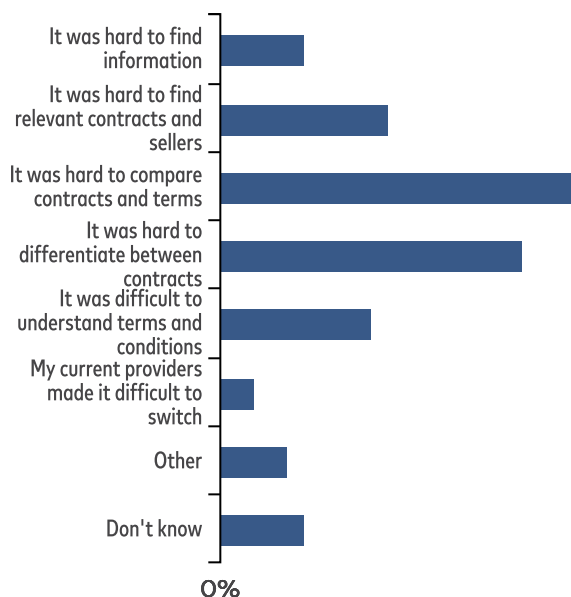
Figure 6-12: Reason for not switching after comparing contracts (Finland)



Note: The graph shows why those who have compared but not switched contract, ultimately chose not to switch. Survey conducted in October and November of 2023 amongst Finnish households. N=179.

Satisfaction with current contract was seen as the most common reason to not compare or switch contracts, as half of those customers who had not compared or switched contracts in the last two years reported that they were satisfied with their current contract (Figure 6-13). Potential savings or the perception of low potential savings were presented as reasons by 14% of respondents; this could derive, for example, from low electricity consumption overall. However, 16% found that their electricity contract was not important to them. The issues of finding information (5%) or the complicated or time-consuming nature of switching or comparing contracts (20%) were also quite common.

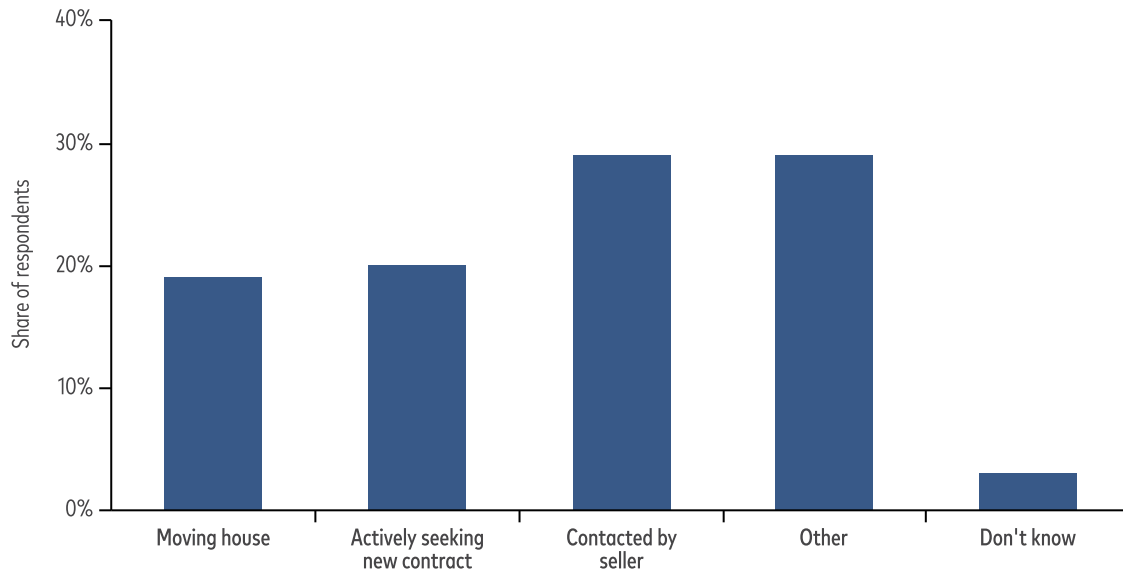
Figure 6-13: Reason for not switching or comparing contracts more often or at all (Finland. Multiple choices allowed)



Note: The graph shows why those who have not compared or switched contracts within the last 13 months, have not done so more often. Survey conducted in October and November of 2023 amongst Finnish households. N=181.

Of those respondents who had signed a new contract in the past 12 months, approximately one fifth had done so because of moving (Figure 6-14). Other common reasons were being prompted by contact from the retailer’s representative (29%), while one fifth had actively looked for a new contract. A rather large share of new contracts was signed for other reasons than the previous three options (at 28%).

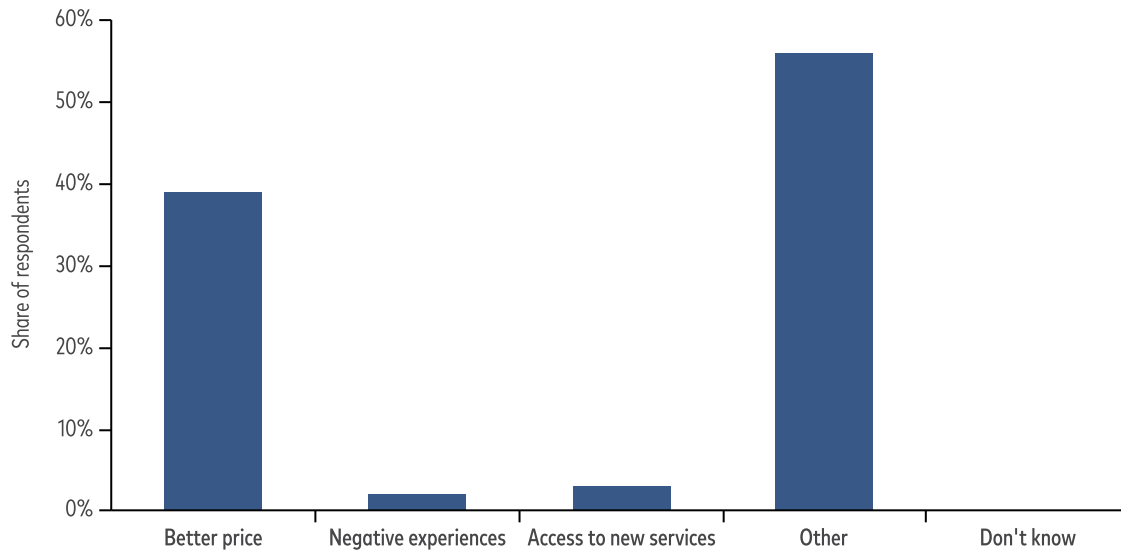
Figure 6-14: Context for switching contract (Finland)



Note: The graph shows the context for having switched contract. Survey conducted in October and November of 2023 amongst Finnish households. N=593.

Customer motivation for switching contract was often a better price at 39%, while negative experiences with the existing supplier or access to new services were not often a reason for switching (Figure 6-15). Other reasons accounted for the majority of responses, which could include moving or coming to the end of a fixed-price contract period.

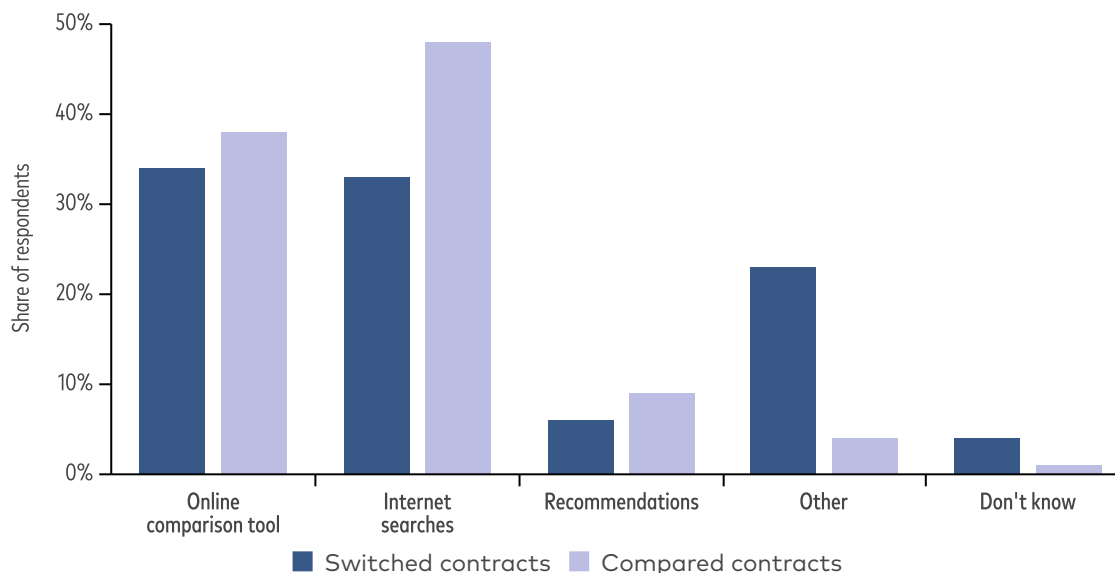
Figure 6-15: Main motivation for switching (Finland)



Note: The graph shows the respondents main motivation for having switched contract. Asked to those who reported having switched contracts within last 12 months. Survey conducted in October and November of 2023 amongst Finnish households. N=593.

The primary source of information among Finnish customers who switched or simply compared contracts was internet-based (Figure 6-16). Approximately one third of respondents who switched found online price comparison tools to be the most important source of information, with other internet sources almost equally represented in the answers. The respondents who had switched contract were not likely to do so based on a recommendation, only slightly more than one fifth of respondents listed recommendations as most important. There is a large disparity in the importance of other sources between those who had switched (23%) and those who had only compared (4%), which could indicate that the information was received from a supplier representative, which was not covered in the survey.

Figure 6-16: Most important source of information when switching or comparing contracts (Finland)



Note: The graph shows the most important source of information the last time the respondent switched or compared contracts. Survey conducted in October and November of 2023 amongst Finnish households. Switched contracts: N=359. Compared contracts: N=179.

6.3.2 Customer awareness and demand for different contracts

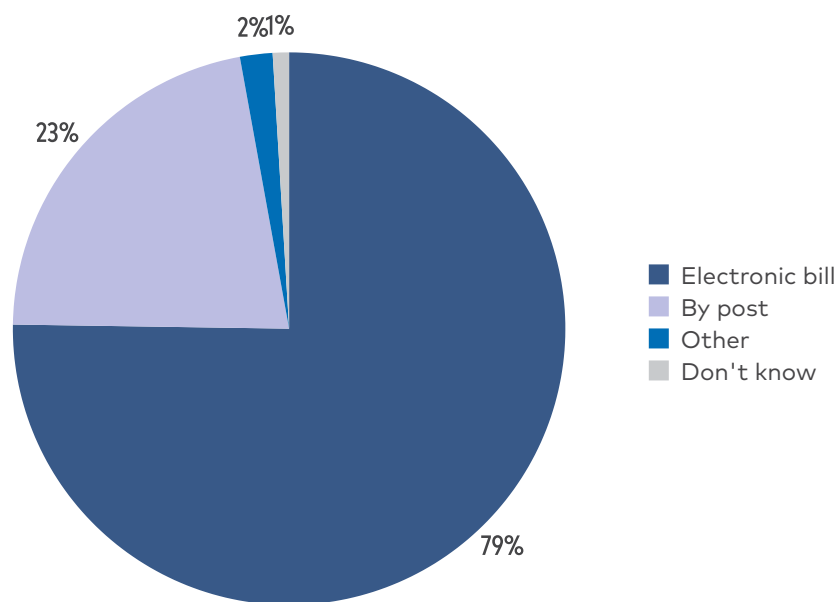
The heightened media focus as well as the incentive created by high price volatility is seen to have affected customer awareness in Finland. As Finland has generally had a high share of fixed-price and variable-price contracts, Finnish customers have preferred more stable contracts over dynamic spot prices. The shift from variable contracts to spot contracts (as shown in Figure 6-2) indicates that some changes in preferences have been seen, as customers have switched contracts. Spot contracts are generally seen as a contract type that is more suitable for customers with more awareness as well as capability for demand flexibility, which could indicate that some customers are now more familiar with spot contracts.

The price volatility in 2022–2023 also resulted in the new type of hybrid contract with a consumption effect. However, this type has not yet been contracted by a large share of customers based on the survey. This type of contract, however, increases the demand for understanding of the electricity market, contract terms, and pricing structures. The current contracts generally have a similar price structure based on a fixed component per kWh and a two-way adjustment based on the spot-price average during consumption. These contracts generally have the same pricing structures between different suppliers; however, a new contract type always requires increased awareness and understanding on the part of the customer.

6.3.4 Invoicing and billing

The majority of Finnish customers receive their bills in electronic format, such as via e-invoice or email, with three quarters of survey responses in October–November 2023 (Figure 6-17). Subscription-based services such as electricity have an incentive over transaction-based services or products for the customer to move to direct online bank e-invoicing to avoid recurring manual invoice payments. However, 22% of respondents still received their invoices in paper format through physical mail, which is high compared to other Nordic countries.

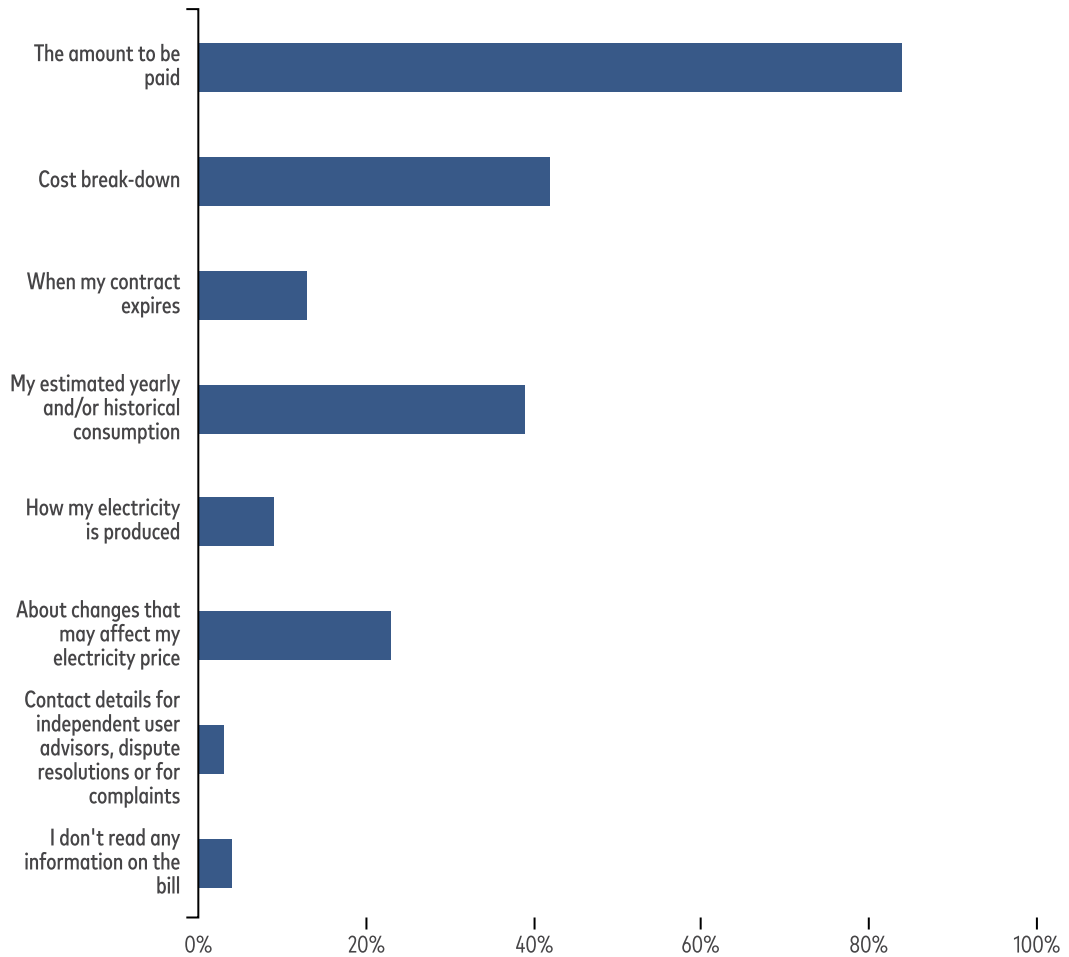
Figure 6-17: How electricity bill is received (Finland)



Note: The graph shows how respondents receive the bill from their electricity supplier. Survey conducted in October and November of 2023 amongst Finnish households. N=969.

The survey found that relatively few Finnish customers familiarize themselves with the other information contained in their electricity invoices in addition to the amount to be paid (Figure 6-18), indicating somewhat low interest or understanding around the details of the invoice. The amount to be paid is read by 84% of customers; when they do read the other information provided, they most often check the cost breakdown (42%), historical or estimated consumption data (39%), or information on changes affecting price (13%).

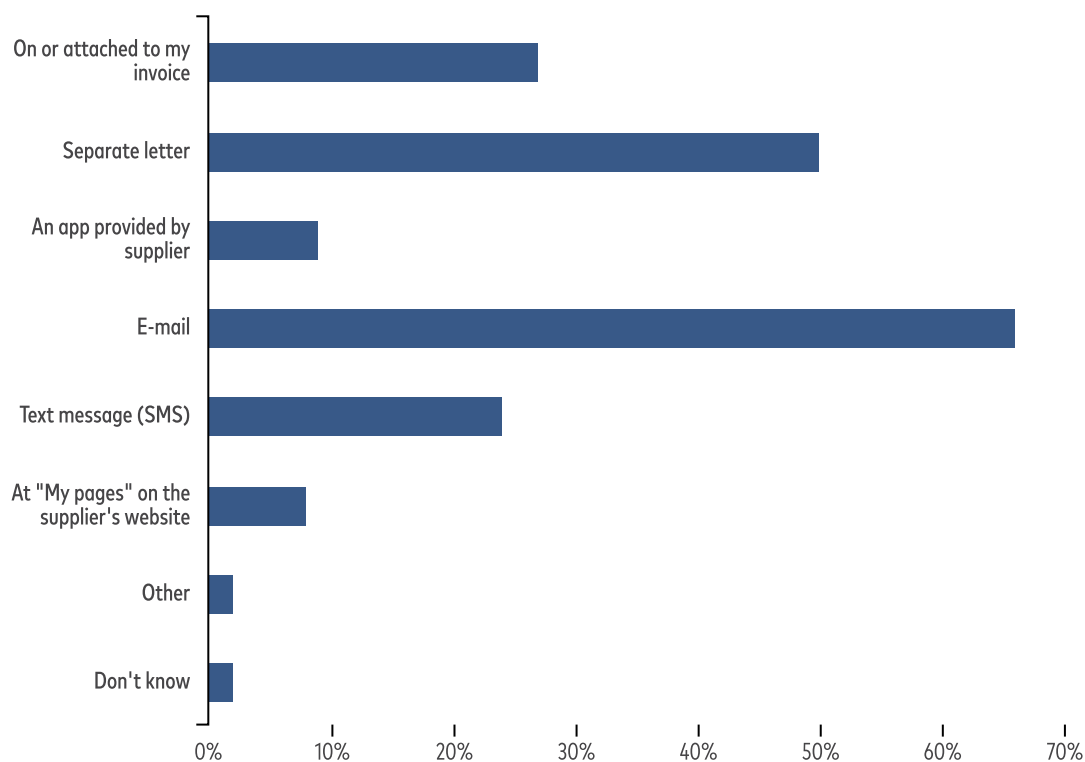
Figure 6-18: What information respondents read on their invoice (Finland. Multiple choices allowed)



Note: The graph shows the fraction of respondents that report looking for each type of information on their bill. Multiple choices allowed. Survey conducted in October and November of 2023 amongst Finnish households. N=969.

Finnish customers mostly prefer email (67%) or separate letter (51%) notifications related to their contract (Figure 6-19). Among other digital ways to notify customers, apps or “My Account” online services are not as popular as SMS (23%) or email notifications. More formal ways of communication are more popular; customers seem to prefer to make sure that they receive the information about any changes, as apps or online services may not be used as often. This may also indicate a low take-up of app or “My Account” type services in Finland, as other surveyed countries show more interest in receiving contract and price information via these add-on services.

Figure 6-19: Preferred method of being notified of changes to the electricity contract or other aspects that may affect the customer (Finland. Multiple choices allowed)



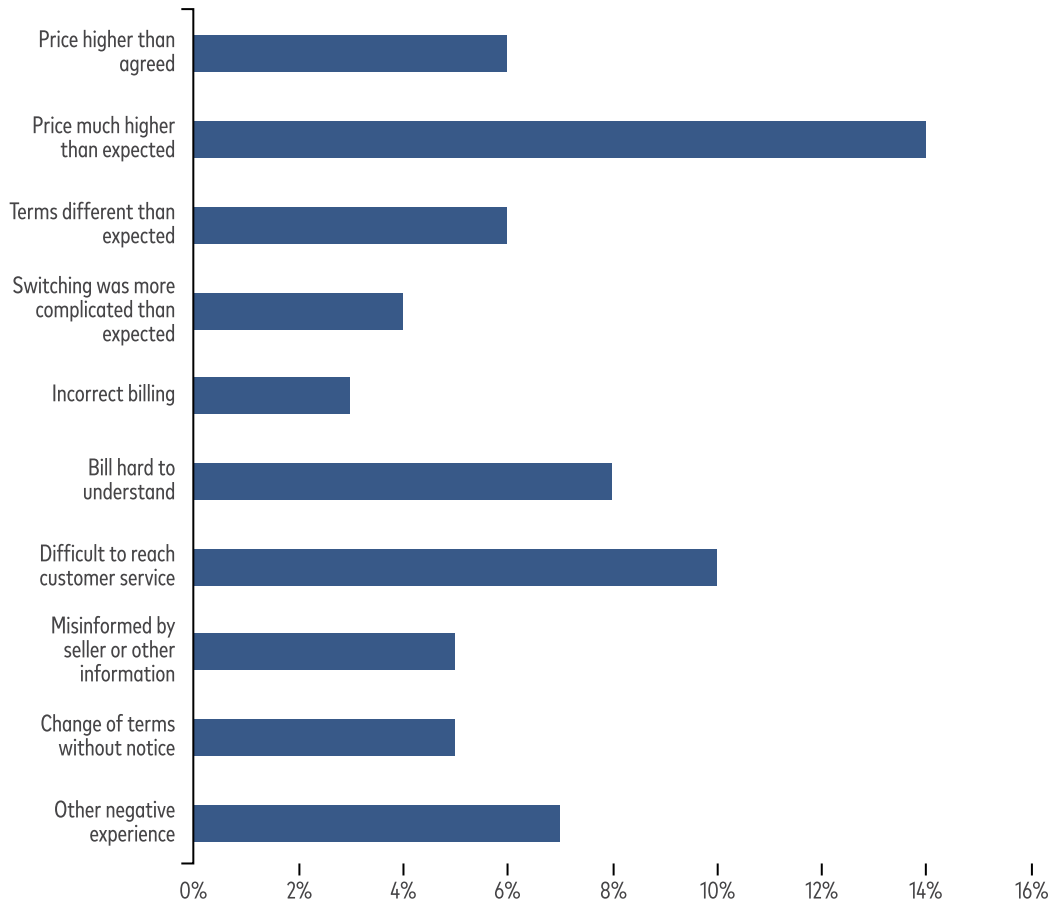
Note: The graph shows the methods by which respondents prefer to be notified of changes by the electricity seller that may affect the customer, for example changes to the electricity contract. Survey conducted in October and November of 2023 amongst Finnish households. N=969.

6.3.5 Customer satisfaction

During mid 2022 to early 2023, the energy sector received a large amount of media attention and public interest due to the implications faced by households and companies. This may have had an effect on the overall image of the sector, as well as levels of customer satisfaction. The survey showed that 60% of all respondents in Finland had had no negative experiences with their electricity suppliers, while the remaining share had had different types of negative experiences, as shown in Figure 6-20. The most common reason for a negative experience was much higher than expected prices, with 14% of all respondents having experienced this, followed by 10% of respondents who had difficulties reaching the supplier's customer service channels, potentially due to increased demand.

Approximately 40% of respondents reported having negative experiences with the retail supplier, and 30% reported negative experiences not related to pricing. Respondents also expressed negative experiences related to information, agreed contract terms or pricing received from the supplier. One in 20 of all respondents had negative experiences related to being misinformed by the supplier or by the information received. In addition to being misinformed, 6% had experienced different contract terms than they were expecting, and 6% had experienced higher prices than agreed. These negative experiences could either derive from the supplier side, whether intentionally or not, or the consumer's limited understanding of agreed terms or pricing.

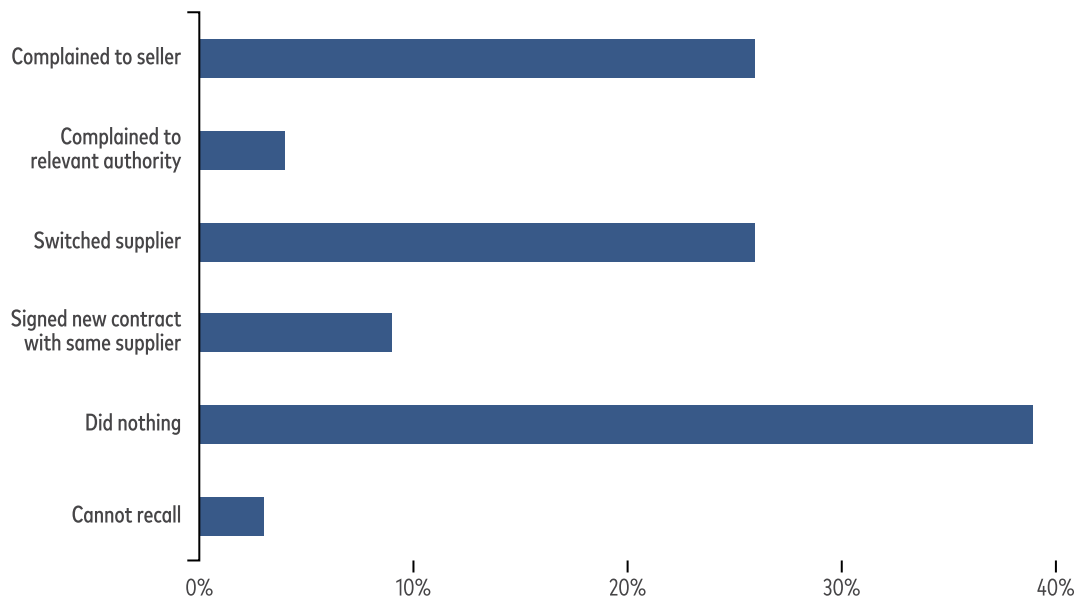
Figure 6-20: Negative experiences with electricity seller (Finland. Multiple choices allowed)



Note: The graph shows the fraction of respondents that reports a negative experience with their electricity provider during the last two years. Multiple choices allowed. Survey conducted in October and November of 2023 amongst Finnish households. N=969.

In response to negative experiences, 39% of respondents did not do anything (Figure 6-21). However, a significant share of 26% switched suppliers as a result, showing that customers can react strongly to negative experiences. Some respondents who remained with the same supplier signed a new contract (9%), while many did issue a complaint with the supplier (26%). Some customers (4%) had also complained to the authorities as a result of their negative experiences.

Figure 6-21: Consumers' response to a negative experience (Finland. Multiple choices allowed)



Note: The graph shows action taken by consumer in response to a negative experience. Survey conducted in October and November of 2023 amongst Finnish households. N=433.

6.3.6 Impacts of energy crisis on customers

The overall rise of energy prices had a large impact on customers overall, but this impact had high variance based on aspects such as contract type, timing of signing last contract, type of housing, and type of heating. In a survey conducted in the summer of 2023, 45% of households voiced that their financial situation had degraded significantly or rather significantly due to electricity prices at their permanent residence, while 42% of detached-house households had pursued savings in heating or cooling (as opposed to only 11% in apartment building households).^[50]
^[51]

Due to the large proportion of fixed-price contracts in Finland, a group of customers entered into 24-month fixed-price contracts before the period of price volatility. This put different customers into very different positions. For example, a detached house with electric heating could have faced an almost 10-fold increase in the price of the energy component if they wanted to sign a new fixed-price contract during the peak prices of up to 40 cents/kWh in autumn 2023, while their neighbours may have retained a fixed-price contract as low as 5 cents/kWh over the highest price peak in autumn 2022 to early 2023, as seen in Figure 6-6. In addition to those having to renew their fixed-price contracts, customers with an open-ended variable-price contract or a dynamic-price spot contract were faced with a sharp increase in electricity prices.

As a result of increased prices, many customers increased their understanding of electricity markets, contractual terms, and energy efficiency activities to save on their electricity costs. In turn, those customers interested in following market prices and having the capability to adjust their consumption may have opted for a spot contract to benefit from shifting consumption to times of lower pricing. Others, who for example prioritize stability or are not inclined to follow market prices, could have opted for contracts with a fixed component, such as fixed-price or open-ended variable-price contracts. The share of spot-price contracts saw an increase from 9% to 14% in 2022^[52] and a further increase to 30% by October–November 2023 at the time of our survey (Figure 6-2). This could indicate a shift towards spot-price contracts due to changes in contract preferences.

50. https://www.kuluttajaliitto.fi/wp-content/uploads/2024/02/Kuluttajaliitto_kuluttajakysely_talous_6_2023.pdf

51. https://www.kuluttajaliitto.fi/wp-content/uploads/2024/02/8e27ad54-kuluttajaliitto_kyselytulokset_saastaminen.pdf

52. <https://energjavirasto.fi/en/-/national-report-on-electricity-and-natural-gas-markets-in-2022>. Date: 28.11.23

The increased price volatility also saw an increase in demand flexibility activities, as the incentive to save energy was high. The Energy Authority estimated a 5.4–7.4% temperature-adjusted reduction in electricity demand between September and December 2022 compared to the 2017–2021 averages.^[53] In addition, consumers were able to receive temporary financial assistance through VAT reduction, compensations and benefits. In April 2022, it was estimated by the Energy Authority that the cost of these measures would total 480 million Euros.^[54]

Due to disputes deriving from increased prices, the Consumer Disputes Board announced two different recommendations during 2023. The first, given in June, saw that the increase in price for open-ended variable-price contracts was unfair if it resulted in a relative increase of 15% and at least 150 Euros annually. The second saw fixed-price contracts with a fixed term as unfair if the average price of similar contracts was over 15% less during the validity of the contracts. Both statements were based on the consumer protection legislation: The supplier's reasons behind the price increases of necessary commodities did not justify unfair increases to consumer prices. In their recommendations, the Board cited pricing-related precedents on other necessary commodities, such as distribution service and housing rental pricing increases. However, two of the nine members of the Board saw that the energy component of energy bills was inherently a different type of necessary commodity, and therefore the unfairness of pricing could not be based on the same precedent.^[55] The suppliers have generally not followed the given recommendation, citing that the recommendations are unfeasible for them from the perspective of how the electricity retail market operates.^[56] The Board's approach to recommendations on fairness of pricing was somewhat different to the Energy Authority's decision on fairness of pricing of obligation to deliver contracts given in June 2023, which was based on the Electricity Market Act's obligation to deliver supplier regulation and did not outline any quantitative limits to fairness of pricing.^[57] It is notable that the Energy Authority decision covers the obligation to deliver contracts based on the Electricity Market Act, while the decision from the Consumer Disputes Board approaches the matter from the viewpoint of consumer protection regulation.

As suppliers made changes to their contract offerings due to price volatility, consumers needed to adjust to different types of contracts and contract terms. The new types of contract offerings, predominantly those containing a consumption-effect component, give the customer an opportunity to affect the price of the energy component while at the same time retaining some degree of certainty through the

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53. <https://energiavirasto.fi/documents/11120570/12919818/Energiavirasto+mediainfo+19012023.pdf/59c27338-ef81-b4a5-22de-044f29f65498?t=1674055238964>. Date: 28.11.23
54. <https://yle.fi/a/74-20028246>. Date: 28.11.23
55. <https://www.kuluttajariita.fi/fi/index/tietoameista/tiedotteet/2023/sahkonhintaavoidaankohtuullistaa.html>. Date: 28.11.23
56. <https://yle.fi/a/74-20047437>. Date: 28.11.23
57. <https://energiavirasto.fi/documents/11120570/12872579/P%C3%A4%C3%A4t%C3%B6s+s%C3%A4hk%C3%B6n+toimitusvelvollisuudesta+ja+hinnosta,+Helen+Oy.pdf/a2e0b50f-89c8-cdb2-e006-fde98d1c61a8/P%C3%A4%C3%A4t%C3%B6s+s%C3%A4hk%C3%B6n+toimitusvelvollisuudesta+ja+hinnat>. Date: 28.11.23

fixed-price component. While the offer of these contracts becoming commonplace was a positive change from the customer's point of view, there were also changes to the terms of existing contract types. There is an indication that the termination clauses of fixed-term contracts have become stricter from the customer perspective. For example, contract penalties may have increased, or termination clauses may have been deleted altogether. In September 2023, the Consumer Disputes Board gave their recommendation that fixed-term contract termination by the consumer based on fairness of pricing should be treated under the Consumer Protection Act. The Board stated that excessive pricing of over 60% compared to average contracts offered during the validity of the contract, and leading to over 600 Euros of annual costs, would give the consumer a right to terminate the contract without penalty.^[58]

During the energy crisis, the customer service channels of many electricity suppliers were constrained to the point that consumers were at times unable to contact customer service. Therefore, there were some limitations to the ability of consumers to exercise their legal rights, such as cancelling rights concerning distance selling or to submit a complaint. In their June 2023 decision, the Consumer Ombudsman found one of the larger suppliers to be non-compliant with the customer support requirements in the Consumer Protection Act. The Ombudsman noted that customers were limited in their capacity to exercise their legal rights due to congestion in the suppliers' call channel. The supplier subsequently committed to ensuring access by customers to their customer service channels as required by the Consumer Ombudsman.^[59]

Compared to pre-crisis levels, the importance of receiving information related to pricing and contractual terms is also highlighted by the increase in energy costs to customers. In June 2023, the Finnish implementation of EU regulation on comparison tools for electricity prices came into force. The regulation established the Energy Authority as the party responsible for running the official sahkonhinta.fi comparison tool. In the past, there have been indications of misleading information and unsupported promises on other price comparison tools.^[60] Similarly, the comparability of prices between different contract prices is sometimes low, as the price information of spot-price contracts is often based on an estimate of average spot prices given by the supplier, whereas the actual price will be based on the spot prices during consumption. However, for the individual consumer, it is not always easy to understand the actual price formation of the different contracts and the resulting prices. In addition to price comparison tools, the importance of a spot-price consumer receiving coupled consumption and price information data is also a key enabler of customer cost management.

58. <https://www.kuluttajariita.fi/fi/index/lautakunnanratkaisuja/maaraaikaisensahkonmyyntisopimuksenirtisanominenennen aikaisestiolosuhteidenmuuttuessa.html>. Date: 28.11.23

59. <https://www.kkv.fi/paatokset/kuluttaja-asiat/asiakaspalvelun-tavoitettavuus-ja-kuluttajan-paaseminen-oikeuksiinsa/>. Date: 28.11.23

60. <https://www.kkv.fi/paatokset/kuluttaja-asiat/alustan-vastuu-sahkon-hintavertailupalvelussa/>. Date: 28.11.23

6.4 Åland

6.4.1 Regulatory framework and organization of the market

Åland is an autonomous region of Finland, in which the government of Åland (Landskapsregering) answers to the parliament of Åland (Lagting). Åland has been granted extensive autonomy, which extends to the energy sector. While the regulatory framework for the electricity market is mostly based on the Finnish regulation, the region has several exceptions and can, due to its status as an autonomous region, decide on its own electricity market laws and other regulatory frameworks. These laws form part of the ÅFS (Ålands Författningssamling) decided by the Lagting and other regulatory frameworks (part of the Ålex) that are decided by Åland's government. A pervasive difference is that the region's energy authority or actors are given the responsibility instead of the nation's authorities or actors. In ÅFS 2015:13 (Landskapslag om Ålands Energimyndighet), the Energy Authority in Åland (Ålands Energimyndighet) is given the authority to supervise and monitor the electricity market.

Relevant authorities and actors

In addition to Åland's own national regulatory authority and electricity market legislation, the transmission network in Åland is operated by an independent TSO, Kraftnät Åland. Åland also has its own agencies and bodies covering consumer matters in the region.

Role	Name	Description
Regulatory authority	Ålands Energimyndighet	The national regulatory authority of Åland oversees the energy market in Åland.
Consumer authority and competition authority	Statens Ämbetsverk på Åland	Consumer and competition matters in Åland are supervised by the General Government Agency of Åland.
	Ombudssmyndigheten	Åland has its own ombudsman, ombudsmanmyndigheten. The ombudsman supports consumers through advice and activities to secure customer interests.
Alternative dispute resolution body	Konsumettvistenämnden Consumer Dispute Board	The Consumer Disputes Board is the ADR body in Åland. The Government of Åland nominates the members of the board.
Industry organization for electricity retailers	N/A	Suppliers can be members of Finnish industry organisations.
Transmission system operator	Kraftnät Åland	Åland's independent TSO handling transmission system and balancing services in Åland.

Regulatory framework

Legislation in Åland is based on the national Finnish framework, with some exceptions. Some of these exceptions are more linked to transmission and distribution of electricity (e.g., voltage, permissions) and will not be included in this report. Other exceptions that are related to electricity law and part of the ÅFS (Ålands Författningssamling), and which have an impact on the electricity market, can be summarized as follows:

- Unbundled energy companies – The provisions on the separation of actors for distribution systems in electricity companies are not applicable to electricity companies in the region.
- Local balance responsibility – Regarding nationwide balance responsibility and settlement, the system operator in the region is responsible for ensuring that the region's electrical system is technically functional and reliable. Additionally, they handle tasks related to regional balance responsibility and flat-rate settlement.
- The transmission network owner is allowed to charge a separate transmission fee for the import and export of electricity to and from its network.
- The TSO and the transmission network owner in the region are responsible for monitoring the development of standards for message traffic and procedures for information exchange in relevant aspects.
- Balance settlement applies in the region - the net consumer's consumption should be calculated based on measurement or based on measurement and flat-rate settlement.
- The regional government grants permission to engage in network operations.
- Flat-rate settlement as a method in balance settlement and procedures for fixed and open electricity supply is described (fixed = a certain amount determined per hour; open = all the electricity the customer needs + balance); today, hourly settlement is used.
- The right to administrative tasks assigned to state authorities according to national law shall be managed by the regional government, to the extent that the administration relates to tasks within the region's legislative authority.
- Application of the law on energy efficiency services for companies in the electricity market is managed by the Energy Authority in Åland according to law 2015:103 rather than the Finnish National Energy Market Authority.

Åland also implements many lesser regulations, such as decrees given by Finnish authorities on energy markets. The decrees implemented include those on invoicing information, on measurement and settlement of electricity delivery, and 10 other regulations. These regulations are set to come into force automatically on the same schedule as in mainland Finland through a decree given by Åland's government (2015:108).

While there are some differences in the legislation related to energy markets, the general consumer protections in Åland follow the same format as the Finnish legislation, including authority setup and interpretation on how the laws are applied. These consumer protections are also monitored locally by the authorities in Åland.

Retailer requirements

In Åland, as in the rest of Finland, retail electricity sales do not require a separate licence. The retailer organisation can be vertically integrated with the DSO, which both the electricity retailers in Åland are. The companies need to have separate accounting for the DSO part and for the retailer part. Suppliers are obligated to publish their prices on their websites and must also inform consumers about the government website providing links to other electricity supply entities. Suppliers also inform the local government about conditions and pricing.

The market in Åland is not connected to the Finnish electricity market data exchange, Datahub. Instead, Åland's TSO has their own data system with all connection points and customers. The retailer does not have to be able to use EDIEI traffic for exchange of information given that the TSO is not using it; rather, information is exchanged with either developed APIs or via email.

Retailers follow the General Terms of Electricity Sales and Supply in Åland (EFV2017, EFV2017), which are an adaptation of the Finnish general terms of electricity sales and supply. Updates and changes to the local general terms are led by the DSO in collaboration with the local actors in Åland.

Invoicing

The regulatory principles on the invoicing of electricity sales in Åland follow those in place in Finland, as Åland adopts the Finnish Energy Authority's decree on information required in the invoicing of electricity. In Åland, it is more common to have an integrated supplier DSO, and many customers therefore receive invoices covering both electricity supply and DSO billing. Similar to Finland, combined billing is not a requirement in Åland, meaning that some customers with a different electricity supplier and DSO receive two invoices. Since only a few customers have a separate supplier and a separate DSO, the retailers do not want to develop functionality in their systems to be able to combine electricity supply with grid fees from the other DSO in the future.

Similar to Finland, the legislation and the general terms of electricity sales in Åland give retailers the right to potentially obtain reasonable security or prepayments from consumers before the contract is signed, if there are compelling grounds. The possibility of doing so after the contract is signed is more limited.

Contracts

The legal framework for electricity supply contracts is the same in Åland as in the rest of Finland, including supplier notice periods, contract termination principles, and the obligation to deliver rules stemming from the Finnish Electricity Market Act. Similarly, the General Terms of Electricity Sales and Supply in Åland are mostly based on the general terms of electricity supply in Finland. However, there can be some variation on these terms, as they are adapted to the local market environment in Åland based on how national laws are applied in the region.

Marketing

The legal framework for consumer protection follows the same regulation as the rest of Finland. Åland has its own authority for competition and customer rights (Statens Ämbetsverk på Åland), as well as an ombudsman promoting consumer rights (Ålands ombudsmansmyndighet) that handles customer protection matters locally.

SMEs' customer rights

Commercial customers do not enjoy consumer protections in Åland or in Finland. However, the electricity market-specific regulations applied to small customers with less than 3 x 63 A main fuse connections and up to 100,000 kWh of annual consumption provide some additional protections compared to larger businesses, the regulatory frameworks for which are the same in Åland as in the rest of Finland.

Sanctioning

In Åland, the local energy authority has a similar mandate to oversee conformance to legal requirements in the energy sector as the Finnish Energy Authority has in the rest of Finland. The local consumer and competition authorities also hold sanctioning powers related to consumer protection or competition infringements.

Government response to the energy crisis

Åland's autonomy gave the local government leeway to decide on whether some of the schemes implemented in Finland would also be made available in Åland. Like in Finland, a temporary VAT reduction on the energy component of electricity bills (from 24% to 10%) was applied in Åland for five months during the winter of 2022–2023. In addition, the interlinked schemes to provide support amid high electricity prices via deductions in personal taxation or through social security benefits were made available in Åland. However, Åland did not implement the automatic compensation scheme through supplier billing for high energy component costs, which was also in place to cover half of the costs over 10 cents/kWh for spot- or fixed-price customers in Finland over a four-month period during the winter of 2022–2023. The latter scheme was adopted under the administration of the Finnish ministry responsible for energy, while other schemes were administered by other ministries.

In addition to financial schemes, Åland ran its own energy-saving campaign complementing the national campaign launched in Finland. The local campaign was organized by Smart Energy Åland in cooperation with local energy sector actors and the government.

To provide support for the increased capital demands of electricity suppliers in the autumn of 2022 caused by price volatility and liquidity issues in financial markets, the Åland government started to prepare a bank guarantee scheme. However, the suppliers in Åland did not utilize this scheme and instead used other types of options to cover their funding through the period of price volatility.

6.4.2 Competitiveness and functioning of the market

Competitive landscape

Due to the regional framework, there are some entry barriers for suppliers seeking to act in the electricity market in Åland. The "Landskapslag (1996:47) om rätt att utöva näring" establishes the criteria for a company to operate in Åland, including requirements on how the company must be connected to Åland. Furthermore, the supplier must use a local balance responsible partner; there are currently four companies with balance responsibility towards Åland's TSO. Of the four, two operate as retail suppliers in Åland. In addition to the requirements on setting up a supplier company in Åland, the fact that the legal framework is based on the Finnish regulation while the price area belongs to Sweden SE3 makes it harder for electricity retailers from either Finland or Sweden to enter the market. No licences are required to set up supplier operations in Åland. If a local actor wishes to go into the energy business, the interviews with some of the actors indicate that it is rather easy to start a retail company, while some focused more on the entry barriers mentioned above and the limitations of the market size. According to the interviews, gaining permission from the local government (Ålands landskapsregering) to set up a company operating in Åland was seen as a smooth process; in contrast, the interviewees saw the market size in Åland as the likeliest hindrance, as small markets can be viewed as less attractive for potential new entrants.

The current competition landscape is based on two integrated electricity retail supplier DSOs operating in the Åland market. Until the spring of 2023, a balance provider and wind park operator also operated as a third supplier option in Åland, with customers mainly in larger consumers and company segments. According to the interviews, there are approximately 32,000 customers in Åland; approximately one third live in the grid area for one of the suppliers, and the remainder are in the grid area for the second supplier. According to the interviews, only a handful of customers have changed suppliers, indicating almost full correlation between a customer's electricity supplier and their DSO.

Company ownership also has an impact on how they act in the market. The two suppliers in Åland are either owned by the municipality or operate as an economic cooperative owned by their customers, which can mean that the companies may focus less on financial targets and more on giving customers a stable and reliable electricity supply. Neither company seems to actively try to gain customers from the other; for example, one offers fixed-price contracts only to customers located in their DSO area. In the interviews, the suppliers mentioned that they also have limitations on how customers can change contract types. For example, one of the suppliers has a limitation on moving from an open-ended tariff-based variable-price contract to a spot contract whereby the customer must stay on a spot contract for one year before switching back to tariff-based contracts. This limitation is in place so that customers cannot use spot-price contracts during summertime and tariff-based contracts

during wintertime, which would increase the supplier's risk exposure. Overall, even if there are all possibilities for the market to function, in practice, there is very little competition in the market, and it is very similar to the market function in Finland and Sweden prior to deregulation (Finland 1995, Sweden 1996).

Contracts and prices

According to the legislation proposal 28/2022-2023 from May 2023, electricity retailers with significant market influence must publish their prices to consumers and SMEs free of charge and make it possible for consumers to compare offerings. This change stems from the EU legislation on the required implementation of electricity comparison tools. Retailers must also inform consumers that links to other electricity supply entities are provided on the Åland government website.

Both suppliers offer similar contract types, which are published on each company's website. They generally offer two contract types: a variation on tariff-based prices that are open-ended (similar to Finnish variable-price contracts), and dynamic-price spot contracts. In the open-ended tariff-based contract, the price is fixed for an open-ended period, which is then updated with a notice period of one month several times a year. These contracts often have a price variation between peak time and non-peak time, such as separate daytime and nighttime tariffs. One of the suppliers in Åland has over 90% of customers on contracts based on these open-ended tariff contracts. The suppliers also offer spot-price contracts, which are mainly favoured by businesses. Since the supplier companies are also DSOs, the electricity supply and distribution prices are usually shown together on the price lists.

The other supplier operates as a business cooperative owned by its customers and only offers tariff-based variable-price contracts to customers who are located in the same DSO area. This means that the customers of the second supplier have only one contract option with a fixed-price element. Generally, there seems to be rather limited marketing activity in the retail electricity market in Åland, as neither supplier is actively gaining new customers, also resulting in little to no win-back activity.

Åland's TSO publishes both suppliers' open-ended contract prices along with SE3 and FI market area spot prices on their website. This tool can be used by the consumer to compare historical prices. During the June 2022 – May 2023 period, the two suppliers' open-ended contract prices were, on average, 25% below the average monthly spot prices in the SE3 price area.^[61]

Impacts of energy crisis on suppliers

The financial and liquidity effects on suppliers operating in Åland were similar to other Nordic countries, as price volatility and liquidity issues raised the costs of hedging and increased collateral demand. The suppliers continued to offer their tariff-based variable-price contracts to their customers throughout the price volatility. In addition

61. <https://kraftnat.ax/elpris/> Date: 16.1.2024

to the two largest suppliers, a smaller supplier provided spot-price dynamic contracts to customers in Åland; however, the supplier stopped offering retail contracts in early 2023, citing a decision made earlier based on the business environment for a small supplier and the decision to focus on their main business operations.^[62]

Availability of fixed-price contracts, or contracts with fixed-price elements

While the main suppliers in Åland continued to offer their open-ended variable-price contracts and spot contracts through the price volatility, other types of fixed-price contracts, such as the fixed-price and fixed-term contracts popular in mainland Finland, were not made available to customers during the crisis and as of late 2023. The suppliers have also placed some restrictions on switching between contract types, limiting switching activity between contract types within the same supplier, which have generally been open-ended for two weeks on the customer side. In practice, this limits the timing of contract types seasonally by, for example, having spot contracts during the summer and open-ended fixed-price contracts during the winter; this can create a lock-in into a type of contract that is usually offered as open-ended. During the crisis, the suppliers witnessed increased interest from some customers wishing to optimize the differences in contract prices using spot-price contracts during summer and variable-price contracts during winter. In the interviews, the suppliers mentioned some considerations over bringing further contract types to the market.

6.4.3 Customer behaviour

While customers in Åland were not surveyed for this study, the interviewed stakeholders reported no significant increase in customer complaints or congestion of customer service channels, and very few cases have been submitted to the consumer and competition authorities regarding the region's electricity market. One supplier reported having conducted their first customer survey following the principles for CSI (customer satisfaction index) during 2023, but trends on the development of customer satisfaction over time are not available.

As Åland is a limited market area with only a few suppliers, a high correlation between a customer's DSO and supplier, and a more limited selection of contract options, there are also differences in aspects of customer behaviour compared to larger market areas in the Nordic countries. Regarding customers' contract preferences during and after the price volatility in the past two years, there has been no indication of a larger shift in contract type preference from variable-price open-ended contracts to dynamic spot contracts based on the interviews. In Åland, less switching between contract types or suppliers could be attributed to many reasons, such as the correlation between the local DSO and the electricity supplier, or not having fixed-price and fixed-term contracts, which cause natural periodic switching

62. <https://alandsradio.ax/nyheter/allwinds-slutar-salja-el-kunder> Date: 16.1.2024

when contracts end. In the interviews, it was noted that some customers may not be aware of the options to switch suppliers or how to compare contracts. It was also highlighted that customers are very loyal to their suppliers and that the supplier's capacity to offer stable prices over time is a source of high trust among their customers.

7. Iceland

7.1 Regulatory framework and organization of the market

7.1.1 Relevant authorities and actors

Several authorities have a role in regulating and overseeing the retail market for electricity in Iceland; they are presented alongside the relevant regulations they manage in Table 7-1.

Table 7-1: Actors and relevant regulations

Role	Name	Responsibility
Regulatory authority	Orkustofnun	Operates for the benefit of society and in line with Iceland's energy policy. Oversees aspects such as pricing (revenue and tariffs), quality, and security of supply. Mission to build knowledge in its areas of operation, such as energy production, utilization, and climate issues, and to practise efficient and transparent governance as well as independent and rigorous supervision. Orkustofnun oversees Orkusetur, which runs the price comparison tool for consumers.
Consumer authority	Neytendastofa	Responsible for ensuring the enforcement of legislation laid down to protect the safety of consumers and consumers' legal protection in various transactions with business operators.
Competition authority	Samkeppniseftirlitið	Promotes effective competition in economic activities, thereby increasing the efficiency of the productive factors of society. The supervisory work of Samkeppniseftirlitið extends to all forms of business activities, regardless of whether such activities are conducted by individuals, companies, public entities, or other parties.
Consumer council	Neytendasamtök Íslands	Membership-based association with the main objective of safeguarding the rights of consumers in Iceland. Offers members free legal guidance and assistance if needed, and provides general legal guidance and information for non-members during opening hours on Thursdays.
Industry organization for electricity retailers	Samorka	The association of the Icelandic electricity industry, district heating, waterworks, and sewage utilities in Iceland. The federations's purposes and tasks are forwarding the mutual interests of its members, guarding their interests in mutual projects, fostering research and gathering information for its members as well as for public authorities, hosting seminars and conferences, and acting on behalf of members in mutual projects.

7.1.2 Regulatory framework

Retailer requirements

The retail market in Iceland is a free market in which anyone can start a company and become an electricity supplier if certain conditions are met. Electricity retailers are not required to have their own production, which means that companies in the retail market may either produce electricity or not.

Electricity retailers are required to have a licence from the National Energy Authority to engage in electricity trading. This licence will only be granted to independent legal and tax entities. To perform their obligations in relation to operation, applicants must demonstrate their financial capacity. Companies that sell electricity must possess minimum capital of ISK 15,000,000 (around EUR 98,000) and provide a 36-month plan outlining the scope of electricity sales and how they will supply electricity to meet sales agreements. A fee of ISK 50,000 (around EUR 327) must be paid for an electricity trading licence.^[63]

Under Icelandic law, a single power company can function as generator, distributor, and supplier. However, accounting separation is required between concession (transfer of electricity in a certain area) and competitive activities.^[64]

Invoicing

The required information to be included in invoicing follows government regulation.

Customers in Iceland receive two separate bills: one from the electricity retailer and one from the distributor. In addition, they should receive information about the source of electricity on their electricity bill once a year. Payment is due after the period charged.

Contracts

Customers are free to choose their electricity supplier, and change of electricity suppliers is free of charge for the customer. The customer can change electricity retailer by contacting the new electricity retailer; the new electricity retailer will take care of the change.^[65] Customers can also switch contracts using the price portal.

The customer can terminate a contract with notice of three months or less.^[66]

Households and SMEs that use less than 0.5 GWh per year are allowed to withdraw from a contract with three weeks' notice. All retailer switches take place at the start of a new month. Customers that use between 0.5 and 1 GWh per year have a three-month notice period, while consumers of more than 1 GWh per year can have a longer notice period.

63. https://orkustofnun.is/en/national_energy_regulatory/licensing#retail-license. Date: 20.11.23

64. <https://askjenergy.com/iceland-introduction/the-electricity-market-and-isbas/>. Date: 21.11.23

65. https://orkustofnun.is/en/national_energy_regulatory/energy-user/electricity-supplier. Date: 21.11.23

66. <https://www.government.is/media/atvinnuvegaraduneyti-media/media/acts/Act-No-65-2003-on-Electricity.pdf>. Date: 20.11.23

While there are no requirements on how to find information about contracts for electricity retailers, this information is made available by the consumer-facing price comparison tool.

The electricity retailer can change the contract whenever they want and publish information about the changes on their website. Customers should receive an email about the changes if they have signed up to do so.

Marketing

The marketing of electricity contracts in Iceland follows from the general marketing regulations. Therefore, there are no particular requirements for marketing of electricity contracts. There are no telephone sales or direct sales on the street in the electricity market in Iceland.

SMEs' customer rights

Consumer protection in Iceland covers both households and SMEs. The Consumer Agency provides the public (consumers as well as business operators) with relevant and up-to-date information concerning legal rights and obligations in transactions with consumers, including issues concerning the security of measurements and products.

Sanctioning

The National Energy Authority can issue a written warning and provide a reasonable deadline for rectification if an electricity supplier fails to comply with the Electricity Act, regulations on the execution of the Electricity Act, conditions of the licence, or other provisions. If the electricity supplier does not comply with the warning within the specified timeframe, the National Energy Authority may withdraw or change the licence. In cases of serious violations or neglect, or if it is evident that the electricity supplier cannot meet its obligations according to the licence, the National Energy Authority may withdraw the licence without issuing a warning.

Customers who believe that an electricity retailer is acting unlawfully in its decisions, actions, or emissions can contact the Energy Regulatory Authority. If the electricity retailer does not act in accordance with the provisions of electricity laws, the Energy Regulatory Authority may demand that corrective measures be taken, and penalties may be imposed.^[67]

The Consumer Agency is empowered by law to use various sanctions and enforcement measures if necessary, such as sales bans, recalls, fines, and other measures as laid down in the legislation. As the competition authority, Samkeppniseftirlitið have sanctioning power over violations of the Competition Act.

67. https://orkustofnun.is/en/national_energy_regulatory/legal-framework-and-regulations, Date: 21.11.23

7.1.3 Government response to the energy crisis

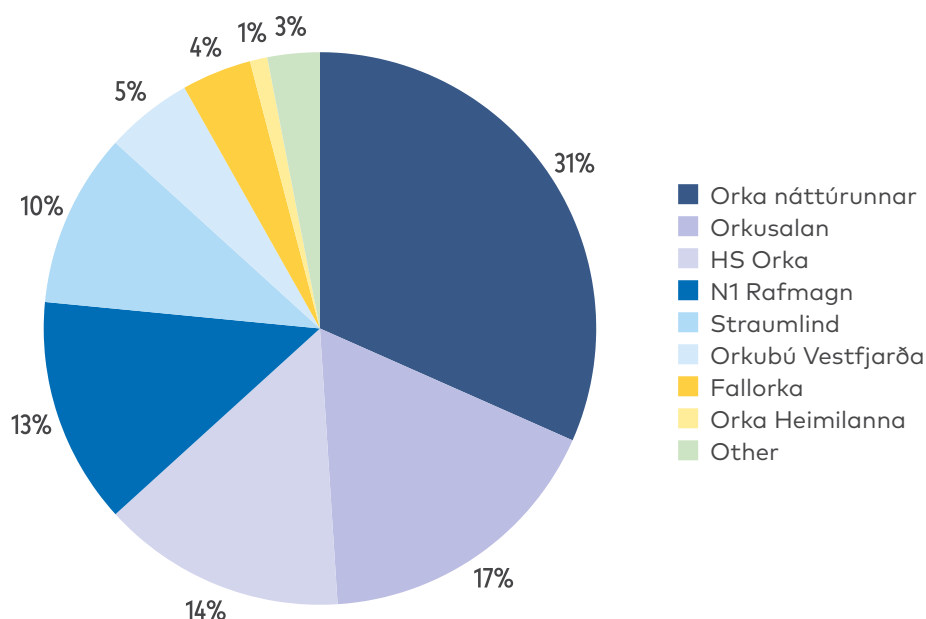
The Icelandic government has not implemented any measures in response to the energy crisis. The electricity grid in Iceland is not connected to any other countries, meaning that the country is self-sufficient. As a result, electricity prices in Iceland have largely been unaffected by the energy crisis in Europe, and no countermeasures have been deemed necessary.

7.2 Competitiveness and the functioning of the market

7.2.1 Competitive landscape

Competition in the Icelandic electricity retail market has improved over the past five to 10 years, although it still lags behind the level of competition seen in other Nordic markets. In 2005, the traditionally vertically integrated companies were split up; from 2006, all electricity users had the right to choose their electricity retailer. Despite this, small independent electricity retailers did not enter the market until 2016. There are currently nine electricity retailers in the Icelandic retail electricity market, and with the introduction of new companies, Iceland now has four electricity retailers that do not offer power production. The market shares of the largest electricity suppliers are high; the market is characterized by a few large electricity retailers and a few smaller ones. Statistics from the household survey show that the five largest retailers (by market share) account for 85% of the total market (Figure 7-1), and the single largest retailer has a market share of 31%. The largest suppliers in the market are those that were traditionally vertically integrated, while the smaller ones are new entrants without, for instance, power production in the same conglomerate. Using the results from our household survey, we estimate the Herfindahl-Hirschman index of the retail market to be 1,900, indicating a moderately competitive market with a reasonable number of firms.

Figure 7-1: Market shares of the nine largest retailers (Iceland)



Note: The market shares are estimated from a survey conducted amongst Icelandic households in October and November of 2023. The shares are weighted. N=36

In the wholesale electricity market, direct competition is rather limited, primarily due to Landsvirkjun's dominant position. While various other electricity retailers are also electricity producers, the majority of their generated electricity is dedicated to serving their own customers, leaving the independent electricity retailers with minimal surplus for the wholesale market unless they purchase it from Landsvirkjun. Landsvirkjun has 70% of electricity production, with most of the electricity produced (80%) sold to energy-intensive industries via long-term contracts; the remaining 20% is bought by public utilities and the Icelandic TSO.^[68] The absence of a functioning wholesale market poses challenges for electricity retailers in achieving fair competition, as prices are determined by Landsvirkjun, leading to a market primarily built on bilateral agreements between Landsvirkjun and the electricity retailers. There is also no financial market for electricity in Iceland, making risk management and price hedging difficult. The lack of a functional financial market also removes essential price signals in the market.

It is not difficult to obtain a licence to operate as an electricity retailer in Iceland, and some new electricity retailers began entering the electricity retail market in 2016. However, there seem to be some substantial entry barriers to the Icelandic market. In particular, electricity retailers with their own power production seem to have

68. <https://askjaenergy.com/iceland-introduction/iceland-energy-sector/>. Date 29.11.23

significant competitive advantages over those that do not, as they have better potential to purchase electricity. All electricity retailers are subject to the same prices from Landsvirkjun, but retailers with their own production can potentially obtain lower electricity costs, as they have an extra alternative to purchasing their electricity. The margins in the electricity retail market are already low, so retailers who have their own power production enjoy advantages over other electricity retailers.

Iceland has a relatively small proportion of customers who switch their electricity retailers, particularly among households but also for SMEs. In 2017, there were approximately 370 customer switches for households, even though there are about 140,000 household customers in the country. This low mobility is likely due to how low the energy consumption of households is, with an average of about 4,500 kWh per year and annual energy bills of 225–250 Euros. As such, the potential amount of money that households can save per year is minimal. Icelandic SMEs also have relatively low electricity consumption and are thus unlikely to be particularly active in seeking cost-effective electricity purchases. Approximately 150–200 companies switch their electricity supplier annually.

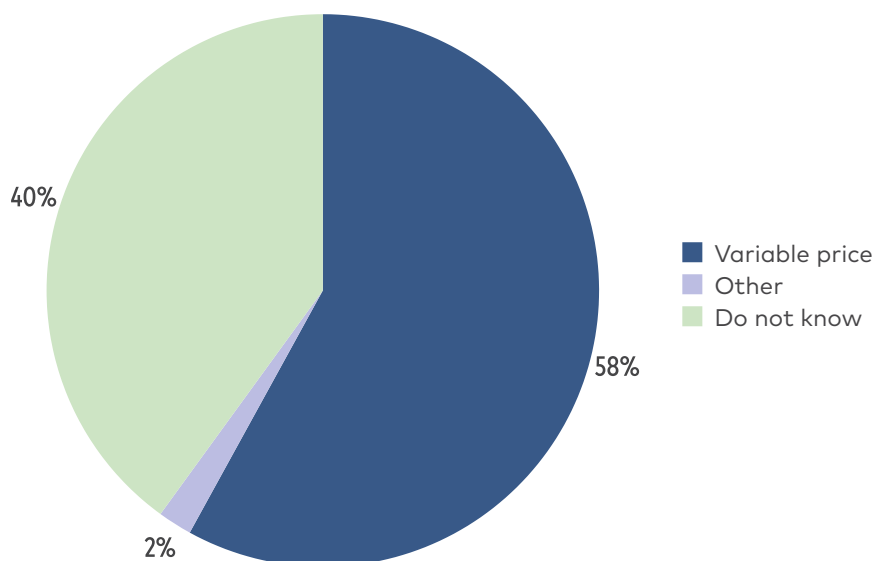
Despite the low mobility in the Icelandic market, some evidence indicates the emergence of new electricity retailers contributing to increased competition and, in turn, lower prices for consumers in the electricity retail market. The lowest offered price to households has decreased by 20% from 2018 to 2021. According to Landsvirkjun, the same also holds for the non-household segment. However, it is too early to attribute these lower prices to increased competition between electricity retailers, as the lower prices may also be caused by demand and supply effects.

7.2.2 Contracts and prices

According to our survey, 83% of respondents indicated that they could find at least one contract that aligned with their needs and preferences, while 13% did not know whether the available contract types met their needs. For those who did find at least one relevant contract, 16% found just one, 42% found two or three, and 25% found more than three.

The most prevalent electricity contract among Icelandic households is a variable-price contract (Figure 7-2). The remaining 40% do not know which type of contract they have. A variable-price contract in Iceland entails a fixed-price contract where the price can change several times throughout the year; in practice, this typically happens once a year.

Figure 7-2: Contracts (Iceland)

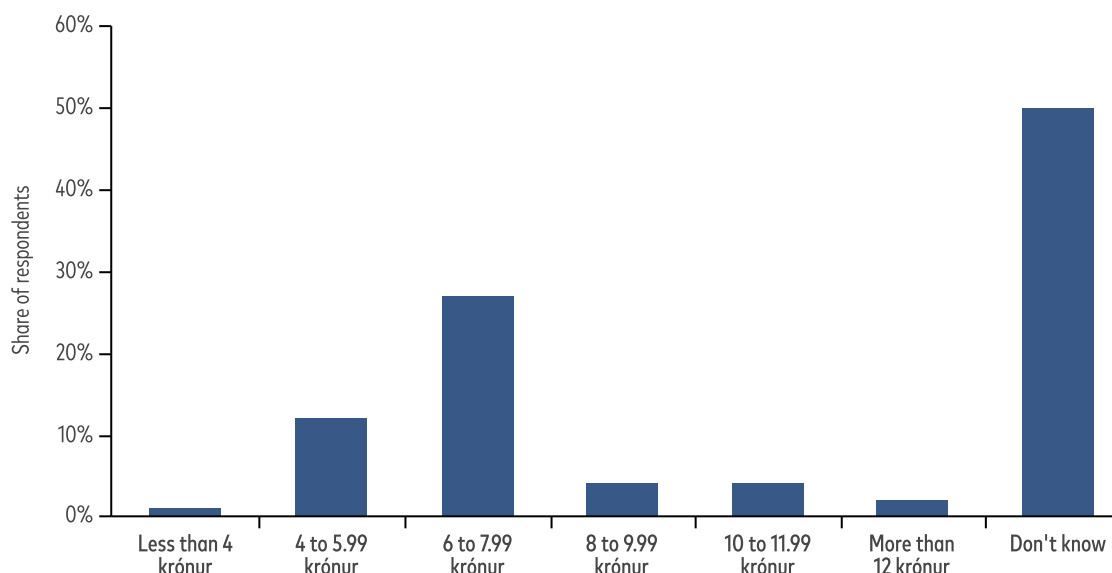


Note: The contract shares are those reported by respondents in a survey conducted amongst Icelandic households in October and November of 2023. The shares are weighted. N=369.

In the survey, we assessed Icelandic households' awareness of the pricing details in their contracts. For variable-price contracts, approximately 30% of respondents have a price range of 6–7.99 krónur/kWh, while around 10% fall within the 4–5.99 krónur/kWh range. In addition, 50% do not know the price per kWh for their variable-price contracts; this high proportion is likely due to the customers' entering the contract a long time ago. However, this is not a surprising result given how low and stable prices have been in the retail market, as well as how the electricity bill constitutes a very low sum in a typical household's budget. Electricity prices in Iceland are much lower than other OECD countries, as Iceland's renewable energy resources are abundant and available at a low cost.^[69]

69. <https://askjaenergy.com/iceland-introduction/iceland-energy-sector/>. Date: 29.11.23

Figure 7-3: Per kWh price for variable price contracts (Iceland)



Note: Price per kWh for respondents with a variable price contract. In Icelandic króna. Survey conducted in October and November of 2023 amongst Icelandic households. N=227.

Impacts of the energy crisis

The European energy crisis had no direct impact on Iceland's electricity retail market, primarily because it operates as a closed system without interconnections to other countries through cables, thus preventing any increase in electricity prices. There was, however, a large increase in aluminium smelting production, driven by rising international aluminium prices at the same time as the energy crisis occurred. Aluminium smelters constitute a significant part of the industrial activity in Iceland and thus the country's energy consumption. This increase in production, therefore, led to much higher electricity demand during this period. That said, the low energy prices during the crisis compared to the rest of Europe did attract new industries, particularly power-intensive companies seeking cheap power sources.

The heightened demand for electricity drove up prices in the wholesale market, resulting in increased operational costs for many companies. While some of these costs were passed on to customers in the form of higher prices, a substantial number of companies opted to internalize these expenses rather than transferring the full cost increase to their customers. As a result, the already low profit margins for several electricity retailers in Iceland were further reduced.

Electricity prices in Iceland are largely influenced by the state-owned company Landsvirkjun. Landsvirkjun has 70% of the power production in Iceland, and the

absence of a wholesale market grants Landsvirkjun significant control over the price of electricity. Iceland also still lacks a functional financial market for electricity trading. The absence of such a financial market means that future electricity prices cannot be effectively set, which leaves consumers potentially exposed to price fluctuations without the ability to secure long-term price stability through financial instruments. This absence of both a functional wholesale market and a financial market are unique challenges facing the Icelandic electricity market.

A significant present-day concern in Iceland is that the supply of electricity is expected to fall below the growing demand in the near future. Landsvirkjun reports that they were operating at full capacity as of September 2023.^[70] This creates potential challenges regarding energy shortages and maintaining a stable and affordable power supply for both existing industries and those newcomers attracted by low energy prices.

Availability of fixed-price contracts, or contracts with fixed-price elements

In Iceland, variable-price contracts are the prevailing system for electricity contracts, and the country does not have a market for spot prices. Prices are typically adjusted once a year, often on 1st January, when Landsvirkjun also adjust their prices. Electricity retailers purchase electricity from Landsvirkjun once a year through bilateral agreements. Although prices are typically fixed for a year, consumers can change electricity supplier at three weeks' notice.

Approximately all household customers and a little under 50% of SMEs still rely on manual electricity meter readings, according to the market actors interviewed. This imposes limitations on the types of agreements that can be established. In contrast, a greater share of larger companies have adopted smart meters, which allow for diverse pricing strategies, such as peak power pricing and longer contract options.

The dominance of variable-price contracts can also be credited to the fact that Landsvirkjun is the main power producer for the electricity retail market, and electricity retailers source their power from Landsvirkjun or their own production through fixed contracts. The wholesale electricity price is set by Landvirkjun, with no price fluctuation during the day. While some seasonal price variability exists, this is typically not passed on to the customer. As far as we have understood, the markup may be significant, at least compared to markups on spot-price contracts in other countries.

Electricity retailers in Iceland are only able to secure energy from the wholesale market for a maximum period of just one year, typically through closed contracts with Landsvirkjun. This limited timeframe makes it particularly challenging to predict electricity utilization during the winter season. However, electricity retailers do have the option to buy more, but this typically comes at a higher cost. This can be

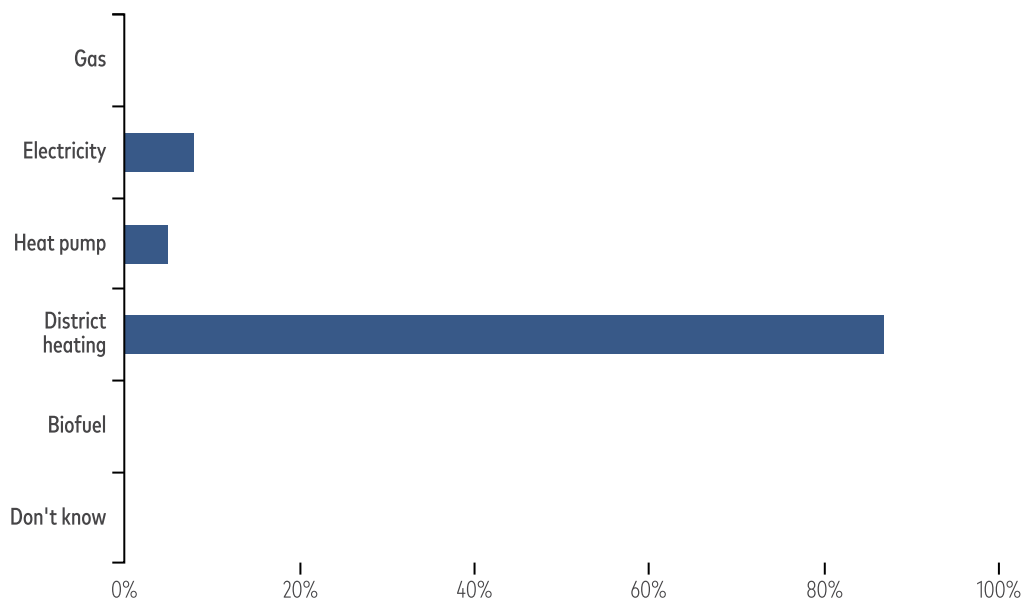
70. <https://www.landsvirkjun.com/news/pressing-energy-matters>. Date: 28.11.23

particularly challenging for electricity retailers who do not have their own energy production and are therefore dependent on purchasing electricity from Landsvirkjun. Overall, this limits the electricity retailers' ability to expand in the market, thereby restricting the potential for well-functioning competition in the electricity sector.

7.3 Customer awareness and satisfaction

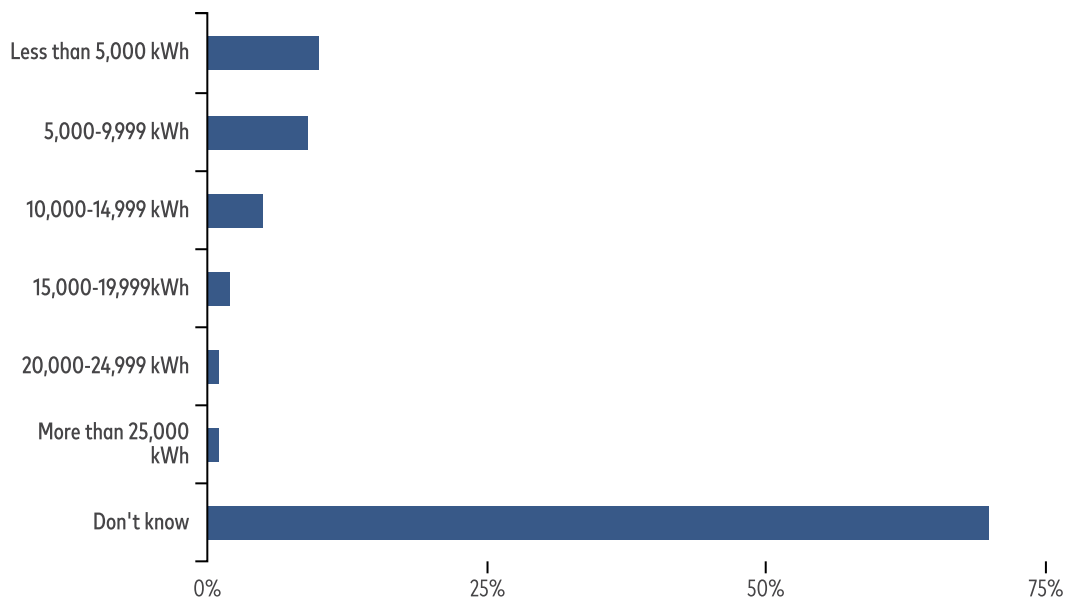
The most important source of heating of households in Iceland is district heating (Figure 7-4). While district heating is the most important source of heating for around 90% of households, electricity is the most important source of heating for 8% of households. Although 70% of households do not know their electricity consumption per year, consumption is low for those who do (Figure 7-5).

Figure 7-4: Most important source of heating (Iceland)



Note: The graph shows the most important source of heating in the household. Survey conducted in October and November 2023 amongst Icelandic households. N=555.

Figure 7-5: Household electricity consumption per year (Iceland)



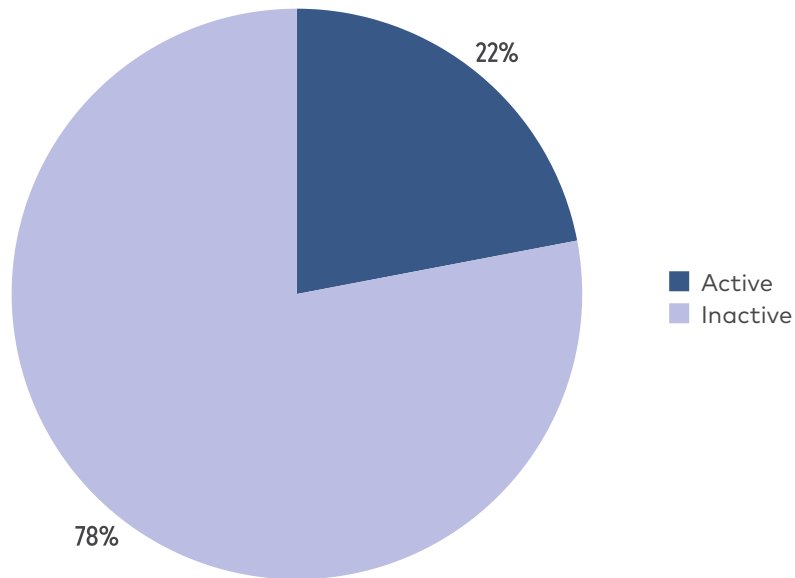
Note: The graph the reported yearly electricity consumption. Survey conducted in October and November 2023 amongst Icelandic households. N=369.

7.3.1 Awareness during search and switching

Electricity is generally a low-interest product in Iceland, as prices are low and most heating comes from geothermal energy sources. In the survey, respondents were asked about issues related to comparing and switching contracts, whether they felt well informed to do so, and other relevant issues.

Figure 7-6 illustrates that only 22% of respondents had engaged in either switching or comparing electricity contracts in the preceding 12 months. This suggests that Icelandic households are for the most part inactive, which supports the notion that competition in the Icelandic market does not function optimally.

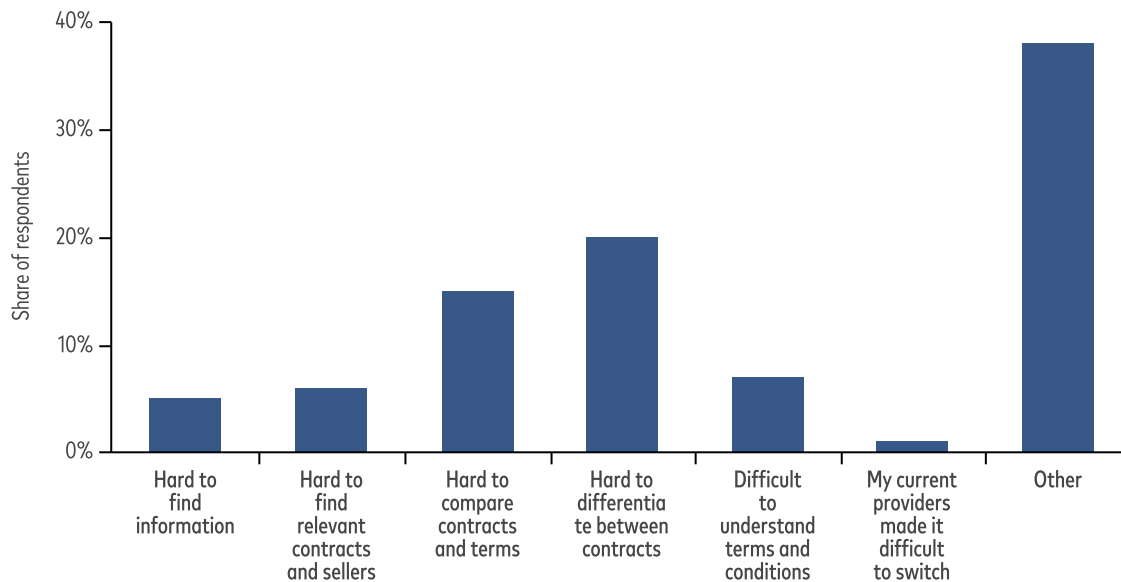
Figure 7-6: Share of consumers active in the electricity market last 12 months (Iceland)



Note: The graph shows the share of respondents who have either switched or compared electricity contracts during the previous 12 months. Survey conducted in October and November of 2023 amongst Icelandic households. N=369.

Those respondents who reported facing challenges when switching or comparing contracts had one or multiple reasons for the difficulties they encountered. The results emphasized two main challenges: the difficulty in distinguishing between various contracts, and the complexity of comparing contract terms. Additionally, understanding the terms and conditions posed a challenge for some respondents (Figure 7-7). The main challenge reported by the respondents was due to 'other' reasons.

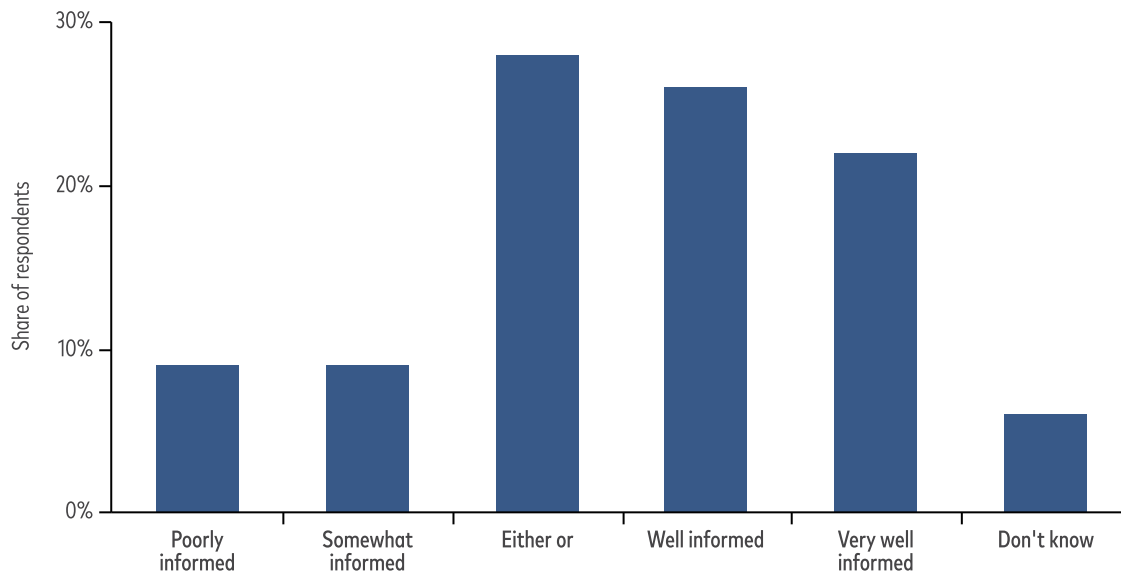
Figure 7-7: Challenges in switching or comparing contracts (Iceland)



Note: The graph shows the percentage of respondents who have recently switched or compared contracts that experienced challenges when doing so. Multiple choices were allowed. Survey conducted in October and November 2023 amongst Icelandic households. N=78.

Among the respondents who had compared or switched contracts, approximately 50% reported feeling well to very well informed, while approximately 30% felt neither informed nor poorly informed when it came to switching or comparing contracts (Figure 7-8). Conversely, less than 10% expressed feeling poorly informed in these situations. These results may appear somewhat surprising considering that a significant portion of respondents reported challenges in differentiating between contracts, comparing contract terms, and comprehending terms and conditions. This may suggest that the respondents were able to grasp the necessary information to make an informed decision, but that the process itself may be unnecessarily difficult and time-consuming.

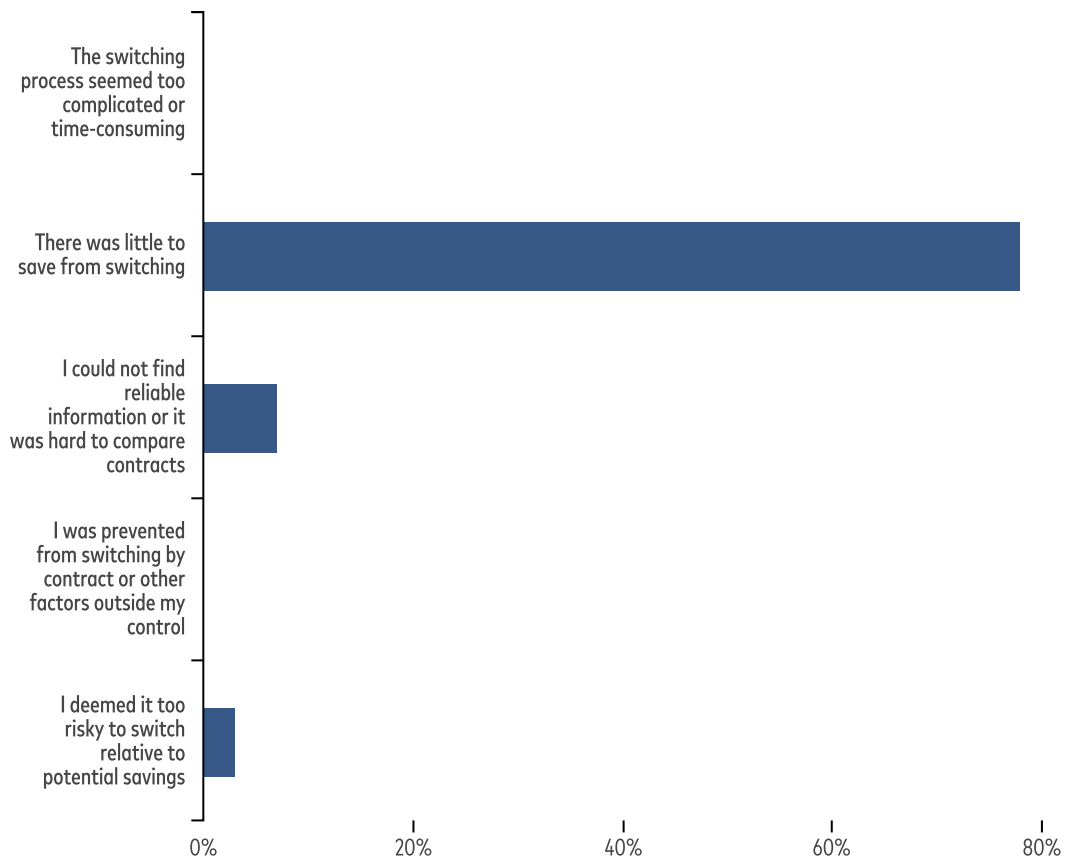
Figure 7-8: How informed respondents felt when switching or comparing contracts (Iceland)



Note: The graph shows how well-informed respondents who have recently switched or compared contracts felt. Survey conducted in October and November of 2023 amongst Icelandic households. N=78.

Household respondents mentioned various reasons for not switching or comparing contracts. Approximately 80% stated that their primary reason was the lack of considerable savings associated with switching (Figure 7-9). Furthermore, 7% of respondents chose not to switch due to a lack of reliable information and difficulties in comparing contracts. This implies that these consumers are price-driven, which may contribute to more effective competition, all else being equal.

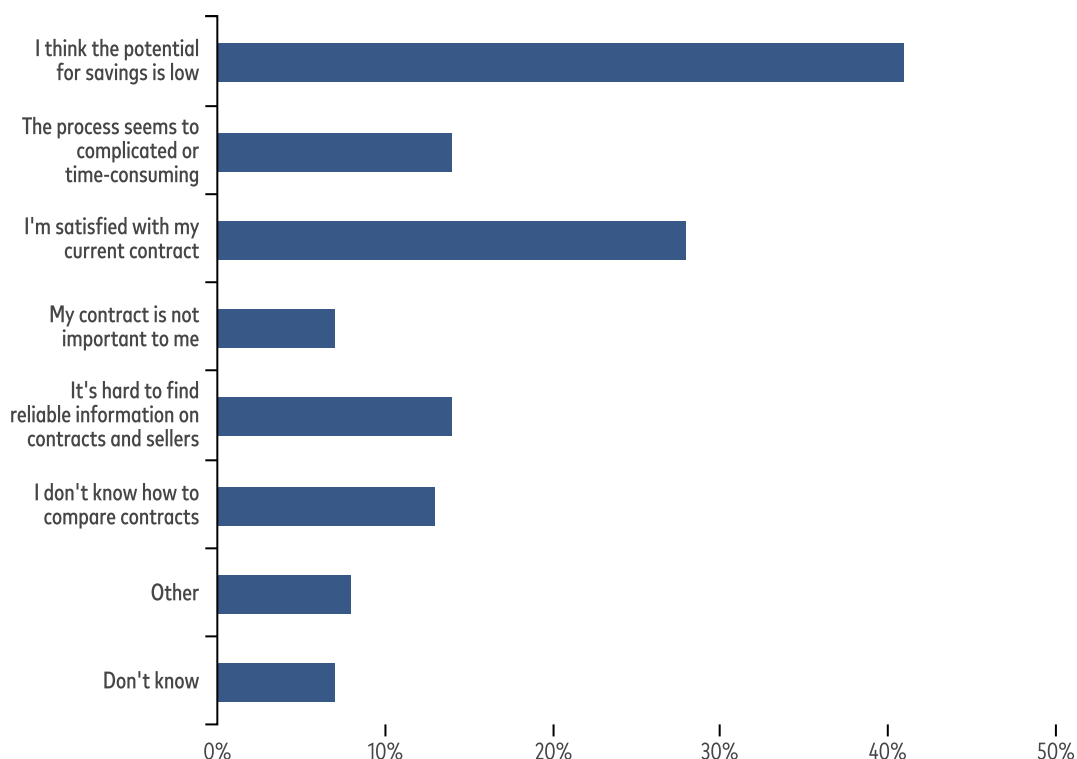
Figure 7-9: Reason for not switching after comparing contracts (Iceland)



Note: The graph shows why those who have compared but not switched contract, ultimately chose not to switch. Survey conducted in October and November of 2023 amongst Icelandic households. N=42.

The Icelandic market has been characterized by low mobility, and there are various reasons why consumers have refrained from switching and comparing contracts. The survey results show that the primary reason is the perception of limited potential for savings in a new contract. The second most prevalent reason is the high level of satisfaction with existing contracts (Figure 7-10). Other reasons included that it was hard to find information on contracts and sellers. This could suggest that the competition on price in the market is restricted, or alternatively that households' electricity consumption is so modest that even a minor percentage fluctuation in prices among electricity retailers would not yield substantial monetary savings for end-consumers. The limited potential for savings, coupled with the considerable time and effort required to seek out a more favourable contract, thus prevents consumers from engaging in the process of contract switching or comparison.

Figure 7-10: Reason for not switching or comparing contracts more often or at all (Iceland. Multiple choices allowed)

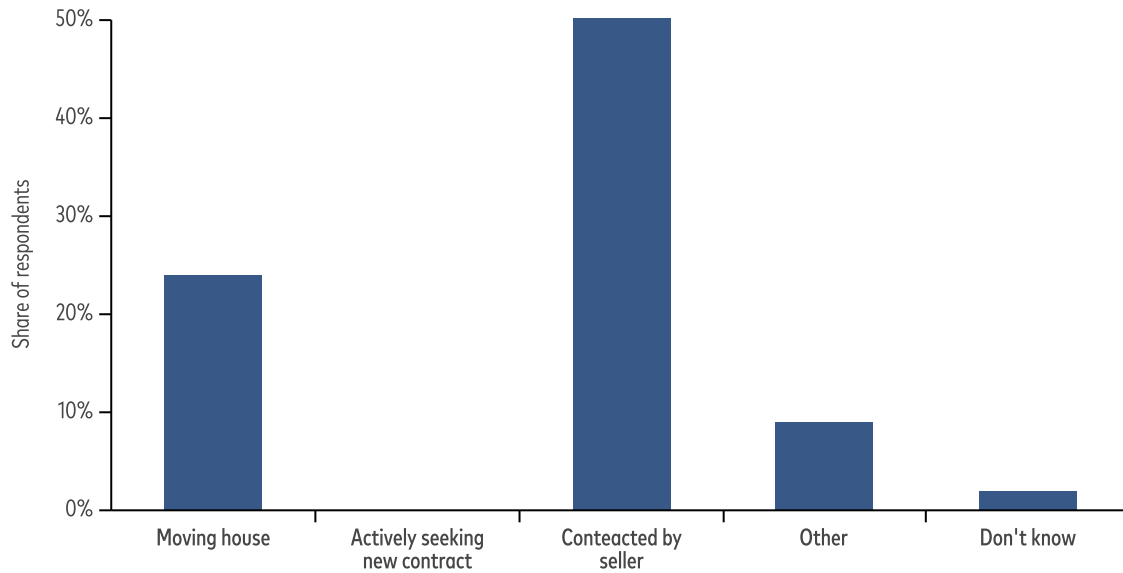


Note: The graph shows why those who have not compared or switched contracts within the last 13 months, have not done so more often. Survey conducted in October and November of 2023 amongst Icelandic households. N=314.

Among the active customers, the context for switching contracts varies between consumers: 65% of those who had switched contracts did so because they were contacted by a seller, while 25% did so because they were moving. None of the respondents reported that they had switched contracts because they were actively seeking a new contract, which implies that the minority who are active customers chose not to actively seek a new contract with the intention of finding a better option, instead accepting an offer when contacted. Furthermore, when consumers are approached by sellers, they may be led into contracts that are not in their best interest, especially if they are not well informed about their current contract. Ultimately, these factors pose a challenge to competition in the market.

Win-back is not a strategy that many electricity retailers in Iceland use: Only 7% of consumers responded that they had been contacted by their previous supplier after switching to a new one (N = 36).

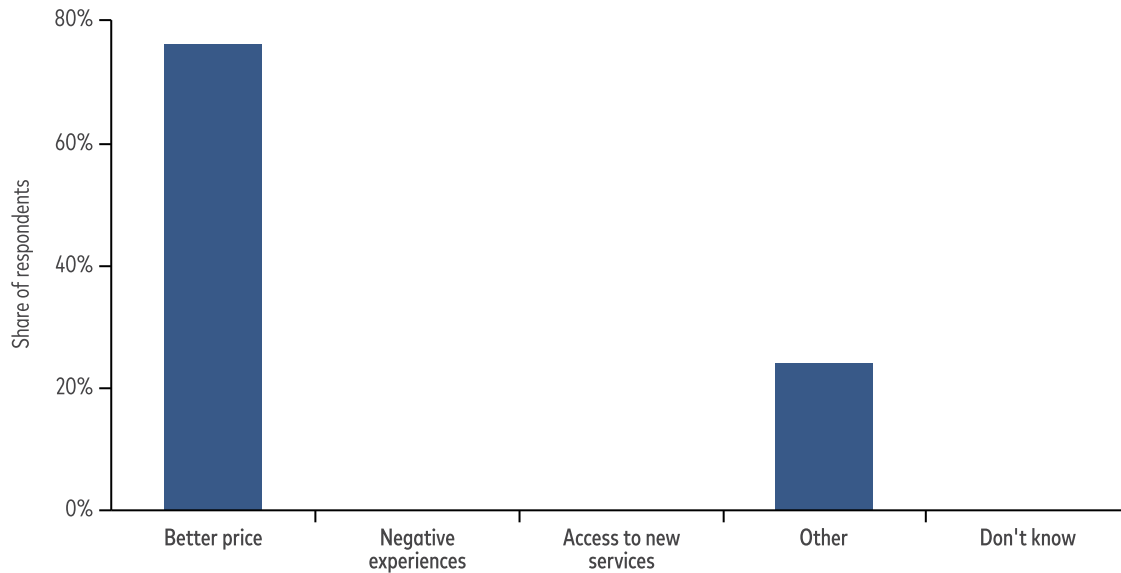
Figure 7-11: Context for switching contract (Iceland)



Note: The graph shows the context for having switched contract. Survey conducted in October and November of 2023 amongst Icelandic households. N=36.

The survey reveals that the main motivation among those who had already switched contracts was that the new contract offered a better price. This is in line with how almost 80% of the households in the survey responded that the reason for not switching was that there was little money to save (Figure 7-9). Overall, this indicates that consumers are drawn to low prices, giving suppliers an incentive to compete on price. Surprisingly, none of the respondents expressed a desire to switch due to negative experiences with their current electricity retailers. This indicates that the suppliers generally operate in a consumer-friendly manner.

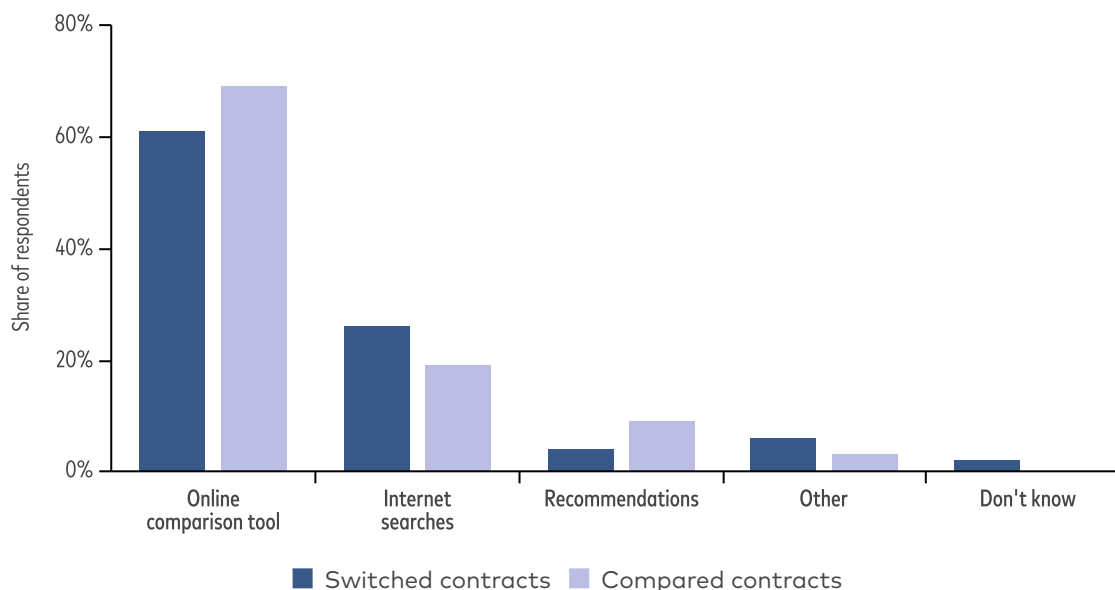
Figure 7-12: Main motivation for switching (Iceland)



Note: The graph shows the respondents main motivation for having switched contract. Asked to those who reported having switched contracts within last 12 months. Survey conducted in October and November of 2023 amongst Icelandic households. N=36.

The most important source of information used by respondents the last time they had switched or compared contracts was an online comparison tool (Figure 7-13). Of those who had not switched or compared contracts during the last 12 months, 62% reported it likely that they would use an online comparison tool if they were to compare contracts in the future. On the other hand, within the same group, 27% reported that they were not familiar with any online comparison sites. Ultimately, this implies that the efficiency of the market depends to a high degree on a price comparison service providing relevant and reliable information and consumers being well informed about these services. The second most important source of information when switching or comparing contracts was through internet search.

Figure 7-13: Most important source of information when switching or comparing contracts (Iceland)



Note: The graph shows the most important source of information the last time the respondent switched or compared contracts. Survey conducted in October and November of 2023 amongst Icelandic households. Switched contracts: N=28 Compared contracts: N=70.

7.3.2 Customer awareness and demand for different contracts

The customer awareness is considered low in Iceland, which is not a surprise as the typical electricity bill for an average household accounts for less than 1% of their total income. Furthermore, Icelandic households do not have automatic meters and only need to manually read their electricity consumption once a year. This means that Icelandic consumers have few incentives to track their running electricity consumption and to purchase products or contracts that enable them to reduce or move their consumption. To most consumers, electricity is a homogenous and low-interest product.

As a result of most households having manual meters, most Icelandic consumers have variable-price contracts. The survey shows that variable-price contracts are the typical system in Iceland (Figure 7-2) and are offered to both households and SMEs. There is no spot market, only tariffs based on usage profiles. The most common tariff is a fixed tariff, which is a fixed fee per kWh regardless of utilization time. The prices of these contracts can change several times throughout the year; in practice, this typically happens once a year. Although there are certain differences in the prices between the different contracts offered, the aggregated cost differences over a year are relatively small. By Icelandic law, these contracts cannot last for more than three months for consumption above 1 GWh per year, but the customer can exit the contract whenever they want. The other type of tariff is a mix of the cost of power

use and energy use.

The survey results suggest that Icelandic households are for the most part inactive in this market (Figure 7-6). Among the active customers, 65% of those who have switched contracts did so because they were contacted by a seller, while 25% did so because they were moving (Figure 7-11). The system when moving in Iceland demands that a customer with no history of buying electricity must change their retailer within 30 days after moving in to prevent their electricity being cut off. Customers are therefore forced to choose a retailer, which may describe why 25% of those who switched contracts in the survey did so because they were moving. Crucially, none of the respondents' report that they switched contracts because they were actively seeking a new contract.

Although the general level of customer awareness in the electricity retail market can be considered low, it has likely increased in recent years. This can be attributed to increased competition in the market following the introduction of new suppliers, the introduction of the price portal, and various regulatory changes pushing consumers to choose an electricity supplier when they move. There is also some indication that the expansion of electric vehicles (EVs) has to some extent increased customer awareness among a segment of consumers. The number of EVs in Iceland has increased in recent years, numbering around 24,300 in 2022.^[71] Some electricity suppliers offer charging stations and reduced electricity prices for consumers with EVs, potentially contributing to this increase in customer awareness.

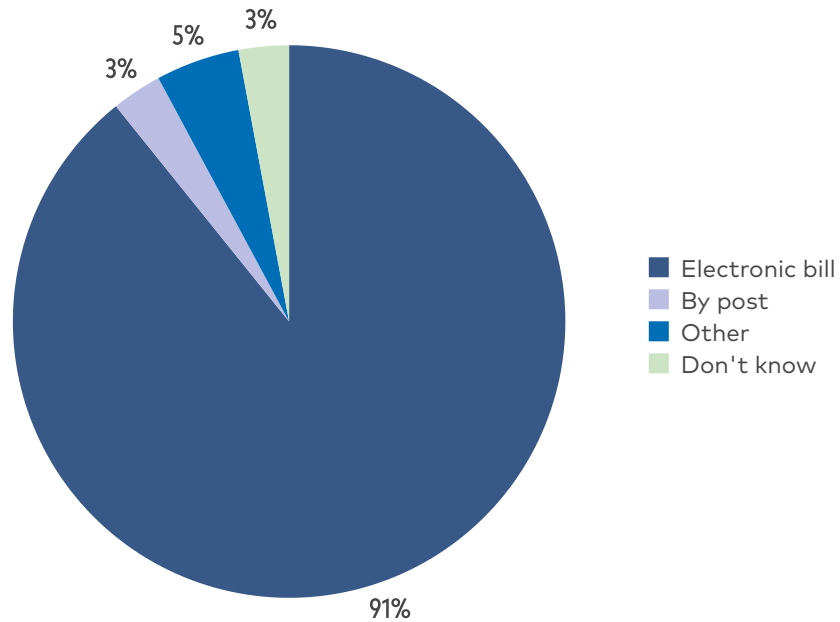
Demand for electricity in Iceland is mainly driven by industry; the demand from households accounts for only approximately 5% of total consumption/production. Landsvirkjun is the national power company that sets the price for electricity. A few different contracts are offered in the market with limited scope and duration. Due to competitive issues in the market, customers in the retail segment cannot be bound for more than five years. Contracts in the wholesale part of the market last for a year at most due to the electricity retailers only being able to secure energy from their side in the wholesale market for up to a year at a time.

Customers generally do not care about the electricity market in Iceland, since the price on electricity is so low. This low level of interest makes it hard to tell whether customers understand the terms and conditions in their contracts. However, billing can in some cases be difficult to understand, as both the retailer and the distributor have their own prices. Hence, the customer is presented with two separate bills from two different companies, one from the retailer and one from the distributor. A price portal can be used if the customer wishes to change retailer; this price portal is not specific to energy, but it does make it easier for the customer to compare different electricity retailers. However, the evidence suggests that they will not usually change retailer due to low consumer interest.

71. <https://www.statice.is/statistics/environment/transport/vehicles/>. Date: 30.11.23

7.3.3 Invoicing and billing

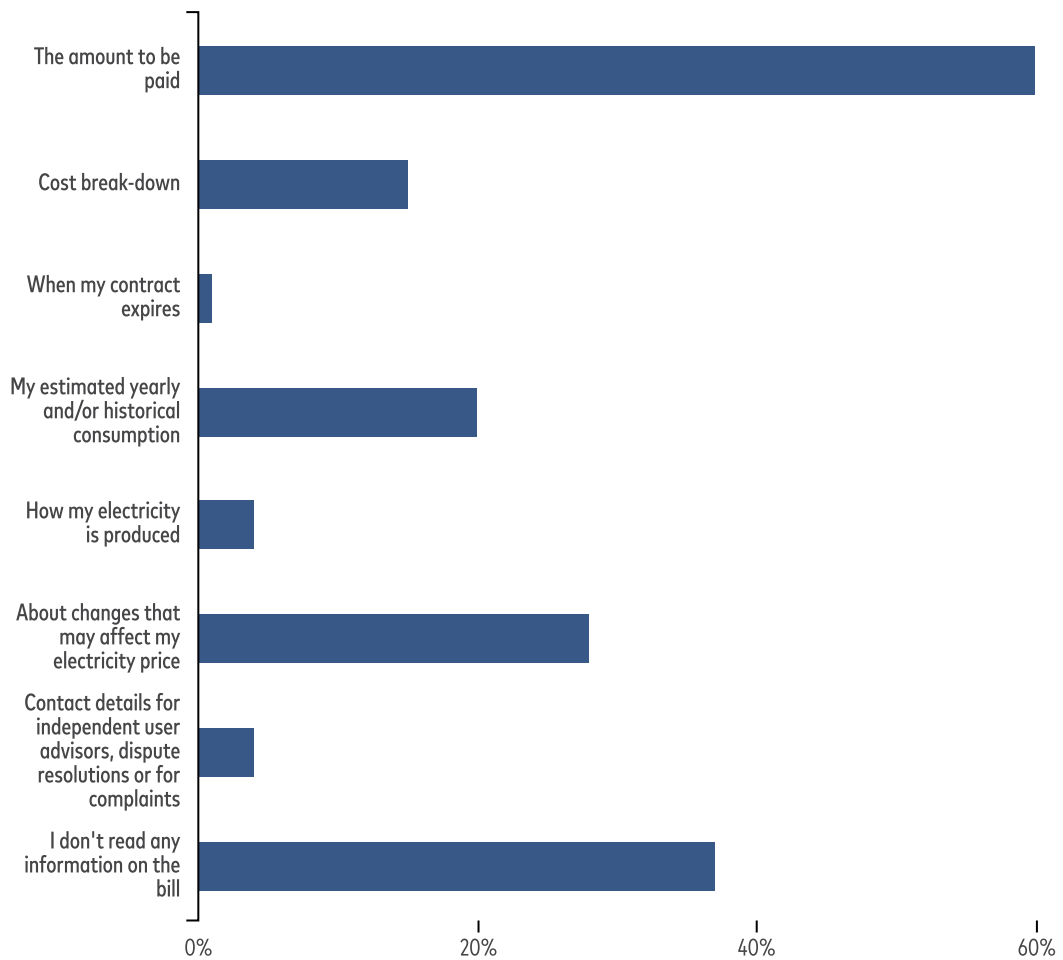
Figure 7-14: How electricity bill is received (Iceland)



Note: The graph shows how respondents receive the bill from their electricity supplier. Survey conducted in October and November of 2023 amongst Icelandic households. N=369.

Almost all respondents report that they receive their electricity bills electronically (Figure 7-14). Among the respondents seeking information on their electricity bills, three specific aspects of the invoice were highlighted (Figure 7-15): 60% were interested in the amount to be paid, while only 20% and 15% were interested in the estimated annual consumption and the cost breakdown, respectively. At the same time, approximately 40% of respondents do not read the information on their invoices. This further highlights the extent to which electricity is a low-interest product in Iceland, as neither the choice of retail supplier nor the information on the bill (other than the sum to be paid) is very important to the end-customer.

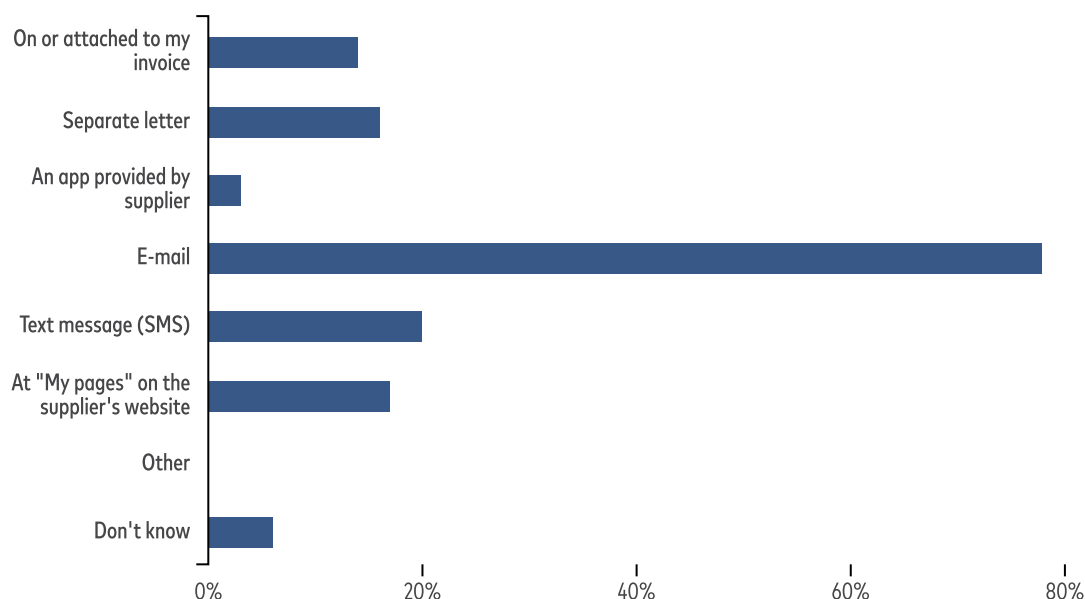
Figure 7-15: What information respondents read on their invoice (Iceland. Multiple choices allowed)



Note: The graph shows the fraction of respondents that report looking for each type of information on their bill. Multiple choices allowed. Survey conducted in October and November of 2023 amongst Icelandic households. N=369.

For approximately 80% of respondents, the preferred method of receiving notifications about changes to the electricity contract or other relevant aspects is by email. This was followed by a variety of different methods, such as by text message or separate letter (Figure 7-16).

Figure 7-16: Preferred method of being notified of changes to the electricity contract or other aspects that may affect the customer (Iceland. Multiple choices allowed)



Note: The graph shows the methods by which respondents prefer to be notified of changes by the electricity seller that may affect the customer, for example changes to the electricity contract. Survey conducted in October and November of 2023 amongst Icelandic households. N=369.

7.3.4 Customer satisfaction

There are generally no complaints from customers in the energy market in Iceland, as there is low interest in the market. Customers in Iceland are unaffected by any cost changes as they are mostly on variable-price contracts that entail an element of fixed pricing. An exception from this is in 2022, where 10% inflation resulted in a 10% increase in prices. As prices were already low, this increase was almost imperceptible in the actual price changes. Iceland also predominantly uses geothermal energy to heat its buildings. This is available in most areas, and those areas where it is not accessible are subsidized by the government.

Despite the electricity retailers having to increase their prices somewhat due to increasing prices in the wholesale market, no complaints have been made by customers regarding this pricing increase. In this way, customers in Iceland are far less price-sensitive than customers in other countries, so this has not had a great impact on customer satisfaction in a country where a typical electricity bill is less than 1% percent of the average household's income. While SMEs have complained about the larger companies pursuing aggressive win-back strategies, the only time that these larger, more established companies compete on price is when they face the risk of losing specific customers.

That said, problems have arisen concerning the default system when moving to a different place. Some customers were charged high prices after the default system placed them on the most expensive tariff in Iceland. However, those customers who were overcharged only needed to call the retailer to obtain a lower price and compensation. This system was implemented in December 2019 and led to many customers changing their supplier. However, this system of retailer of last resort was changed in May 2022 such that customers who already have a history of buying electricity are automatically assigned their most recent retailer, while customers with no such purchasing history must change their retailer within 30 days after moving or risk being cut off. Some market players state that this is why consumers are now thinking about their electricity supplier. As a result of customers being forced to choose a retailer, the competitive landscape in the Icelandic market has changed.

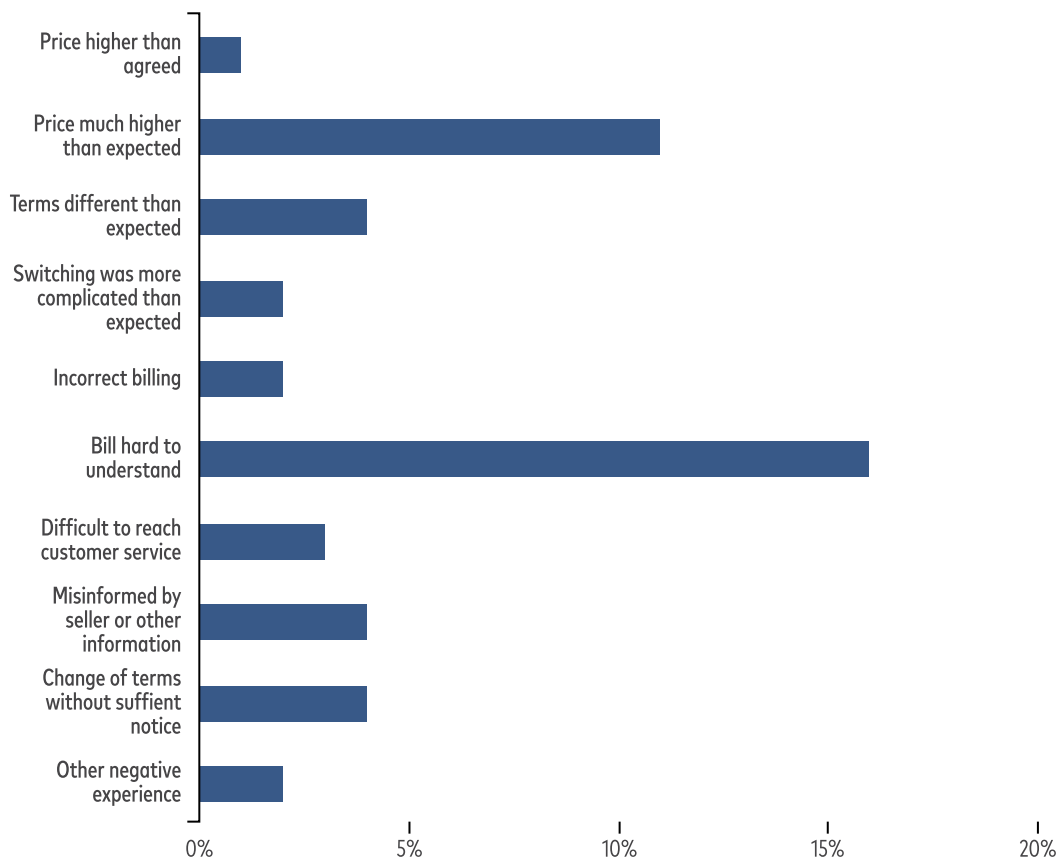
Another reason why customers may change retailer is if they own an EV and are therefore in the market for a charging station. EVs have increased interest in the market over recent years. Indeed, one of the interviewed actors in Iceland stated that customers who own an EV have doubled their electricity use. While this is a small segment of the market, customers are nonetheless becoming more aware about the price of electricity. It can be said, therefore, that knowledge levels have increased with the number of customers who own EVs.

Little evidence exists regarding general customer satisfaction in the Icelandic electricity retail market. However, there is little reason to believe that customer satisfaction is particularly low. None of the interviewed actors considered it to be particularly high or low. Prices and costs for consumers are generally low, customers can easily switch between different electricity retailers, and few knew of examples where electricity retailers had actively tried to deceive customers. The only example mentioned was from 2020, where the regulations were changed so that households were automatically placed with the electricity retailer with the lowest tariff when they moved housing; in reality, it turned out that these households did not receive the lowest tariff. This case gained widespread media attention, and the customers affected were eventually refunded. The Icelandic consumer agency reported that they had not received any complaints regarding the electricity retail market after the media scandal. One of the interviewed actors in Iceland did point to a split in customer satisfaction between urban and rural areas: consumers in the former generally do not care about prices, while those in the latter may complain about cost and/or service.

In Iceland, a little under 70% of respondents reported negative experiences with their retail suppliers. According to the survey, the main problem for the customer is that the bill is hard to understand, followed by the price being higher than expected (Figure 7-17). Here, the negative experience regarding the price development is not necessarily the electricity retailers' fault, but rather the inflation causing the price per kWh to rise. The bill being difficult to understand seems, however, to be a general issue in the

market, indicating an opportunity for improvement in making this aspect more consumer-friendly. Other problems mentioned were related to terms being different than expected, misinformation by seller or other resources, or that the seller changes terms or transfers the customer to a different contract without notice. While these issues may not seem significant given the low percentage of people experiencing them, they do suggest that electricity retailers could benefit from adopting more consumer-friendly practices regarding contract terms and communication with customers.

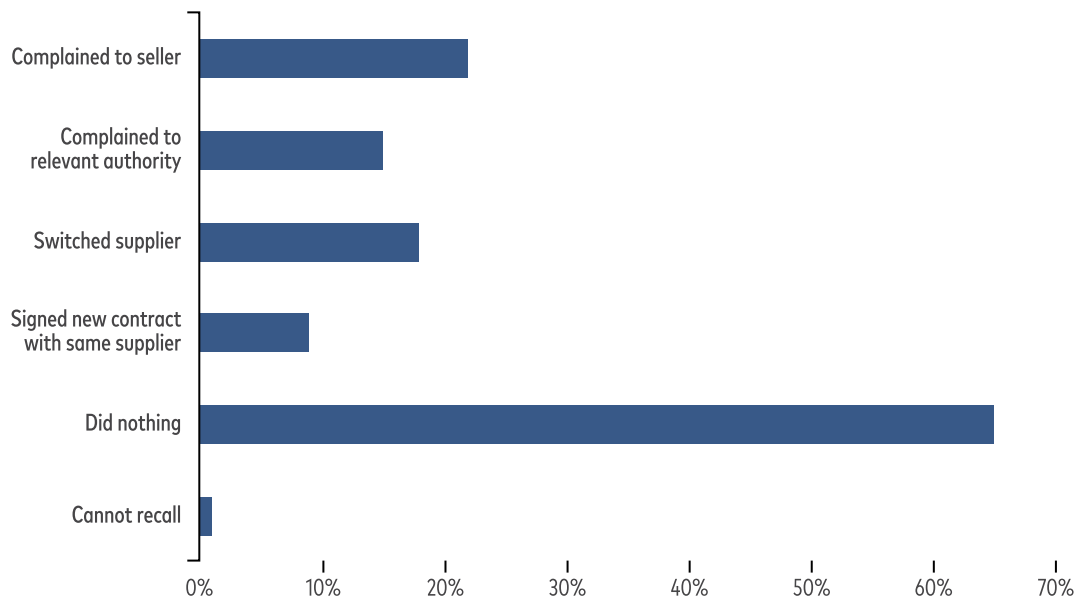
Figure 7-17: Negative experiences with electricity seller (Iceland. Multiple choices allowed)



Note: The graph shows the fraction of respondents that reports a negative experience with their electricity provider during the last two years. Multiple choices allowed. Survey conducted in October and November of 2023 amongst Icelandic households. N=369.

Approximately 30% of respondents reported having negative experiences with their retail supplier, and 25% reported negative experiences not related to pricing. The households' responses to negative experiences varied. For this survey question, we have chosen to exclude those who justified their negative experience by stating that the price was higher than expected. This is because this price development was driven by external factors in the market. Among those who had other reasons for having a negative experience, 65% reported taking no action in response. Approximately 20% complained to the retail supplier, a little under 20% switched to a different supplier as a result, and 15% chose to complain to the relevant authority (Figure 7-18). Despite their negative experiences, most customers were not motivated to take any action. While there could be several reasons for this, a notable factor is that 80% of the customers in the market may be considered inactive.

Figure 7-18: Consumers' response to a negative experience (Iceland. Multiple choices allowed)



Note: The graph shows action taken by consumer in response to a negative experience. Survey conducted in October and November of 2023 amongst Icelandic households. N=162.

Impacts of the energy crisis

Icelandic electricity prices were relatively unaffected by the European energy crisis, as the Icelandic grid is not connected to Europe. The relative price differences between Iceland and the rest of Europe made Iceland more attractive to new and existing industries, especially aluminium smelters, which increased production as they could sell their products at higher prices in international markets. This in turn contributed to increasing electricity prices for the industry. However, consumers in the electricity retail market were relatively unaffected by this, as a fixed part of Landsvirkjun's energy production is reserved for the electricity retail market. For household consumers, the most notable effect of the European energy crisis was increased prices for imported goods.

Oscarsborg Fortress, Norway. Photo: Unsplash / Vidar Nordli-Mathisen

8. Norway

8.1 Regulatory framework and organization of the market

8.1.1 Relevant authorities and actors

Several Norwegian authorities have a role in regulating and overseeing the retail market for electricity; they are described alongside their relevant regulations in Table 8-1.

Table 8-1: Actors and relevant regulations

Role	Name	Responsibility
Regulatory authority	Reguleringsmyndigheten for energi (RME)	Responsible for regulating Norway's power market and grid system. Ensures a user-friendly and efficient retail market, occasionally imposing fines for breaches, although this is infrequent for electricity retailers.
Consumer authority	Forbrukertilsynet	Responsible for monitoring the business practices and contract terms of traders. Its primary focus is on preventing and stopping illegal marketing, unfair contract terms, and other forms of unlawful trading practices directed towards consumers.
Competition authority	Konkurransetilsynet	Enforces the Competition Act and works to promote competition for the benefit of consumers and businesses, aiming to contribute to efficient resource utilization.
Consumer council	Forbrukerrådet	Advocates for consumer interests, and influences businesses and government authorities to be more consumer-friendly. Forbrukerrådet runs the retail electricity price portal strømpris.no on behalf of the RME.
Electricity appeal board	Elklagenmda	Main purpose is to offer consumers a fair, reasonable, and efficient process for resolving disputes related to energy companies.
Industry organization for electricity retailers	Fornybar Norge	Promotes sustainable energy solutions that reduce greenhouse gas emissions and generate new jobs and income in Norway. Fornybar Norge is the largest member organization for electricity suppliers. Oversees industry standards such as Trygg strømhandel and the Standard Electricity Supply Agreement. Trygg strømhandel is a certification scheme for electricity retailers that sets a number of requirements for the sale and marketing of electricity. The Standard Electricity Supply agreement explains the terms for buying and selling electricity.

8.1.2 Regulatory framework

Retailer requirements

Chapter 4 of the Energy Act (Energiloven) specifies that one needs a trading licence from the Regulatory Authority for Energy (RME) to engage in the trading of electrical energy and outlines the conditions that must be met to obtain such a licence. These requirements are not complex and do not pose a significant barrier to establishing oneself as an electricity supplier in Norway.

The Energy Act also imposes requirements for the structural and functional separation of vertically integrated entities that have been assigned system responsibility or that have more than 100,000 network customers. The requirement for structural separation means that the network business must be separated from businesses engaged in the production or trading of electrical energy, and these entities must be organized as independent legal entities. The requirement for functional separation means that individuals in the management of the network business cannot participate in the management of businesses engaged in competitive activities within the vertically integrated entity. In practice, there should be a clear separation between the DSO and the electricity supplier.

Invoicing

Requirements for invoice design are specified in the Regulations on Settlements (Avregningsforskriften). First, the invoice must be clear and easily understandable for the consumer. It should include information about the basis for the invoice, including separate line items for all price components, electricity volume, and whether the consumer receives mandatory electricity delivery. Furthermore, if estimated values are used as the basis for billing, this must be clearly stated on the invoice. The invoice should also include the electricity spot market area for the consumer measuring point.

Additionally, the invoice should inform the consumer of their ability to compare electricity supply agreements on the public price comparison site strompris.no. It should contain the name of the electricity supply agreement, the agreement's duration, and the notification procedures in the event of changes to the agreement. If the agreement includes a price guarantee, the duration of the price guarantee should be prominently displayed on the invoice. In contracts directly tied to the spot price in the relevant electricity spot market area, it must be explicitly indicated on the invoice if the price is not calculated hourly based on consumption. The invoice should also provide information about the consumer's right to raise objections to the invoice, including the consumer's right to contact the Electricity Complaints Board (Elklagenemnda), the contact information for which must be included.

The invoice from the electricity retailer can also include costs and tariffs from the DSO. The terms regarding combining retailer and DSO costs in one invoice are established as a voluntary arrangement. The voluntary nature of this arrangement means that DSOs can choose to offer electricity suppliers the option to include the DSO tariffs in the retailer invoice, but if they do so, it must be extended to all

interested electricity retailers. Likewise, an electricity retailer can choose to include DSO tariffs in their invoices, but if they do, they must implement this for all customers in the DSO area.

The regulations state that an electricity supplier can invoice the customer both in advance and in arrears. In cases of pre-billing (payment in advance), the period between the invoice due date and the delivery date must not exceed 10 weeks.

Contracts

Customers can change electricity supplier by creating a new electricity agreement with an electricity supplier. It is free to change electricity supplier unless the customer has an agreement with a lock-in period. The new electricity supplier notifies the previous supplier about the new electricity agreement. The Regulations on Settlements (*Avregningsforskriften*) state that a written electricity supply agreement between the electricity supplier and the customer must be in place when switching. It is required that the electricity supply agreement must, at a minimum, contain information about the metering point ID, the customer's personal identification number or organizational number, the customer's name or company name, the product covered by the agreement, and the customer's consent.

Angrerettsloven regulates consumers' rights to cancel or withdraw from purchases such as online purchases, telephone sales, sales at stands, or door-to-door sales. The customer has a 14-day right of withdrawal when purchasing electricity when the agreement is considered a distance sale (typically when the agreement is entered into over the phone or the internet) or sales outside a fixed retail location (typically through door-to-door sales). If the customer has not received sufficient information regarding the right of withdrawal before entering the agreement and/or the customer has not received a withdrawal form on a durable medium after entering the contract, the withdrawal period is extended by up to one year. Lock-in periods for contracts should be no longer than 12 months, with the exception of fixed-price contracts. Customers should receive a financial benefit for entering into a contract with a lock-in period, such as a discount on electricity or other services. The customer can terminate such contracts by paying a reasonable termination fee.^[72]

The Price Information Regulation (*Prisopplysningsforskriften*) establishes requirements for electricity suppliers to have an up-to-date price list readily available at the location or in the channels where consumers can enter into electricity agreements. This means that all electricity suppliers are obligated to register their prices on strompris.no so that consumers have an overview of all the contracts in the market. This price list should provide a comprehensive overview of prices and terms for all the electricity supplier's various electricity agreements, including agreements that are no longer offered but still have active customer relationships. Furthermore, the price list for each individual electricity agreement per price area should specify the

72. [Strøm - Forbrukertilsynet](#)

agreement's name, type, and price, along with a link to the agreement terms.

Requirements for notifying consumers about changes to or termination of their electricity agreement are also presented in the Price Information Regulation (*Prisopplysningsforskriften*). The supplier must inform the consumer of all changes to or termination of the electricity agreement no later than 30 days before the change or termination of the agreement takes effect. This includes changes in the price agreed upon at the time of the contract (except for changes in the spot price). The notification should clearly explain the reason for the change in the agreement or the termination of the agreement, and whether the consumer has the right to terminate the agreement at no cost. Notifications should be formulated in a way that makes the content and changes clear and understandable to the consumer. This means that the price and terms before and after the change should be clearly presented. Furthermore, the notification should be provided separately and should not be mixed with other information from the supplier. The notification should be sent to the consumer via SMS and email, or by post if the consumer has not consented to digital communication methods.

There are also current proposals submitted by the Ministry of Petroleum and Energy and the Ministry of Children and Family Affairs for changes to laws and regulations aimed at reducing the information asymmetry that consumers experience in the electricity retail market. The measures include an obligation to inform electricity customers if their agreement does not follow the spot price on an hourly basis, strengthened consumer protection for sales through certain channels (including the introduction of a cooling-off period), improved consumer rights in the event of unilateral changes to electricity contracts, requirements for information on breach fees, a reduced period for permitted advance billing, withdrawal of trading licenses for violations of relevant regulations, and new requirements regarding electronically documented consent during supplier changes and facility takeovers. These proposed changes are aimed at strengthening the requirements around information on contracts, how changes to contracts are communicated, and also changes in regards to what is allowed to be included in the terms and conditions of contracts.

Marketing

On 1st November 2022, new and stricter rules for the marketing of electricity contracts were introduced. These requirements for marketing were largely a clarification of the requirements already followed from the Marketing Act. Consumers must receive sufficient information in company marketing to enable them to understand what both the contract and the product or service involve. Consumers must also be able to use this information to compare with other contracts. The Price Information Regulation provides a list of information that is considered essential according to the Marketing Act. The electricity supplier must provide information about contract type, mandatory price components and their size, duration of the contract and price components, any lock-in period and termination fee, advance payment and period for advance, conditions to qualify for the contract, additional

services, and notice of comparison at Strømpris.no.

Win-back strategies are allowed and can take place both by telephone and on the door, as well as in writing. It can thus be regarded as a form of direct sales aimed at a customer group that has made an active choice to switch supplier. Angrerettsloven provides the customer with various rights and information requirements when it comes to sales outside a fixed retail location, such as online purchases, telephone sales, sales at stands, or door-to-door sales. The law also regulates consumers' right to cancel or withdraw from these purchases. The information requirements include details about the goods or services, such as main characteristics, total price, any additional charges,^[73] the agreement's duration or minimum contract period, and conditions for terminating the agreement. Agreements marketed through unsolicited sales over the phone are not considered to be entered into until the business has confirmed the offer in writing on a lasting platform after the telephone call has ended and the consumer has accepted the offer in writing. Typically, this is done via SMS. There are also specific requirements regarding the minimum information to be provided when the agreement is made through a means of remote communication with limited space or time to display information. Here, the customer should receive a written confirmation of the agreement on a lasting platform within a reasonable time after the agreement is concluded and no later than before the delivery of the service begins.

SMEs' customer rights

SMEs do not have the same consumer protection as households, and they have considerably fewer consumer rights. If SMEs are exposed to illegal behaviour from electricity retailers, they cannot complain to Elklagenemnda or the Competition Authority as households can. SMEs must contact lawyers to receive help regarding these issues, or solve the problem themselves. Similarly, they do not have the same type of withdrawal rights as household consumers.

Sanctioning

The RME, the Consumer Authority, and the Competition Authority have the authority to address violations of the laws and regulations they respectively oversee. Retailer licenses can be withdrawn both by the RME and the Ministry of Petroleum and Energy, but no retailers have so far been deprived of their licences. Licences can be withdrawn if the licensee has provided incorrect or incomplete information about matters of significant importance. This also applies when the licensee is no longer considered fit to carry out the business after serious or repeated violations of the law or provisions or orders issued pursuant to the law.^[74] The RME have the authority to withdraw retailer licences for violating the licence conditions, the Energy Act, and

73. If the price cannot reasonably be pre-calculated, the method for calculating the price should be provided, along with any additional costs (or an acknowledgment that they may occur). For subscription agreements, the total price should encompass the costs per billing period, or the method for calculating them if the total costs cannot be pre-calculated.

74. [Lov om produksjon, omforming, overføring, omsetning, fordeling og bruk av energi m.m. \(energiloven\) - Kap. 4. Omsetning av elektrisk energi - Lovdata](#). Date: 29.11.23

associated regulation, but not for violating the Marketing Act or Angrerettsloven. The RME's ability to withdraw a licence is limited to when there is incorrect information of significant importance for the decision, or in cases of gross or repeated violations of the Energy Act and associated regulations whereby the retailer is no longer fit to conduct business.^[75]

The RME are entitled to use various means of reaction and sanctions against electricity retailers who break the regulations they enforce. The RME can react with compulsory fines, report, impose infringement fees, or fully or partially confiscate dividends. The Consumer Authority (Forbrukertilsynet) has the authority to impose financial sanctions on actors that violate the Marketing Control Act (Markedsføringsloven). Changes to the Regulation on Determining Coercive Fines and Penalty Fees (Endringer i forskrift om utmåling av tvangsmulkt og overtredelsesgebyr) specify the maximum size of penalty fees: up to 4% of the business's annual revenue or up to 25 million Norwegian kroner

8.1.3 Government response to the energy crisis

Electricity support scheme for households

In December 2021, the government introduced a temporary national electricity support scheme for households. The electricity support has been adjusted several times.^[76] The RME manages and oversees the electricity support scheme, which is directly linked to households' electricity consumption.

As of 16th June 2023, the Norwegian support scheme covers 90% of prices above 70 øre/kWh excluding VAT. While the scheme was changed by law on 16th June, it was not implemented until 1st September 2023. The electricity support is based on the average market price (spot price) on an hourly basis in the local pricing area to which the household belongs. When the electricity price in a given hour exceeds 70 øre, the state will pay 90% of the price above this level. Under the scheme, a household receives support for electricity consumption of up to 5,000 kWh per month per measuring point.

Prior to the legal changes that came into effect on 1st September 2023, the electricity support scheme was not based on the average price on an hourly basis, but the average market price of electricity (spot price) for a price area in a given month.

The electricity support scheme has also changed a number of times when it comes to the percentage covered above 70 øre/kWh. When the support scheme was first introduced on 11th December 2021, it was proposed that if the average electricity spot price over a month exceeded 70 øre per kWh, the state would cover half of the expenses above this level. This was then increased to 55% on 22nd December 2021. On

75. <https://www.nve.no/media/15669/rapport-sanksjonsmuligheter-overfor-kraftleverandoerer.pdf>. Date: 29.11.23

76. <https://www.regjeringen.no/no/tema/energi/strom/stromstotte-til-husholdningene-tidslinje/id2929222/>. Date: 29.11.23

8th January 2022, the government strengthened the scheme once again, and the level was increased to 80%. The percentage was changed for the third time by law on 29th April 2022, when a distinction was made between winter months (90% covered) and summer months (80%). Lastly, on 16th June 2022, it was increased to 90% regardless of winter or summer season.

The support scheme reduces risk for consumers by covering parts of their electricity bills during periods of high electricity prices. Since the support is linked to the spot price, it provides particularly good price security for consumers with spot-price contracts. In some cases, consumers have entered fixed-price contracts or variable-price contracts at high prices and have simultaneously received electricity support based on the spot price. In periods of lower spot prices, these consumers have received less electricity support than expected and have had to pay high electricity bills. Consumers with other types of contracts than spot contracts do not have the same direct price security, although these consumers are effectively protected. The electricity support scheme is currently proposed to last until the end of 2024.

High-price contribution (Høyprisbidraget)

The government introduced a tax on power production, also known as the high-price contribution (høyprisbidraget).^[77] The tax is calculated based on the average electricity price per month in excess of 70 øre/kWh. It is imposed at a rate of 23% of the average electricity price per month above 70 øre/kWh. The tax was introduced due to the exceptionally high electricity prices in parts of Southern Norway and was intended to help redistribute more of the extraordinary income generated from power production. Since the situation improved, the Parliament decided to end the high-price contribution on 14th December 2023, effective from 1st October 2023.

Fixed-price contracts for businesses

In March 2023, the government made changes to the resource rent tax on hydropower for fixed-price agreements. The goal was to facilitate electricity retailers offering standardized fixed-price contracts to non-household consumers, with such contracts being available for periods of three, five, and seven years. This is achieved by introducing a contract exemption for electricity sold through these standardized fixed-price contracts. The proposal entails that the resource rent tax imposed on power producers will be valued at the actual contract price of these standardized fixed-price agreements, rather than the spot market price, which is the usual practice.

77. <https://www.skatteetaten.no/bedrift-og-organisasjon/avgifter/saravgifter/om/kraftproduksjon/innforing/#1-om-avgiften>, Date: 29.11.23

Electricity support scheme for businesses

For a limited period, the Norwegian government provided an electricity support scheme for businesses. The support scheme was application-based and limited to companies with at least 3% electricity intensity in the first half of 2022. This intensity was measured as the actual electricity costs as a percentage of turnover. Support was then calculated using a two-step model:

- Support Step I: Up to 25% of the difference between the actual price and 70 øre/kWh. At a minimum, the company had to conduct an energy assessment.
- Support Step II: Up to 45% of the difference between the actual price and 70 øre/kWh. The company had to conduct an energy assessment and, additionally, apply for and carry out energy measures.

Companies received a subsidy of up to 50% of the investment cost associated with their energy measures. The maximum cap for consumption-based support through Steps I and II for each company under the scheme was 3.5 million Norwegian kroner. The cap applied regardless of whether the company was in Step I or Step II. Together with the investment grant for their energy measures, the maximum cap was 5 million Norwegian kroner.

8.2 Competitiveness and the functioning of the market

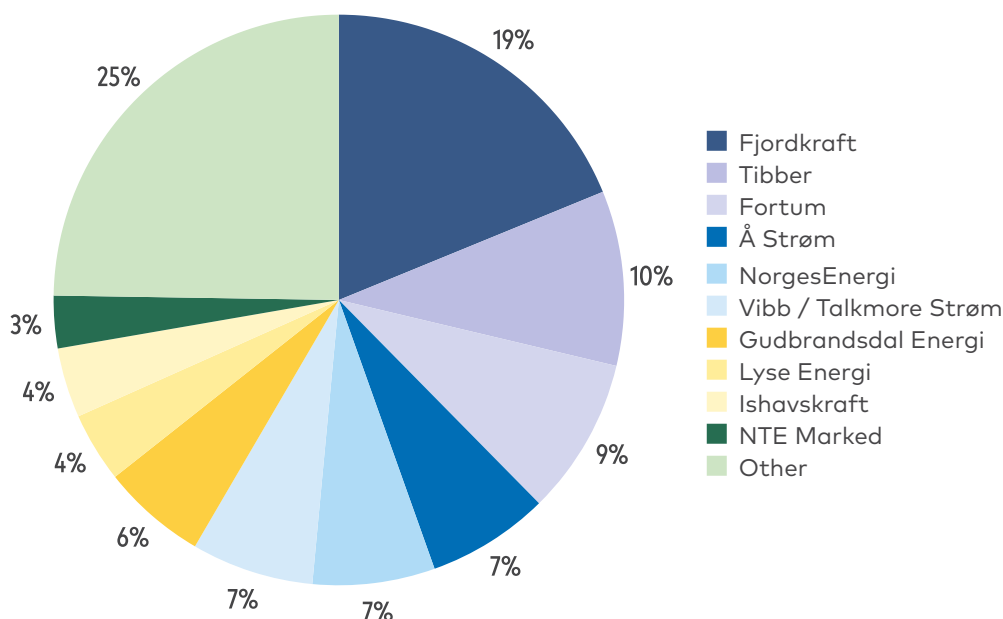
8.2.1 Competitive landscape

Competition in the Norwegian electricity retail market appears to be quite robust, with numerous electricity retailers operating in the sector, including large established companies, various small local providers, and new players that profile themselves as innovative. Competition in the market for SMEs is generally similar to that of household customers, with the exception that SMEs have fewer customer protections and rights.

The Norwegian market currently has around 120 electricity retailers,^[78] offering various products to both households and businesses. However, not all electricity retailers engage in direct competition, as some suppliers only target one or certain price areas, regions, or municipalities. Despite the large number of electricity retailers, the market shares of the largest electricity suppliers are high; the market is characterized by a few large electricity retailers and numerous smaller ones. Statistics from the household survey show that the five largest retailers (by market shares) account for just over half of the market (Figure 8-1), and the single largest retailer has a market share of 19%. Out of the 120 electricity retailers, 18 have a market share above 1%. Using the results from our Norwegian household survey, we estimate the Herfindahl-Hirschman index of the retail market to be 0.08, indicating low market concentration and a high degree of competition.

78. <https://www.nve.no/reguleringsmyndigheten/publikasjoner-og-data/statistikk/statistikk-over-sluttbrukermarkedet/>.
Date: 29.11.23

Figure 8-1: Market shares of the ten largest retailers in Norway



Note: The market shares are estimated from a survey conducted amongst Norwegian households in October 2023. The shares are weighted. N=1195.

Entry barriers can be considered low for new electricity retailers in the market, with new establishments frequently emerging. Statistics from the NRA show that the market shares of large local companies are gradually declining, making the market less concentrated than before.^[79] Nevertheless, many areas in Norway are dominated by a single local provider previously integrated with the local grid company. Although regulations from 2021 mandate a corporate functional separation for grid companies, there can be cases where customers have more trust in the retail supplier when they are in the same corporate group as the local grid company. Higher trust may translate into market power, allowing for higher markups for these local players.

Electricity is a homogeneous product with low switching costs for consumers. The Norwegian market has been characterized by high mobility, especially during the energy crisis, compared to other Nordic countries. Statistics from NVE show that around 700,000 retail supplier switches occur each year, with an increasing number of switches during the more expensive and energy-intensive winter months.

While the market conditions are favourable to healthy competition, the challenge lies in asymmetric information. There is often insufficient or inadequate information

79. <https://www.nve.no/reguleringsmyndigheten/publikasjoner-og-data/statistikk/statistikk-over-sluttbrukermarkedet/leverandoerskifter-markedsandeler-og-leveringsplikt/>. Date: 29.11.23

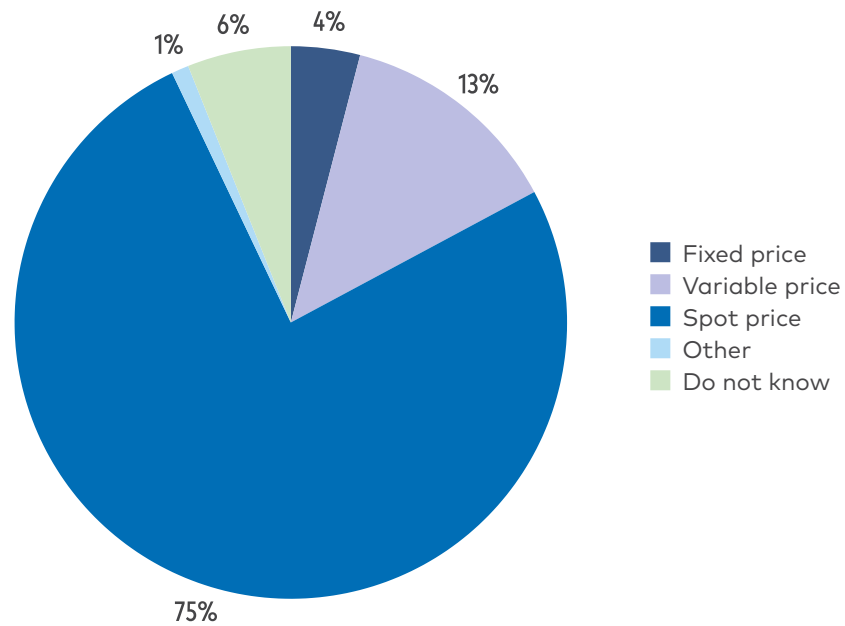
available to consumers. For competition to function effectively, consumers need sufficient information to make rational and active choices. A central question is whether consumers in the electricity retail market have the necessary information access and are active enough for competition to work efficiently. It appears that market players attempt to differentiate themselves based on price and product, resulting in a vast number of diverse agreements. There is also a multitude of variable spot contracts; consequently, some less-active consumers have electricity contracts that may not be in their best interests. This could be due to the complexity of navigating the market, making it challenging for consumers to make well-informed choices.

8.2.2 Contracts and prices

The existing contract options in the market are well suited to meet the needs of most consumers. According to our survey, 75% of respondents indicated that they could find at least one contract aligned to their needs and preferences, while 23% did not know if the available contract types met their needs. For those who did find at least one relevant contract, 15% found just one, 32% found two or three, and 28% found more than three.

The most prevalent electricity contract among Norwegian households is a spot-price contract. In the survey, 75% of respondents have a spot-price contract (Figure 8-2). The second most common contract type are variable-price contracts. A few years ago, the picture would have been the complete opposite, with a considerably higher share given to variable-price contracts. This indicates that consumers have moved to more competitive contracts. The Consumer Council has for years warned about variable contracts and promoted spot contracts, which may have contributed to this transition. Fixed-price contracts are not very common in Norway (reported by as little as 4% of respondents), as they are only offered to households in Northern Norway.

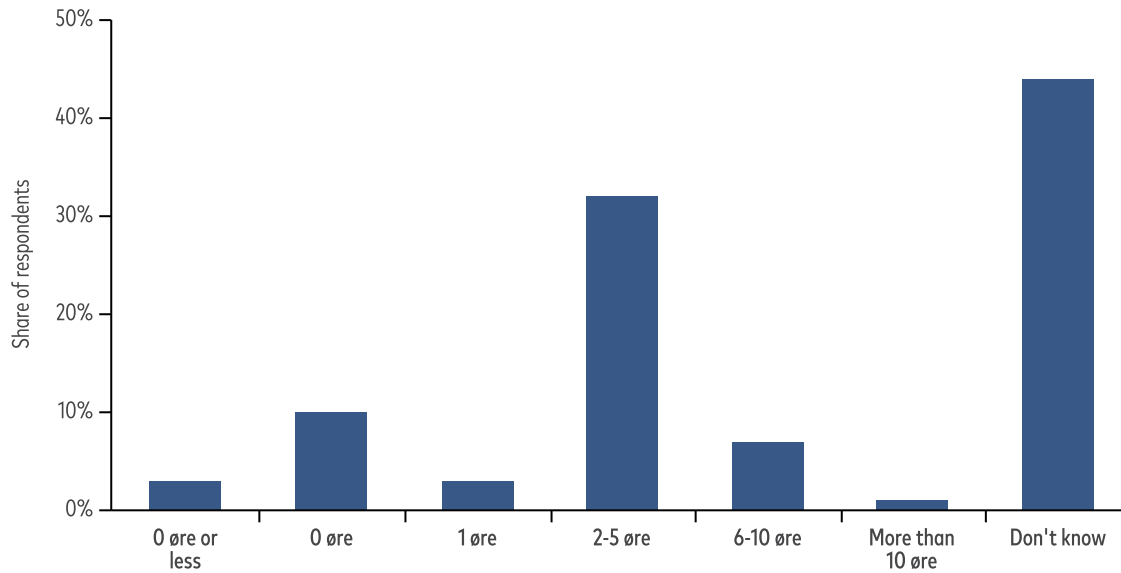
Figure 8-2: Contracts



Note: The contract shares are those reported by respondents in a survey conducted amongst Norwegian households in October 2023. The shares are weighted. N=1195.

In the survey, we assessed households' awareness of the pricing details in their contracts. For spot-price contracts, customers typically have an additional surcharge per kWh, whereas in fixed- or variable-price contracts, this surcharge is typically integrated into the overall price structure. In addition to the surcharge, some households may pay a fixed monthly fee. In the survey, most respondents with a spot-price contract reported paying a surcharge per kWh between 2 and 5 øre. At the same time, the survey reveals that a large proportion of respondents (45%) are not aware of the surcharge they are charged.

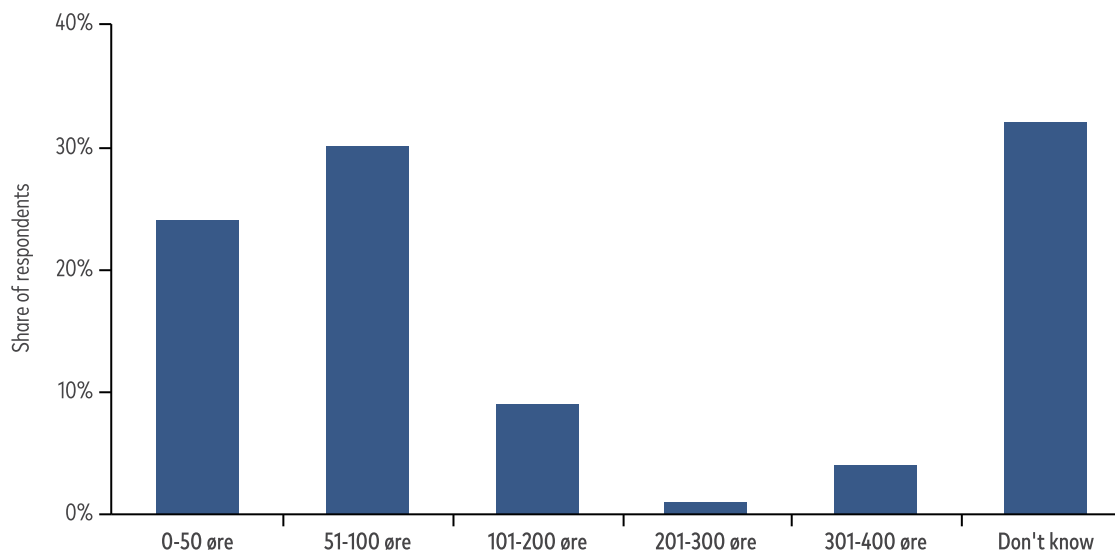
Figure 8-3: Per kWh surcharge in spot price contracts (Norway)



Note: Surcharge per kWh for respondents with a spot price contract. In Norwegian øre with 1 øre = 0.01 Norwegian kroner. Survey conducted in October and November of 2023 amongst Norwegian households. N=903.

For fixed-price contracts, the spread of results tends to be more evident compared to spot prices, due to how customers enter into agreements at different entry times and the agreements have different durations. In the survey, 30% of respondents report a price range of 51–100 øre per kWh, while 25% fall within the 0–50 øre range. Additionally, 5% report prices as high as 301–400 øre. Surprisingly, over 30% of respondents expressed uncertainty about what their fixed price per kWh is, emphasizing a lack of awareness in this regard. Household customers did, however, express a higher awareness of pricing in their fixed-price contracts compared to variable- and spot-price contracts.

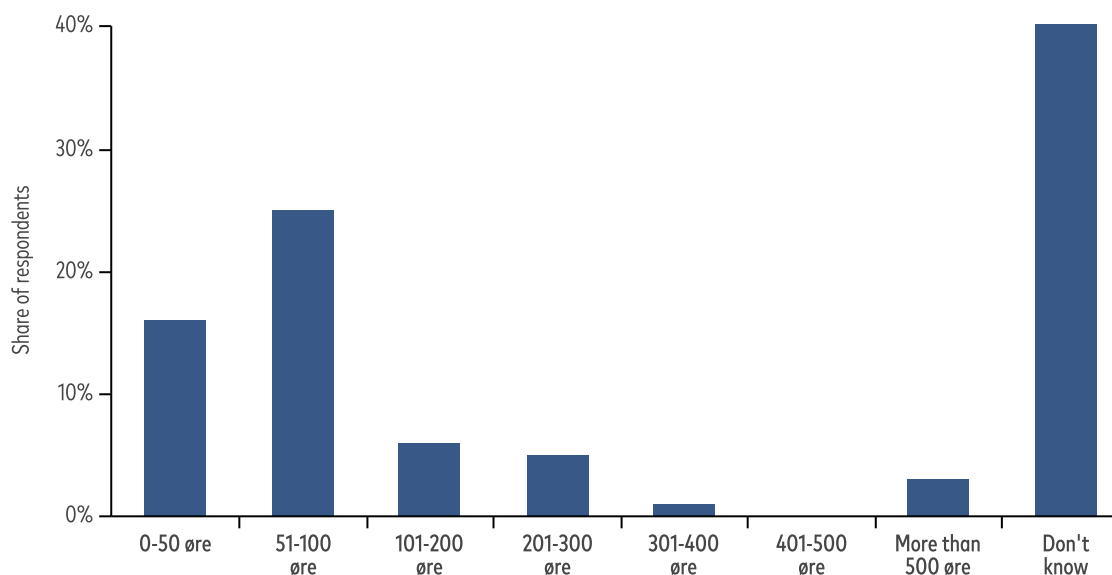
Figure 8-4: Per kWh price for fixed price contracts (Norway)



Note: Price per kWh for respondents with a fixed price contract. In Norwegian øre with 1 øre = 0.01 Norwegian kroner. Survey conducted in October and November of 2023 amongst Norwegian households. N=49.

For variable-price contracts, the spread of results is similar to fixed-price contracts: 25% of respondents have a price range of 51–100 øre per kWh, while around 15% fall within the 0–50 øre range. There are also 45% who do not know the price per kWh for their variable-price contracts, an even higher share than for fixed-price contracts. In the case of variable-price contracts, this lack of awareness is due to the customers entering the contract a long time ago. For variable-price contracts, the retail supplier sets a fixed price that can change with a 30-day warning based on spot-price development. This may indicate that about half of the customers who have entered a variable-price contract are non-active customers who do not follow the development of the pricing of their contracts. The high number of non-active customers may also explain why these customers typically have more expensive electricity contracts.

Figure 8-5: Per kWh price for variable price contracts (Norway)



Note: Price per kWh for respondents with a variable price contract. In Norwegian øre with 1 øre = 0.01 Norwegian kroner. Survey conducted in October and November of 2023 amongst Norwegian households. N=153.

8.2.3 Impacts of the energy crisis

The energy crisis that began during the latter part of 2021 had an impact on electricity retailers in Norway in several ways. Initially a low-interest product, electricity garnered increased public awareness due to high electricity prices. This heightened consumer awareness has driven innovation in the retail companies. Some electricity retailers have, for instance, increasingly prioritized the development of electricity management products for consumers during the energy crisis, such as tools that enable consumers to control their electricity usage, innovations that facilitate the integration of self-generated power with the grid, and the ability to plan electric vehicle charging based on cost-effective pricing.

The energy crisis has also led to an increased focus on commitment to transparency and consumer trust with regard to both electricity retailers' marketing and business models. In recent years, new electricity retailers have been established who have marketed themselves as "not trying to trick the customers, like the other electricity retailers are". Furthermore, many electricity retailers have shifted towards offering products that are more transparent and easier to understand, such as offering a fixed markup on the spot price in contrast to markups that the retailers can change throughout the contract period. Consequently, the market has seen a shift towards more electricity retailers marketing themselves as consumer-friendly and trustworthy, and having contracts that are easier to understand for customers.

While the energy crisis did not result in bankruptcies among electricity retailers, it posed a substantial threat, especially during the challenging winter months. This may indicate that the retail electricity market was indeed efficient during this time. However, it is important to note that spot-price contracts were the most prevalent prior to and during the crisis, and that the electricity retailers offering fixed-price contracts had generally fully hedged their positions. In addition, electricity suppliers with customers on variable-price agreements also faced challenges during the energy crisis. One of the reasons was due to how the notification period for price changes in variable-price contracts was extended from 14 to 30 days in 2022, requiring suppliers to hedge a significant portion of their volume one month in advance. Several electricity retailers had to purchase volume at high prices in the financial market in the fall of 2022, right before the spot prices started to fall again. As the suppliers had already procured variable contracts at high prices, they could not offer their customers on variable contracts a lower price to match the spot market. At the same time, the electricity support scheme did not benefit customers on the high-cost variable-price contracts, as it was designed for spot-price contracts. This resulted in a surge in customer enquiries to call centres in September/October 2022 for many electricity suppliers, which led to a significant shift from variable- to spot-price contracts. Overall, electricity suppliers incurred losses as they did not receive more than they had paid for the electricity in the financial market, and customers lost significant amounts of money by having a much higher electricity price than that in the spot market. Some electricity suppliers considered this their most severe setback during the energy crisis.

In Norway, the government introduced the high-price contribution during the energy crisis, intended to help redistribute more of the extraordinary income generated from power production. However, the high-price contribution also had an impact on liquidity in the financial market. This was because the high-price contribution reduced the possibility or incentive to hedge in all markets other than through standardized contracts. This included both financial trading and over-the-counter (OTC) trading with contracts not covered by the exemption. As a result, it is likely that liquidity was diverted from other markets, enabling producers to offer their standardized contracts on somewhat better terms than other agreements (by utilizing these contracts, they minimized their tax obligations if they anticipated price variations above and below 70 øre). Therefore, Parliament decided to end the high-price contribution scheme in December 2023.

Furthermore, the crisis brought a liquidity challenge for certain electricity retailers, with smaller retailers being more vulnerable than larger and more established retailers. The working capital requirements associated with many electricity retailers' operations increased substantially. This was due to how many electricity retailers took out loans, purchased and paid for electricity, and covered the costs for customers for up to a month or more before customers settled their invoices. As electricity prices

and interest rates rose, the amounts that the retailers needed to borrow increased. Many electricity retailers found themselves facing loan terms resembling consumer loans rather than standard corporate financing arrangements. This was due to how the conditions in the financial sector changed due to the high exposure many institutions in the Nordic region had in the electricity sector, leading to substantial uncertainty regarding their ability to meet payment obligations. Some respondents also stated that this challenge was more pronounced for the smaller electricity retailers because they often lacked the same financial backbone as larger electricity retailers; this resulted in established electricity retailers receiving an increased number of enquiries about acquiring customer portfolios from these smaller suppliers.

A few respondents also expressed the need for a guarantee programme during the energy crisis, where the state would provide loans with lower credit costs to electricity retailers, resulting in lower costs for customers. However, such a scheme was never introduced. To address the liquidity issue, some electricity retailers transitioned from post-payment to pre-payment models, while others opted to establish bilateral agreements with electricity producers to ensure access to more affordable credit.

Availability of fixed-price contracts, or contracts with fixed-price elements

The available contract types are the same for households and SMEs: spot-price, fixed-price, and variable-price. However, for SMEs, it is also common to have a power agreement that combines spot pricing and fixed pricing.

For households

Fixed-price contracts were available to household customers both before and at the beginning of the energy crisis, but demand for these agreements was low. Statistics show that the share of households who had a fixed-price agreement was 5% in June 2022, and very few entered fixed-price agreements as they were very expensive due to the high risk premium during this period. Most Norwegian households have traditionally had spot-price contracts due to stable and low energy prices, and these contracts have been actively promoted, for instance by Forbrukerrådet, due to the spot contracts having the lowest average costs over time. There is also a small percentage of households that have variable-price agreements. Forbrukerrådet has actively warned households over these contracts, and their share has declined significantly due to high electricity prices. Before the energy crisis, around 20% of households had these contracts; as prices rose and the electricity support scheme was introduced, this figure reduced to around 5%.

There were also household customers who had entered into fixed-price contracts before the crisis. These contracts allowed customers to secure electricity at low rates compared to the spot price during the crisis, which was advantageous for consumers but proved to be catastrophic for the electricity retailers. In some cases, electricity retailers attempted to buy customers out of their favourable fixed-price contracts in

exchange for a lump sum, an offer accepted by some household customers. In addition, some electricity retailers sold parts of their customer portfolios to different electricity retailers to avoid bankruptcy.

Fixed-price contracts were also available to household customers during the energy crisis to customers until the electricity support scheme was introduced, but these tended to be relatively expensive due to high and rising electricity prices. While there would have been considerable demand for low-cost fixed-price contracts when market prices were high, these were not readily available. Some electricity retailers described demand for fixed-price contracts during the early stages of the energy crisis; the fixed-price contracts they sold to households were secured against the system prices, but as the difference between the area price and system price increased, it eventually became difficult to offer such contracts. Some electricity retailers expressed that the change in the resource rent tax – making the tax based on the actual income of the power producer through the fixed price from the standardized contracts, rather than the spot-market price – should include contracts sold to households as well, not just businesses, thus enabling the electricity retailers to provide fixed-price contracts to households. The proposal originally included contracts for household consumers, but they were not included in the final proposal. The argument was that it was not seen as appropriate that household consumers entered into such long-term fixed-price contracts, given the high risks and large opt-out fees. Moreover, the introduction of the electricity support scheme, which created an electricity price cap for households, made it irrational for customers to purchase fixed-price contracts and thus almost completely removed the demand for these type of contracts.

For SMEs

Combination agreements are the most common contract type for SMEs, although fixed-price agreements exist and are used to some extent. These agreements often include a mix of fixed-price and spot-price components. These provide price hedging for a portion of the volume the customer purchases, while the remaining part of the electricity is purchased at spot price. There are also commercial customers who have chosen not to hedge their exposure to electricity prices and use spot agreements. These are typically businesses with low consumption, meaning that the cost of electricity has not been a determining factor for the company. There are, however, also some large customers who have relied on pure spot-price agreements.

For those customers with spot-price contracts, their electricity costs increased significantly in 2022. The Norwegian government introduced a temporary and limited electricity support scheme for businesses that was only available in 2022. Those SMEs that received electricity support were not allowed to distribute dividends and had a cap on how much money they could receive.

The government plan to help those businesses in an electricity market with volatile prices was to facilitate electricity retailers offering standardized fixed-price contracts to businesses, with contract periods of three, five, and seven years. This was achieved by introducing a contract exemption for electricity sold through these standardized fixed-price contracts, in which electricity is valued at the contract price instead of the spot price. Additionally, many electricity retailers offer these contracts with different profiles, such as seasonal and base load profiles, which some electricity retailers say have effectively addressed the majority of SMEs' concerns.

To offer these fixed-price agreements to SMEs, electricity retailers establish agreements with power producers and act as intermediaries between the customers and the producers. The hedging agreements are with the power producers due to the non-liquid financial market. In these agreements, the SMEs take on the volume risk, while the power producer sets the price. To supply fixed-price contracts at a large scale to SMEs is challenging. First, it involves a substantial uncertainty premium in the price. For power production companies, managing numerous bilateral agreements with a multitude of electricity retailers requires a large amount of administrative work and is a barrier to the supply of fixed-price contracts.

Thus far, there has been limited demand for these contracts, and their effectiveness remains uncertain. Some market players express that the 3-5-7 years fixed-price contracts are too long and inflexible, which may not align with the needs of some businesses. Other electricity retailers express that there have been no complaints regarding their fixed-price contracts, and that the retailers can adjust the contracts to the business's electricity usage profile. However, many SMEs are hesitant to enter a fixed-price arrangement due to their lack of understanding of the terms and conditions in fixed-price contracts. Moreover, with the current low prices in some areas, their willingness to enter into a fixed-price agreement is limited. Nonetheless, many businesses did secure themselves against system prices in 2021. Assessing how well the 3-5-7 years contracts have functioned will be easier once these contracts against system prices expire by the end of 2023 and these electricity retailers must enter into new contracts.

Some electricity retailers expect an increase in demand for fixed-price contracts because they believe businesses want predictability in budgeting, as opposed to taking bets in the market. This approach has traditionally been a focus for larger companies, especially those with higher exposure to energy prices. SMEs have typically considered spot prices or combination agreements as their best option. However, as the market expects increased volatility and high prices in the future, there are some expectations that businesses want to explore possibilities to reduce their risk exposure to the electricity market.

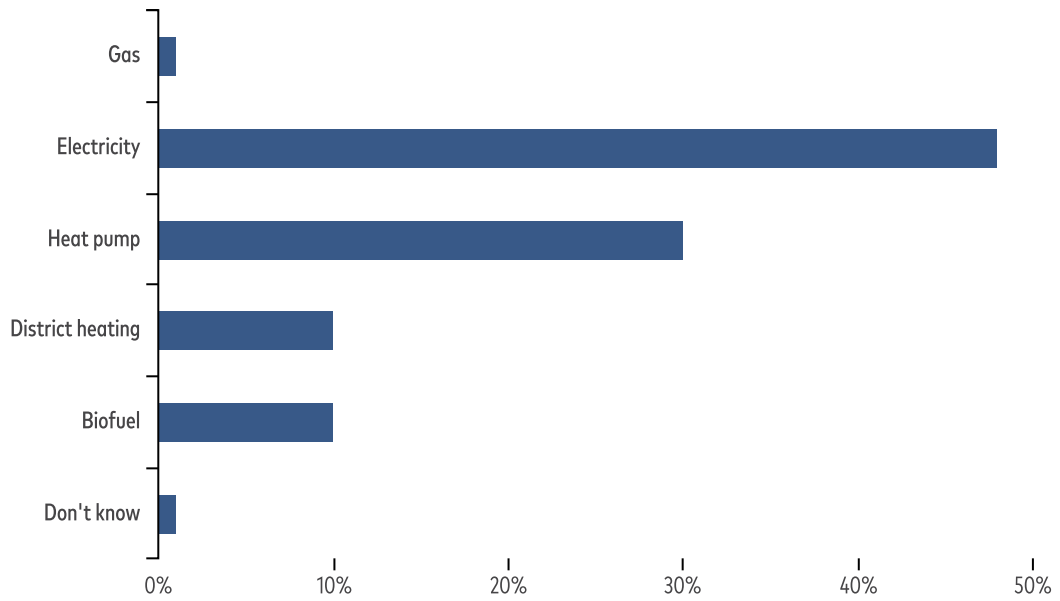
Challenges associated with offering fixed-price contracts

The shortage of liquidity in financial markets posed a challenge for the supply of fixed-price contracts to households due to the lack of hedging opportunities. The low supply of fixed-price contracts to households can also likely be attributed to reduced demand in the market as a result of the introduction of the electricity support scheme. The scheme introduced was, in reality, a cap on electricity prices for households, making it unreasonable for them to have a fixed-price contract. For SME customers, fixed-price contracts were available and more attractive than for the household segment, and most businesses chose to hedge at least half of their portfolio through fixed-price agreements. The 3-5-7 contracts were also established during the energy crisis through the introduced contract exception for electricity, making fixed-price agreements for between three and five years available to SME customers.

8.3 Customer awareness and satisfaction

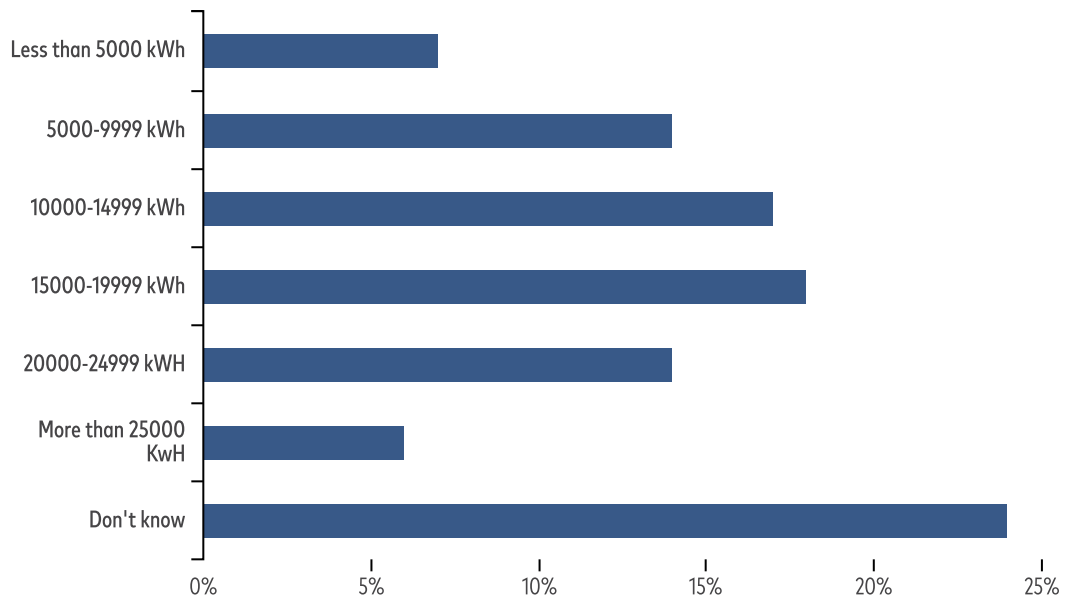
Electricity is the most important source of heating in Norway (48%), followed by heat pumps (30%; Figure 8-6). Some households also use biofuel and district heating, whereas almost none use gas. As much as 23% of households do not know their electricity consumption per year. The electricity consumption of households in Norway varies, but the average is higher than the other Nordic countries: 35% of households reported that they use 10,000–24,999 kWh per year (Figure 8-7).

Figure 8-6: Most important source of heating (Norway)



Note: The graph shows the most important source of heating in the household. Survey conducted in October and November 2023 amongst Norwegian households. N=1483.

Figure 8-7: Household electricity consumption per year (Norway)



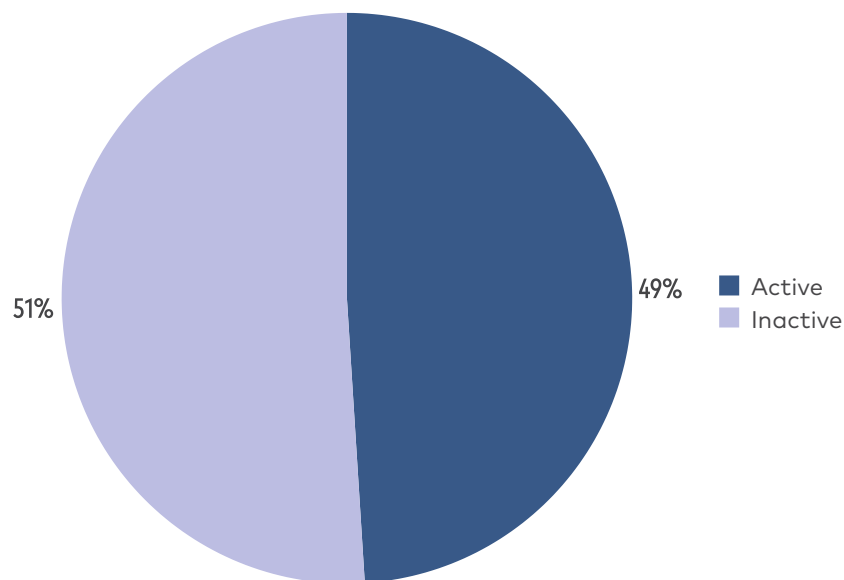
Note: The graph the reported yearly electricity consumption. Survey conducted in October and November 2023 amongst Norwegian households. N=1195.

8.3.1 Awareness during search and switching

Although electricity is generally a low-interest product in Norway, public awareness has increased due to high electricity prices, which in turn has affected the mobility of customers. In the survey, respondents were asked about issues related to comparing and switching contracts, including challenges experienced, if the respondents felt well informed, and other relevant issues.

Figure 8-8 illustrates that 49% of respondents have engaged in either switching or comparing electricity contracts in the preceding 12 months. This suggests that Norwegian consumers are for the most part active, which supports the notion that the Norwegian electricity retail market is functioning well.

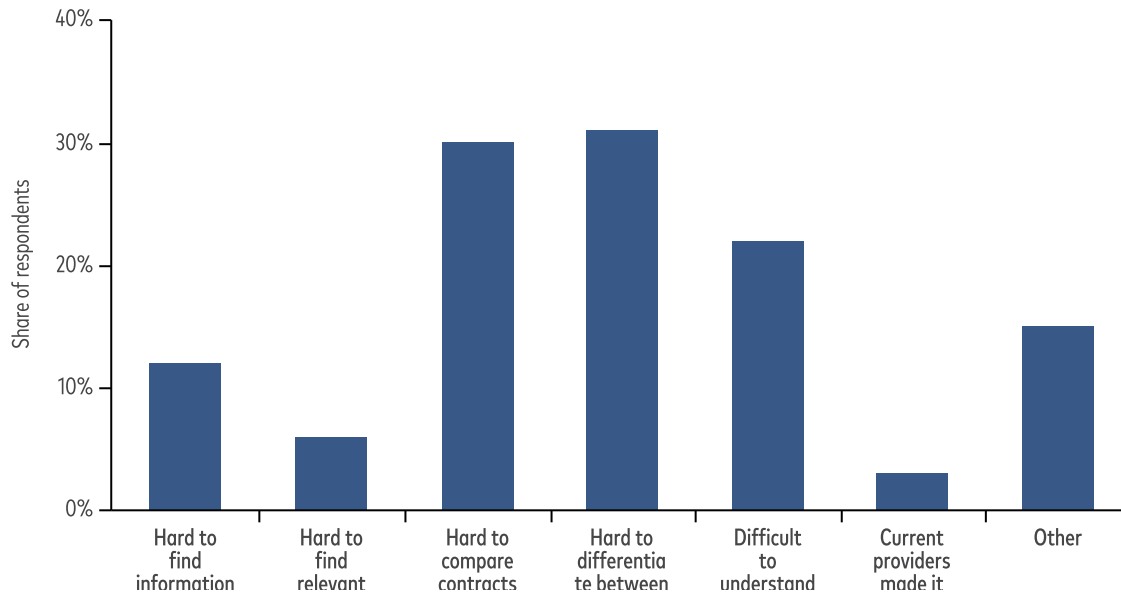
Figure 8-8: Share of consumers active in the electricity market last 12 months (Norway)



Note: The graph shows the share of respondents who have either switched or compared electricity contracts during the previous 12 months. Survey conducted in October 2023 amongst Norwegian households. N=1195.

The respondents who reported challenges when switching or comparing contracts had one or multiple reasons for the difficulties they encountered. The results emphasized two main challenges: the complexity of comparing contract terms and the difficulty in distinguishing between various contracts. Additionally, understanding the contract terms and conditions posed a significant challenge. Respondents also mentioned struggling to find information and relevant contracts and sellers.

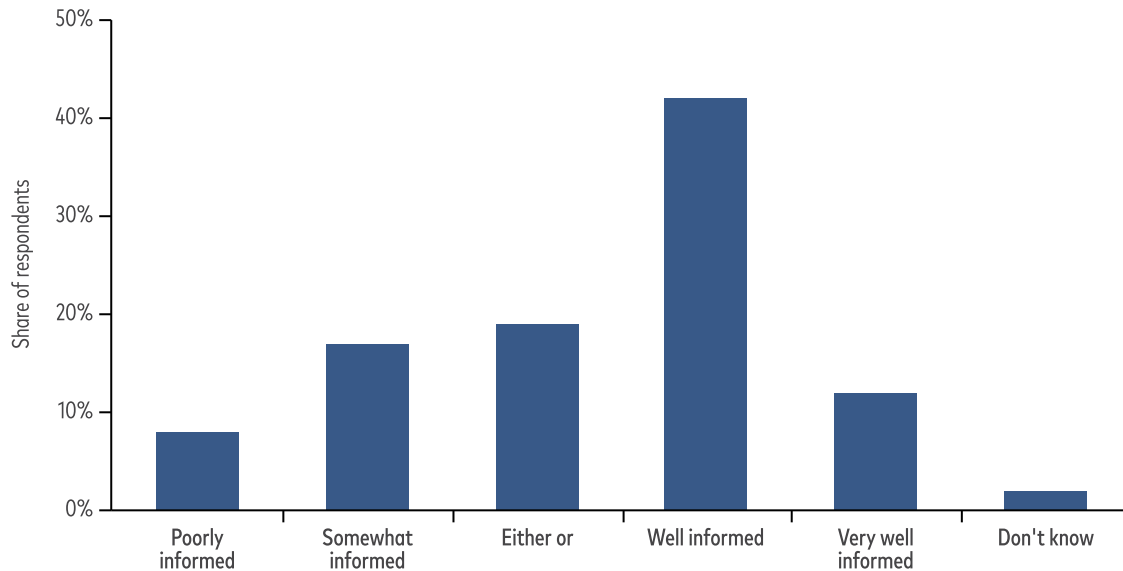
Figure 8-9: Challenges in switching or comparing contracts (Norway)



Note: The graph shows the percentage of respondents who have recently switched or compared contracts that experienced challenges when doing so. Multiple choices were allowed. Survey conducted in October and November 2023 amongst Norwegian households. N=585.

Among the respondents, 40% reported feeling well-informed, while 20% felt somewhat informed when it came to switching or comparing contracts. Conversely, less than 10% expressed feeling poorly informed in these situations. These results may appear somewhat surprising considering that a significant portion of respondents reported challenges in differentiating between contracts, comparing contract terms, and comprehending terms and conditions. This may suggest that the respondents are able to grasp the necessary information to make an informed decision, but that the process may be unnecessarily difficult and time-consuming.

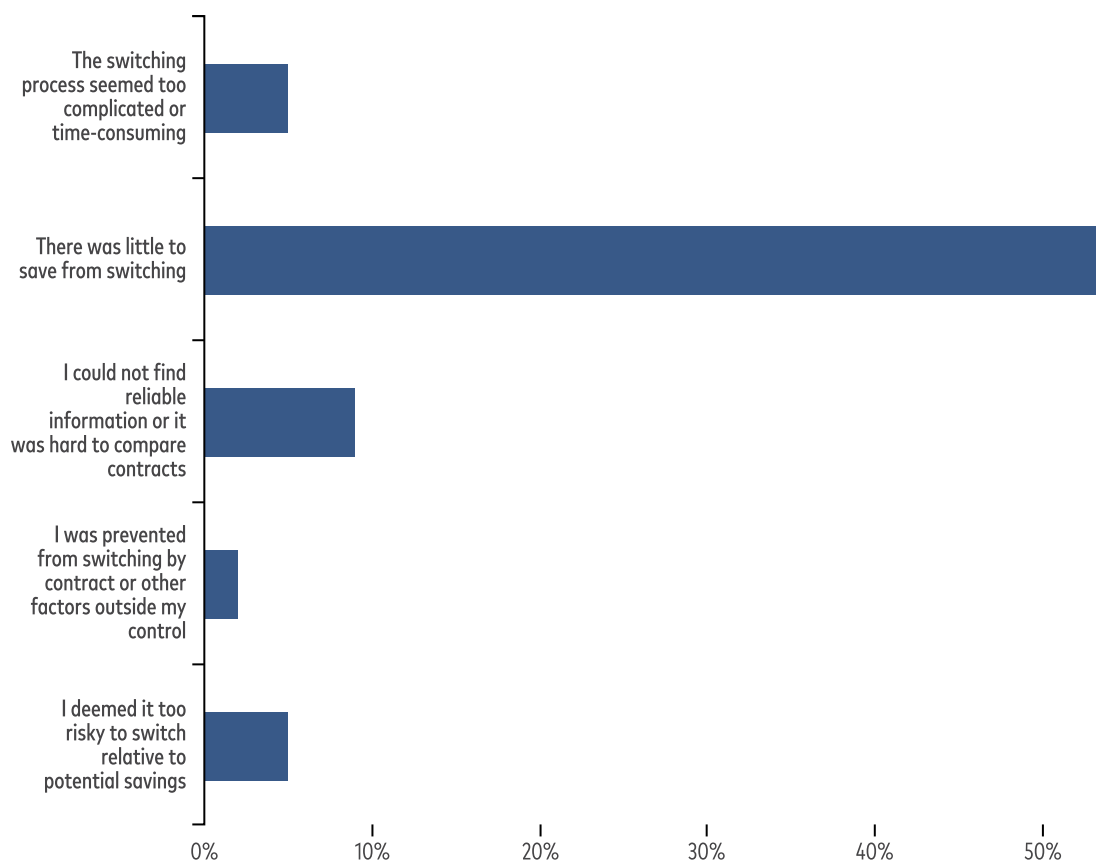
Figure 8-10: How informed respondents felt when switching or comparing contracts (Norway)



Note: The graph shows how well-informed respondents who have recently switched or compared contracts felt. Survey conducted in October 2023 amongst Norwegian households. N=585.

Half of the respondents who had compared contracts ultimately chose not to switch. While these individuals mentioned various reasons for their decision, the majority (74%) stated that their primary reason was the lack of considerable savings associated with switching (Figure 8-11). Furthermore, 9% of respondents chose not to switch due to the lack of reliable information and difficulties in comparing contracts. This reason was highlighted by the respondents as the main challenge when comparing or switching contracts (Figure 8-9). Lastly, 5% of respondents said that their reasons for not switching were both the difficulty of the switching process and the perceived risk of switching relative to potential savings.

Figure 8-11: Reason for not switching after comparing contracts (Norway)

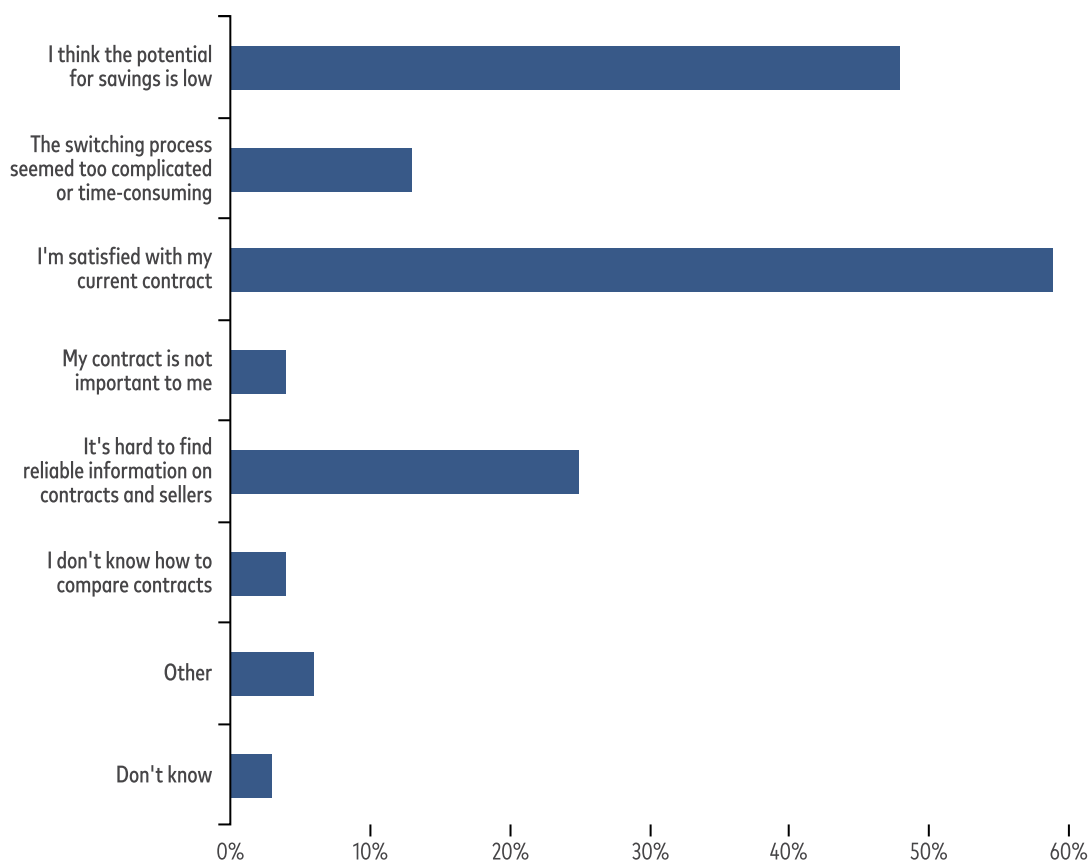


Note: The graph shows why those who have compared but not switched contract, ultimately chose not to switch. Survey conducted in October 2023 amongst Norwegian households. N=277.

The Norwegian market has been characterized by high mobility, with approximately 20% of households and 10% of businesses switching suppliers in 2022.^[80] The switching rate was also relatively high prior to the energy crisis compared to other Nordic countries. However, a substantial proportion of consumers have refrained from switching and comparing contracts for various reasons. The survey results show that the primary reason is the high level of satisfaction with existing contracts (Figure 8-12). The second most prevalent reason is the perception of limited potential for savings in a new contract. Other reasons mentioned were that it was hard to find information on contracts and sellers, as well as the switching process seeming both complicated and time-consuming.

80. <https://www.nve.no/reguleringsmyndigheten/publikasjoner-og-data/statistikk/statistikk-over-sluttbrukermarkedet/leverandoerskifter-markedsandeler-og-leveringsplikt/>. Date: 29.11.23

Figure 8-12: Reason for not switching or comparing contracts more often or at all (Norway) (Multiple choices allowed)



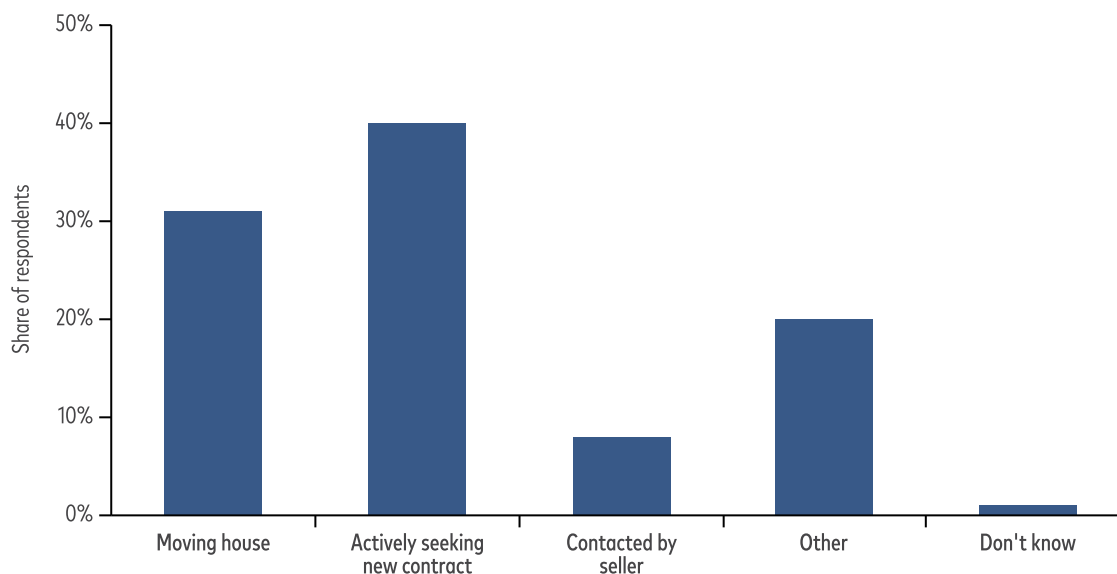
Note: The graph shows why those who have not compared or switched contracts within the last 13 months, have not done so more often. Survey conducted in October and November of 2023 amongst Norwegian households. N=69.

According to statistics from NVE, around 600,000 households switch contracts each year, but the context for switching varies between consumers.^[81] Here, 40% of those who had switched contracts did so as a result of actively seeking a new contract, while 30% did so because they were moving (Figure 8-13). Around 10% of the respondents report that they switched contracts because they were contacted by a seller. Win-back sales are also a commonly employed strategy by electricity retailers, with a notable 46% of consumers reporting that they were contacted by their previous supplier after switching to a new one (N = 243). Of these respondents, 9% accepted their former supplier's offer. This may suggest that households are adept at identifying competitive electricity contracts, or that price competition is so tough that electricity retailers have little room to lower their prices with the aim of winning

81. <https://www.nve.no/reguleringsmyndigheten/nytt-fra-rme/nyheter-reguleringsmyndigheten-for-energi/totalt-byttet-norske-husholdninger-stromleverandor-nesten-600-000-ganger-i-2019/>. Date: 30.11.23

customers.

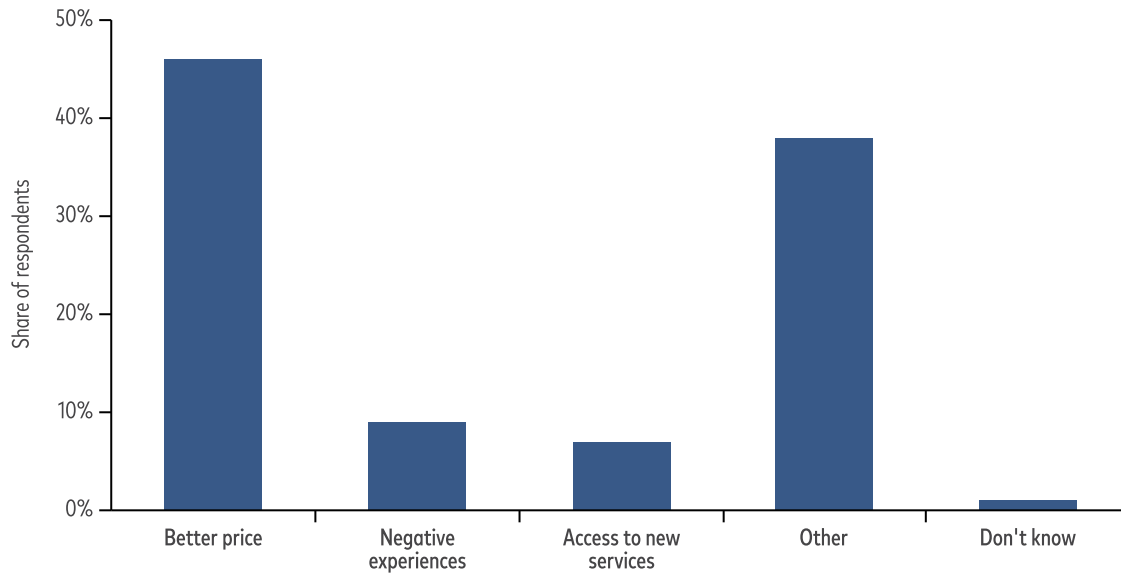
Figure 8-13: Context for switching contract (Norway)



Note: The graph shows the context for having switched contract. Survey conducted in October 2023 amongst Norwegian households. N=308.

The survey reveals that the main motivation for switching among those who had already switched contracts was that the new contract offered a better price. This is in line with how 75% of households responded that the reason for not switching was that there was little money to save (Figure 8-11). Overall, this indicates that consumers are drawn to low prices, giving suppliers an incentive to compete on price. Among other reasons, around 5% report that their motivation for switching was negative experiences with their existing retail supplier, with a similar figure for those wanting access to new services.

Figure 8-14: Main motivation for switching (Norway)

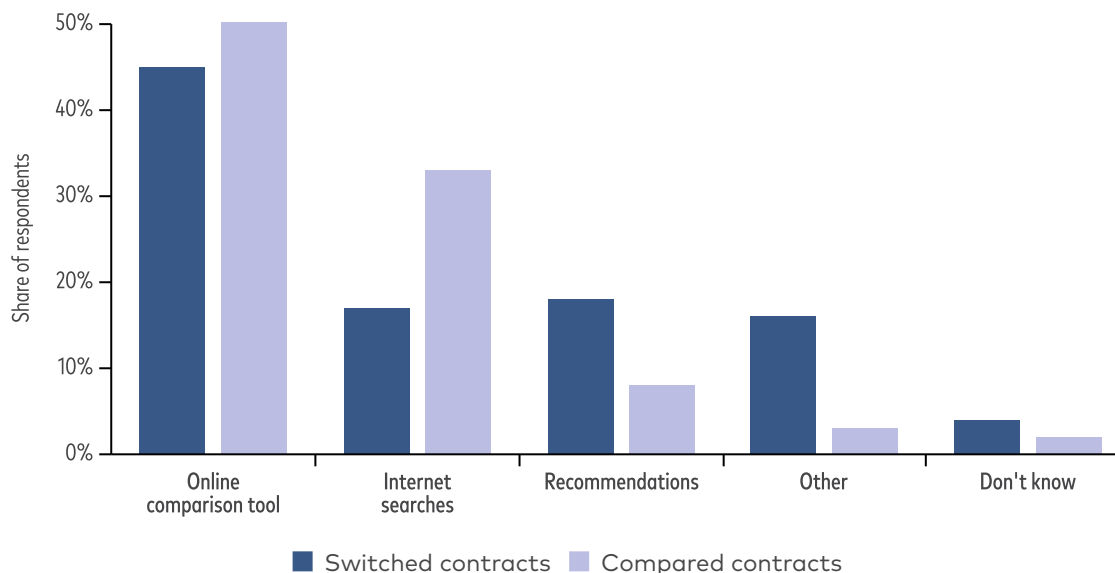


Note: The graph shows the respondents main motivation for having switched contract. Asked to those who reported having switched contracts within last 12 months. Survey conducted in October 2023 amongst Norwegian households. N=308.

The most important source of information the respondents used the last time they switched or compared contracts was an online comparison tool (Figure 8-15). Of those who did not switch or compare contracts during the last 12 months, 39% reported that they would likely use an online comparison tool if they were to compare contracts in the future. On the other hand, within the same group, 38% reported that they were not familiar with any online comparison sites. Ultimately, this implies that the efficiency of the market depends on a price comparison service providing relevant information, and consumers feeling well-informed about these services.

The second most important source of information when switching contracts is recommendations from friends, family and other people they trust. For comparing contracts, the second most important source of information is the internet.

Figure 8-15: Most important source of information when switching or comparing contracts (Norway)



Note: The graph shows the most important source of information the last time the respondent switched or compared contracts. Survey conducted in October 2023 amongst Norwegian households. Switched contracts: N=187. Compared contracts: N=277.

8.3.2 Customer awareness and demand for different contracts

Electricity has previously been seen as a low-interest product in Norway due to it being a homogenous product and prices historically being low and stable. That said, there is some evidence that rising energy prices have contributed to increased general customer awareness in the Norwegian market, although the survey indicates that the market is still characterized by a significant group of inactive consumers.

There is a consensus among the interviewed actors that considerable information challenges still exist in the Norwegian electricity retail market, making it difficult for customers to compare products and make well-informed decisions. Different contract types and bundling with other products can make contracts difficult to compare, and contracts are constructed in different ways, making it difficult for a consumer to ensure that there are no hidden terms of which they are unaware. When Forbrukertilsynet performed controls on the 20 largest electricity retailers in March 2023, they found violations by all of them, including the following:

- Eight out of 19 did not provide information before the contract was entered about the right to withdraw.
- All 19 companies lacked or had deficiencies in the legally required price list on their websites.
- Ten of the 19 companies had no price list at all.
- All 19 companies failed to provide essential information about the electricity agreement in their marketing, such as price, invoice fee, commitment period and breaching fee.
- Four out of 19 companies had significant deficiencies in the description of the type of agreement.

Some actors have also been sceptical of the design of the price comparison portal strompris.no. This relates to the fact that the contracts listed on top are often those with a time-limited low price (markup). Changes have, however, been made to the portal: Previously, contracts with a low markup for a very brief period could be listed on top, now the period for a low markup must longer. As of October 2023, the spot contracts on top of the portal must guarantee the markup for at least 12 months.

Although there still seems to be considerable information challenges in the Norwegian electricity retail market, several of the interviewed actors have observed that these problems have been reduced in recent years. This is likely due to a combination of changes in regulations and industry standards, increased enforcement of existing regulations, and a general increase in public awareness around the electricity retail market.

The industry standard Trygg strømhandel was established in 2020. Both prisopplysningsforskriften and avregningsforskriften were changed in 2022, with increased obligations regarding the information the electricity retailers can use in their marketing, contracts, and invoicing.^[82]

Forbrukertilsynet has been given increased sanctioning opportunities since October 2023, and they have also monitored the electricity retail market more closely in recent years, for instance with the controls in March 2023. The increase in sanctioning power follows from the implementation of the EU's modernization directive in Norway and applies to the Marketing Act and the Right of Cancellation Act. The new rules strengthen consumer protection and set clearer requirements for businesses.^[83] It was noted in our interviews that the regulations are demanding for the electricity retailers to understand, so they also work to guide the retailers in this respect. Thus, several changes have recently been implemented to address information asymmetry in the electricity retail market, the full effect of which has not yet been felt.

82. <https://www.fornybarnorge.no/nyheter/2021/24-stromleverandorer-sertifisert-for-trygg-stromhandel/>. Date: 24.11.23

83. <https://www.forbrukertilsynet.no/nye-reglar-styrkar-forbrukarvernet>

Furthermore, the government announced in September 2023 that they planned to hold a hearing in October 2023 regarding further measures to respond to these challenges.

The Norwegian market offers a wide supply of spot contracts with varying markups and other price elements or product bundles. Although the market for spot contracts can be somewhat confusing for consumers, several spot contracts are available with no other price elements than a relatively low markup and possibly a fixed monthly fee. There is, however, a limited supply of fixed-price contracts for household consumers. [84] Fixed-price agreements can result in higher costs over time compared with spot contracts, for instance, depending on how the customer adjusts their electricity consumption according to the spot prices. However, for many consumers, the fact that the price is stable is more important than having the lowest average price. Although the current electricity support scheme reduces the risk of high price volatility for consumers, there are few alternatives for those who prefer contracts with stable prices.

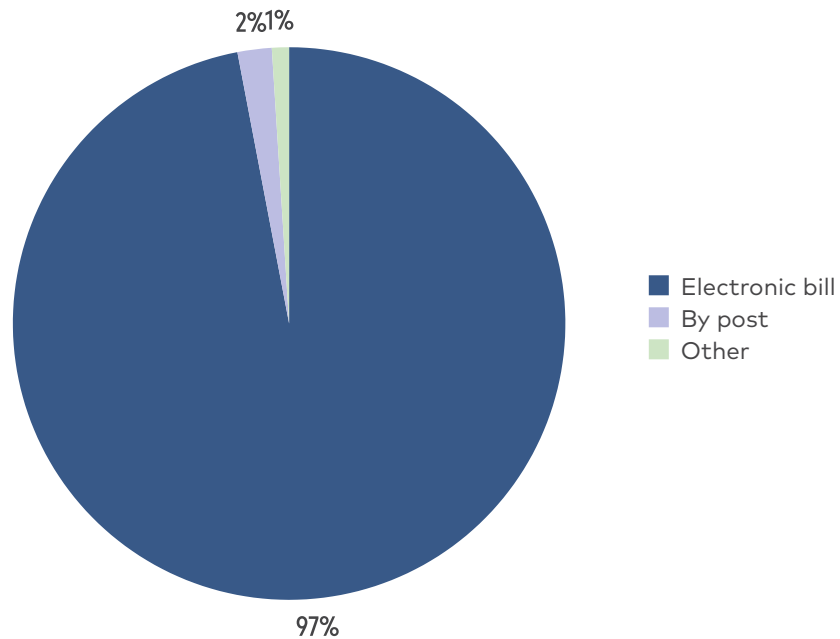
The non-household consumers in the electricity retail market are described as a particularly vulnerable group. Many of these consumers are, in practice, the same people with the same information and awareness of the electricity retail market as the household segment. However, the non-household segment has significantly fewer consumer rights than households, and they are not necessarily aware that they have fewer consumer rights as a non-household consumer. Fixed-price agreements, or agreements with fixed-price elements, have traditionally been more prominent in the non-household segment. The supply of such agreements became limited when electricity prices increased. In November 2022, the government introduced measures to boost the supply of fixed-price agreements to non-household consumers; however, the available statistics indicate that few companies have entered into these agreements. [85]

84. As of October 2023, three fixed-price agreements are available at strompris.no.

85. <https://www.altinget.no/arbeidsliv/statsradensvarer/9980>

8.3.3 Invoicing and billing

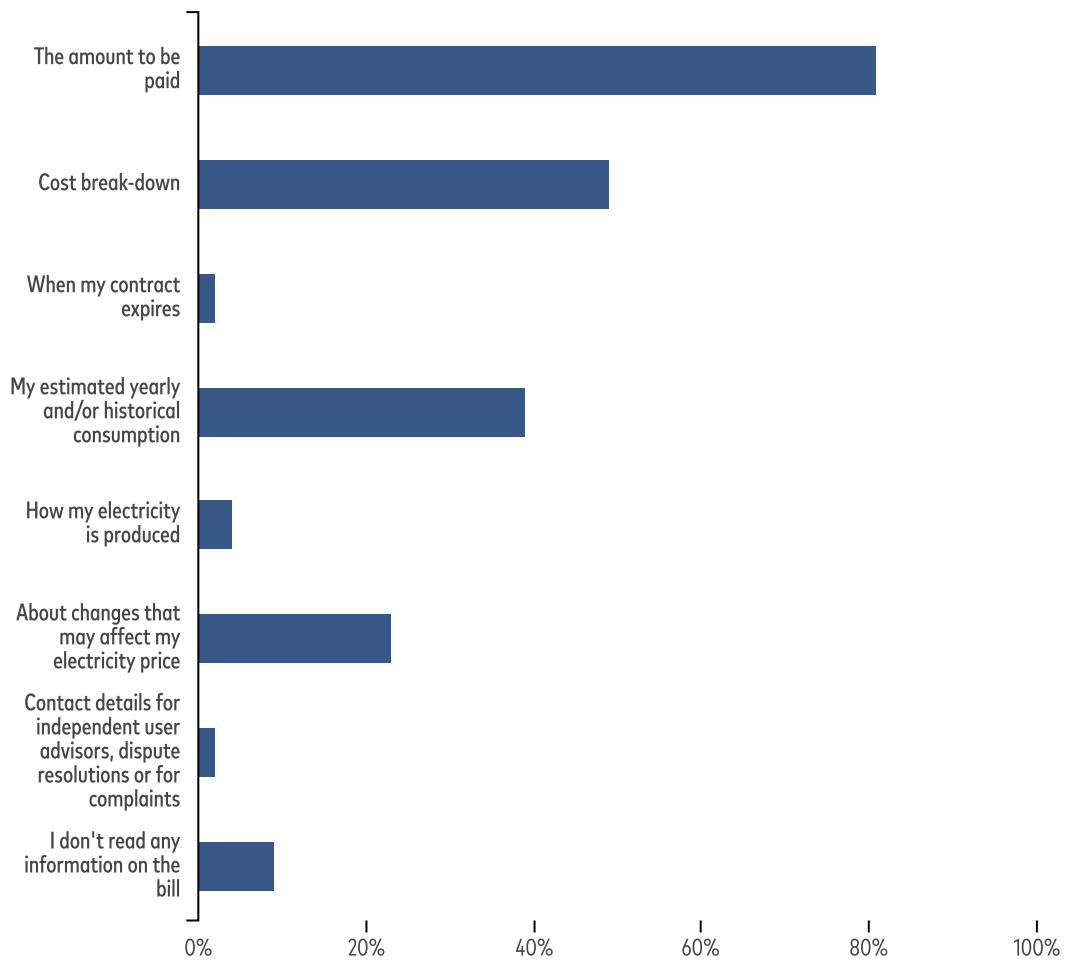
Figure 8-16: How electricity bill is received (Norway)



Note: The graph shows how respondents receive the bill from their electricity supplier. Survey conducted in October and November of 2023 amongst Norwegian households. N=1195.

Almost all respondents report that they receive their electricity bills electronically (Figure 8-16). Among the respondents seeking information on their electricity bills, two specific aspects of the invoice were highlighted (Figure 8-17): 80% were interested in the amount to be paid, while 50% were interested in information on the price elements upon which the bill is based. Subsequently, 40% of respondents pay attention to information regarding their estimated yearly and/or historical consumption, while 30% focus on details about changes that may impact their electricity bills.

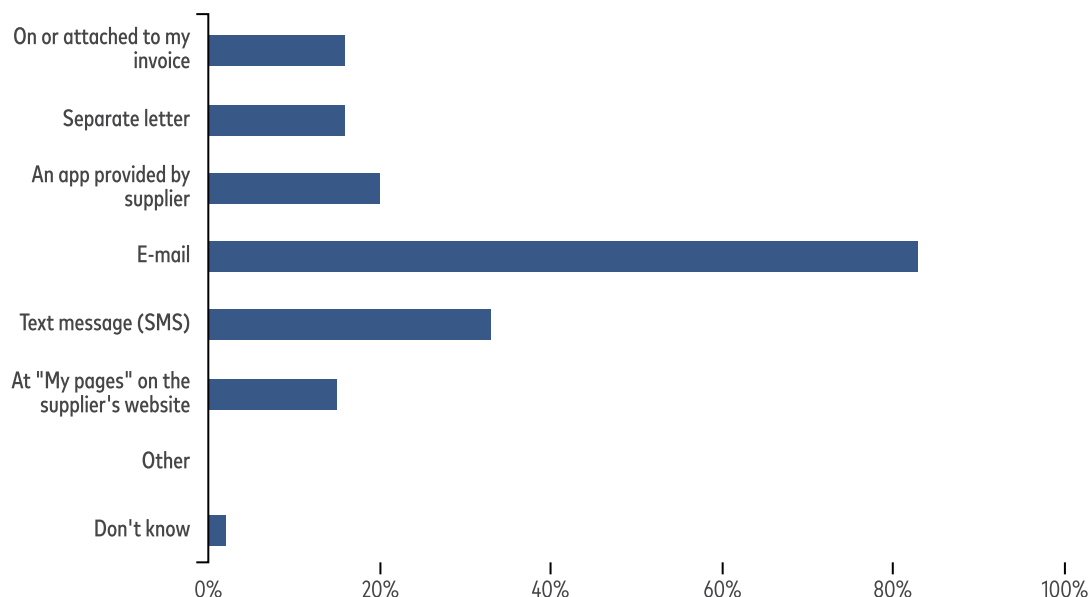
Figure 8-17: What information respondents read on their invoice (Norway. Multiple choices allowed)



Note: The graph shows the fraction of respondents that report looking for each type of information on their bill. Multiple choices allowed. Survey conducted in October and November of 2023 amongst Norwegian households. N=1195.

For 80% of respondents, the preferred method of receiving notifications about changes to the electricity contract or other relevant aspects is via email, followed by text messages at 40% (Figure 8-18).

Figure 8-18: Preferred method of being notified of changes to the electricity contract or other aspects that may affect the customer (Norway. Multiple choices allowed)



Note: The graph shows the methods by which respondents prefer to be notified of changes by the electricity seller that may affect the customer, for example changes to the electricity contract. Survey conducted in October and November of 2023 amongst Norwegian households. N=1195.

In summary, much is heading in the right direction in the Norwegian retail electricity market. Customers have gained greater awareness and knowledge of the market, assisted by simpler contracts that make it easier for households to understand price elements and the terms and conditions in their contracts. Furthermore, several retailers have recently begun marketing themselves as being trustworthy and predictable by offering only one contract and promising not to make any changes to them. The primary challenge, however, may lie in the fact that a sizable group still exists with low interest in the market.

8.3.4 Customer satisfaction

The electricity retail market has for a long time been considered a market with relatively high levels of customer dissatisfaction compared to other markets. Forbrukerrådet received 3,450 enquiries regarding the electricity retail market in 2022, an increase of 70% compared with 2021.^[86] This is the market with the second highest number of enquiries. Specifically, enquiries were related to unjustified cancellation of fixed-price agreements, requirements of prepayment, high electricity bills, and the lack of withdrawal rights. Furthermore, Elklagenemnda received 1,200 enquiries in 2022, double the figure from 2021. More than half of these complaints were related to the electricity retail market.^[87] Most of these complaints were related to consumers questioning terms in the agreements they had made; 40% stated that they felt cheated one or more times when buying electricity in a survey from 2022.^[88]

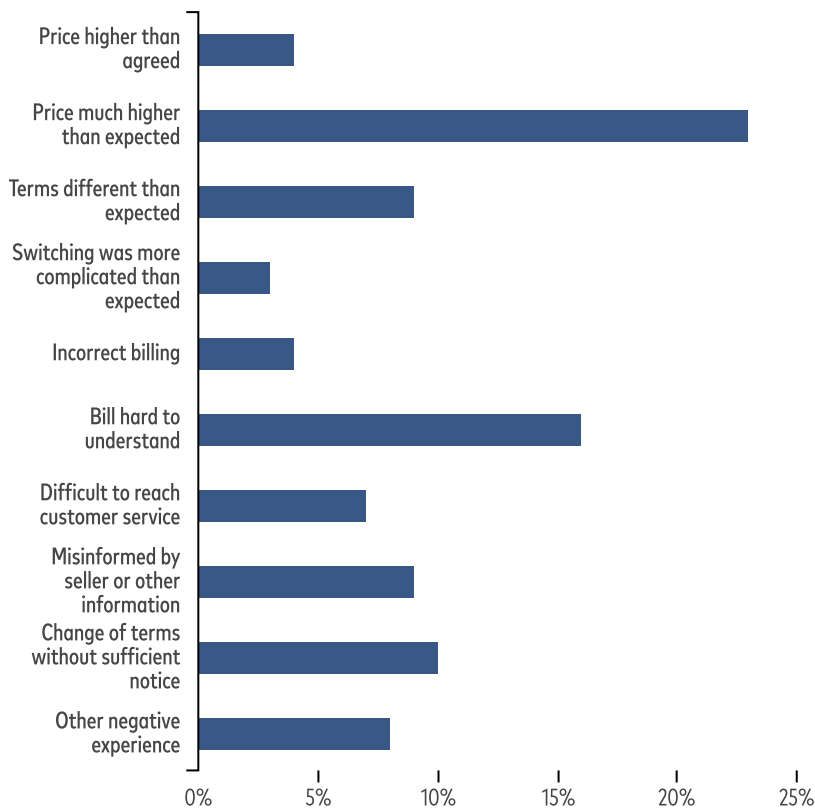
Approximately 50% of the survey respondents report having negative experiences with their retail supplier, and 40% report negative experiences not related to pricing. The survey results show that the main problem for the customer was that prices were much higher than expected (Figure 8-19). This may, however, not have been the electricity retailer's fault but rather the development of the electricity price in the market. The second most prevalent problem is that billing was hard for customers to understand. Other problems mentioned were related to contract terms, misinformation, and difficulty in reaching customer service.

86. <https://www.forbrukerradet.no/siste-nytt/forbrukerradet-nedringt-av-fortvilte-stromkunder/>

87. <https://www.elklagenemnda.no/contentassets/15b3423413004d85aabdb18ab707580f/armelding-2022-elklagenemnda.pdf>

88. Forbrukerrådet. 2022. "Strøm og strømleverandører – kunnskap, erfaringer og holdninger i befolkningen»

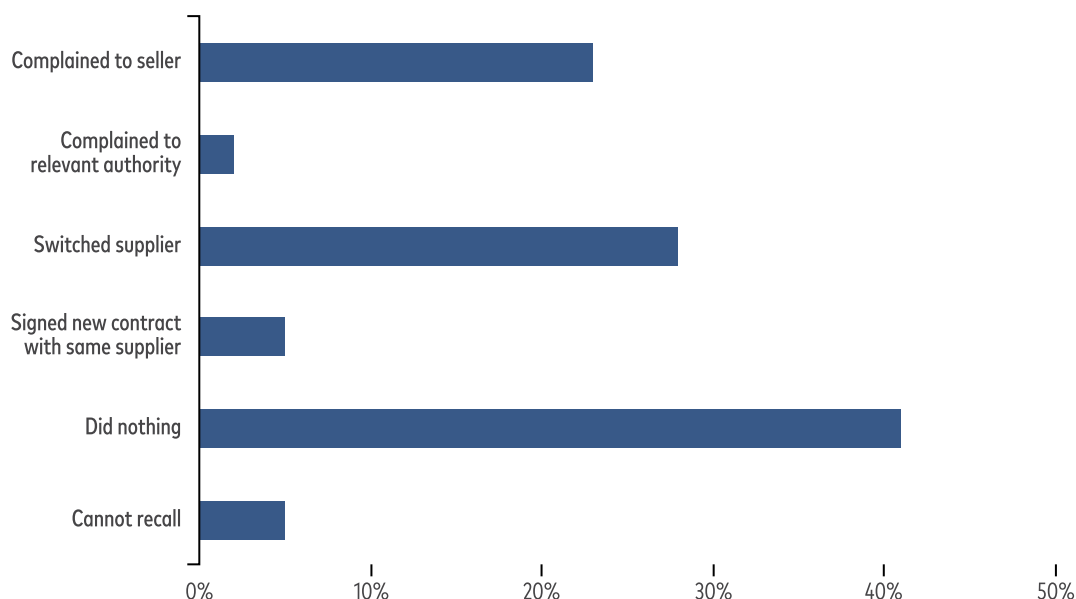
Figure 8-19: Negative experiences with electricity seller (Norway. Multiple choices allowed)



Note: The graph shows the fraction of respondents that reports a negative experience with their electricity provider during the last two years. Multiple choices allowed. Survey conducted in October and November of 2023 amongst Norwegian households. N=1194

The households' response to their negative experiences varied. In the survey, we have chosen to exclude those who justified their negative experience by stating that the price was higher than expected. This is because this issue for the most part is related to the development of the spot price in the market and not the electricity retailers specifically. Among those who had other reasons for having a negative experience, 41% reported taking no action. Approximately 30% switched to a different supplier, while around 20% chose to complain to their electricity retail supplier (Figure 8-20).

Figure 8-20: Consumers' response to a negative experience (Norway. Multiple choices allowed)



Note: The graph shows action taken by consumer in response to a negative experience. Survey conducted in October and November of 2023 amongst Norwegian households. N=612.

Information is lacking when it comes to customer satisfaction in the non-household segment. However, a 2022 survey on the satisfaction of Norwegian electricity customers shows that non-households were less satisfied than households. The electricity support scheme is likely to be one of the reasons for this difference in satisfaction levels.^[89] It was noted in the interviews that many enquiries were submitted by SMEs needing guidance, and with questions on the same topics as the household consumers, such as contracts being difficult to understand or being wrongly invoiced. However, since non-household customers do not have the same rights as household consumers, they need to contact lawyers to receive help regarding these issues (or resolve the problem themselves).

In general, the increasing number of enquiries and complaints can be related to both an increase in the actual level of illegal behaviour from the electricity retailers and an increase in the customer awareness that makes consumers more able to identify illegal behaviour. While we do not have evidence to say that there has been an increase in the actual level of illegal behaviour in the electricity retail market, increased customer awareness and media attention have likely contributed to this increase. Some market players also express that dissatisfaction towards electricity suppliers is related to high electricity prices, and in that sense to customers not

89. <https://www.epsi-norway.org/wp-content/uploads/2023/06/Stromstudien-2022.pdf>

understanding the market. The high electricity prices increased the need for information and regular updates from the electricity suppliers, which also increased awareness regarding electricity saving.^[90]

Impacts of the energy crisis

High electricity prices have contributed to increased customer awareness in the electricity retail market. Electricity has shifted from being a low-interest product that made up only a minor part of most household budgets to a topic of widespread media attention, for instance, around high costs for consumers. This increased media attention, along with the actual high costs for consumers, has likely resulted in more consumers delving into the details of their electricity agreements. According to several of the interviewed actors, there has been an increase in consumers noticing that they paid for additional products of which they were previously unaware.

Although high electricity prices have likely contributed to increasing customer awareness, the energy crisis has not necessarily contributed to increased mobility in the electricity retail market. The share of consumers that change electricity retailer each year has remained relatively stable at 20–25% in the household segment, and 10–12% in the non-household segment, over the past five years.^[91] There has, however, been a change in the composition of contracts. For households, spot contracts have been the dominant contract type for several years and have become even more prominent as electricity prices have increased. In particular, the already low share of variable contracts has been further reduced.

The increase in spot contracts may seem somewhat counterintuitive at first, since spot contracts are the contracts with the highest degree of volatility and have historically had high markups. Several factors have likely contributed to this shift. First, variable-price contracts are not particularly transparent, and Forbrukerrådet have for years warned the public about these types of contracts and recommended spot contracts instead. Second, the electricity support scheme for households has contributed to reducing the volatility related to spot contracts. Third, together with increasing energy prices came a greater focus on cost-saving measures related to electricity, such as moving consumption to cheaper hours. There is evidence that high electricity prices have contributed to both a reduction in total household electricity consumption and a move to shifting consumption in line with energy prices.^[92]

The energy crisis has led to increased prevalence of innovation that allows the connection of self-produced electricity to regular electricity. Customers have installed various solutions to reduce their use of electricity and make their usage more flexible as prices have increased. Examples include solar cells, heat pumps, smart charging of EVs, and apps to monitor electricity use and react to price signals. Traditionally,

90. <https://www.epsi-norway.org/wp-content/uploads/2023/06/Stromstudien-2022.pdf>

91. [Leverandørskifter, markedsandeler og leveringsplikt \(nve.no\)](#)

92. (Dalen og Halvorsen 2022) and (Tangeland et al. 2022)

electricity has been seen as a low-interest, homogeneous product, with prices historically being low and stable. Customer awareness regarding electricity prices has since increased, but this may change if prices fall and/or become stable again. Nonetheless, the increased knowledge among some customers and the installation of different solutions to monitor and react to price signals may contribute to a longer-lasting effect on customer awareness and response to electricity price changes.



Stockholm, Sweden. Photo: Unsplash / Dusan Petkovic

9. Sweden

9.1 Regulatory framework and organization of the market

9.1.1 Relevant authorities and actors

In this subsection, the role of different relevant authorities and actors are described in Table 9-1.

Table 9-1: Actors and relevant regulations

Role	Name	Responsibility
Regulatory authority	Energimarknadsinspektionen (Ei)	Responsible for supervising the electricity, district heating, and natural gas market in Sweden and ensuring the actors' compliance with the regulatory framework. Also responsible for suggesting changes and developing regulations. Also offers the electricity contract comparison site "elpriskollen.se".
Consumer agency	Konsumentverket	Government agency responsible for consumer legislation and monitoring of consumer affairs; the electricity market is one of 45 different markets monitored by the Consumer Agency.
Competition authority	Konkurrensverket	Enforces the Competition Act and is responsible for monitoring the markets to promote competition both in private and public activities so that it is efficient and beneficial to consumers.
Consumer information and guidance (Consumer council)	Konsumenternas energimarknadsbyrå	An independent bureau that offers free advice and guidance to consumers on the Swedish energy markets. It is funded by the Consumer Agency, the Energy Agency, Ei, and two industry organizations. The bureau also presents statistics on reported consumer problems and complaints, as well as an updated list of electricity retailers that have received an unusually high volume of complaints.
National board for consumer disputes (Electricity appeal board)	Allmänna reklamationsnämnden (ARN)	A public authority whose main responsibility is to impartially resolve disputes between business operators and consumers.
Industry organization for electricity retailers	Energiföretagen	Trade association representing companies that distribute, store, sell, and supply energy in Sweden, mainly for heating, electricity, and cooling. There are around 400 members in total, including municipal, state-owned, and private companies, as well as associations.

9.1.2 Regulatory framework

Retailer requirements

There is currently no licencing procedure in the Swedish electricity retail market. A requirement for a licence could create a significant barrier to entry, because companies would need to be granted permission to operate in the market, contradicting the ambition of a free market without specific barriers to entry. However, electricity retailers must adhere to the general requirements of running a business, as well as certain provisions for actors on the Swedish electricity retail market. For example, the reporting of electricity contracts must be published on the price comparison website elpriskollen.se; they also need to sign an Ediel agreement with Svenska kraftnät for electronic information exchange and registration and reporting according to the Regulation on Wholesale Energy Market Integrity and Transparency (REMIT).

Optional certifications

The "fair electricity trading" certification, developed by the trade association Energiföretagen, can be obtained by electricity retailers seeking to ensure quality and demonstrate their adherence to 18 customer promises. These promises entail that companies commit to going beyond what the law requires when it comes to selling electricity contracts in a fair manner, thereby making electricity customers feel safer in their choice of electricity retailer. In 2022, a total of 43 electricity retailers had managed to obtain this certification.^[93]

The "fair electricity trading" certification means that a certification body has verified that the electricity company has functional procedures that make it clear what the customer is buying and what the agreement entails. Energiföretagen supports the certification, but an independent and accredited certification company (DNV GL) manages the certification of companies. DNV GL also oversees electricity retailers' compliance with the set requirements of the certification. If an electricity retailer fails to meet the requirements, DNV GL also has the authority to revoke the certification.

Customers who have signed an electricity contract with a certified electricity retailer can refer to the customer promises in the case of a dispute to seek a resolution.^[94] Some examples of customer promises include special consideration for vulnerable customers, clear and correct price information, and information before delivery starts or contracts expire.

Complaint list

The Swedish Consumer Energy Markets Bureau provides information on complaints and an updated list of companies who have generated the most complaints in relation to the number of customers in the past 12 months. Currently, three out of around 150 companies fit these criteria. The list is updated once per quarter. It aims

93. <https://www.energimarknadsbyran.se/el/dina-avtal-och-kostnader/valja-elavtal/certifierade-elbolag/>. Date: 28.11.23

94. The customer promises as a whole are presented on the Energiföretagens website: <https://www.energiforetagen.se/energifakta/schysst-elhandel/krav-pa-certifierade-foretag/>

to support and inform customers who are choosing electricity contracts and electricity retailers to help them make a more informed decision and avoid consumer problems as far as possible.^[95]

The list is generated using statistics from the contacts the bureau has with people seeking help to resolve a dispute with a company in the electricity market. For a company to be included in the list, the number of complaints must have exceeded a certain minimum level, currently 35 complaints; the minimum level is revised every quarter along with an update of the list. The complaints included in the statistics relate to cases where a customer has been unable to resolve a dispute with the company's customer service and has needed guidance and support from the bureau's consumer service. The agency also considers whether there may be a basis for the complaints. Further details and information are also provided for the complaints usually received in relation to each company on the list.^[96]

Provisions that prohibit vertical integration are provided by the Electricity Act, which includes provisions that prohibit the involvement of electricity grid companies that are a part of a group that collectively serves at least 100,000 electricity users with companies that trade or produce electricity. Specifically, the DSO must have an organization and decision-making process that is separate from companies trading or producing electricity, and they cannot have a board member, managing director, or signatory who simultaneously holds positions as a board member, managing director, or signatory in a company that trades or produces electricity.

Invoicing

The required information and design of electricity invoices is governed by regulations based on the Electricity Act. The design of the invoice is regulated by paragraphs 5–7 §§ in the regulation on delivery of electricity and aggregation services. The regulation states that the electricity retailers must explain the contents of the invoice in an easily understandable manner if requested by the electricity user, offer the electricity user invoices in electronic format, and invoice electricity users (who have remotely readable meters) at least once every quarter and those who have meters that cannot be remotely read at least once a year.

Moreover, the information required of electricity retailers on their invoices is governed by paragraphs 9–10 §§ in the same regulation. First, the invoice should be clear and include general information on the retailer's name, contact details, and contact details for customer service. Other required information includes:

95. <https://www.energimarknadsbyran.se/el/dina-avtal-och-kostnader/valja-elavtal/klagomalsinformation/>. Date: 28.11.23

96. <https://www.energimarknadsbyran.se/el/dina-avtal-och-kostnader/valja-elavtal/klagomalsinformation/>. Date: 28.11.23

- Billing period, applicable prices, and the amount to be paid for electricity delivery, broken down into fees and the measured values in kWh on which the billing is based
- The amount to be paid for any other services provided by the electricity retailer during the billing period and the applicable prices for these services
- Invoice due date
- Identification code for the delivery point
- Applicable delivery agreement, its validity period, and where the electricity user can find information about the contents of the agreement
- What it means for the agreement to be an assigned agreement, if such a delivery agreement is applied.

In addition, the information below may be provided on the electricity retailer's website if there is a clear instruction on the invoice about where the electricity user can find them:

- How the agreement can be terminated and whether it can be terminated free of charge
- Opportunities for and benefits of changing electricity retailer
- Where comparison tools are available that compare offers from different electricity retailers
- Each energy source's share of the electricity that the electricity user purchases according to the delivery agreement
- Other services that the electricity retailer can provide
- Conditions for compensation and reimbursement for services that have been incorrectly invoiced or that do not meet the specified quality
- How the electricity user can make complaints and how complaints are handled
- Consumer rights
- Independent services for dispute resolution and contact details for such services.

For invoices based on actual consumption, the following additional information is required:

- Graphic comparisons of the user's electricity consumption during the billing period and the consumption during the same period the previous year
- Contact information for independent user advice on available energy-efficiency measures
- Comparisons with a normalized or benchmarked average electricity user in the same user category.

If the customer's electricity retail company and electricity grid company are part of the same company group, the costs are usually invoiced together. The customer will then receive an invoice that includes both grid and electricity costs. If the customer switches electricity retailer, they may receive separate invoices, one for the grid cost and one for the electricity cost, as joint invoicing is not always possible. However, there are electricity retailers that offer joint invoicing even if they are not part of the same group as the grid company. There are no financial benefits for customers to have the grid and electricity costs combined on one invoice, as companies are not allowed to charge invoice fees according to the Electricity Act.

An electricity trading company must offer multiple payment methods when invoicing and cannot disadvantage an electricity user based on the payment method chosen. This means that contracts are not allowed to be designed so the electricity consumer is forced into a certain payment method. The fees charged for a particular payment method or for a system of advance payment must not exceed the costs incurred by the payment recipient for the use of the payment method or system.

Contracts

Customers can switch electricity retailer by contacting another electricity retailer and entering into a new agreement. The new agreement can be accepted in different ways, through writing, online, or over the phone. When a customer calls the company to enter into an agreement, the audio recording is sufficient as proof that they have accepted the agreement. Moreover, electricity retailers are only allowed to enter agreements with customers who have a valid electricity grid agreement, and it is the responsibility of the electricity retailer to ensure this. When a telemarketer calls a consumer, the consumer must accept the agreement in writing for it to be valid pursuant to a consumer protection regulation (regulation of distant contract sale).

Switching electricity retailer is free of charge for consumers and small businesses. The electricity retailer must ensure that a user can switch within three weeks from the request for the switch in a non-discriminatory manner regarding costs, effort, and time. This means that the electricity retailer is not allowed to impose a burdensome administrative process on an electricity user when they request to switch.

If the customer has a previous agreement with a commitment period and/or notice period, they need to ensure that this agreement is not terminated prematurely and risk a termination fee. The electricity retailer can charge termination fees only for agreements that are for a specific period with a fixed-price component. The lock-in period varies between electricity retailers and contract types. For fixed-price contracts, a lock-in period of one to three years is the most common, although it can range between one month and 10 years. Regarding variable-price contracts, having no lock-in period or a lock-in period of one month is common. A variable contract with a lock-in period means that the customer is bound during the contract period, but the electricity price still varies with the development of the electricity exchange.

Often, electricity agreements are automatically extended if the customer does not actively contact the company and terminate the agreement. For the electricity retailer to have the right to extend the electricity agreement, it must be stated in the terms of the agreement. The company must also inform the customer of the contract extension 60–90 days before the extension takes place through a separate notice (applies for fixed-term contracts that are automatically renewed after the contract period has ended), including what the new agreement will be if no active change is made. For electricity agreements entered over the phone or through a website, the customer has a right of withdrawal for 14 days. Extension of the right of withdrawal period by up to one year applies if the customer has not received sufficient information regarding the right of withdrawal. As soon as sufficient information is provided, the right of withdrawal period of 14 days begins.

If an electricity user has lost their electricity agreement, the customer's electricity grid company will assign the customer to an electricity retailer, and the customer is entered into what is called "assigned price". Usually, the assigned price is higher than other price alternatives and can change during the year; however, these changes occur more slowly than the non-assigned monthly flexible price alternatives. Electricity grid companies have an obligation to ensure that an electricity retailer has committed to providing electricity to the electricity user on reasonable terms. Within seven days of the assignment, the electricity grid company must inform the electricity user of the assigned electricity retailer. The assigned electricity retailer must, at least once every quarter, inform the customer of their offered contract types and prices, as well as where information can be found on contracts and prices offered by other electricity retailers.

On 1st June 2023, new regulations were introduced into the Electricity Act, stating provisions on how assigned contracts are not allowed to be hourly price contracts or dynamic prices. Dynamic prices refer to prices that reflect the price on the spot market at every hour, with an interval that at least corresponds to the frequency for settlement on the market. Moreover, an assigned contract is not allowed to have a notice period longer than 14 days. Historically, assigned prices have been fixed-price contracts (with a maximum 14-day notice period), but recently it has become more common that the assigned price contract is a variable-price contract.

The price comparison website "elpriskollen.se", offered by Ei,^[97] is often referred to when informing customers of where they can find information and compare different contracts and their prices as well as their terms and conditions. Additionally, a symbol is displayed if a retailer has been subject to supervision regarding one of the consumer protection provisions of the Electricity Act, or if the company is on the Swedish Consumer Energy Market Bureau complaint list, or if a retailer has the certification of "fair electricity trading". In 2023, there was a relaunch of Elpriskollen with new and improved functions for customers. During 2022, the tool had 780,000

97. According to the regulation 2016:742 with instructions for Ei, 7§ p 4, Ei shall provide a comparison tool that meets the requirements of Article 14.1 of Directive 2019/944.

unique visitors. The website "elskling.se" also offers similar comparison of electricity contracts and prices between different electricity retailers.

All electricity supply companies are obligated to report information on prices and terms applied by the company for delivery of electricity to Ei for publication on elpriskollen.se. This obligation applies for certain contract types that can be entered into by customers and for electricity users with an expected annual electricity consumption below 100,000 kWh.

Regarding information about contracts, electricity retailers have no specific requirements about having to list all their contracts on their website. However, they are required to provide certain information about their products and services, such as the price and terms of the contract, which can be provided on their website or in other easily accessible channels. This information must be updated regularly.

An electricity supply company that intends to change the terms of an ongoing indefinite agreement must inform the electricity user about the changes and their right to terminate the agreement in a separate notice. If the change concerns the electricity price, the reasons and conditions for the change must also be included in the notice. The notice should be designed in a way that the full implications of the term changes are made evident solely by reading the notice. The company must notify and inform the user at least two weeks before the changes take effect; if the user is a consumer, they must be notified at least two months before.

Marketing

There are no particular requirements or regulations that apply only to marketing within the electricity market in Sweden, and the marketing of electricity products is governed by the general Marketing Act. The act applies to all marketing of information by businesses to consumers and is applicable to all marketing activities. In the act, marketing not only refers to advertising but also includes the mere offering of a product. According to paragraph 5 § of the Marketing Act, marketing must comply with good marketing practices. Marketing that violates good marketing practices is considered unfair under paragraph 6 § of the Marketing Act if it significantly affects or is likely to affect the recipient's ability to make a well-informed business decision.

Win-back tactics are allowed in Sweden, but they must follow certain rules. According to the Marketing Act, it is not allowed to use misleading or aggressive marketing or to harass consumers by calling or sending unwanted messages. In addition, there are requirements that consumers should have the opportunity to terminate subscriptions or agreements without hindrance. If the company follows these rules, win-back sales can be used in electricity trading in Sweden.

SMEs' customer rights

Rights for SMEs are limited in comparison to consumer rights. According to Ei, many complaints received by Ei and the Swedish Consumer Energy Markets Bureau show that the smallest companies, defined as micro-enterprises, are affected by unfair business practices. The European Commission defines micro-enterprises as companies with less than 10 employees and a maximum annual turnover of 2 million EUR. In 2020, around 96% of companies in Sweden fell into this category, with 79% of these being sole proprietorships.^[98]

Examples of unfair business practices affecting micro-enterprises include telephone sales deceiving the company into switching electricity retailer, false promises of better contract terms or partnerships between an electricity grid company and an electricity retailer, and received confirmation of a concluded agreement when the company has only agreed to receive more information about a contract. Two business operators who enter into a contract are legally considered equal parties, although the micro-enterprise often has a weaker position compared to the contracting party. The consumer protection rules do not apply to micro-enterprises, even when they are in a weaker position compared to their contracting party.

In a report published by Ei in 2023 on "unfair business methods"^[99] ("Oschyssta affärsmetoder", government assignment), several suggestions of changes to the current regulations to mitigate the challenges of unfair electricity retailer are presented. For micro-enterprises, it is suggested to introduce a right of withdrawal for 14 days to improve their protection rights. This would apply to agreements entered into with electricity retailers or intermediary service providers. Another recommendation is that the right of micro-enterprises to withdraw from a contract should be similar to the right that consumers currently have under the Distance and Off-Premises Contracts Act, which means that the right of withdrawal should not be able to be waived as a general rule. The report also contains further suggestions aimed at SMEs and micro-enterprises.

Sanctioning

Since electricity supply companies do not need a licence to operate, no licence can be withdrawn.

The "fair electricity trading" certification can be withdrawn if the company does not adhere to its customer promises. The trade association Energiföretagen developed and manages the certification, together with the independent and accredited certification company DNV GL, which oversees the certifications themselves. The

98. Government assignment on unfair business methods: <https://ei.se/download/18.234a701c1863c067849502b/1676625808935/Oschyssta-aff%C3%A4rsmetoder-Ei-R2023-01.pdf>. Date: 28.11.23

99. Government assignment on unfair business methods: <https://ei.se/download/18.234a701c1863c067849502b/1676625808935/Oschyssta-aff%C3%A4rsmetoder-Ei-R2023-01.pdf>. Date: 28.11.23

certification acts as a form of self-sanctioning, as it is not connected to any authority but something for which many electricity retailers strive.

The up-to-date list of companies with unusually high numbers of complaints, managed by the Swedish Consumer Energy Markets Bureau, also provides self-sanctioning within the market (see Retailer requirements under Appendix A). The price comparison tool Elpriskollen includes information of companies included in this list, as well as which companies have the “fair electricity trading” certification, making it easy for customers to see which companies receive many complaints and which are striving for fairer customer treatment. As the list also provides information on which complaints the companies on the list usually receives, it offers a way to create transparency for customers regarding unfair business practices, making electricity retailers endeavour to not end up on the list.

Provisions on fines in the Electricity Act are stated for electricity grid companies who fail to meet certain obligations. However, there is no stated limit on the size of the fine. Additionally, the Electricity Act allows for fines for other actors as well. The regulatory authorities (in the Swedish case, this applies to Ei) that are responsible for ensuring that laws and regulations are followed have the right to issue injunctions to individuals or organizations to ensure compliance with applicable regulations and conditions. Injunctions that are not followed can be reinforced with fines.

9.1.3 Government response to the energy crisis

To help reduce electricity consumers' financial strain from high electricity prices, the Swedish government gave Svk three assignments to implement electricity support funded by bottleneck revenues. One was directed to businesses and legal enterprises, and two were directed to households. The first electricity support was given to households in bidding areas SE3 and SE4 with an electricity grid agreement on 17th November 2022 for the period of October 2021 to September 2022. The second round of electricity support was given to households in all bidding areas with an electricity grid agreement on 31st December 2022, covering the period between November and December 2022. The third round of electricity support was given to business owners and legal entities in bidding areas SE3 and SE4 with a grid agreement on 17th November 2022, covering the period from October 2021 to September 2022.^{[100] [101] [102]}

Additionally, the government has given two assignments to the Swedish Energy Agency (Energimyndigheten) to provide electricity and natural gas support to businesses and households. The electricity support was given to electricity-intensive businesses, defined as businesses with an electricity consumption of at least 0.015

100. <https://www.regeringen.se/regeringens-politik/energikrisen/elstod-hushall/>

101. <https://www.regeringen.se/regeringens-politik/energikrisen/elstod-elintensiva-foretag/>

102. <https://www.regeringen.se/regeringens-politik/energikrisen/elstod/>. Date: 28.11.23

kWh/ SEK of turnover. Besides being defined as an electricity-intensive business, the businesses needed to have experienced electricity prices that were at least 1.5 times higher during the covered period compared to their average price in 2021. The support covered the period of October to December 2022 and was funded by bottleneck revenues. Furthermore, support for high natural gas prices was given to private gas consumers in southwest Sweden connected to the western Swedish gas network. The support sought to mitigate the effects of future high gas prices, although it was based on consumption between October 2021 and September 2022 when gas prices were high. A budget of 150 million SEK was assigned from the government to Energimyndigheten to allocate to the gas companies, which in turn allocated the support to their customers.

The compensation level for household customers was calculated as the difference between the average electricity price during the covered period and the national reference price (75 öre/kWh). The actual compensation was then calculated as the electricity consumption during the covered period multiplied by the compensation level. Moreover, for the second electricity support, a maximum limit of 80% of the electricity consumption was set to be covered by the electricity support. A summary of the compensations for the three first rounds of electricity support can be seen in Table 9-2.

Table 9-2: Electricity and natural gas support in Sweden

Support round	Support receiver	Compensation level	Average price during covered period	Covered period
Electricity support – Round 1	Household customers SE3	50 öre/kWh	125 öre/kWh	Oct 21 – Sep 22
	Household customers SE4	79 öre/kWh	154 öre/kWh	
Electricity support – Round 2	Household customers SE1	0,8 x 90 öre/kWh	165 öre/kWh	Nov 22 – Dec 22
	Household customers SE2	0,8 x 90 öre/kWh	165 öre/kWh	
	Household customers SE3	0,8 x 126 öre/kWh	201 öre/kWh	
	Household customers SE4	0,8 x 129 öre/kWh	204 öre/kWh	
Electricity support – Round 3	Business owners and legal entities SE3	50 öre/kWh (max. 20 MSEK)	125 öre/kWh	Oct 21 – Sep 22
	Business owners and legal entities SE4	79 öre/kWh (max. 20 MSEK)	154 öre/kWh	
Electricity support – Round 4	Electricity-intensive businesses SE1–SE4	See Equation 1	–	Oct 22 – Dec 22
Natural gas support – Round 5	Household consumers connected to the West Swedish gas network	79 öre/kWh	–	Nov 22 – Dec 22

* 1 öre = 0.01 SEK

Equation 1: Calculation of electricity support round 4 (electricity-intensive businesses)

$$\text{Round 4 support} = \text{El consumption}_{\text{covered period}} \times [\text{average el price}_{\text{covered period}} - (\text{average el price}_{2021} \times 1,5)]$$

Besides the introduction of support schemes, Energimyndigheten also ran a campaign to inform customers of various ways to save electricity called “Every kilowatt hour (kWh) counts”. The campaign was launched in October 2022 and presented different measures that households could take to save electricity, such as changing light bulbs to LED lights and lowering the thermostat. The campaign also included information on the load curve and peak load hours to encourage more consumers to use electricity during low load hours to flatten the load curve. The campaign also explained the importance of electricity savings linked to the high electricity prices caused by the war in Ukraine.

Lastly, the government also introduced state credit guarantees for loans to electricity producers in September 2022. A total of 250 billion SEK was dedicated to the guarantee scheme, and a single guarantee covered up to 80% of the loan, with the bank covering the remaining share. The last day for applying was in September 2023, and the credit guarantee scheme was never utilized.

9.2 Competitiveness and the functioning of the market

9.2.1 Competitive landscape

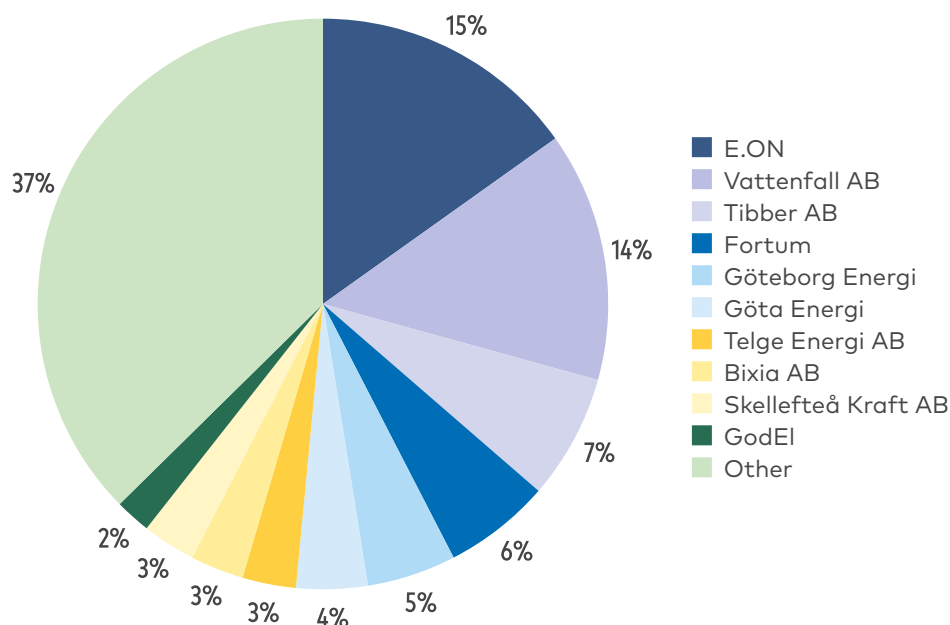
With no licence required to be an electricity retailer in Sweden, there are no specific entry barriers due to the ambition of a free market, creating a highly competitive market. There are currently around 150 electricity supply companies in the Swedish market,^{[103][104]} with a mix of local companies that only offer contracts in certain areas or bidding zones and larger companies with customers throughout the entire country. Electricity supply companies are free to decide which types of contracts they want to deliver to customers. However, an electricity supply company that has agreements with more than 200,000 electricity users should be able to offer agreements with dynamic prices to electricity users who have a meter and measuring equipment that can measure the amount of electricity transferred and register it with a time interval that corresponds to at least the frequency of settlement on the market.

As shown in Figure 9-1, the survey shows that there are a few large electricity supply companies with larger market shares, and 19 retailers with a market share above 1%. The three largest supply companies have a combined market share of 36%. Using the results from our Swedish household survey, we estimate the Herfindahl-Hirschman index of the retail market to be 0.07, indicating low market concentration and a high degree of competition.

103. <https://www.energimarknadsbyran.se/el/dina-avtal-och-kostnader/valja-elavtal/klagomalsinformation/>. Date: 28.11.23

104. <https://www.energimarknadsbyran.se/el/dina-avtal-och-kostnader/valja-elavtal/klagomalsinformation/>. Date: 28.11.23

Figure 9-1: Market shares of the ten largest retailers (Sweden)



Note: The market shares are estimated from a survey conducted amongst Swedish households in October and November of 2023. The shares are weighted. N=772.

According to several of the interviewees, the end-customer market has well-functioning competition, as there is a variety of available contract types and electricity retailers. Moreover, high prices have affected demand and supply, and thus the price mechanism has worked as planned, as its purpose is to create an equilibrium between supply and demand and to steer scarce resources to the highest economical value. Increasing prices are also supposed to stimulate the development of new supply and production, which has been less efficient. Possible measures to address the deficient link between new electricity production and high prices are overseeing the permit process to shorten permit processing times or monitoring the market mechanisms to achieve more new production in the short term.

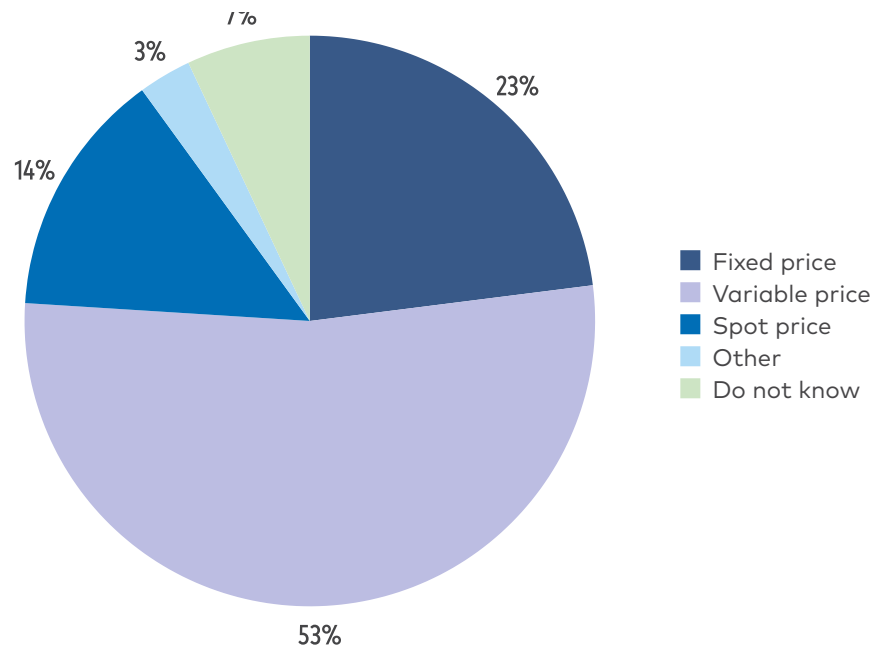
9.2.2 Contracts and prices

According to our survey, 74% of respondents indicated that they could find at least one contract aligned with their needs and preferences, while 24% did not know if the available contract types met their needs. For those who did find at least one relevant contract, 19% found just one, 28% found two or three, and 27% found more than three.

The most prevalent electricity contract among Swedish households is a variable-price contract at 53% of respondents (Figure 9-2). Fixed-price contracts also showed to be relatively common, being the second most common contract with a share of 23%. A possible explanation of the high prevalence of variable-price contracts is that the meter reading collection period for households is monthly in Sweden. For electricity retailers, the risk reduces if the settlement period is the same as the measurement time resolution and matched prices, meaning that customers often have a variable price based on an average spot price. Additionally, fixed-price contracts have existed on the market for a long time, and customers tend to stay with contract types that are familiar. During the last year, and with the new generation of smart meters, more customers have also signed spot-price contracts with hourly measurements and spot prices.

Moreover, a major challenge for electricity retailers in general regarding offering different contracts is the many regulations that control how and when they must inform customers related to products and offerings, often related to the invoice. This includes having to inform customers of price information at least 60–90 days before expiration of a contract that automatically renews as a fixed-term contract, which makes it difficult for the electricity retailer to give an accurate price for the delivery period. Furthermore, this also hinders the development of new products that are more complex than the ones offered today, as the increased complexity of a new product would be difficult to correctly present on an invoice according to the regulations on the information that must be included.

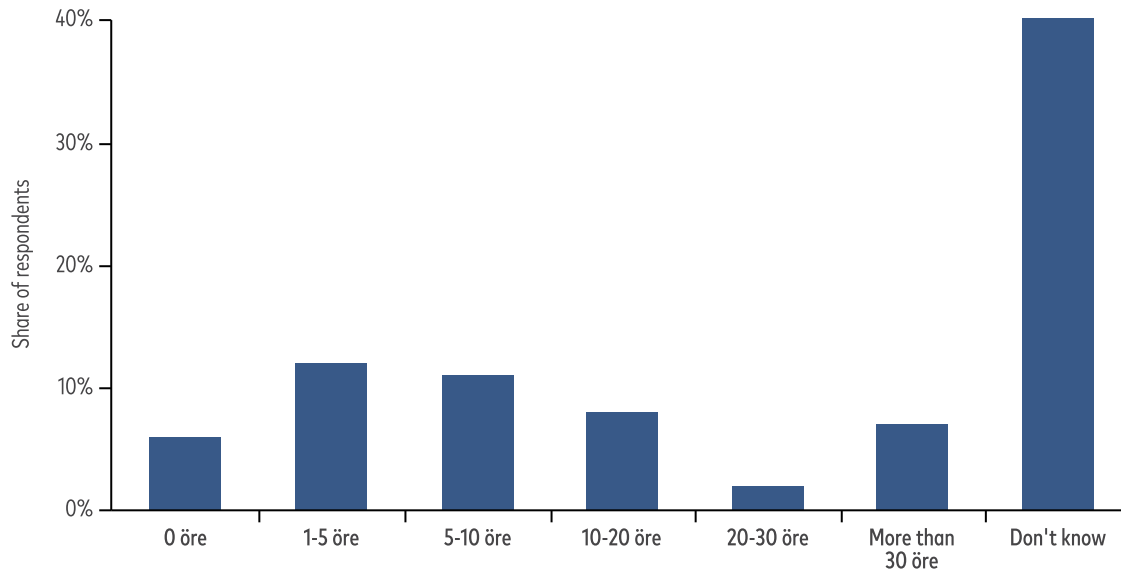
Figure 9-2: Contracts (Sweden)



Note: The contract shares are those reported by respondents in a survey conducted amongst Swedish households in October and November of 2023. The shares are weighted. N=772.

In the survey, we assessed households' awareness of the pricing details in their contracts (Figure 9-3). For spot-price contracts as well as variable-price contracts, customers typically have an additional surcharge per kWh, whereas in fixed- or variable-price contracts, this surcharge is typically integrated into the overall pricing structure. In addition to the surcharge, some households may pay a fixed monthly fee. In the survey, most respondents with a spot-price contract reported paying a surcharge per kWh of between 1 and 5 öre. At the same time, the survey reveals that a large proportion of respondents (54%) were not aware of the surcharge they are charged.

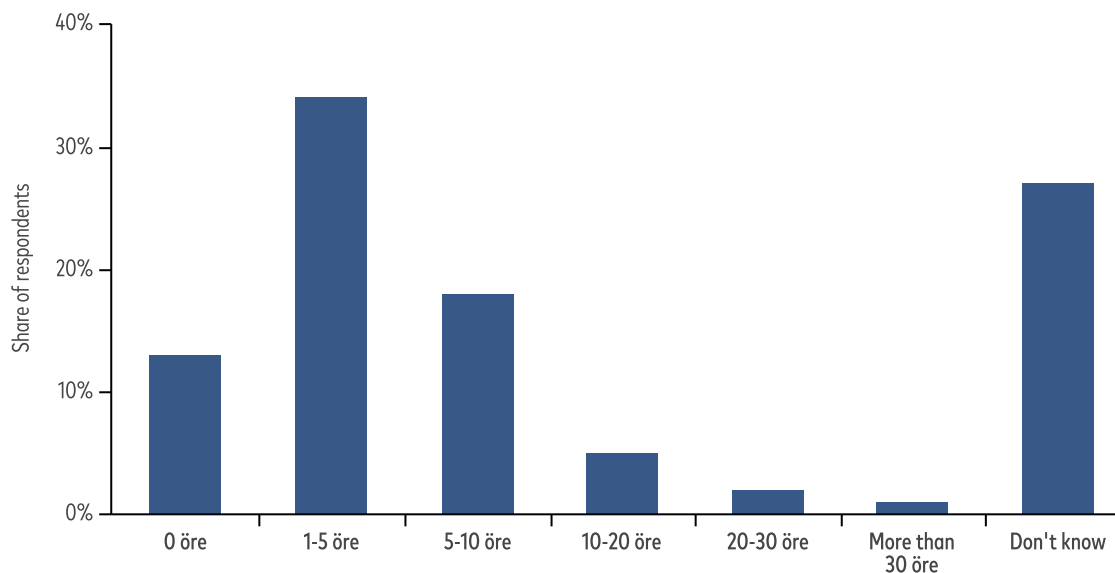
Figure 9-3: Per kWh surcharge in spot price contracts (Sweden)



Note: Surcharge per kWh for respondents with a spot price contract. In Swedish öre with 1 öre = 0.01 Swedish kroner. Survey conducted in October and November of 2023 amongst Swedish households. N=105.

For fixed-price contracts, the spread of results tends to be more evident compared to spot prices (Figure 9-4). In the survey, 34% of respondents reported a price range of 50–100 öre per kWh, and 18% reported a range of 100–150 öre. Additionally, 3% reported prices as high as 200–300 or more than 300 öre. The survey also shows that, similarly to the awareness of surcharge in spot-price contracts, many are unaware of their price information: Almost 30% of respondents expressed uncertainty regarding their pricing. Household customers did, however, express a higher awareness of the price in their fixed-price contracts compared to variable- and spot-price contracts.

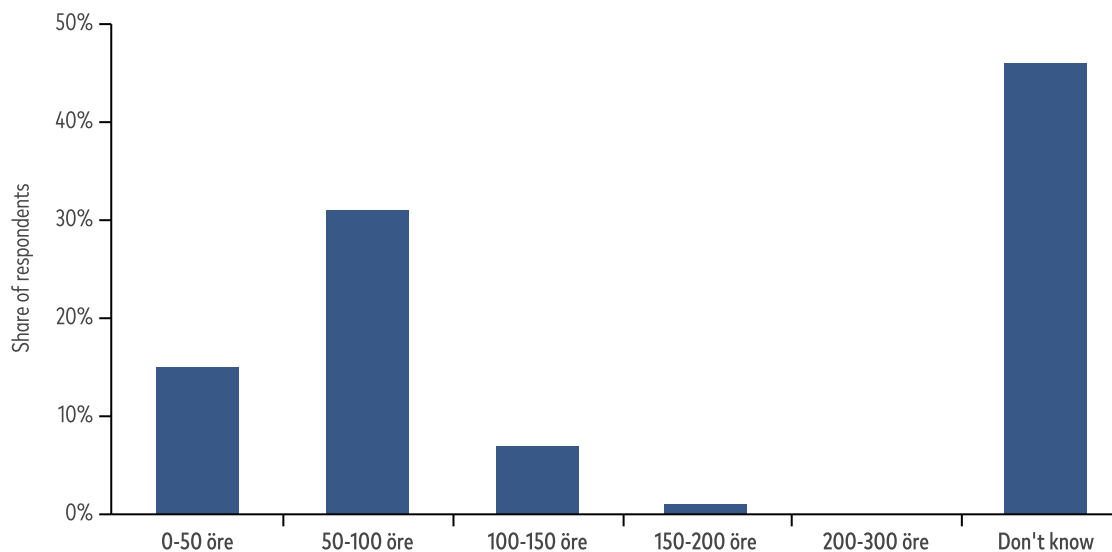
Figure 9-4: Per kWh price for fixed price contracts (Sweden)



Note: Price per kWh for respondents with a fixed price contract. In Swedish öre with 1 öre = 0.01 Swedish kroner. Survey conducted in October and November of 2023 amongst Swedish households. N=181.

For variable-price contracts, the spread of results has some similarities to the results for fixed-price contracts. A high share of respondents (31%) reported a price range of between 50 and 100 öre per kWh, although fewer respondents (7%) reported a higher price range of 100–150 öre. Additionally, only around 1% reported higher price ranges of 200–300 öre or more than 300 öre. Pricing awareness is also lower compared to fixed-price contracts, as 45% of respondents reported not knowing their price. This can possibly be explained by the price changing each month depending on the average spot price of the month; as a result, many customers may be unaware of the price changes that occur or what their average price is.

Figure 9-5: Per kWh price for variable price contracts (Sweden)



Note: Price per kWh for respondents with a variable price contract. In Swedish öre with 1 öre = 0.01 Swedish kroner. Survey conducted in October and November of 2023 amongst Swedish households. N=416.

9.2.3 Impacts of the energy crisis

Many electricity retailers have had to rapidly change business strategies to follow the volatile market and oversee hedging strategies to keep being able to provide secure products that are still economically feasible agreements for the business. It has been challenging to understand both the price fluctuations and the changing behaviour pattern of customers, creating difficulties around risk and hedging management. Many electricity suppliers have also experienced significant difficulties and challenges regarding the fundamentals in the market, as described more in detail below.

Moreover, electricity suppliers have experienced a significant increase in the number of calls and complaints received by customer service. Many complaints concerned irritation at high prices, the cessation of fixed-price contracts by some electricity retailers, and wanting advice regarding how to handle the situation. When prices started to fall, many customers also wanted to revert to flexible monthly contracts and leave their high-priced fixed-price contracts. During the interview study, it was also found that some electricity retailers have experienced a small movement of customers switching from smaller retailers to larger retailers that are more well-known and established, due to these electricity retailers being perceived as more trustworthy. However, this shift only applied to a small share of customers, and many did not change. Additionally, electricity retailers experienced a major trend of increasing demand for hourly electricity contracts.

Availability of fixed-price contracts, or contracts with fixed-priced elements

Throughout the energy crisis, fixed-price contracts have always been available to customers in the Swedish electricity market. However, prices have increased significantly due to the volatile market, and many electricity retailers have experienced difficulties with offering these contracts at an attractive price level, leading to a reduced supply of fixed-price contracts.

The volume risks and financial risks have also differed for electricity retailers of varying sizes. Electricity retailers with both production and supply of electricity have found it somewhat easier to manage their risks and hedging requirements. However, all electricity retailers have had to rapidly change their hedging strategies and oversee their overall business strategies to adapt to the volatile market while still being able to offer safe and high-quality products to their customers.

There have also been challenges regarding other types of contracts, such as hybrid products made up of partly fixed prices and partly flexible prices. Many electricity retailers have expressed challenges regarding the right to charge early termination fees if customers break their contract before its expiration date for these kinds of products. Not being able to charge such fees significantly increases the risk for electricity retailers that offer these contracts, thus reducing their ability and willingness to offer them.

For fundamental reasons, electricity production that is becoming more weather-dependent makes the market price more volatile, which in turn affects the cost of hedging and increases the risks around volume, profile, bidding, and pricing. This situation has led to increased challenges regarding hedging strategies and risk management, as volume and price hedging must be managed simultaneously. In turn, this has led to many electricity retailers being unable to continue offering fixed-price contracts, while others have had to rapidly change their strategies and significantly increase prices to keep being able to do so. For those fixed-price contracts that have been available on the market, their prices have in many cases been too expensive and exceeded the customer's willingness to pay, causing demand for them to plummet.

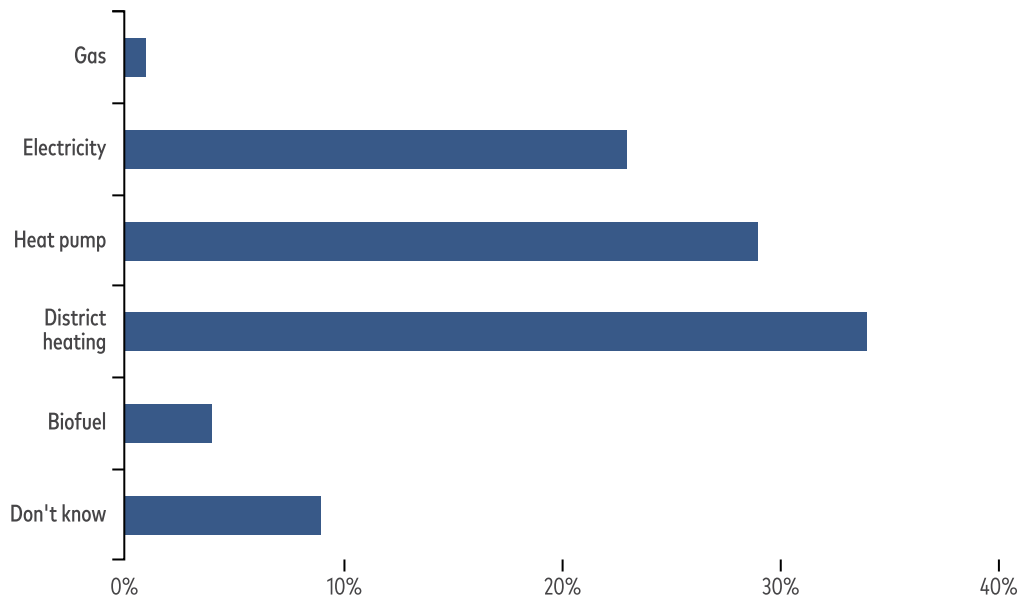
Other challenges with offering fixed-price contracts include fundamental challenges of transmitting electricity to the south of Sweden, which has led to even higher volatility in the south and a low supply of fixed-price contracts, especially in SE4. Many electricity retailers have been reluctant to offer fixed-price contracts in this area due to the increased risk involved.

Fundamental challenges with market liquidity were also highlighted during the interviews in relation to both the Nasdaq and the EPADS. There were also worries about even lower liquidity in the market in the future when the exchange is sold from the Nasdaq to the European Energy Exchange and the earlier "system price" will be replaced with new prices per price area. Electricity retailers were also worried that it would become even harder to offer fixed prices to customers in SE4.

9.3 Customer awareness and satisfaction

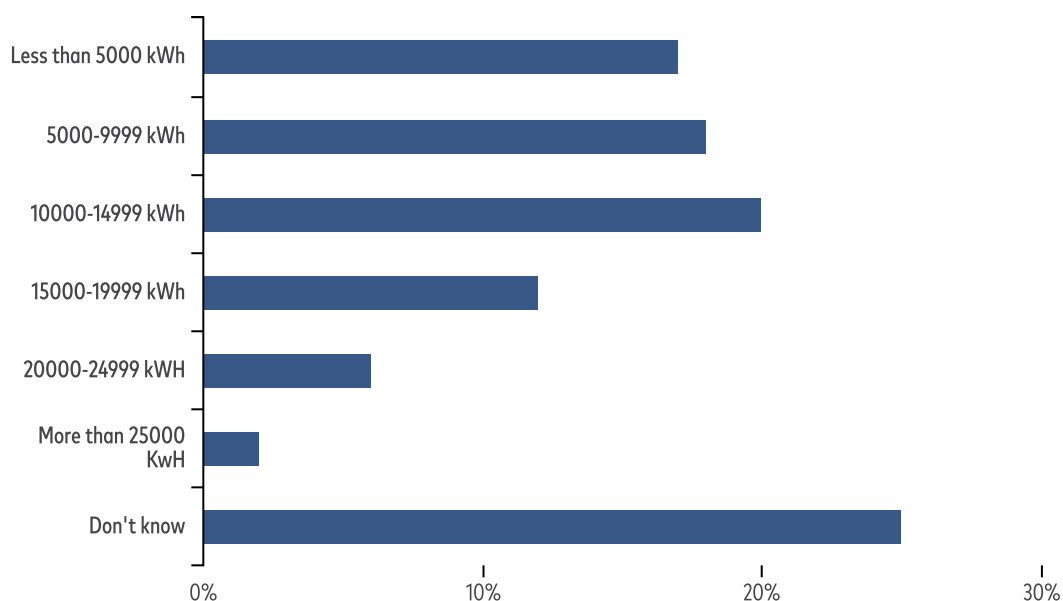
District heating is the most important source of heating for 34% of households in Sweden. Heat pumps are the second most important source of heating. Electricity is the third most important source, at 23% of households (Figure 9-6), although 26% of households do not know their electricity consumption per year (Figure 9-7). Of those who do know their consumption, the electricity consumption per year is generally low.

Figure 9-6: Most important source of heating (Sweden)



Note: Price per kWh for respondents with a variable price contract. In Swedish öre with 1 öre = 0.01 Swedish kroner. Survey conducted in October and November of 2023 amongst Swedish households. N=416.

Figure 9-7: Household electricity consumption per year (Sweden)



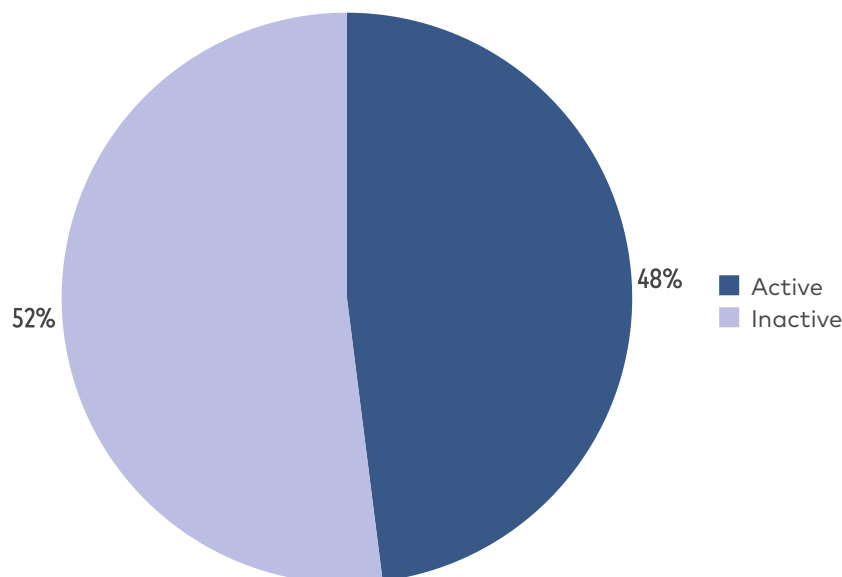
Note: The graph shows the reported yearly electricity consumption. Survey conducted in October and November 2023 amongst Swedish households. N=772.

9.3.1 Awareness during search and switching

Among the respondents, 48% had engaged in either switching or comparing electricity contracts in the preceding 12 months (Figure 9-8). Statistics provided by SCB (Statistics Sweden) show that generally around 10% of customers had an assigned price contract in 2021; in 2022, this share decreased to around 9% and continued to decline even further, reaching an all-time low of just under 7% in 2023. [105] This decrease could be an indicator of more customers being active and choosing other contract types. However, it could also be a consequence of more electricity retailers assigning customers without an electricity contract to a variable-price contract instead of an assigned-price contract. Lastly, the high share of active customers falls in line with the results from the interview study, where almost all actors mentioned an increased number of calls to customer service regarding both complaints and requesting information and advice.

105. https://www.statistikdatabasen.scb.se/pxweb/sv/ssd/START_EN_EN0301/SSDManadEI/Avtalstyp/. Date: 30.11.23

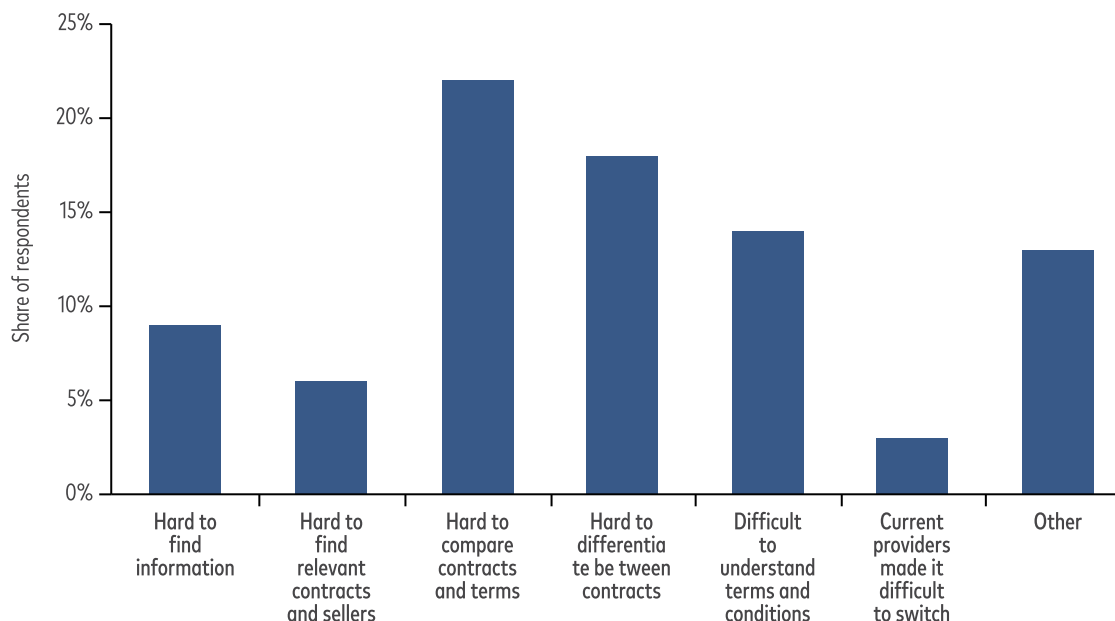
Figure 9-8: Share of consumers active in the electricity market last 12 months (Sweden)



Note: The graph shows the share of respondents who have either switched or compared electricity contracts during the previous 12 months. Survey conducted in October and November of 2023 amongst Swedish households. N=772.

In the survey, the most prevalent challenge in switching or comparing contracts – experienced by 22% of respondents – refers to difficulties in comparing contracts and terms. This was followed by difficulties in differentiating between contracts at 18% (Figure 9-9). Additionally, difficulties in understanding contract terms and conditions were experienced by 14% of respondents. Few respondents answered that they had challenges regarding finding information, relevant contracts or sellers, or challenges when switching contract. This reinforces the extent to which this is a well-functioning market where most electricity retailers adhere to regulations and work to inform customers and make information easily attainable. Moreover, it shows how the electricity market in general is a difficult market to understand. As noted during the interviews, many customers find it difficult to understand different contracts – even after becoming more informed during the energy crisis – due to the complexity of the market.

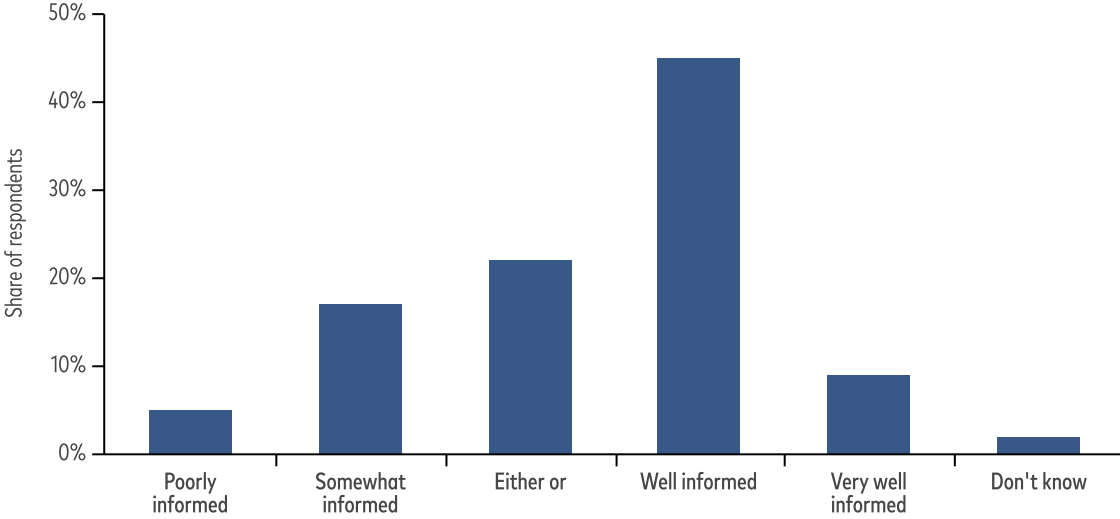
Figure 9-9: Challenges in switching or comparing contracts (Sweden)



Note: The graph shows the percentage of respondents who have recently switched or compared contracts that experienced challenges when doing so. Multiple choices were allowed. Survey conducted in October and November 2023 amongst Swedish households. N=246.

Among the respondents, 45% reported feeling well-informed, while 17% felt somewhat informed when it came to switching or comparing contracts (Figure 9-10). Conversely, less than 5% expressed feeling poorly informed in these situations. This may suggest that the respondents were able to grasp the necessary information to make an informed decision, but that the process may be unnecessarily difficult and time-consuming. It also emphasizes the large share of fair electricity supply companies who keep their customers well-informed of new agreements.

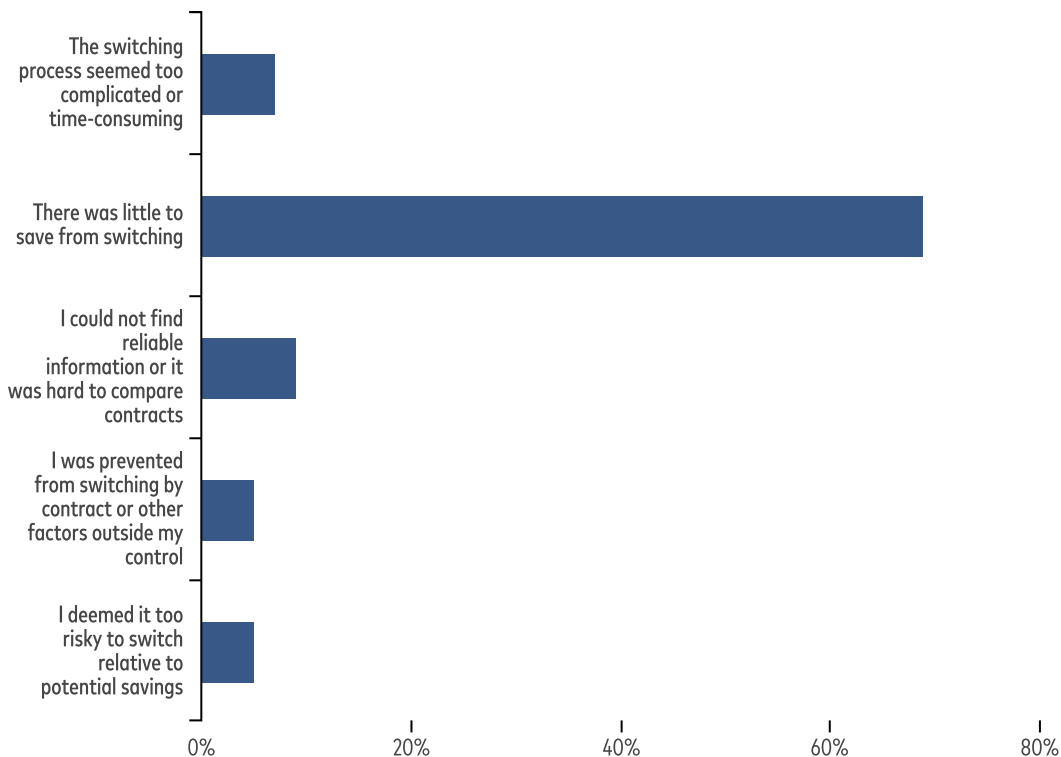
Figure 9-10: How informed respondents felt when switching or comparing contracts (Sweden)



Note: The graph shows how well-informed respondents who have recently switched or compared contracts felt. Survey conducted in October and November of 2023 amongst Swedish households. N=365.

Among the respondents, a majority of 69% stated that there was little to save from switching as a reason for not switching (Figure 9-11). This shows how the market features well-functioning competition among electricity retailers, with a wide range of competitive contract alternatives available on the market. In comparison, few respondents stated that they did not switch contract due to information being hard to find or because the process seemed complicated. Again, this supports the results of few respondents feeling poorly informed when comparing or switching contracts, or few experiencing challenges regarding finding relevant information on contracts or supply companies. Altogether, the results highlight efficient competition and high transparency on the electricity market regarding information provided by electricity retailers to customers about contracts.

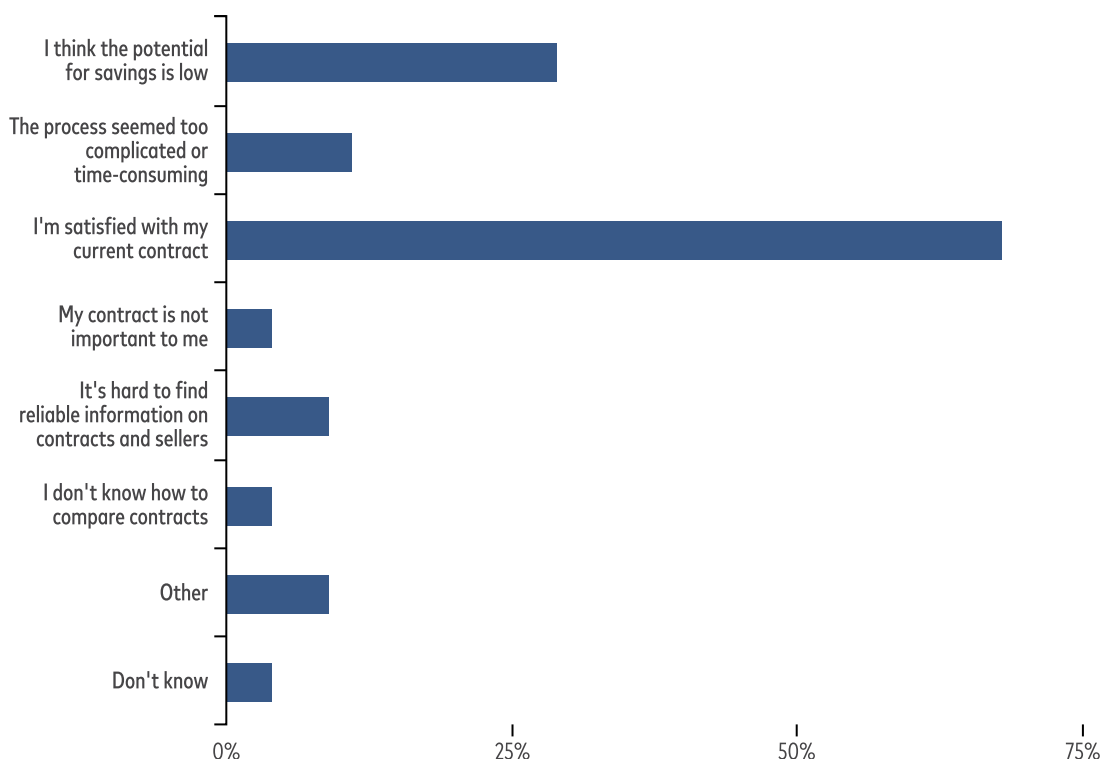
Figure 9-11: Reason for not switching after comparing contracts (Sweden)



Note: The graph shows why those who have compared but not switched contract, ultimately chose not to switch. Survey conducted in October and November of 2023 amongst Swedish households. N=119.

The survey results show that the majority of respondents (68%) choose not to switch or compare contracts more often because they are satisfied with their current agreement (Figure 9-12). The second most prevalent reason for not switching more often was the perspective that switching offers low potential for savings. This further supports the sense of efficient market competition regarding available contracts and price alternatives. Furthermore, it shows how electricity retailers have generally offered contracts that were competitive at a reasonable price level during the energy crisis despite high price increases, as most customers were still satisfied with their contracts and did not see potential for savings if they were to switch.

Figure 9-12: Reason for not switching or comparing contracts more often or at all (Sweden. Multiple choices allowed)



Note: The graph shows why those who have not compared or switched contracts within the last 13 months, have not done so more often. Survey conducted in October and November of 2023 amongst Swedish households. N=355.

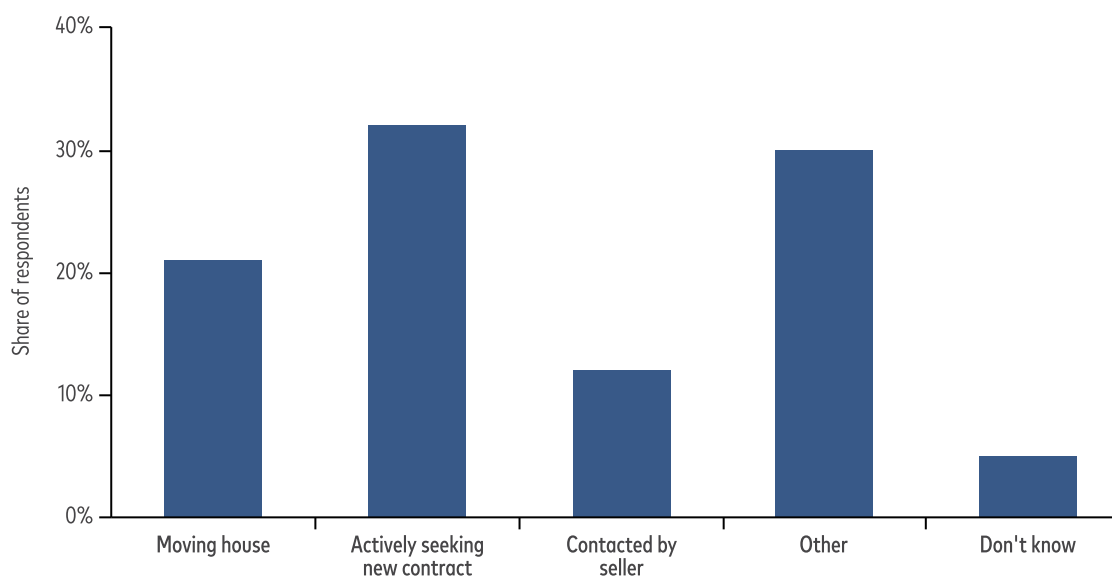
According to statistics from SCB (Statistics Sweden), almost 65,000 households switched electricity retailer in September 2022, compared to around 40,000 households in September 2023,^[106] which is a decrease of around 38%. The context for switching contracts varies between consumers: 32% of those who have switched contracts did so because of actively seeking a new contract, while 21% did so because they were moving (Figure 9-13). Around 12% of respondents reported that they switched contracts because they were contacted by a seller. The decrease in switched contracts may have been the result of many contracts being switched during the energy crisis.

Win-back sales are not as commonly employed by electricity retailers in Sweden, with only 24% of consumers reporting in the survey that they were contacted by their previous supplier after switching to a new one (N = 131). Among these, 19% accepted their former supplier's offer. This may be an indicator of a highly competitive market in which electricity retailers have little room to lower their prices with the aim of winning customers, as well as a low possibility of savings since many retailers have

106. SCB, 2023, *Byten av elleverantör (elhandelsföretag)*

similar price offerings.

Figure 9-13: Context for switching contract (Sweden)



Note: The graph shows the context for having switched contract. Survey conducted in October and November of 2023 amongst Swedish households. N=246.

Regarding the motivation for switching contracts, a majority of over 60% of respondents stated having switched for reasons other than better prices, negative experiences, or access to new services. This aligns with the results of a large share of respondents also having another context for switching contract than moving house, seeking a new contract, or being contacted by a seller. During the interview study, many actors expressed having experienced a customer shift from small retail companies towards larger, more well-known companies, and this may be an explanation for certain contract switches that fall into this category of “other”. From another perspective, it may also be connected to many respondents having switched contracts because of moving houses, which would make the main reason for switching something other than better prices, negative experiences, or access to new services. This would also align with the results of there being many electricity suppliers with a small market share (Figure 9-1), indicating a large share of local retailers; when a customer moves, they may therefore have to switch contract, as their previous retailer is not active in the area to which they are moving.

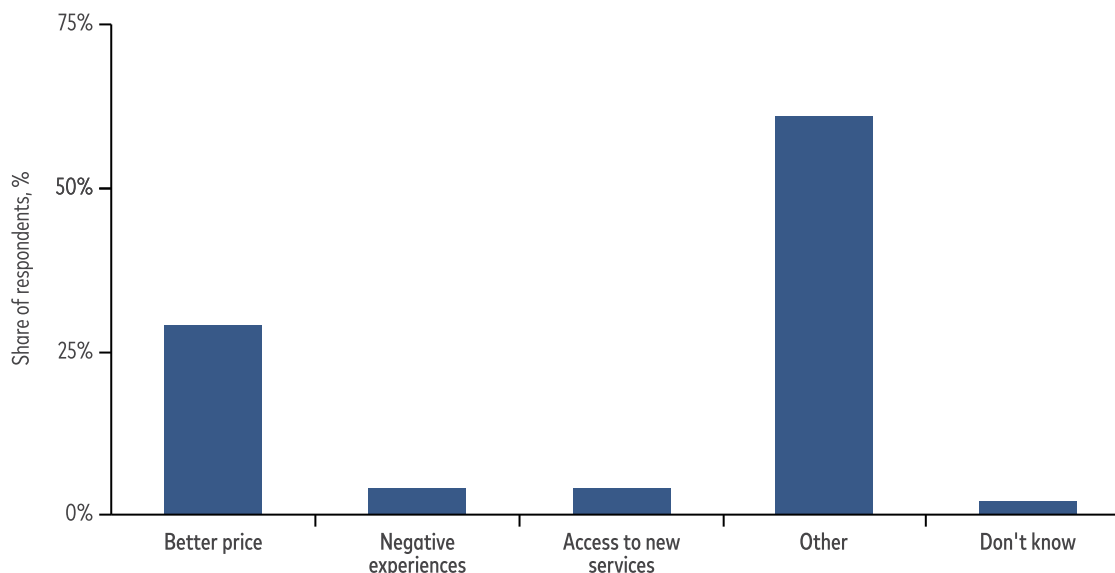
The Nordic Customer Survey 2022 conducted by NordREG explored rationales for signing new electricity contracts.^[107] The survey showed that switches (36%) most often occurred due to previous contracts expiring, which could be the case in this

107. <https://www.nordicenergyregulators.org/wp-content/uploads/2022/12/2.1d-Table-report-Total.pdf>

survey as well, explaining the high share of respondents pointing to “other” motivations for switching. Moreover, the NordREG survey showed that 18% switched due to changes in life situations (for example, moving), while 21% switched to receive better conditions other than better price. Both of these options were missing from our survey and may be among the high share of “other reasons”.

After “other” motivations for switching contracts came better price (29%). Very few switched due to having a negative experience or to gain access to new services. This emphasizes how most electricity retailers offer fair contracts and good customer service, while the market remains competitive regarding price levels. That said, the share respondents switching because of better price is still relatively low, and this is consistent with the previous findings of few respondents experiencing high possibilities of savings from switching contracts. Other reasons included in the customer survey were, for example, wanting access to green contracts and wanting a local supplier, which are not included in this survey either and could be reasons among the respondents who answered “other”.

Figure 9-14: Main motivation for switching (Sweden)

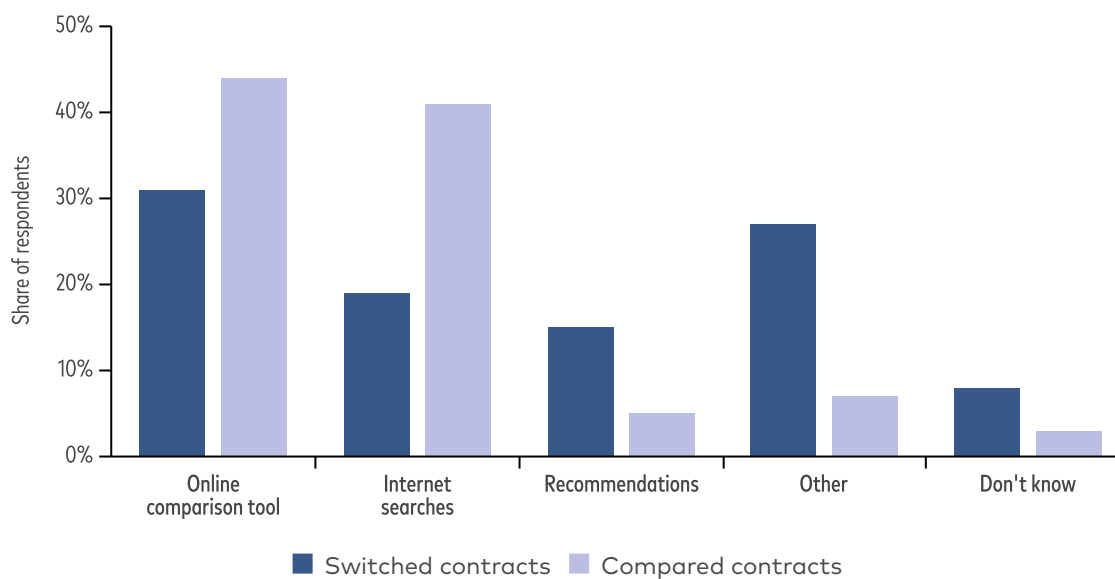


Note: The graph shows the respondents main motivation for having switched contract. Asked to those who reported having switched contracts within last 12 months. Survey conducted in October and November of 2023 amongst Swedish households. N=246.

The survey also examined how different information sources matter when switching or comparing contracts. It was found that the two most important sources when comparing contracts were online comparison tools and internet searches (Figure 9-15), whereas for switching contracts, the two most important sources were online

comparison tools and other sources, followed by internet searches as the third most popular reason. Again, this concurs with the results of a high share of active customers, with many actively using internet searches and available comparison tools to research contracts. It also highlights the important role of available online comparison tools. Appreciation for the online tools was also expressed during the interview study by most actors. Actors also stated that many customers express appreciation regarding elpriskollen.se being a state-owned comparison tool and one that increases trust for customers regarding high transparency. Furthermore, recommendations were seen as more important when switching contracts than when comparing them. This points to recommendations being another possible “other” reason for switching contracts.

Figure 9-15: Most important source of information when switching or comparing contracts (Sweden)



Note: The graph shows the most important source of information the last time the respondent switched or compared contracts. Survey conducted in October and November of 2023 amongst Swedish households. Switched contracts: N=162. Compared contracts: N=119.

9.3.2 Customer awareness and demand for different contracts

There is a broad consensus that the general customer awareness and demand for different contracts have increased in the wake of the energy crisis, which can also be seen from the household survey results. Customers have been more inclined to understand their own contractual situations and the possibilities to act on sudden increases in electricity price to reduce the potential impact on their (for many, already

strained) household economy. Previously, when the electricity price was low, customer inactivity had no real effect on the household's economy; almost overnight, pricing increases forced customers to quickly educate themselves. Customer services recognized this shift by the average customer calling being more concerned but also more well-informed. However, some customers still have difficulties in understanding the difference between a DSO and a retailer, highlighting the need to further inform and build knowledge and understanding. The energy crisis placed the electricity retailers and the energy industry in a position to focus on understanding their customers and further educate them around what a retailer does and how the market works. This even applies to media outlets, which sometimes have a low level of understanding themselves, which creates unnecessary intimidation and concern among customers. Ultimately, however, the energy crisis has raised the general customer level of knowledge and understanding, and thus customer awareness of the electricity industry as a whole.

Although the energy crisis has caused customer movement on the electricity market, the customer base is fundamentally slow-moving. Previously, the average customer did not change retailer even if they would benefit from doing so. As a result, electricity retailers have not seen the level of customer losses that they feared even when the crisis was at its worst.

Nonetheless, the energy crisis has generated some market movement. In general, this movement can be divided into two categories. The first category was those customers who left a smaller retailer company for a larger well-known one. The primary reason for this shift was a feeling of security and trust, of moving to a safe haven during the crisis. The second category was those customers actively looking for ways to reduce their electricity cost and take control over their electricity consumption. Most customers within this category signed up to hourly based contracts. Although these contracts became very popular, electricity retailers recognized that the average customer did not fully understand what was required of them to be able to optimize their own electricity consumption and thus benefit from this type of contract.

Furthermore, many variable electricity products and contracts are becoming so advanced that it is also difficult for the electricity retailers to explain how they work to the customer. This makes it even more difficult for customers to navigate the products and contracts being offered by electricity retailers. On the other hand, some retailers argue that the average customer should not need to understand how a contract works behind the scenes and that those customers should rely on fixed-price contracts.

According to many actors, industry transparency is of great importance and revolves around creating trust and security for the customer. The existing strict regulations and measures seek to increase transparency through requirements of what information needs to be included in customer invoices. However, customers often do

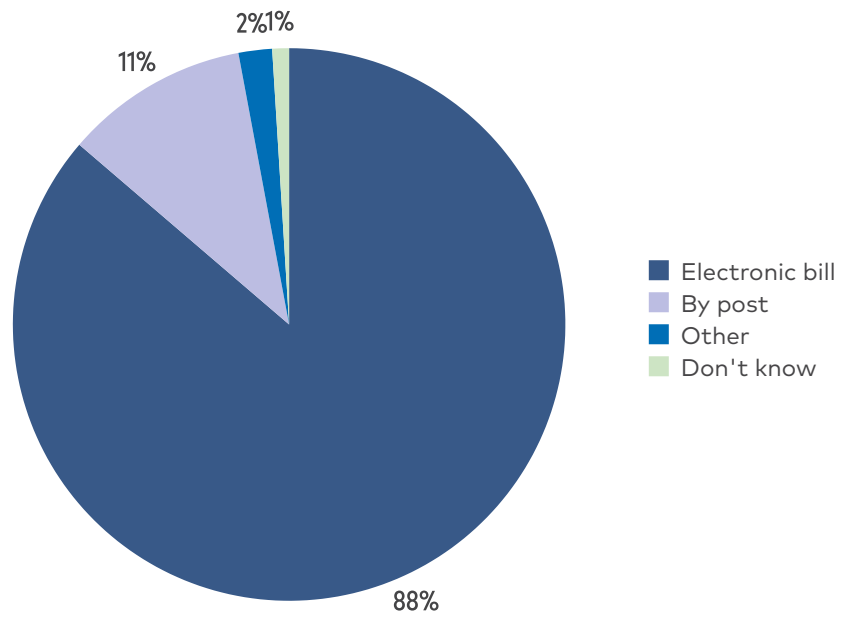
not understand or read this information, which creates challenges for suppliers wanting to develop more complex products, while also hindering the suppliers from helping customers understand their contracts and prices. Actors expressed that preventative work with a focus on communicating questions such as the customer's electricity consumption, what can affect their consumption, what can affect their prices, and actions they can take to influence their price is key to increasing transparency and boosting customers' understanding. This also falls in line with the household survey results, where electricity consumption and cost breakdown were the most read items on invoices, indicating how customers are becoming more interested in how their own behaviour affects their prices.

9.3.3 Invoicing and billing

A high share of respondents of the household survey receive their electricity bills electronically, while some receive them by post (Figure 9-16). The information most read on the invoice among the respondents is their estimated annual and/or historical consumption (44%), followed by cost breakdown (35%; Figure 9-17). Reviewing information regarding changes that may affect their electricity price is also relatively common (20%). Only 10% of respondents read no information at all, indicating that most customers are interested in their invoices and electricity costs, which also supports the sense of a high level of active customers and increasing customer awareness.

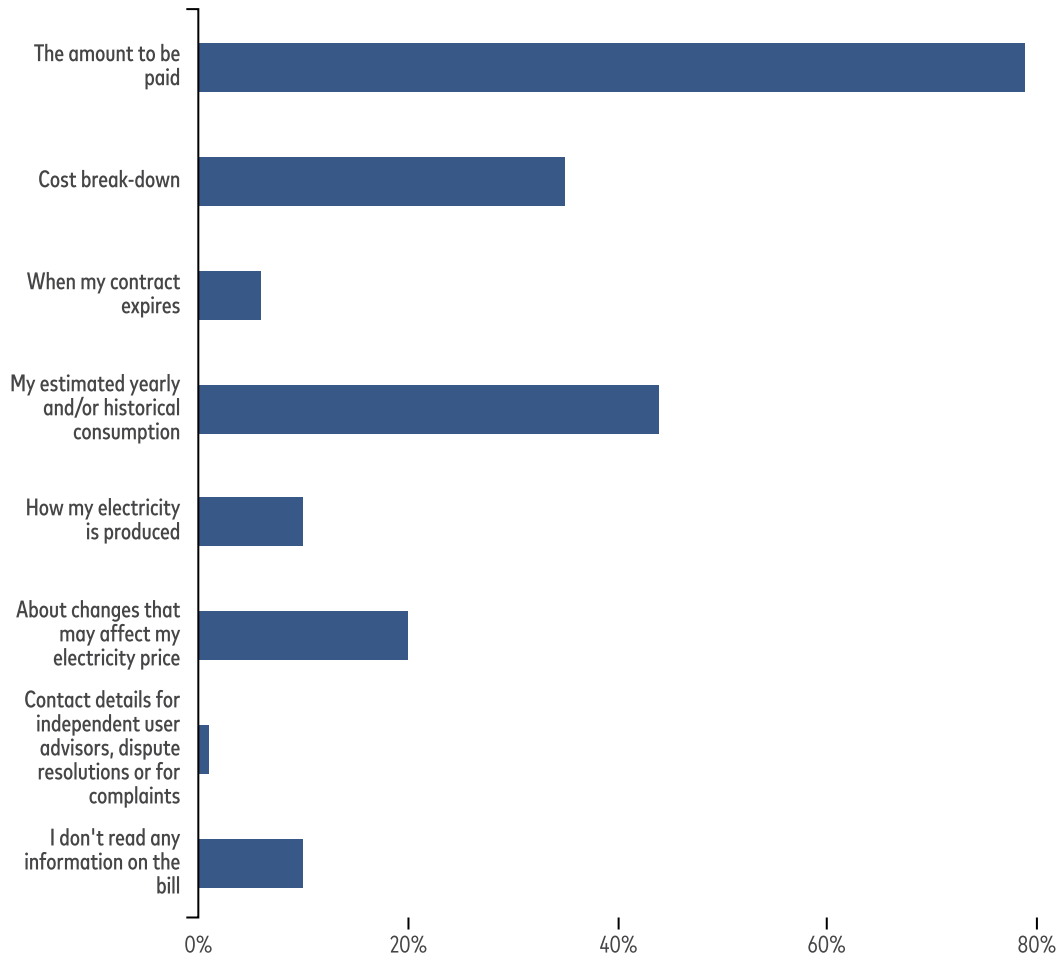
Additionally, the results highlight how few respondents read the information regarding their contract expiry date. In the interview study, it was found that during the crisis, automatically extended fixed-price contracts were a prevalent challenge among customers. This points to how even though customer awareness is increasing, this awareness is generally increasing around cost and price information as well as electricity consumption, but not around terms and conditions and contract expiry dates. A reason for this may be that customers generally became interested regarding solutions for how they could lower their electricity consumption to lower costs during the crisis, hence their following the cost breakdown and electricity consumption data more thoroughly.

Figure 9-16: How electricity bill is received (Sweden)



Note: The graph shows how respondents receive the bill from their electricity supplier. Survey conducted in October and November of 2023 amongst Swedish households. N=772.

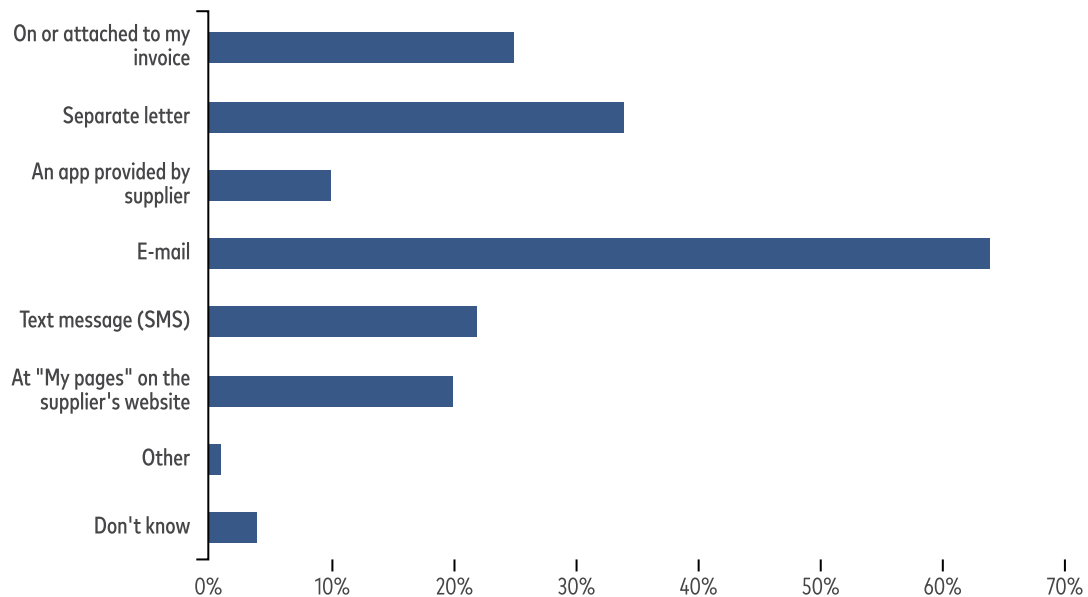
Figure 9-17: What information respondents read on their invoice (Sweden. Multiple choices allowed)



Note: The graph shows the fraction of respondents that report looking for each type of information on their bill. Multiple choices allowed. Survey conducted in October and November of 2023 amongst Swedish households. N=772.

Regarding how customers wish to receive information about changes to their electricity contracts, 64% of respondents answered that they prefer to receive it via email (Figure 9-18). The second most preferred method of receiving information was through a separate letter (34%), followed by as an attachment to the invoice (25%).

Figure 9-18: Preferred method of being notified of changes to the electricity contract or other aspects that may affect the customer (Sweden. Multiple choices allowed)



Note: The graph shows the methods by which respondents prefer to be notified of changes by the electricity seller that may affect the customer, for example changes to the electricity contract. Survey conducted in October and November of 2023 amongst Swedish households. N=772.

9.3.4. Customer satisfaction

The general view on customer satisfaction is that customers are satisfied with their electricity retailers. There has been a long period of low electricity prices to which customers have become satisfied. However, electricity retailers say that average customer satisfaction levels declined just after the turn of the year 2022 and pointed to major differences in customer satisfaction between those customers who had signed a fixed contract before the crisis, those who had not, and those who were inactive and received automatic renewals of previous fixed contracts; in essence, customer satisfaction greatly correlates with price. Customer satisfaction also differs between larger and smaller electricity retailers. In general, larger electricity retailers enjoy greater trust by their customers. Electricity retailers are also referred to as either a serious or an unserious actor. The common ground for those so-called unserious actors (see Retailer requirements under Appendix A for information about list of unserious actors) is their customer acquisition process and the use of telemarketing, which is seen as aggressive, and customers are feeling pressured to sign up for something that they do not really want. Once they wish to cancel, it is difficult to get hold of these companies. Altogether, this creates a bad experience; when the energy crisis hit, this feeling of dissatisfaction was further amplified. As a result, many larger companies were regarded as a safer choice during the crisis, as stated during the interviews.

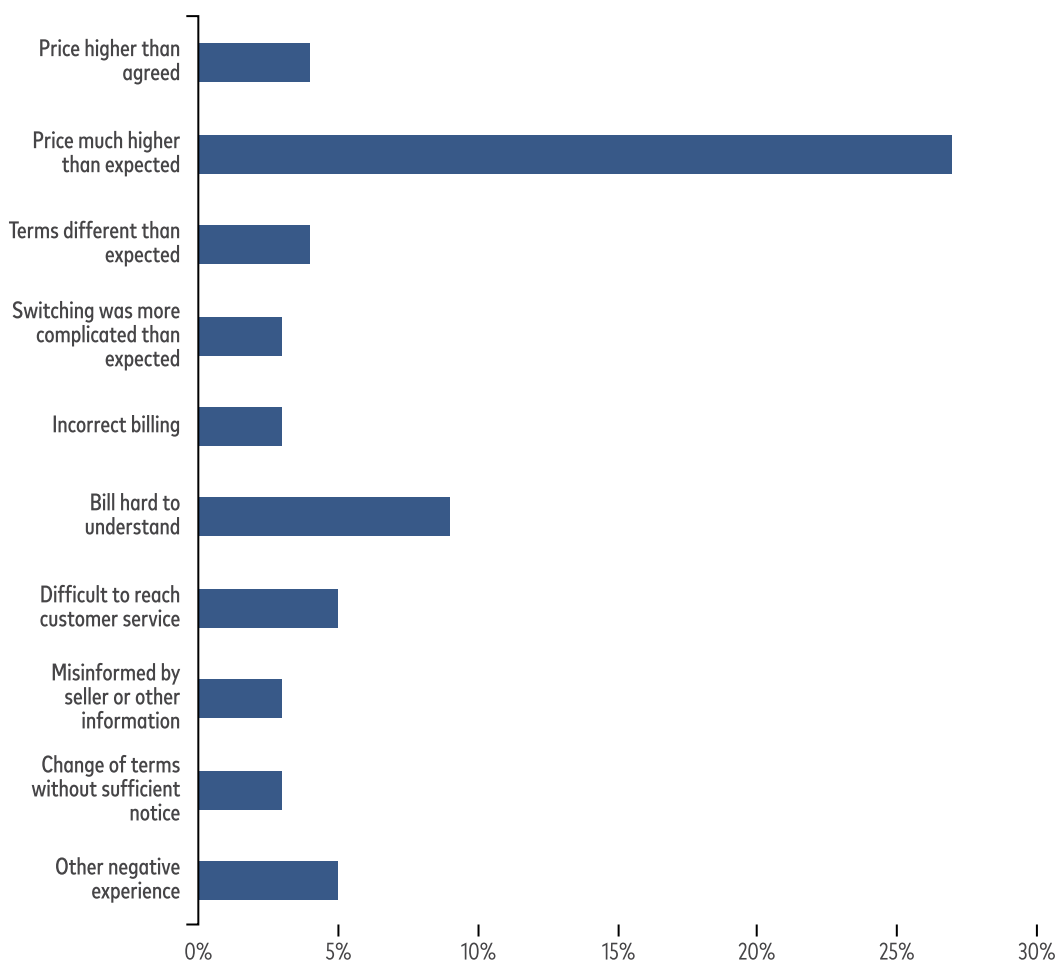
This shift in customer satisfaction was also noted in the calls to customer services across the entire energy industry. Customer service departments have been under great pressure during the energy crisis, primarily due to the sheer increase in number of calls, but also due to that fact that the average customer who called in had more informed questions and concerns, making the individual call longer. The calls were evenly distributed across Sweden, with no real difference between electricity areas. Much of the customers' frustration was also related to not being able to reach customer service.

Another challenge for customers was the automatic extension of fixed-price contracts, which also became more evident during the energy crisis. Before the crisis, inactivity among customers with fixed-price contracts rarely led to a drastic change in their electricity price. However, with the highly volatile prices during the crisis, customers suddenly experienced a large increase in their electricity price when their contracts were automatically renewed, without being able to break the contract.

Moreover, a perception exists among some customers that electricity prices are not controlled by the electricity retailers and that high prices are beyond their control. Customers' frustration is thus directed towards the electricity market as a whole or towards politicians instead, as the perception is that the high prices are their responsibility and not controlled by the electricity suppliers. This shows how the complexity of the electricity market makes it difficult to understand for the customer, and why frustration may not always be directed towards the actors responsible.

Approximately 40% of respondents reported having negative experiences with their retail supplier, and 30% reported negative experiences not related to price. In the household survey, respondents who had a negative experience with their electricity retailer were asked to state the context of their negative experience. By a clear majority, the most common negative experience was higher-than-expected prices, followed by the invoice being difficult to understand (Figure 9-19). Other negative experiences were far less prevalent among the respondents. Combining this with the finding of most customers feeling well-informed when switching or comparing contracts as well as being satisfied with their current contract and finding low potential for savings when switching contract, a conclusion can be drawn that customer satisfaction remained high even in the face of high prices and the electricity retailers all experiencing the same price increase. Although customers were dissatisfied with the high prices, they still experienced being fairly treated and receiving fair contracts.

Figure 9-19: Negative experiences with electricity seller (Sweden. Multiple choices allowed)



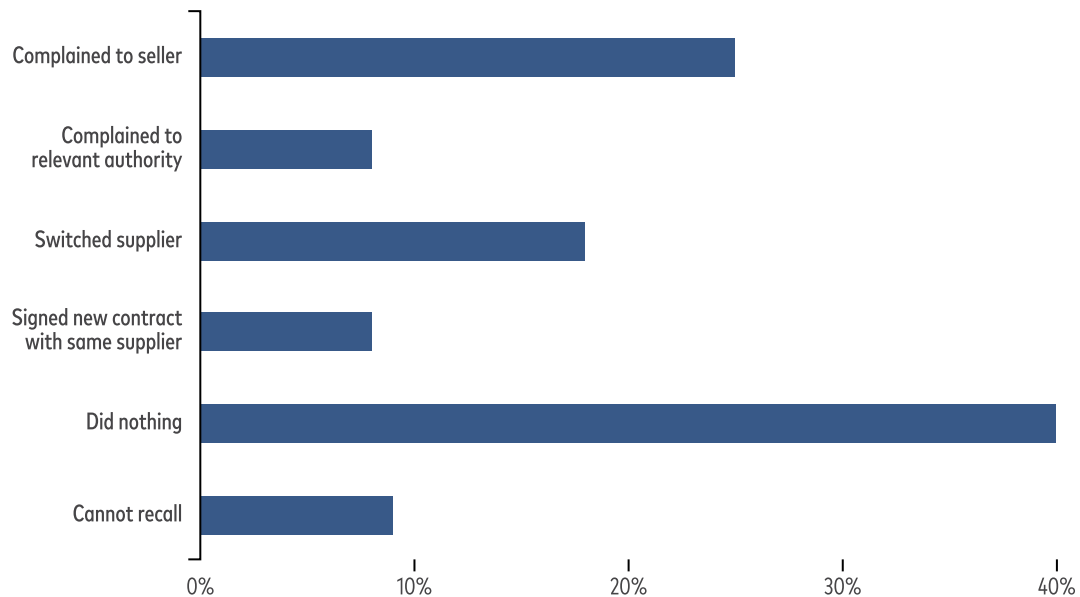
Note: The graph shows the fraction of respondents that reports a negative experience with their electricity provider during the last two years. Multiple choices allowed. Survey conducted in October and November of 2023 amongst Swedish households. N=772.

In response to a negative experience, 40% of respondents answered that they took no action; 25% complained to the seller, and 18% switched supplier (Figure 9-20). As previous results have shown, many customers compared contracts but not as many have switched, mainly due to being satisfied with their existing contract and finding low saving potential. These results align with many respondents taking no action after a negative experience. Respondents may have researched contracts and made comparisons, but they ultimately concluded that their current contract was still adequate and competitive, hence their decision not to act even if they pursued research or comparison.

Additionally, 33% of respondents complained to either their electricity supplier or to an authority, which falls in line with the increase in complaints expressed by the actors

during the interview study.

Figure 9-20: Consumers' response to a negative experience (Sweden. Multiple choices allowed)



Note: The graph shows action taken by consumer in response to a negative experience. Survey conducted in October and November of 2023 amongst Swedish households. N=248.

Impacts of energy crisis

Many households have expressed concern with the electricity price development and its impact on their household economy. The primary consumer response has been to seek answers on how to cope with the situation and energy-saving tips. The level of concern further increased when many electricity retailers withdrew the availability of fixed-price contracts, leaving many customers feeling exposed to circumstances beyond their control. On the contrary, those who managed to sign up to a fixed-price contract at the height of the crisis wanted to cancel when prices started to fall. In general, however, the high electricity prices led to those who could limit their electricity consumption doing so, and many were prepared to make lifestyle changes accordingly. This transition is also obvious in the number of hourly rate contracts that were signed as a possibility to gain greater control over costs.

From a retailer perspective, the main challenge has been to understand the fluctuations in electricity price and customer behaviour. Before the retailer and consumer market felt the consequences of the energy crisis, the electricity traders/purchasers experienced turmoil even earlier, which resulted in changes in valuation of risk factors and price hedging to be able to continue to deliver the same products. As a result, and especially from a competition perspective, the various actors' movements, and

responses to changes in the market is rather what one would expect to happen in a competitive marketplace; from a purely competitive perspective, the energy crisis is not referred to as a crisis, but as a marker of a well-functioning energy market.

Another widely discussed topic during the energy crisis was customers expressing unfairness regarding price differences and varying treatment between electricity price areas. At the beginning of the crisis, many customers in the south of Sweden expressed dissatisfaction regarding extremely high prices, as highlighted in the media. During the first round of electricity support, there was then much dissatisfaction and frustration from customers in other areas for the support only being directed towards the south. There were also complaints among business customers as the support was initially only directed towards household customers.

Before the energy crisis, much of the focus by customer bureaus and authorities was directed towards handling challenges regarding unfair electricity suppliers, even though they represented a small share of the market. The large focus on a small market share of unfair electricity suppliers is an indicator that the rest of the market was functioning well, with satisfied customers and companies acting according to regulations and striving to create attractive products for their customers. During the crisis, the dissatisfaction from customers shifted more towards the high electricity prices, and unfair electricity traders received less focus.

Appendix A: Roles and regulations in the Nordic countries

An overview of the regulatory frameworks in the Nordic countries

Table 10-3: Regulatory frameworks in the Nordic countries

	Denmark	Finland	Iceland	Norway	Sweden
Retailer requirements					
Vertical integration	Unbundling requirements apply to vertically integrated DSOs with more than 100,000 connected customers.	The DSOs are required to be legally unbundled when a threshold of 200 GWh is met for more than three consecutive years.	A single power company can function as generator, distributor, and supplier. Accounting separation is required between concession and competitive activities.	Unbundling requirements apply to vertically integrated entities that have been assigned system responsibility or have more than 100,000 network customers.	Provisions that prohibit the involvement of electricity grid companies that are a part of a group that collectively serves at least 100,000 electricity users with companies who trade or produce electricity.
Invoicing					
Required information on invoice	Requirements presented in Executive Order no. 1696 of 2020. One invoice from the electricity supplier.	Requirements regarding the minimum information to be presented in the invoice. Possible with one invoice or two invoices.	Requirements follow government regulation. Two invoices, one from the electricity supplier and one from the DSO.	Requirements are specified in the Regulations on settlements. Possible with one invoice or two invoices.	Requirements follows from the Electricity Act. Possible with one invoice or two invoices.
Possibility of prepayment or post-payment	Both possible.	Both possible.	Only post-payment.	Both possible.	Both possible.

Contracts					
How to enter new agreement	Free to change electricity supplier; the new supplier notifies the previous supplier.	Free to change electricity supplier; the new supplier notifies the previous supplier.	Free to change electricity supplier; the new supplier notifies the previous supplier.	Free to change electricity supplier; the new supplier notifies the previous supplier.	Free to change electricity supplier; the customer should contact the current supplier to terminate their current agreement.
Lock-in periods and right to withdraw	Maximum lock-in period of six months for households, no corresponding rules for SMEs. 14-day right of withdrawal if the contract is a remote sale.	Maximum lock-in period of 24 months for fixed-price contracts. 14-day right of withdrawal if the contract is a remote sale.	Customers can terminate their contract with three months or shorter notice. Three weeks' notice for households and SMEs with consumption less than 0.5 GWh per year, three months for consumption between 0.1 and 1 GWh per year, and longer for consumption over 1 GWh per year.	Maximum lock-in period of 12 months, with the exception of fixed-price contracts. 14-day right of withdrawal if the contract is a remote sale.	No maximum lock-in period except for assigned-price contracts, which have a maximum 14-day lock-in period. 14-day right of withdrawal if the contract is a remote sale.

<p>Requirements on how to find information about contracts</p>	<p>Electricity suppliers are required to ensure that relevant and correct information about all their products, including price and terms, is available at all times on their website. In addition, electricity suppliers are obligated to publish their current prices and products on the price comparison tool.</p>	<p>Electricity suppliers are obligated to report contract prices for small customers (applies to households and many SMEs) to the NRA.</p>	<p>No requirements, but the information is available at the price comparison tool.</p>	<p>Electricity suppliers are required to have an up-to-date price list readily available. Electricity suppliers are obligated to register their prices on the price comparison tool.</p>	<p>Electricity suppliers are required to provide certain information about their products and services, such as price and terms of the contract, on their website or in other easily accessible channels.</p>
<p>Requirements when making changes to existing contracts</p>	<p>The electricity supplier must directly notify customers of changes in the contract conditions. At least three months' notice for households and 14 days for SMEs.</p>	<p>The electricity retailer must notify customers of changes to pricing or terms of an open-ended contract at least 30 days before.</p>	<p>The electricity retailer can change the contract whenever they want and publish information about the changes on their website. Customers who have signed up can receive an email about the changes.</p>	<p>The electricity supplier must notify the consumer of all changes to or termination of the electricity agreement no later than 30 days before the change or termination of the agreement takes effect.</p>	<p>The electricity supplier must notify customers about the changes and their right to terminate the agreement. At least two months' notice for households and 14 days for SMEs.</p>

Marketing					
Required information to include in marketing of contracts	Follows from the general marketing regulations.	Follows from the general market regulations.	Follows from the general market regulations.	Follows from the general marketing regulations. New and stricter rules were introduced in November 2022, which largely meant a clarification of requirements from the Marketing Act.	Follows from the general marketing regulations.
Win-back strategies, telephone sales, or selling contracts on the street	Allowed with win-back strategies and telephone sales, but the customer must have consented to be contacted. This applies to households but not SMEs.	Allowed with win-back strategies.	Allowed with win-back strategies. No telephone sales or direct sales on the street.	Allowed with win-back strategies, which can take place by telephone, at the door, and in writing.	Allowed with win-back strategies, but it must occur following certain rules.
Sanctioning					
Can licences be withdrawn?	No licence required. The electricity retailer can be deprived of the right to be registered at DataHub.	No licence required.	Retailer licences can be withdrawn.	Retailer licences can be withdrawn.	No licence required.
SMEs' customer rights	Electricity supply regulation applies to both households and SMEs, but some points apply to SMEs to a lesser degree.	Many of the electricity market-specific regulations applies to SMEs.	Consumer protection covers both households and SMEs.	SMEs do not have the same consumer rights as households.	SMEs do not have the same consumer rights as households.

Denmark

Role and responsibilities of different actors

Several authorities supervise whether electricity suppliers comply with the legislation. This applies to both the sector-specific legislation, which only applies to electricity suppliers in the energy market, and general legislation that applies to all companies across industries.

The Danish Utility Regulator (DUR)

The Danish Utility Regulator (DUR) is the national regulatory authority in Denmark for the markets for electricity, natural gas, and district heating. The DUR monitors the development of these markets and seeks to maintain strong and effective supervision of the utility sectors, with the purpose of securing consumer interests in the utility sectors. Hence, ensuring that the utility and supply sectors are well-functioning and that the actors follow current rules and regulations is one of the DUR's main responsibilities.^[108]

The tasks of the DUR appear in the Law on the Danish Utility Regulator as well as the sectoral laws and EU regulations. They also appear in the sector laws on electricity supply, on gas supply, on heat supply, on the promotion of renewable energy, on the promotion of savings in energy consumption, and on amendments of the "lov om miljøbeskyttelse". The DUR has five main tasks: supervision, approvals, economic regulation, international cooperation, and analysis and monitoring.^[109] The DUR publishes a number of reports that are typically based on analyses and monitoring of the electricity, gas, and district heating markets. The DUR is responsible for monitoring and analyzing conditions in the utility sectors, including compliance among electricity retailers.

The DUR monitors electricity prices on the retail market for households and SMEs. Among other things, it prepares electricity price statistics as part of its monitoring activities. The electricity price consists of several elements: the trading company's electricity price, subscription, grid subscription, grid tariff, transmission tariff, taxes, PSO, and VAT. As part of its monitoring, the DUR prepares electricity price statistics every quarter. These statistics indicate the average electricity price for households and SMEs in Denmark with a consumption of less than 100,000 kWh per year.^[110]

Consumers in Denmark can buy electricity from many different electricity suppliers that offer a number of different products. The electricity price guide in Denmark is called Elpris.dk and provides information about all the electricity products and electricity prices offered in the country. The site also provides consumers with some basic advice around choosing a product and a supplier. Hence, the purpose of the comparison tool is to increase transparency and customer awareness with regard to

108. <https://forsyningstilsynet.dk/about-us>. Date: 23.11.23

109. <https://forsyningstilsynet.dk/om-os/kerneopgaver>

110. <https://forsyningstilsynet.dk/analyser-og-tal/forbrugerpriiser/elpriser>

products and prices in the electricity retail market.^[111] The DUR is responsible for establishing and maintaining the electricity price guide with information on electricity prices, discounts, and terms in the Danish electricity market. Electricity suppliers that sell electricity to Danish customers are obligated to publish their current prices in the electricity price guide.

A number of legal measures have been introduced to ensure that consumers in Denmark are not left without power, for example, if consumers move or if their electricity supplier goes bankrupt. In such cases, the consumer can access electricity without having a contract, and it is the DUR that determines the price that corresponds to the market average.^[112]

The Danish Energy Agency (DEA)

The Danish Energy Agency (DEA) operates under the Ministry of Climate, Energy and Utilities and manages the legislation on the electricity market in Denmark. The DEA and the DUR share responsibility regarding laws and regulations. The DEA is responsible for implementing European legislation into Danish legislation. It monitors and develops the energy and supply sectors in Denmark by administering the legal framework for production, transmission, and distribution of electricity, and for competition, consumer protection, and security of supply. Energy production, supply, and consumption, as well as Danish efforts to reduce carbon emissions are tasks for which the DEA is responsible. In addition, it is responsible for user conditions, supply obligation, and telecommunication statistics.^[113]

The DEA offers advice and guidance to private customers to understand their electricity consumption. Private customers can obtain information about the average consumption for different types of households.

The Danish Consumer Ombudsman (DCO)

The Danish Consumer Ombudsman (DCO) is an independent authority that supervises that companies comply with the Danish Marketing Practices Act and other consumer protection legislation, especially from the point of view of consumers. It is free to contact the DCO for both households and SMEs.^[114] The DCO attaches great importance to preventative information and guidance on the Marketing Act for electricity suppliers by continuously preparing guidelines in collaboration with business and consumer organizations.

The DCO addresses, among other things, cases concerning electricity retailers' telephone sales, the conclusion of agreements in general, and the marketing of green electricity and prices (including fees). In the case of serious violations of consumer protection legislation, the DCO processes cases with a view to criminal sanctions. The DCO does not address concrete financial disputes between a consumer and an

111. <https://forsyningstilsynet.dk/analyser-og-tal/forbrugerpriser/elpriser>

112. <https://forsyningstilsynet.dk/analyser-og-tal/forbrugerpriser/elpriser>

113. <https://ens.dk/en/our-responsibilities/electricity> Date: 23.11.23

114. <https://www.forbrugerombudsmanden.dk/om-os/om-forbrugerombudsmanden/> Date: 23.11.23

electricity retailer, but instead refers the consumer to the Ankenænet på Energiområdet (ANE).

Danish Competition and Consumer Authority (DCCA)

The Danish Competition and Consumer Authority (DCCA) is a government agency under the Danish Ministry of Industry, Business and Financial Affairs that monitors the markets in Denmark. The primary tasks of the DCCA are to contribute to the development of new policies and regulation. The DCCA considers both competition and consumer aspects when analyzing the market and putting forward recommendations to consumers and companies. In addition, through the formulation of guidance notes on legal and practical matters, the DCCA produces market analyses and advises the relevant public authorities. Together with the Danish Competition Council, the DCCA forms an independent competition authority. It is the Competition Council that makes decisions on major matters of principle.^[115]

Regarding competition matters, the main task of the DCCA is to enforce the Danish Competition Act. The DCCA tracks down and acts against violation of the Competition Act, assesses major mergers, and informs and guides companies about the regulations. The DCCA has the authority to impose sanctions for violations of the Competition Act. For consumers, the DCCA is responsible for enforcing a number of consumer protection laws. Interaction between consumers and businesses to make markets work well and create growth and high consumer welfare is supported by the DCCA. Forbrug.dk is the DCCA's hub for public consumer advice, offering guidance on consumer rights. In sum, the DCCA contributes to:^[116]

- The development of new consumer policy and regulations
- Considerations of consumer complaints
- Market analyses and communicating information regarding consumers to both consumers and businesses.

The DCCA is responsible for a number of laws in the competition and consumer field. Those that are relevant to the retail market include:^[117]

- The Danish Competition Act
- The Danish Act on Information Society Services (including e-commerce)
- The Danish Act on Protection of Consumer Interests
- The Danish Marketing Practices Act.

The DCCA also provides analyses about the competitive situation in the retail market in Denmark.

115. <https://www.en.kfst.dk/about-us/tasks/>. Date: 23.11.23

116. <https://www.en.kfst.dk/consumer/>. Date: 23.11.23

117. <https://www.en.kfst.dk/consumer/consumer-regulation/>. Date: 23.11.23

Green Power Denmark

Green Power Denmark is Denmark's green non-commercial business organization, which works to ensure that Denmark is electrified with green electricity as soon as possible. Green Power Denmark was founded on 23 March 2022 through a merger of Dansk Energi, Wind Denmark, and Solar Power Denmark. The organization states that electricity is the engine of the green transition. It represents companies in the renewable energy industry, owners and developers of renewable energy systems, electricity retailers, DSOs, energy trading companies, and companies working to refine, convert, and store green electricity.^[118]

Green Power Denmark has around 1,500 members and represents the energy industry, large and small owners and installers of energy technology, and companies that operate the Danish electricity grid and trade in energy. The organization offers guidance and advice to its members, as well as publications and reports. These publications address topics such as analysis, natural energy, policy papers, recommendations, statistics, and technical reports. The organization offers indicative terms of agreement and procedures for electricity suppliers, as well as standardized terms of cooperation between grid companies and electricity suppliers regarding the use of the electricity grid. Green Power Denmark also provides courses targeted at the energy industry. Topics for these courses vary and include technical courses, law and network economy, and markets and energy systems. In total, 35 electricity retailers are members of Green Power Denmark.^[119]

Green Power Denmark's Standard Agreement ("Standardaftalen") between grid companies and electricity suppliers on use of the distribution network regulates the cooperation between grid companies and electricity suppliers. Electricity suppliers can use this agreement to access information about the distribution of responsibility and payment conditions.^[120] When the Standard Agreement is used, the individual grid company must submit documents for approval to the DUR before the grid company can use them.

Forbrugerrådet Tænk

Forbrugerrådet Tænk is an independent member organization that works to secure consumers' rights. Its aim is to ensure that all consumers can make safe choices by strengthening their agency. Over 30 organizations are members of Forbrugerrådet Tænk, from trade unions and interest groups to patient groups and consumer groups. The council assembly is the highest body and determines which consumer policy goals Forbrugerrådet Tænk must work towards.^[121]

118. <https://greenpowerdenmark.dk/om-os>. Date: 23.11.23

119. <https://greenpowerdenmark.dk/medlem/vores-medlemmer?membergroup=109&search=>. Date: 30.11.23

120. <https://energinet.dk/el/elmarkedet/sadan-bliver-du-elleverandor/>. Date: 23.11.23

121. <https://taenk.dk/om-os/saadan-fungerer-medlemsorganisationen>. Date: 21.11.23

Both members and non-members of Forbrugerrådet Tænk can use the website and telephone service to request consultancy regarding their rights as consumers, including purchase law, right of complaint, complaints, and marketing. Forbrugerrådet Tænk also offers information and proposals regarding current topics. Due to the energy market not functioning properly, Forbrugerrådet Tænk has presented 20 concrete proposals regarding a safe energy market.^[122] It has also conducted several tests on electricity agreements and electricity retailers to help customers choose the retailer and contract that is most favourable for them. In addition, it provides general information regarding electricity to customers, such as how they can become more self-sufficient, how to save money on their electricity bill, and how to understand their electricity bill.

Ankenævnet på Energiområdet (ANE) – The Energy Supplies Complaint Board

Civil complaints from consumers against energy companies established in Denmark are handled by the Energy Supplies Complaint Board, a privately approved complaint board. This means that the Board's activities are laid down in its statutes, which must be approved by the Minister of Business in accordance with § 6 of the Consumer Complaints Act. Members of the Board are Green Power Denmark, Evida Holding A/S, Dansk Fjernvarme, and Forbrugerrådet Tænk.

The Complaint Board handles complaints regarding the purchase and delivery of electricity, natural gas, district heating, and other associated commodities and services. It covers both general consumer protection and sector-specific legislation in its processing of a complaint. The Complaint Board only handles complaints from household consumers, although it can deviate in exceptional cases. The consumer must be or have been in a direct customer relationship with the company for the Complaint Board to handle the complaint.^[123] A fee of DKK 160 is due when submitting a complaint to the Board. The Complaint Board provides information regarding several topics to consumers in the electricity market on their website. It also regularly writes articles on legal themes that are of interest to both consumers and electricity suppliers. The purpose of these articles is to prevent future complaints and provide broad information about the Board's practice in selected areas.

Energinet

The Danish TSO, Energinet, is a non-profit company owned by the Danish Ministry of Climate and Utilities. Energinet owns, operates, and develops the transmission systems for electricity and gas in Denmark and is therefore responsible for the daily operation of the electricity system and for maintaining security of supply. This is done by ensuring a balance between consumption and production in the electricity system, such that the electricity grid always maintains the electrical voltage. The regulatory authority for Energinet investments is divided between the DEA and the DUR.

122. <https://taenk.dk/det-kaemper-vi-for/forbrugernes-20-forslag-til-et-trygt-energimarked/>. Date: 21.11.23

123. <https://www.energianke.dk/om-ankenævnet/the-energy-supplies-complaint-board/>. Date: 20.11.23

Energinet owns and operates DataHub, an IT system that stores all data on electricity consumption in Denmark. In addition, it handles the communication and business processes between the market players in the electricity market.^[124] Among other things, Energinet monitors that electricity retailers' registrations of their consumers on DataHub are correct. This includes an electricity retailer's registrations of a consumer's change of retailer, a consumer moving in and out of the country, as well as other changes of address and interruption of electricity at a consumer's residence. All consumers are billed based on the information in DataHub.^[125]

Relevant regulations

Most Danish energy savings legislation comes from EU legislation, such as the Energy Efficiency Directive and the Energy Performance of Buildings Directive, while the national line is largely laid down in the Energy Agreement from 2012 and the latest Energy Agreement from 2018. Most legislative changes in the consumer field are also derived from EU legislation, while the DCCA is responsible for preparing new bills and proposed amendments to existing Danish regulation.^[126]

In cooperation with external stakeholders and electricity suppliers, in January 2022 the DUR launched an updated and improved platform for energy consumers. The DUR works continuously to ensure that the Danish electricity comparison tool, Elpris.dk, supports the green transition and encourages customers to participate and be more active in the retail market.^[127] The electricity suppliers that sell electricity to Danish customers are obligated to publish their current prices on Elpris.dk. Hence, the suppliers are responsible for the products and prices being kept up-to-date.^[128]

In June 2018, the legislation on security of the electricity supply was changed. The Minister for Energy, Utilities and Climate now sets the desired level of security of supply, formalizes the annual report from Energinet, and regulates payments for services related to security of supply.^[129]

The Danish Climate Act

Market Model 3.0 seeks to develop a more flexible electricity market to support the transition towards a climate-neutral society. The effective implementation of Danish and European climate and energy objectives has been the starting point of Market Model 3.0. The Danish Climate Act from 2020 has the target of reducing greenhouse gas emissions and establishing Denmark as a standard-bearer in the international green transition.^[130]

124. <https://energinet.dk/el/elmarkedet/roller-pa-elmarkedet/>. Date: 20.11.23

125. <https://www.forbrugerombudsmanden.dk/alle-emner/abonnemeter/stroem-og-andre-energiprodukter/>. Date: 20.11.23

126. <https://www.en.kfst.dk/consumer/consumer-regulation/>. Date: 22.11.23

127. <https://forsyningstilsynet.dk/Media/638223421700646103/national-report-2022-opdateret-oktober-2022.pdf>. Date: 20.11.23

128. https://elpris.dk/#/article/om_elpris. Date: 22.11.23

129. <https://ens.dk/en/our-responsibilities/electricity>. Date: 23.11.23

130. <https://ens.dk/en/our-responsibilities/electricity/market-model-30>. Date: 21.11.23

The Electricity Supply Act

The purpose of the Electricity Supply Act is to ensure that the electricity supply in Denmark is organized and implemented in accordance with the needs of security, economics, environment, and consumer protection. Within this objective, the Act must guarantee consumers access to cheap electricity. Energy suppliers not regulated by the Act are entitled to a compensation payment of CO₂ taxes.^[131] The Electricity Supply Act also provides information regarding invoicing in the retail market.

The Danish Competition Act

The Danish Competition Act sets out to promote efficient resource allocation in society through workable competition for the benefit of undertakings and consumers.^[132] Competition cases are identified through market research, discussion with market players, and cooperation with other competition authorities. Businesses and citizens also submit a number of enquiries about competition matters. In addition, the DCCA oversees mergers and requests from companies for exemptions and non-intervention statements in relation to parts of the Danish Competition Act. Any major and principal infringements of the Danish Competition Act are examined by the Competition Council.^[133]

131. <https://www.retsinformation.dk/eli/lto/2021/2648>. Date: 22.11.23

132. <https://www.en.kfst.dk/media/1351/competition-act-8692015.pdf>. Date 21.11.23

133. <https://www.en.kfst.dk/competition/about-competition-matters/>. Date: 23.11.23

Finland

Energy Authority (National Regulatory Authority)

The Energy Authority (Energiavirasto) is the authority regulating the energy sector, covering the electricity and gas markets and networks, renewable energy, EU emissions trading, and energy efficiency domains. The role and mandate of the Energy Authority is dictated by the Energy Authority Act and includes regulating, monitoring, and improving the functioning of electricity markets.

The Energy Authority monitors the electricity markets based on the mandate and targets given in the Electricity and Gas Market Monitoring Act, which is applied to tasks including monitoring the implementation of national and EU electricity market legislation as the National Regulatory Authority. In the retail electricity markets, the Energy Authority provides oversight for the fulfilment of legal requirements retrospectively; it does not monitor contractual matters.

The Energy Authority also manages the price comparison tool Sahkonhinta.fi to fulfil the EU regulation requirement on electricity price comparison tools.

Finnish Competition and Consumer Authority (FCCA)

The role of the FCCA (Kilpailu- ja kuluttajavirasto, KKV) is to ensure the efficient functioning of the market to benefit the national economy and consumers. The FCCA's tasks are given in the Act on FCCA, which includes a proactive role in initiating activities concerning developing competitiveness, dismantling anti-competitive practices, and bolstering consumer policies. In addition, it is tasked with monitoring competitiveness based on the Competition Act, organizing studies within its domains as well as consumer guidance, and adopting a separate role as Consumer Ombudsman. The role of the Consumer Ombudsman is focused on monitoring marketing activities and contractual matters related to consumers. The role of the FCCA in the electricity market has been elevated since the energy crisis and its impact on the electricity retail markets, specifically competitiveness and consumer matters.

Consumer Disputes Board

The Consumer Disputes Board is the alternative dispute resolution (ADR) body for consumer matters in Finland. The Board consists of independent experts offering a free-of-charge resolution alternative to court proceedings in matters related to all consumer goods and services. The Board is established based on the Consumer Protection Act, and its sections consisting of business and consumer representation provide non-binding recommendations. In 2023, the Board issued recommendations related to the fairness of pricing of indefinite-length contracts and termination of fixed-price fixed-term contracts in the context of the energy crisis.

Energy Market Disputes Board

In addition to the Consumer Disputes Board, an Energy Market Disputes Board has been established in Finland with a focus on alternative dispute resolution in matters between an energy company and a non-consumer end-customer. The Board is governed by the Energy Market Disputes Board Act, which came into force at the beginning of September 2023 and gave the mandate to provide resolution recommendation in the limited context of rights and responsibilities and contractual matters defined in the Electricity Market Act. The mandate does not extend to matters related to the regulatory tasks of the National Regulatory Authority (the Energy Authority). The dispute resolution principles of the Electricity Market Disputed Board follow those of the Consumer Disputes Board. The Board exists to fulfil the EU Electricity Market Directive's requirements for alternative dispute resolution.

Ministry of Economic Affairs and Employment

The Ministry of Economic Affairs and Employment is the ministry responsible for the energy domain in Finland. The role of the ministry is to coordinate energy policies in Finland and to represent Finland in EU policymaking forums. The Ministry also coordinates competition and consumer matters in Finland.

Finnish Energy (special interest group)

Finnish Energy is a special interest group representing a wide range of companies in the energy sector in Finland, including energy producers, distributors, retailers, and service providers.

Iceland

Roles and responsibilities of the different actors

National Energy Authority of Iceland (NEA) / Orkustofnun (OS)

The National Energy Authority (NEA, Orkustofnun or OS in Icelandic) is a government agency that operates under the authority of the Ministry of Environment, Energy and Climate. The NEA plays a pivotal role in shaping and governing the retail electricity market within the country. It is also responsible for operating for the benefit of society in alignment with Iceland's energy policy. The role of the NEA is to create a transparent environment for energy matters, to promote innovation and informed discussions, and to provide expert advice to the authorities for the well-being of the general public.^[134]

The NEA exercises oversight over crucial aspects of the retail electricity market, including pricing mechanisms such as revenue caps and tariffs. Like the other Nordic countries, Iceland separates the transmission and distribution of energy from the sale of electricity. Transmission and distribution of energy is a natural monopoly and sits under monopoly regulation, which includes determining a revenue cap for the TSO and DSOs. This is described in articles 12 and 17 of the Electricity Act. This oversight helps maintain affordability and accessibility of electricity while ensuring its quality and security of supply to consumers.

The NEA is responsible for issuing licences to the electricity retailers, which are required to engage in electricity trading. The NEA also has another important role in the electricity market as the consulting agency for customer complaints. Under Articles 22–26 and 30 of the Electricity Act, in the case of a complaint regarding any publicly managed aspect (e.g., tariff prices for the grid connection), the NEA is the responding authority. Anyone who believes electricity suppliers are violating their rights with their decisions, projects, or omissions can consult the NEA.^[135]

The National Energy Regulatory Authority is an independent unit within the NEA and is responsible for monitoring the electricity market in accordance with the provisions of the Electricity Act no. 65/2003. With the introduction of the third Electricity Packet (2009/72/EC) into Icelandic law, this mandatory and independent regulatory body for the electricity market was strengthened. The scope of monitoring applies to all companies operating under the Electricity Act. The National Energy Regulatory Authority also monitors electricity security.

As a regulator, the National Energy Regulatory Authority has several objectives: to promote competition in the production and trading of electricity; to support efficiency and economy in the transmission and distribution of electricity; to ensure adequate electricity security, consumer interests, and consumer awareness in the electricity

134. https://orkustofnun.is/en/about_us/national_energy_authority, Date: 29.11.23

135. <https://ec.europa.eu/newsroom/just/items/53331>, Date: 29.11.23

market; to promote the use of renewable energy sources; and to make sure that environmental standards are being met.

Orkusetur runs a price comparison tool for electricity consumers. Orkusetur was established by the NEA in collaboration with the Ministry of Industry and Trade and is overseen by the NEA. The project is funded by the EU and Samorka. All nine of the Icelandic suppliers report to the Icelandic price comparison tool. The website covers all contracts that are offered to household customers in Iceland. It compares both electricity prices and distribution and transmission costs.^[136]

The Consumer Agency / Neytendastofa

The Consumer Agency is one of the governmental agencies in Iceland that serves to ensure the enforcement of legislation laid down by Parliament to protect the safety of consumers as well as consumers' legal protection in various transactions with business operators. This includes focusing on consumer interests in the retail electricity market. The Consumer Agency receives notifications concerning potential breaches of application of Icelandic legislation on general safety issues, the legal rights of consumers, and the protection provided by law that measurements and measuring instruments are correct in relation to transactions with consumers.

The Consumer Agency is empowered by law to use various sanctions and enforcement measures if necessary; this includes sales bans, recalls, fines, and other measures as laid down in the legislation. The agency enforces a number of legislative acts, including the surveillance of unfair business practices and market transparency (Act No. 57/2005), door-to-door sales, and distance contracts (Act No. 46/2000).

The Consumer Agency provides the public (consumers as well as business operators) with relevant and up-to-date information concerning legal rights and obligations in transactions with consumers, including issues concerning the security of measurements and products.

The Icelandic Competition Authority / Samkeppniseftirlitið

The Icelandic Competition Authority (Samkeppniseftirlitið) was founded on 1st July 2005, when the Competition Act No. 44/2005 entered into force. By the same Act, the former Icelandic Competition Authority (Samkeppnisstofnun) and Competition Council (Samkeppnisráð) were discontinued.

The objective of the Competition Act is to promote effective competition in economic activities and thereby increase the efficiency of the productive factors of society. The Competition Authority is responsible for achieving the objectives of the Competition Act by opposing unreasonable barriers and restrictions on freedom in economic activities, as well as harmful oligopolies and restriction of competition, and by facilitating the entry of new competitors into the market. This includes the retail electricity market.

136. <https://orkusetur.is/raforka/raforkuverd/>. Date: 29.11.23

The role of the Competition Authority includes the following:

- To enforce the requirements and prohibitions of the Competition Act and, as applicable, Articles 53 and 54 of the EEA Agreement, and to permit exceptions pursuant to the Competition Act
- To decide on measures to be taken against anti-competitive behaviour in undertakings
- To observe that measures taken by public entities do not restrict competition, and to indicate to the relevant authorities any means by which competition can be made more effective and the entry of new competitors into the market facilitated
- To monitor the development of competition and trade practices in individual market sectors in Iceland, and to investigate the management and ownership relations between undertakings.

The supervisory work of the Competition Authority extends to all forms of business activities, regardless of whether such activities are conducted by individuals, companies, public entities, or other parties.

Neytendasamtök Íslands (NS)

The Consumers Association of Iceland is a membership-based association with the main objective of safeguarding the rights of consumers in Iceland. It is mainly funded by membership fees from their members based in Iceland. The NS offers its members free legal guidance and assistance if needed regarding disputes with traders based in Iceland.

During its opening hours on Thursdays, the NS is open to calls from all consumers and provides general legal guidance and information free of charge. However, the NS only reviews documents, offers mediation, or considers cases more closely if the consumer is a member.

Samorka

Samorka is the association of the Icelandic electricity, district heating, waterworks, and sewage utilities. The federation was founded in 1995, when the Federation of Icelandic Electric-Works and the Federation of Icelandic District Heating and Waterworks merged. All district heating services and electric works in the country are members of this federation, in addition to most of the waterworks and sewage utilities. Samorka operates in the four fields mentioned above. It is also a member of Nordenergi, the collaboration between the Nordic associations for electricity producers, suppliers, and distributors.

Samorka's purposes and tasks include forwarding the mutual interests of its members, guarding their interests in mutual projects, fostering research and gathering information for its members as well as for public authorities, hosting seminars and conferences, and acting on behalf of members in mutual projects.

Landsnet

Landsnet is the Icelandic TSO, which owns and operates all electricity transmission lines in Iceland. A large part of Landsnet's business involves the operation and maintenance of the electricity transmission lines and substations it owns. As the TSO, it also has system-wide responsibility for the entire Icelandic electricity system. This includes being responsible for the operational security of the electricity transmission system as a whole and its management, balancing electricity supply and demand, maintaining the grid's capacities on a long-term basis, shaping and constructing the future grid, ensuring equal access to the grid, and promoting an active electricity market. Landsnet is subject to regulation by the NEA. The NEA determines the revenue cap on which Landsnet's tariff is based. As a natural monopoly, Landsnet's operations are regulated by the NEA, which sets an annual limit (revenue cap) for Landsnet's maximum revenues. The purpose of the revenue cap is to promote efficiency in the operation of Landsnet and to ensure a reasonable return on investment.

Electricity transmission is a concession operation and, according to the Electricity Act, one company shall handle the transmission of electricity and system management. This company is Landsnet hf., which was established by the Act on the Establishment of Landsnet hf., No. 75/2004, although the company formally began operations on 1st January 2005. The electricity transmission system is now entirely in the hands of the DSO Landsnet hf. Landsnet's owners are Landsvirkjun, RARIK, Orkuveita Reykjavíkur, and Orkubu Vestfjarda.

Landsvirkjun

Landsvirkjun is the National Power Company of Iceland and operates 18 power stations in Iceland, concentrated into five main areas of operation. It is the largest electricity producer in Iceland and generates about 71% of the country's power. It operates 15 hydropower stations, three geothermal power stations, and two wind turbines for research purposes in the five operating areas in Iceland.

Landsvirkjun is a jointly owned enterprise of the State Treasury, the City of Reykjavík, and the Township of Akureyri. Its objectives are according to Article 2 of Act No 42/1983.^[137]

137. <https://www.government.is/publications/legislation/lex/2018/02/06/Act-No-42-1983-on-Landsvirkjun/>. Date: 29.11.23

Organization of the retail market and the role of power suppliers

Most power companies are under public ownership, the main exception to this being HS Orka, which generates about 7% of the total power generation in Iceland. The state-owned Landsvirkjun National Power Company generates 71% of the country's power. The TSO (Landsnet) and the six DSOs are all publicly owned, with HS Veitur the only one partly owned (minority) by private parties.

Under Icelandic law, a single power company can function as generator, distributor, and supplier. However, accounting separation is required between concession (transfer of electricity in a certain area) and competitive activities. While consumers must use the distributor holding the concession for their respective area, the distributor need not be the same company as the supplier. Like in the other Nordic countries, the distribution of electricity is a natural monopoly and is regulated by the NRA, while the supply of electricity is subject to competition.

Unlike most countries in Europe, Iceland does not have a formal wholesale market for electricity. As a result, wholesale transactions take place by agreement between the buyer and the seller and not through a central market. Buyers on the wholesale market are electricity sellers that then resell to their customers, who are end-users or other electricity sellers. Sellers on the wholesale market are usually producers of electricity, but electricity sellers can also resell the electricity they have purchased to other electricity sellers.

The retail market in Iceland is a free market, and anyone can start a company and become an electricity seller if the conditions are met and they receive a licence to sell electricity. Electricity retailers are not required to have their own production, so companies in the retail market either produce electricity or not. Nine companies currently have a licence to sell electricity in the retail market in Iceland: Atlantsorka, N1 Rafmagn, Straumlind, Orka heimilanna, Orkubú Vestfjarða, Orkusalan, Orka náttúrunnar, Hs Orka, and Fallorka.

Users in the retail market are all households and companies that are not large users (i.e., with usage under 80 GWh of electricity per year). All users are free to choose their electricity supplier, and all changes to electricity suppliers must be free of charge for the user. However, it should be kept in mind that the user does not have a choice of distribution provider; rather, it depends on the location, if their operation is licenced.

Relevant regulations

The Electricity Act

The Electricity Act in Iceland plays a fundamental role in shaping the retail electricity market. This legislation provides the framework for the entire electricity sector, governing aspects such as generation, transmission, distribution, and retail. It establishes clear rules and responsibilities for market participants, including power suppliers, grid operators, and generators.^[138]

A primary focus of the Electricity Act is to foster competition within the market. It sets out mechanisms to prevent monopolistic practices, thus promoting a competitive environment that benefits consumers with greater choices and potentially lower prices. Additionally, the Act ensures equitable access to the transmission and distribution grids, preventing discrimination and fostering a level playing field for all market participants.

Consumer protection is another key aspect of the Act. It defines rules related to billing transparency, contract termination, and dispute resolution, empowering consumers by providing them with clear information about their electricity contracts and avenues for addressing grievances. The Act states that the final customer can complain to the National Energy Authority of Iceland. Furthermore, the Act takes into account environmental considerations by encouraging the integration of renewable energy sources, thereby aligning with Iceland's commitment to sustainable energy production. Overall, the Electricity Act is instrumental in shaping a transparent, competitive, and reliable retail electricity market in Iceland.

Act on the Consumer Agency and Consumer Spokesman with later amendments (Act No 62/2005)

The Act on the Consumer Agency and Consumer Spokesman, designated as Act No. 62/2005 in Iceland, establishes the framework for consumer protection and advocacy in the country. This legislation serves to create and define the roles and responsibilities of the Consumer Agency and the Consumer Spokesman. Subsequent amendments have since been introduced to reinforce consumer rights and bolster consumer protection measures.^[139]

The primary goals of this Act include the establishment of the Consumer Agency, which acts as the central authority responsible for upholding consumer rights in Iceland. This agency is empowered to enforce consumer protection laws, to offer guidance and information to consumers, and to mediate in cases of disputes between consumers and businesses.

138. <https://www.government.is/media/atvinnuvegaraduneyti-media/media/acts/Act-No-65-2003-on-Electricity.pdf>. Date: 29.11.23

139. <https://www.neytendastofa.is/lisalib/getfile.aspx?itemid=1402>. Date: 29.11.23

In addition, the Act designates a Consumer Spokesman, who operates independently and advocates on behalf of consumers. The Consumer Spokesman's role encompasses representing the interests of consumers, raising awareness about consumer rights, and engaging in legal proceedings when necessary to protect consumers' interests.

The Act also places significant emphasis on consumer education and information dissemination, with the Consumer Agency responsible for providing consumers with knowledge about their rights and responsibilities in commercial transactions. This includes the distribution of information related to product safety, contract terms, and procedures for resolving disputes.

Furthermore, the Act grants the Consumer Agency the authority to monitor and enforce compliance with consumer protection laws. It enables investigations and legal actions against businesses found to be engaging in unfair or deceptive practices, thus ensuring that consumers are treated fairly in the marketplace.

Importantly, the Act establishes mechanisms for resolving disputes between consumers and businesses, encouraging mediation and negotiation to reach mutually acceptable resolutions. When agreements cannot be reached through these means, the Consumer Agency can facilitate legal action on behalf of consumers.

Over time, amendments to the Act have been made to enhance consumer protection in response to changing consumer behaviour, technological advancements, and evolving market practices. Overall, the Act on the Consumer Agency and Consumer Spokesman, together with its amendments, serves as a vital instrument for promoting consumer rights, ensuring transparency in commercial transactions, and providing effective avenues for dispute resolution in Iceland's marketplace.

Article 4 of the Act states that the Minister will appoint an Appeals Committee for Consumer Affairs and its responsibilities. This includes being referred to decisions by the authorities that are made in accordance with the Act on the Surveillance of Unfair Commercial Practices and Market Transparency.

In accordance with the Act on the National Energy Authority, no. 87/2003, as well as the Electricity Act, the NEA works on electricity issues under the supervision of the Minister of the Environment, Energy and Climate. The NEA shall monitor that companies operating in accordance with the Electricity Act meet the conditions that apply to the operations. Furthermore, the NEA sets revenue limits for the TSO and distribution utilities to achieve efficiency in their operations. The Electricity Act also mandates the Competition Authority's supervision of the economic activities covered by the Electricity Act. The Electricity Act also stipulates that the NEA grants licences for electricity production (Chapter II), licences for the operation of the TSO (Landsnet; Article 8), licences for the construction of transmission infrastructure (Articles 9 and 11), licences to construct and operate a distribution network (Article 13), and licences to conduct electricity trade (Article 18).

Norway

Role and responsibilities of the different actors

RME (Regulatory Authority)

The Regulatory Authority for Energy (RME), part of the Norwegian Water Resources and Energy Directorate (NVE), is responsible for regulating Norway's power market and grid system. The RME ensures a user-friendly and efficient retail market, occasionally imposing fines for breaches, although this is infrequent for electricity retailers. The RME can also revoke electricity suppliers' trading licences. Additionally, the RME can take administrative measures like giving advance notice of decisions and providing guidance to market actors. The RME's responsibilities also include overseeing and enforcing compliance with various relevant regulations and laws in the retail market.

The RME's responsibilities are outlined in the Energy Act and related regulations, as well as the Third Electricity Directive and associated regulations.^[140] The regulations that are relevant in this context are as follows:

- The Energy Act (Energiloven)
- The Regulation on Measurement, Settlement, Billing of Grid Services, and Electrical Energy, Net Company Neutrality (Regulation on settlements, or Avregningsforskriften)
- The Regulation on Reporting Obligations for Electricity Supply Agreements (Forskrift om rapporteringsplikt for kraftleveringsavtaler).

The RME also enforces the Regulation on Grid Regulation and the Energy Market. The EU's Fourth Energy Market Package has been adopted in the EU and is currently under consideration in Norway (as of May 2023). The RME also manages the electricity support scheme (strømstøtten) that was introduced in 2021 in response to the energy crisis. In recent times, the RME has played a role in introducing changes to the Price Information Regulation (Prisopplysningsforskriften) and the Regulation on Electricity Sales and Network Services (forskrift om kraftomsetning og netttjenester), including improvements in providing information on invoices to consumers. The RME has also collaborated with the Consumer Authority (Forbrukertilsynet) to enhance its oversight of electricity suppliers.^[141]

140. <https://www.nve.no/reguleringsmyndigheten/om-rme/dette-er-rme/hvem-er-reguleringsmyndigheten-for-energi/>. Date: 30.11.23

141. <https://www.nve.no/media/13963/rmes-aarsrapport-2022-til-nves-nettsider.pdf>. Date: 30.11.23

The Consumer Authority (Forbrukertilsynet)

The Consumer Authority (CA) is a supervisory authority that works to make markets simpler and safer for consumers. The CA is responsible for monitoring the business practices and contract terms of traders. Its primary focus is on preventing and stopping illegal marketing, unfair contract terms, and other forms of unlawful trading practices directed towards consumers. The CA plays a crucial role in ensuring that businesses operate ethically and transparently in their dealings with consumers.

The CA supervises the following areas that are of particular relevance to the electricity retail market:

- The Marketing Act (Markedsføringsloven)
- The Price Information Regulation (Prisopplysningsforskriften)
- The Regulation on Unfair Trading Practices (Forskrift om urimelig handelspraksis)
- The Right of Withdrawal Act (Angrerettloven).

Supervision of the electricity retail market is a high-priority area for the CA, and the authority conducts oversight to ensure that correct and comprehensive information is provided in the marketing of retail electricity contracts, and that the contract terms used by electricity retailers are fair and balanced. In some cases, the CA initiates a dialogue with electricity suppliers, leading them to adjust their practices, but it also has the authority to impose fines on electricity retailers that, for instance, violate the Marketing Act or the Consumer Rights Act. Decisions made by CA can be appealed to the Market Council.

The CA regularly performs supervisions among the electricity retailers. In 2023, it has prioritized supervision related to the marketing and contract terms within the electricity market.^[142] The CA has taken various actions to increase awareness of the current regulations among electricity suppliers. In 2022, it sent three letters to all electricity suppliers, providing information about different aspects of the regulations. This included information about consumer withdrawal rights when entering into fixed-price electricity agreements, as well as guidance on the use of climate and environmental claims in electricity marketing, including the rules governing claims of "renewable" and "green" electricity. The CA has also informed the electricity suppliers of the requirements for providing information about withdrawal rights during the contract signing process.

142. <https://www.regjeringen.no/no/aktuelt/vil-gjere-det-enklare-a-vere-straumkunde/id2908270/>. Date: 30.11.23

Fornybar Norge

Fornybar Norge is a nationwide interest and employer organization that represents Norway's entire renewable energy sector. Its goal is to promote sustainable energy solutions that reduce greenhouse gas emissions and generate new jobs and income in Norway. Its membership includes all aspects of the renewable energy supply chain, from energy production on land and at sea to grid companies, contractors, electricity suppliers, suppliers, and consultants. Fornybar Norge was formed by merging Energi Norge and Norwea in January 2023.

The standard electricity supply agreement (standard kraftleveringsavtale) was jointly developed by the former consumer authority and Energi Norge (now Fornybar Norge) and was last updated in 2017. This standard agreement provides a summary of the rights that consumers and businesses have under current legislation and practices.^[143]

Since 2018, Forbrukertilsynet no longer participates as a party in industry standards and standard agreements. Instead, it issues guidelines that clarify and interpret existing regulations. Consequently, the standard kraftleveringsavtale has not been updated to reflect the changes in legislation made in recent years.

Forbrukerrådet

Forbrukerrådet (the Consumer Council) is a government-funded independent organization that advocates for consumer interests and influences businesses and government authorities to be more consumer-friendly. It runs "strømpris.no", a retail electricity price portal. Electricity retailers must report information according to the Regulation on Reporting Obligations for Electricity Supply Agreements. Although the RME officially oversees this, providers typically report directly to Forbrukerrådet through strømpris.no or make the data accessible on their websites.

According to the Regulation, all active electricity supply agreements should be published on strømpris.no, with links on provider websites. A consistent task for Forbrukerrådet is removing agreements that do not match the reported terms. On the portal, agreements are sorted into categories such as Spot Price, Fixed Price, and Other Agreements, ranked by expected monthly cost. Agreements with a guaranteed price duration of six months or longer are ranked higher than shorter-duration or non-guaranteed agreements. Giving weight to this duration was a change implemented by Forbrukerrådet after receiving many enquiries from consumers who had ordered electricity supply agreements through the portal and experienced price increases shortly thereafter. Duration of agreements is not something that electricity retailers are obligated to report, but Forbrukerrådet has actively contacted them and encouraged the sharing of this information. Besides strømpris.no, other private electricity comparison portals exist; some use the same data source, while others

143. <https://www.forbrukertilsynet.no/lov-og-rett/standardkontrakter>. Date: 30.11.23

gather information from provider websites or directly from providers.

Konkurransetilsynet

The Competition Authority enforces the Competition Act and works to promote competition for the benefit of consumers and businesses, with the aim of contributing to efficient resource utilization. The Competition Act outlines three main areas that the Competition Authority focuses on: illegal cooperation (§ 10), abuse of dominant position (§ 11), and merger control (§ 16). In its daily operations, the Competition Authority has limited involvement in the retail electricity market. However, it is involved in mergers and acquisitions among electricity retailers.

Elklagenemnda

Elklagenemnda was established through an agreement between Fornybar Norge and the Consumer Council (Forbrukerrådet). Its main purpose is to offer consumers a fair, reasonable, and efficient process for resolving disputes related to energy companies. Elklagenemnda handles complaints arising from contractual relationships between energy companies and consumers.

In cases involving electricity retailers, the board primarily relies on the contractual framework, including the Standard Electricity Supply Agreement and the Consumer Rights Act, to make its decisions. While there may be some overlap between the cases handled by Elklagenemnda and those handled by the Consumer Authority, the Consumer Authority generally addresses the broader marketing practices of electricity retailers, whereas Elklagenemnda specifically resolves disputes between consumers and electricity retailers.

Elklagenemnda functions as an advisory body that addresses individual disputes, and its decisions do not necessarily set precedents for other cases. Companies that receive unfavourable decisions from Elklagenemnda typically comply with the decisions. However, other companies with similar practices may not change their practices until they also face a complaint.

The topics covered in the cases handled by Elklagenemnda vary. Examples of recurring themes in these cases include vaguely formulated special conditions (such as non-specific claims that the electricity agreement is among the 10 cheapest), electricity agreements, and other issues related to electricity supply.

Relevant regulations

Energy Act (Energiloven)

The purpose of the Energy Act is to ensure that the production, transformation, transmission, trading, distribution, and use of energy occur in a rational manner.

Chapter 4 of the Energy Act concerns the trading of electrical energy. It specifies the need for a trading licence from the RME to engage in the trading of electrical energy and outlines the conditions that must be met to obtain such a licence. The requirements for obtaining a trading licence are not complex and do not pose a significant barrier to entry as an electricity supplier in Norway.

The Energy Act also imposes requirements for the structural and functional separation of vertically integrated entities that have been assigned system responsibility or that have more than 100,000 network customers. The requirement for structural separation means that the network business must be separated from businesses engaged in the production or trading of electrical energy, and these entities must be organized as independent legal entities. The requirement for functional separation means that individuals in the management of the network business cannot participate in the management of businesses engaged in competitive activities within the vertically integrated entity. In practice, there should be a clear separation between the grid operator and the electricity supplier.

Regulations on settlements (Avregningsforskriften)

The Regulation on settlements aims, among other things, to ensure that electricity suppliers are granted access to the transmission network and to facilitate the ability of customers in the retail market to switch electricity suppliers. Customers in the retail market are guaranteed electricity supply even without an electricity supply agreement through the distribution companies' obligation to supply electricity. This regulation is enforced by the RME.

In accordance with § 2-2, customers in the retail market have the right to switch electricity suppliers. When switching electricity suppliers, a written electricity supply agreement between the electricity supplier and the customer must be in place.

Requirements for information in the electricity supply agreement are outlined in § 2-3 of the Regulation. Here, it is specified that an electricity supply agreement must, at a minimum, contain information about the metering point ID, the customer's personal identification number or organizational number, the customer's name or company name, the product covered by the agreement, and the customer's consent.

Chapter 7 includes provisions regarding the billing of consumers. According to Section 7-1(b), an electricity supplier can invoice the consumer both in advance and in arrears. In cases of pre-billing (payment in advance), the period between the invoice due date and the delivery date must not exceed 10 weeks.

Section 7-2 of the regulation specifies several requirements for invoice design. First, the invoice must be clear and easily understandable to the consumer. It should include information about the basis for the invoice, including separate line items for all price components, electricity volume, and whether the consumer receives mandatory electricity delivery. Furthermore, if estimated values are used as the basis for billing, this must be clearly stated on the invoice. The invoice should also include the electricity spot market area of the consumer's measuring point.

Additionally, the invoice should inform the consumer about the ability to compare electricity supply agreements on strømpris.no. It should contain the name of the electricity supply agreement, the agreement's duration, and the notification procedures in the event of changes to the agreement. If the agreement includes a price guarantee, the duration of the price guarantee should be prominently displayed on the invoice. The invoice should also provide information about the consumer's right to raise objections to the invoice, including the consumer's opportunity to contact the Electricity Complaints Board (Elklagenemnda). It should also include the contact information for the Electricity Complaints Board.

In Chapter 7 of the Regulation, terms are also established regarding having only one bill (i.e., the grid fees from the grid company are included on the invoice from the electricity supplier) as a voluntary arrangement. The voluntary nature of this arrangement means that grid companies can choose to offer electricity suppliers the option to invoice grid fees, but if they do so, it must be extended to all interested electricity suppliers. An electricity supplier can choose to have one invoice, but if they do, they must implement this for all customers in the grid company's area.

Regulation on Reporting Obligations for Electricity Supply Agreements

The purpose of this Regulation is to contribute to providing clear and comprehensive information about prices and terms in electricity supply agreements for consumers and to ensure that such information is publicly accessible. The RME also enforces this regulation.

In accordance with Section 4 of the Regulation, information about any electricity supply agreement offered to or entered into with consumers is subject to reporting obligations. Section 5 of the Regulation establishes requirements for the content, format, and deadlines for reporting. The reporting should include the price per kWh, including any surcharges, as well as any fixed amounts associated with the agreement. Furthermore, the reporting should specify which customer groups the agreement is offered to and include all relevant agreement terms, such as additional terms or limitations in the electricity supply agreement. The agreement should be uniquely identifiable. The documentation of information should be submitted electronically and continuously to the Consumer Council's electricity price portal to ensure that the information is always up-to-date.

Marketing Control Act (Markedsføringsloven)

The Marketing Control Act pertains to “control over marketing, commercial practices, and terms of agreement in consumer relationships and sets requirements for good business conduct among businesses”. According to the Act, the CA is responsible for monitoring businesses’ commercial practices and terms of agreement, and it is the most important law that the CA enforces. Accordingly, the CA has the authority to impose financial sanctions on actors that violate it.

Of particular relevance to the assessments in this report is Chapter 2 of the Marketing Act, which addresses commercial practices. Specifically, §§ 6 to 9 prohibit unfair commercial practices, including deceptive actions, misleading omissions, and aggressive commercial practices. In addition, § 10 contains requirements related to price labelling and information obligations, providing the legal basis for the Price Information Regulation.

Chapter 3 addresses specific forms of marketing. Under § 11, the business must obtain the consumer’s explicit consent for any payment beyond the consideration of the main service before entering into an agreement. Under § 12(1), telephone marketing directed at consumers who have opted out of such marketing is prohibited. In § 13, there is a similar prohibition on marketing through addressed mail. Additionally, telephone marketing at certain times and using a concealed number is generally prohibited, as stated in § 14; § 15 restricts the use of marketing via email or automated calling systems. In § 18, requirements are set for the clarity and accessibility of terms if businesses offer consumers additional benefits such as discounts, gifts, or similar offers.

Chapter 5 of the Act pertains to terms of agreements. For example, § 22 prohibits contract terms that are found to be unreasonable towards consumers, with the prohibition being guided by public interest considerations. This does not apply to the content of pricing terms.

The authority and enforcement powers of the CA are described in Chapter 7. In particular, § 35 and § 36 address the duties, proceedings, and decision-making powers that are relevant when assessing the consequences of measures.

Chapter 9 of the Marketing Act also provides for the possibility of criminal and civil penalties.

Price Information Regulation (“Prisopplysningsforskriften”)

The Price Information Regulation is authorized by the Marketing Control Act § 10, with the purpose of promoting clear pricing information to enhance competition among businesses while making it easier for consumers to compare prices. The CA (Forbrukertilsynet) oversees that this regulation is followed.

Chapter 6 (§§ 19–22) covers the transportation and sale of electric power. This chapter has recently been revised; starting from 1st November 2022, the obligation to provide information to customers has been strengthened through clearer requirements for marketing information, a requirement for price lists, and heightened requirements for notification in the case of changes or termination of power agreements. The CA further states on its website that the purpose of these changes is to facilitate a more functional and consumer-friendly electricity market.^[144]

Under § 20, the essential information required in commercial communication that constitutes a call to purchase are listed as follows:

- Whether the agreement is for spot-price, fixed-price, standard variable-price, or other types of contracts
- All mandatory price components and their amounts
- The duration of the agreement and the price components
- Any contract duration and potential termination fees
- The period, if any, for which advance payments are required
- Any conditions to qualify for the agreement
- A statement that any additional services offered are not mandatory
- A notice that the agreement can be compared with other agreements on the Consumer Council's electricity price portal.

§ 21 establishes requirements for electricity suppliers to have an up-to-date price list readily available at the location or in the channels where consumers can enter into electricity agreements. This price list should provide a comprehensive overview of prices and terms for all of the electricity supplier's various electricity agreements, including agreements that are no longer offered but still have active customer relationships. Furthermore, the price list for each individual electricity agreement per price area should specify the agreement's name, type, and price, along with a link to the agreement terms.

§ 22 sets out requirements for notifying consumers about changes to or termination of their electricity agreement. The supplier must inform the consumer of all changes to or termination of the electricity agreement, including changes in the price agreed upon at the time of the contract (except for changes in the spot price). The notification should clearly explain the reason for the change in the agreement or the termination of the agreement, and whether the consumer has the right to terminate the agreement at no cost.

According to § 22, notifications about changes to or termination of the electricity agreement should be formulated in such a way that makes the content and changes

144. <https://www.forbrukertilsynet.no/lov-og-rett/veiledninger-og-retningslinjer/veiledning-om-skjerpet-opplysningsplikt-for-stromleverandorer>. Date: 30.11.23

clear and understandable to the consumer. This means that the price and terms before and after the change should be clearly presented. Furthermore, the notification should be provided separately and should not be mixed with other information from the supplier. The notification should be sent to the consumer via SMS and email, or by mail if the consumer has not consented to digital communication methods.

Regulation on Unfair Commercial Practices (Forskrift om urimelig handelspraksis)

The Regulation on Unfair Commercial Practices lists various forms of deceptive and aggressive commercial practices that are considered unfair under all circumstances. The Consumer Authority (Forbrukertilsynet) and the Market Council (Markedsrådet) oversee and make decisions under the Marketing Control Act for actions outlined in this regulation.

Cancellation Act (Angreretsloven)

The Consumer Rights Act, overseen by the CA, provides consumers with various rights and information requirements when it comes to sales outside of a fixed retail location, such as online purchases, telephone sales, sales at stands, or door-to-door sales. The law also regulates consumers' right to cancel or withdraw from these purchases. For the electricity retail market, the following parts of the Consumer Rights Act are particularly relevant:

Chapter 1 § 3 states that the law cannot be waived by agreement to the disadvantage of a consumer, and § 7 states that it is the responsibility of the business to prove that the information requirements in §§ 8 to 16 and § 18 have been met.

According to Chapter 2 Section 8, the business is obligated to provide the consumer with various information before entering into an agreement. These information requirements include details about the goods or services, such as main characteristics, total price, any additional charges,^[145] the agreement's duration and minimum contract period, and the conditions for terminating the agreement.

Furthermore, Chapter 3 Section 10 states that for agreements marketed through unsolicited sales over the phone, an agreement is not considered to be entered into until the business has confirmed the offer in writing on a lasting platform after the telephone call has ended, and the consumer has accepted the offer in writing. Typically, this is done by SMS.

Chapter 5 Section 15 states that when an agreement is made through a means of remote communication with limited space or time to display information, there are specific requirements pertaining to the minimum information to be provided in § 8. Furthermore, Section 18 states that within a reasonable time after the agreement is

145. If the price cannot reasonably be pre-calculated, the method for calculating the price should be provided, along with any additional costs (or an acknowledgment that they may occur). For subscription agreements, the total price should encompass the costs per billing period, or the method for calculating them if the total costs cannot be pre-calculated.

concluded, and no later than before the delivery of the service begins, the consumer should receive written confirmation of the agreement on a lasting platform. This confirmation should include the information outlined in § 8 if it has not been previously provided to the consumer on a durable medium.

Chapter 6 describes the right to regret the purchase. More specifically, Sections 20 and 21 state that the consumer has a 14-day period to regret the purchase; if the consumer is not informed of this, the period extends to 12 months. According to Sections 19 and 26, the supplier can only demand payment for services delivered before the period allowed to regret the purchase has expired if the consumer has accepted this.

Competition Act (Konkurranseloven)

The purpose of the Competition Act is to promote efficient resource utilization by fostering competition for the benefit of consumers and businesses. Key provisions of the Act include Section 10, which prohibits anti-competitive agreements, Section 11, which prohibits abuse of a dominant position, and Section 16, which is concerned with merger control. Additionally, Section 14 allows for measures to be taken in cases where neither Section 10 nor Section 11 can be applied, but there is still a need for general market regulation. This may be the case in markets where anti-competitive practices have developed without violating the prohibitions in Sections 10 and 11, or where it is difficult to prove a violation of these prohibitions.

Price Control Act (Pristiltaksloven)

The Price Control Act, Section 1 (Lovdata, 1993), grants the Norwegian Competition Authority (Konkurransetilsynet) the authority to regulate prices when necessary to promote socially responsible price developments. Decisions can be made regarding maximum prices, minimum prices, price freezes, price calculations, discounts, maximum advances, delivery and payment terms, and other provisions related to prices, profits, and business conditions. The Price Control Act also prohibits unreasonable prices and business conditions, as outlined in Section 2 of the regulation.

The Competition Authority has emphasized on several occasions its reluctance to use the powers granted by the Price Control Act, as it considers free competition to be in the best interest of society and consumers. However, it has clarified that if it is necessary to prevent a crisis from being exploited by certain parties to demand unreasonable prices for essential goods and services, it will use the powers provided by the law (Konkurransetilsynet, 2020).

Changes to the Regulation on Determining Coercive Fines and Penalty Fees (Endringer i forskrift om utmåling av tvangsmulkt og overtredelsesgebyr)

The Ministry of Children and Families has enacted a new regulation regarding the determination of penalty payments and penalty fees for violations of the Marketing

Control Act, the Consumer Right of Withdrawal Act, the Package Travel Act, and the Transparency Act, which came into effect on 14th February 2023.

The regulation specifies the maximum size of penalty fees, which is set at up to 4% of the business's annual revenue or up to 25 million Norwegian kroner. Key considerations in determining penalty fees include the nature, severity, scope, and duration of the violation, the possibility of preventing the violation through guidelines, instructions, training, or control, any financial gains resulting from the violation, past violations, and the financial capacity of the business. This means that future decisions may issue significantly larger penalty fees than previously, especially for entities with high turnovers and/or involved in serious violations.

Suggestions to improve the electricity retail market from the Ministry of Children and Families

The Ministry of Children and Families (BFD) has suggested several changes to the national rules aimed at promoting a more consumer-friendly retail electricity market, as listed below:

- A. Prohibitions/mandates related to certain types of electricity contract offerings for consumers. Prohibitions could apply, for example, to standard variable contracts. Mandates could include requirements for electricity retailers to offer a clearly defined standard spot-price contract with a regulated maximum markup or fixed-price contract.
- B. Requirements for the content of electricity contracts targeting consumers, such as maximum contract duration, requirements for price stability, or prohibitions on price changes for a certain period after contract signing, maximum size of termination fees, and prohibitions or restrictions on the ability to demand advance billing in the regulation on electricity sales and network services.
- C. A maximum markup that an electricity provider can charge in contracts offered to consumers.
- D. Requirements or restrictions related to marketing, including the obligation to disclose any consumer-related risks associated with contracts other than spot-price contracts.
- E. A prohibition or restrictions on the sale of products other than electricity along with an electricity contract, such as bundled sales or gifts. This could include discounts on products when selling electricity contracts in stores, discounts on streaming services with the simultaneous signing of an electricity contract, and the sale of insurance contracts linked to the electricity contract.
- F. A prohibition or restrictions on the ability to sell electricity contracts through telemarketing, door-to-door sales, or stand sales.
- G. A prohibition on win-back marketing aimed at household customers when

switching electricity retailers.

Sweden

Roles and responsibilities of the different actors

Electricity retail market structure

In 1996, electricity trading in Sweden was deregulated and exposed to competition, and customers could decide who they wanted to purchase electricity from. That said, there is a regulated monopoly for electricity distribution via the electricity grid.^[146] The transmission grids have since been developed and extended to neighbouring countries and other EU countries, which has enabled increased distribution and trade of electricity across borders. Transmission of electricity is still a regulated market, where the Swedish TSO Svenska kraftnät (Svk) is responsible for the operation and development of the transmission grids in Sweden.^[147]

In addition, the Swedish electricity market is characterized by bidding zones for electricity. Sweden has, since 2011, been one of only a few EU countries with bidding zones for electricity, corresponding to defined geographical areas of Sweden. There are currently four different bidding zones: SE1, SE2, SE3, and SE4. The zone division was based on existing differences and limitations in transmission capacity in the transmission grid at the time of the division, although there is currently an ongoing process with bidding zone reviews according to the EU Electricity Market Regulation, where Svk is responsible for suggesting and investigating potential new bidding zones in Sweden. Svk's proposal on whether to keep the existing bidding zones or amend to new divisions is expected to be presented in February 2024. If new bidding zones are decided upon, they can be introduced in 2027 at the earliest.^[148]

The Swedish electricity market is integrated with the Nordic market. Moreover, there are several submarkets for electricity trading, including price hedging markets, a day-ahead market, an intraday market, and a balancing market.^[149]

Role of power suppliers

Svk is the only TSO in Sweden, and as mentioned above, it is responsible for the operation and development of the transmission grid in Sweden and for ensuring a constant balance between electricity consumption and production. According to the Electricity Market Directive, TSOs must be certified. Svk was certified by Ei in 2012 as system operator for the electricity transmission grid in Sweden and is certified until further notice. However, Ei has the right to review the certification if Svk fails to meet set requirements for system operators.^[150]

146. Energimarknadsinspektionen, 2023, *Sweden's electricity and natural gas market, 2022*

147. Energimarknadsinspektionen, 2021, *The electricity market*

148. Energimarknadsinspektionen, 2023, *Sweden's electricity and natural gas market, 2022*

149. Energimarknadsinspektionen, 2023, *Sweden's electricity and natural gas market, 2022*

150. Energimarknadsinspektionen, 2023, *Sweden's electricity and natural gas market, 2022*

Moreover, there are around 170 DSOs in Sweden,^[151] responsible for the operation, maintenance, and development of the regional and local distribution grids within certain areas. Each electricity grid company has a monopoly for a certain area and thus exclusive rights to distribute electricity within that area. The monopoly is decided by Ei through a permitting process. Ei also ensures that grid companies do not exploit their monopoly position through a revenue framework and revenue caps. Grid operations in Sweden are not allowed to operate within the same legal entity that is engaged in trading or production of electricity to avoid cross-subsidization due to the monopoly of grid companies.^[152]

Lastly, there are electricity supply companies who buy electricity and sell to customers, although the physical delivery of the electricity is the responsibility of the TSO and DSOs. There are around 150 electricity suppliers in Sweden, with a mix of local companies that only offer contracts in certain areas or bidding zones and larger companies with customers across the entire country. The three largest electricity suppliers had, at the end of 2022, a combined market share of around 51%. Electricity supply companies are free to decide which types of contracts they want to deliver to customers, as there are currently no regulations on requirements of certain contracts that must be provided.^[153]

Swedish Energy Markets Inspectorate (Energimarknadsinspektionen, Ei)

The Swedish Energy Markets Inspectorate (Energimarknadsinspektionen, Ei) is the regulatory authority in Sweden that supervises the electricity, district heating, and natural gas markets. This includes ensuring that actors in these markets follow and comply with both the EU's regulatory frameworks and national legislation, as well as monitoring the development of the markets. Additionally, Ei is responsible for suggesting changes and developing regulations or other measures to promote a well-functioning energy market based on identified issues. This mainly concerns the Swedish market; however, Ei is also involved in the EU regulatory framework development as representatives of Sweden.

Ei receives reports from consumers of companies failing to comply with the provisions of the Electricity Act, the Natural Gas Act, the District Heating Act, the Act on Certain Pipelines, or the Act on the Certification of National Grid Undertakings for Electricity and Certification of Certain Natural Gas Undertakings. As the supervising authority, Ei then examines whether the companies have breached any obligations. Ei also regulates terms and conditions for monopoly companies operating within the electricity networks and natural gas networks and supervises their compliance with these regulations and obligations. Additionally, Ei offers elpriskollen.se, a website for comparing the electricity contracts – in terms of prices, contract types, and conditions – offered by all active electricity suppliers.

151. Energimarknadsinspektionen, 2021, *The electricity market*

152. Energimarknadsinspektionen, 2023, *Sweden's electricity and natural gas market, 2022*

153. Energimarknadsinspektionen, 2023, *Sweden's electricity and natural gas market, 2022*

Swedish Consumer Agency (Konsumentverket)

The Swedish Consumer Agency (Konsumentverket) is a government agency responsible for consumer legislation and monitoring of consumer affairs. The electricity market is one of 45 different markets that the Consumer Agency monitors. Examples of activities performed by the Consumer Agency are ensuring that companies comply with the law, handling consumer complaints, ensuring the safety of products and services, and overseeing market development to identify consumer problems. Marketing rules, sales, and contract terms in the electricity market are monitored by the Consumer Agency, and information and identified issues related to the electricity market are regularly discussed with Ei.

Swedish Consumer Energy Markets Bureau (Konsumenternas energimarknadsbyrå)

The Swedish Consumer Energy Markets Bureau (Konsumenternas energimarknadsbyrå) is an independent bureau that offers free advice and guidance to consumers on the Swedish energy markets. The bureau is funded by the Swedish Consumer Agency, the Swedish Energy Agency, the Energy Markets Inspectorate (Ei) and the two industry organizations Swedenergy and the Swedish Gas Association. Relevant complaints are forwarded to the bureau both from Ei and the Consumer Agency, especially regarding disputes and contractual rights. Through the bureau, consumers can obtain advice and information regarding electricity, natural gas, or district heating in the fields of pre-purchase information, energy suppliers, energy prices, legal guidance in the case of consumers having a dispute with an energy company, and information regarding change of energy supplier.

The bureau also presents statistics of reported consumer problems and complaints, as well as an updated list of electricity retailers with a record of receiving many complaints during the last 12 months to help consumers avoid unfair electricity suppliers. As per the update in October 2023, three companies are currently on the list, out of around 150 companies in total.

National Board for Consumer Disputes (Allmänna Reklamationsnämnden, ARN)

The National Board for Consumer Disputes (Allmänna Reklamationsnämnden, ARN) is a public authority with the main task of impartially resolving disputes between business operators and consumers. Claims are filed by the consumer; in order for them to be handled by ARN, the business operator must first have rejected the complaint partly, in whole, or not responded at all. Recommendations of how disputes should be resolved are presented by the ARN; even though they are not obligatory or binding, a majority of companies adhere to these recommendations.

Regarding the electricity market, disputes that cannot be settled by Ei or the Consumer Agency fall within the ARN's area of responsibility. These disputes can, for example, be between grid companies and consumers over compensation after power outages, or between consumers and suppliers about incorrect billing.

Swedish Competition Authority (Konkurrensverket)

The Swedish Competition Authority (Konkurrensverket) is responsible for monitoring the markets to promote competition in both private and public activities that is efficient and beneficial to consumers. Moreover, it promotes effective public procurement to the benefit of society and market participants. Efficient competition in the market is regarded as having diversity both among the available contract types and the number of independent electricity suppliers.

Relevant regulations

General consumer acts that apply to the electricity market include the Marketing Control Act, the Price Information Act, and the Act on Contractual Terms in Consumer Relations. Other rules that apply include the Statute of Limitations and the Act on Distance Contracts and Off-Premises Contracts. Additionally, there are general consumer purchases and services acts regarding private persons' purchases of products or services from commercial companies.

Other legislations, regulations, and rules specifically designed for the electricity market include the Electricity Act, the General Terms and Conditions, the Electricity Preparedness Act, the Electricity Safety Act, and the Regulation on Measurement, Calculation, and Reporting of Transmitted Electricity.

As a member country of the EU, Sweden also follows and implements EU legislations for the electricity market.

Consumer Purchases Act (2022:260)

This Act governs purchases of products from companies. Rules are provided for customers rights during problems with the purchase, for example, when there is a problem with the delivery of the products. It is applicable when a private person purchases goods from a commercial enterprise.

Consumer Services Act (1985:716)

This Act governs services provided to customers by a commercial provider, and it is mandatory to the benefit of the customers. For example, it states which terms and conditions must be met, and customers cannot receive terms less favourable than these.

Act on Distance Contracts and Off-Premises Contracts (2005:59)

This Act applies when something is purchased on the internet. For example, it states the right of withdrawal within 14 days of the purchase, which also applies to purchases made by telephone.

Marketing Act (2008:486)

The Marketing Act is the general act that governs how companies are allowed to market themselves. The Act offers customer protection against deceptive, aggressive,

and other unauthorized marketing. It is applicable both when companies target their marketing towards other companies or towards customers, and for marketing of products, such as goods, services, and job opportunities.

The Price Information Act (2004:347)

Customer protection and rights include being entitled to accurate and clear price information of what a purchased service or good costs.

Act on Contractual Terms in Consumer Relations (1994:1512)

The Act on Contractual Terms in Consumer Relations states what applies when companies make an agreement with a customer, including the terms and conditions in a purchase agreement, rental contracts, or guarantees. The Act applies to all standard terms used by companies when offering products or services to customers. If the customer has had the opportunity to affect the terms and the customer and company decide on the contract terms by themselves, they are no longer regarded as standard terms and the Act is not applicable.

Statute of Limitations (1981:130)

The Act on Statute of Limitations states provisions on when and for how long a company has the right to demand payment after a purchase of a good or service. Usually, the company has a right to demand payment up to three years after the purchase; however, there are occasions when the statute of limitations or limitation period is extended, and the company can enforce debt for a longer time.

Competition Act (2008:579)

The Competition Act contains two main prohibitions, one for anticompetitive cooperations between companies and the other for companies with a dominant position to exploit their market power. The first prohibition applies when companies cooperate to hinder, limit, or distort the competition, and it applies to both horizontal and vertical cooperation. The second prohibition applies if a company exploits their dominant market position. Several aspects are considered when deciding if a company can be regarded as having a dominant market position, one of which is if their market share is above 40%. Having a dominant market position is not prohibited, but the exploitation of this position is prohibited. Moreover, the Act also contains rules on the acquisition of companies and anticompetitive activities of public sales. The rules apply to the government, municipalities, and regions in terms of how they are allowed to act when conducting public sales.

In Sweden, companies must also comply with the EU's competition rules on the prohibition of anticompetitive contracts and exploitation of a dominant market position. The EU's competition rules apply if anticompetitive actions affect the market between Sweden and another country member of the EU in a considerable way.

Electricity Act (1997:857)

The fundamental provisions of the electricity market are stated in the Electricity Act (Ellagen) of 1997. The Act is based on the old Electricity Act from 1902. Since then, technical and structural changes have developed the electricity supply both in Sweden and abroad, creating issues of application, which led to the new Electricity Act emerging. The new Act regulates establishments regarding the production, transmission, and consumption of electricity.

The new Act bases its material content on the old provisions for electricity grid concession, electricity grid operations and grid tariffs, protective measures and damages, and electricity safety measures and supervision. However, the regulations for the electricity market were complemented with provisions on customer protection. Several changes have also been made since the emergence of the new Act to increase customer protection and strengthen the position of the individual consumer in the market. For example, the Act provides specific rules stating that a change of electricity supplier should not impose a specific charge on the customer.

Additionally, the Act states provisions on information of price and terms. The electricity supplier is obligated to inform their customers about the content of an agreement before it is entered and to inform the customer of when the contract period expires, as well as what happens with price and delivery terms if the customer does not enter a new agreement before the contract period expires. Before contract terms are changed, the customer must be informed through a special message, which should convey that the customer has the right to cancel the contract. The new terms are allowed to be applied two months after the delivery of this message as the earliest.

Assigned Price (Anvisat pris, §§ 3–10 in the Electricity Act)

If the customer has not entered a new electricity contract when the previous contract ends or when moving, the customer's electricity network company will assign the customer to an electricity supplier and enter them into what is called "assigned price". The assigned price is usually higher than other price alternatives and can change during the year; however, these changes occur more slowly than the non-assigned monthly flexible price alternatives.

On 1st June 2023, new regulations were introduced to the Electricity Act, stating provisions on how assigned contracts are not allowed to be hourly price contracts or dynamic prices. Dynamic prices refer to prices that reflect the price on the spot market at every hour, with an interval that at least corresponds to the frequency for settlement on the market. Moreover, an assigned contract is not allowed to have a notice period longer than 14 days.

Regulation on Measurement, Calculation, and Reporting of Transmitted Electricity (1999:716)

The Regulation on Measurement, Calculation, and Reporting of Transmitted Electricity includes provisions on how measurements of electricity should be taken. For example, it states that an electricity meter should be able to measure and register the total active energy for withdrawal and input of electricity. The regulation is based on provisions in the sixth chapter of the Electricity Act, which gives the government the right to issue regulations regarding matters and questions within the electricity measurement area.

The Regulation has recently been updated, and the new directives came into effect on 1st November 2023. The update states that measurements should be on a 15-minute settlement level instead of a 60-minute level. This applies for all input connection points (production), although the settlement will still occur on a daily level with the new 15-minute temporal resolution. A period of transition allows for input connection points where measurements cannot be measured on a 15-minute level to measure on an hourly level until 31st December 2024. The update does not involve regulations for the net metering. However, the new requirements for 15-minute resolution at the input connection points means that the output at those connection points will also be measured with a 15-minute resolution. This allows for accurate tracking of the amount of electricity being produced and consumed, which is necessary for determining the credit or payment that the owner of the renewable energy system is entitled to receive. The imbalance price will still be the same for the whole hour, so there will be no economic effect, and settlement does not have to be on a 15-minute level even if the measurement is.

General Terms and Conditions (Allmänna avtalsvillkor)

The trade association Energiföretagen, which also represents many utilities (producers, suppliers, and grid companies) in Sweden, and the Consumer Agency have agreed on general terms and conditions that should be included in electricity contracts for consumers to receive reasonable and fair contracts. Most electricity suppliers apply these terms and conditions, and the most important provisions include EL 2012 K (rev 2) for electricity trading and NÄT 2012 K (rev 2) for electricity grids.

The terms and conditions include rules and provisions for electricity network connection, electricity meter reading, compensation for power outages, payment obligations and prohibited additional charges, due dates and deadlines, right of withdrawal, requirements for security or advance payment, breach of contract, and disconnection as well as guidance and dispute resolution. Some provisions only apply to electricity networks, while others only apply to electricity trading. However, most provisions can be found in the contract terms for both grid companies and electricity suppliers.

Special rules in the provisions include, for example, the point from which the withdrawal period is counted, that reading of the electricity meter should be done every month and billing should be done every quarter, how preliminary billing and final billing should be done, and the consumer's additional payment obligation when they in good faith pay an invoice that may reasonable be perceived as final for a certain period.

Electricity Emergency Preparedness Act (1997:288)

The Electricity Emergency Preparedness Act (Elberedskapslagen) regulates the utility companies' obligations to take actions and measures for ensuring society's needs of electricity supply during difficult times of severe stress and heightened readiness. The obligations apply to companies that are engaged in the production, transmission, and trading of electricity.

EU legislation

Other relevant regulations that state provisions for the Swedish electricity market and actors are the relevant EU directives and regulations. The EU Commission has developed a common framework to ensure their implementation in electricity markets. The framework decides the rules for the electricity market and its different actors. Svk, the Swedish TSO, works to implement the EU legislation that aims to create a well-functioning inside market for electricity. The various directives and regulations include the Electricity Market Directive, Electricity Market Regulation, Emergency Preparedness Regulation, Transparency Regulation, and REMIT.

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