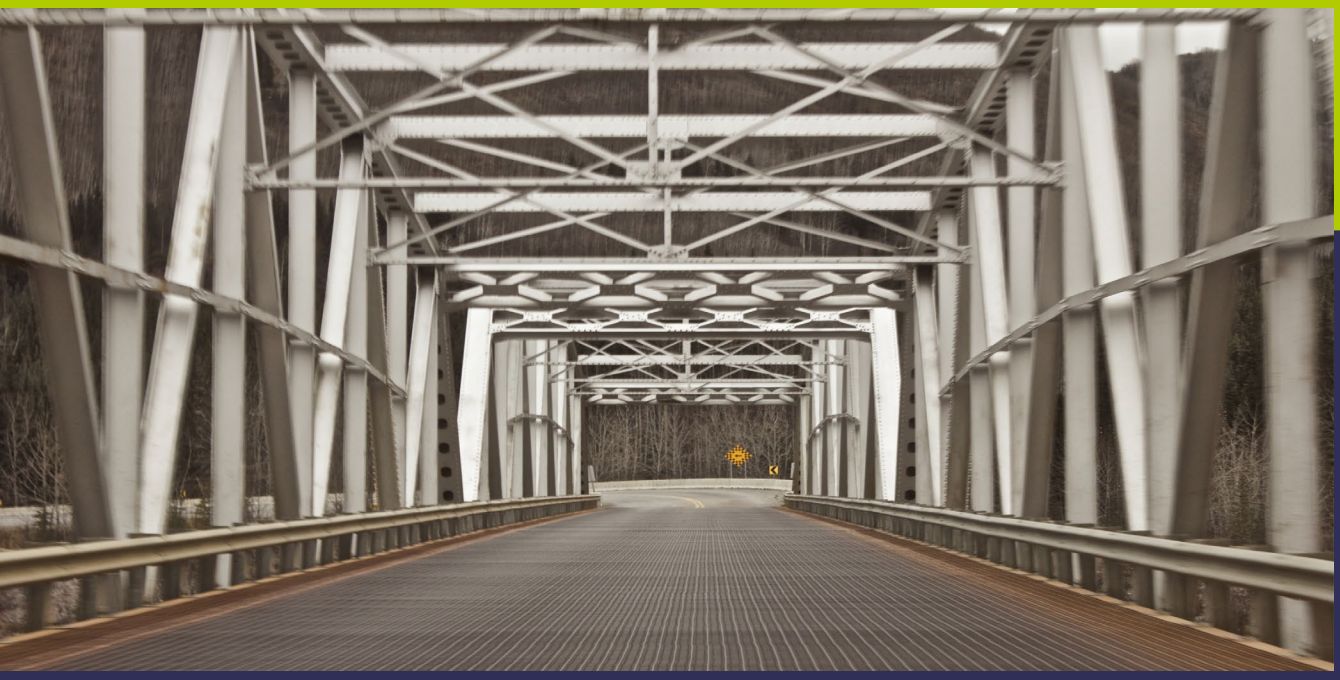
European Commission

EUROPEAN BARRIERS IN RETAIL ENERGY MARKETS



FRANCE
Country Handbook

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Energy

EUROPEAN BARRIERS IN RETAIL ENERGY MARKETS PROJECT: France Country Handbook

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TABLE OF CONTENTS

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Please note that this and the other country handbooks form just part of the deliverables of the “European Barriers in Retail Energy Markets” project. For more detail on methodology, Europe-wide results and the Barriers Index, please refer to the following associated reports: “Final Report of the European Barriers in Retail Energy Markets Project”; “Report on the European Retail Energy Market Barriers Index”

SUMMARY

Project Outline

The following project outline describes the overall European Barriers in Retail Energy Markets Project. It relates to all the countries and markets which are the focus of the project.

The Context

European retail energy market liberalization is now well into its third decade in the most mature markets. Customers of electricity and gas are now free to choose their electricity and gas suppliers in nearly all markets across the EU and in a number of other European markets. At the same time, the European Commission and national European regulators have created a basis for non-discriminatory market access for energy suppliers through a series of regulations and directives. In theory at least, the European retail energy market is a place where new suppliers and providers of retail services can enter the market and compete relatively freely and on equal terms for customers in the market; a place where formerly incumbent electricity suppliers can compete for gas customers and where gas suppliers can compete for electricity customers; a place where a supplier from one region or jurisdiction can compete in another, without facing unreasonable or excessive barriers; a place where a capacity aggregator or other innovative business model can compete to provide its services to retail energy customers.

Objective

The European Barriers in Retail Energy Markets project was established to research the extent to which the theory is the case in practice; the extent to which energy suppliers across Europe face a variety of barriers to enter and compete in the market; to identify which barriers exist and to provide some suggested solutions to those barriers. The project thereby aims to support the European Commission and Member States in developing policy and implementing actions to reduce barriers.

This project has also designed and calculated a performance index that ranks different countries according to how easy it is to do business in the retail energy segment by combining a selection of measurements into a single score. The project is on the other hand, not intended as a measure or indicator of the ‘competitiveness’ of any given market, and it does not in this respect judge the effectiveness of regulatory authorities or governments, many of which have put great effort into developing their markets.

It is also important to note that all the markets included in this research are continuously evolving. Changes are being planned and improvements (and in some cases additional barriers) are possible as a result. While this project highlights and considers known future changes, it cannot make assumptions as to the effectiveness and outcomes of those changes. This project is therefore weighted in the present, based on the actual context in the market, whilst accepting that the present context may change, in some cases imminently.

Competitor Perspective

What sets this project apart from previous Europe-wide projects looking at the issue of barriers is above-all that it primarily takes the perspective of the competitor rather than any objective view of regulators, economists or academics. This is an important distinction since it requires an acceptance that even if the existence of specific barriers may not seem logical or rational, and even if they are not permitted or legal, even if they were supposed to have been eradicated, those barriers are significant at least in the experience or expectations of competitors in the market.

Notwithstanding this however, the project does not simply accept whatever competitors claim. On the contrary, the researchers have gone to great lengths to ensure that claims are challenged and justified. Cooperation with regulatory authorities to understand the regulatory context of claims, along with survey and interview feedback from competitors (including incumbent suppliers) with alternative perspectives or points of view, have also been considered to ascertain a balanced evaluation of the barriers in any given market. This approach may therefore be of value to policy makers, and complementary to other studies addressing market outcomes.

In some cases, claims by respondents have been made which cannot be corroborated. For instance, there have been claims by many respondents across Europe about integrated utility behaviours that represent barriers to independent suppliers in the markets. Barriers apparently resulting from a lack full ownership unbundling. Such behaviours may well be regulated against, may even be considered illegal, and authorities may have powers to investigate them – and maybe do so. They are impossible to prove given the mandate and resources of the researchers of this project, yet they are widely reported by respondents and broadly documented in other researches. Such barriers may be considered allegations by the respondents, but where they appear to merit further consideration they have been raised since their potential impact on competition is substantial.

Scope & Scale of Research

The project focuses on electricity and (in most cases) gas markets in 30 European countries, namely the EU27 states plus Great Britain, Norway and Switzerland. It was conducted over the course of more than a year with the cooperation and assistance of nearly all of the relevant national regulatory authorities (the report does not however represent their views and has not been ratified by them), around 150 suppliers and many other stakeholder organizations, across all focus markets. Great Britain was included in the project and cooperation was received from numerous suppliers, the regulator (OFGEM) and other stakeholders. Switzerland and Malta were included to a lesser extent since they are not yet open markets for household customers.

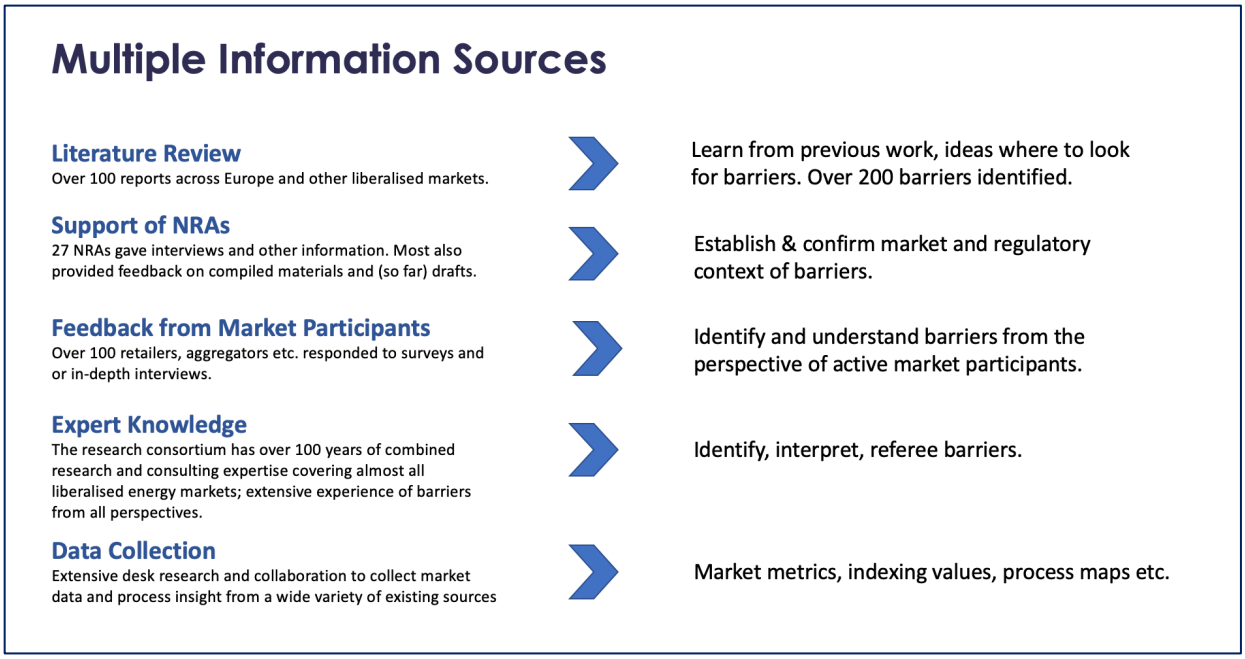
The project focuses on retail (supply), including also demand aggregation services, other additional offerings and new model retail, especially relating to the household segment customers (in some markets households and smaller SMEs may be difficult to distinguish). The project additionally concentrates primarily on barriers that are specific to the energy (electricity and gas) retail market – as opposed to barriers that are true of most markets, such as basic business costs and risk - and it gives priority to barriers for which a potential solution might be sought, as opposed to barriers which are a fact of any energy market and which could not realistically be overcome (such as the barriers relating to the core price volatility of energy as a commodity). The project does not aim to list every possible barrier in the market, however small.

Sources of Information

Many sources of information were used as part of the project. These included an extensive literature review of over 100 public reports, to assist in the targeting of survey questions; interviews with national regulatory authorities (NRAs) to understand the regulatory context in markets; feedback from market participants (suppliers and other competitors) and extensive data gathering for the purpose of collecting market metrics, market processes and

index values. For the latter the task of identifying sources that could deliver comparable and reliable index values was a key challenge of the researchers. The expert knowledge of the project consortium (which has extensive experience from the markets and issues concerned was also used to add judgement to the process. Specifically, the core project team comprised over a dozen researchers and experts from nine European countries, including international experts who have analysed Europe's energy markets since even before they liberalized.

Figure 1 – Multiple Information Sources



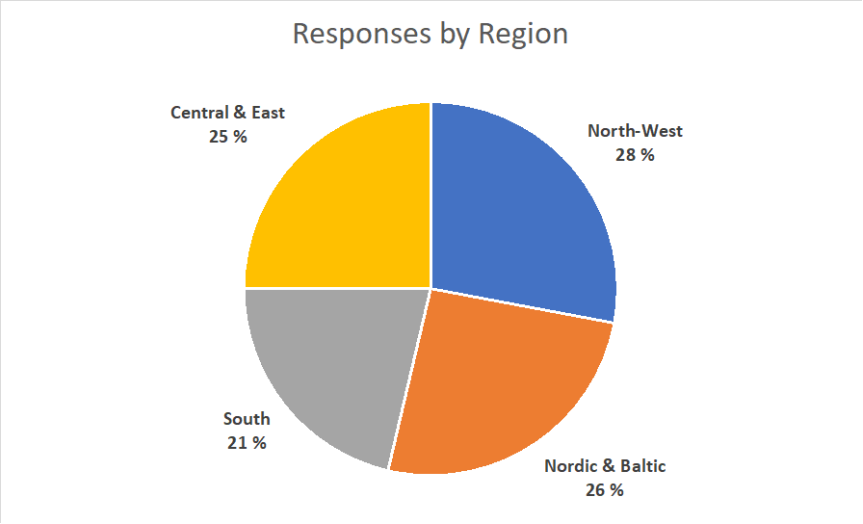
Surveys & Interviews

The primary research mediums used in the project were an extensive questionnaire and in-depth interviews. The purpose of the questionnaire, which contained separate questions depending on the type of respondent, was to provide a comprehensive and structured identification, weighting and magnitude of the barriers as experienced and perceived by suppliers and other competitors. Questions were categorized and broken down according to what was known through the body of existing literature and the experience of the project consortium, ensuring that all known barriers were addressed by the questionnaire. The questionnaire additionally facilitated the identification of barriers that hitherto had not been revealed by the literature review, or which were country specific. Interviews provided additional support and clarification to the findings from the questionnaire as well as allowing respondents to focus on top-of-mind barriers and the interviewers to dig deeper into key and / or unclear issues. While some respondents provided both questionnaire and interview responses, many provided one or the other.

The survey was publicly and widely promoted (via web sites, social media and by other direct means) to potential respondents from 17th June until late October 2019 but remained open until late February 2020 so that stakeholders contacted during Country Handbook development had the chance to respond. The dissemination of information on the project was further facilitated by a widely promoted public website through which over 300 people subscribed.

The Competitor Sample

143 questionnaire and interview responses were received representing 120 unique market-specific responses covering 28 focus markets. 71% of responses were through questionnaires versus 29% through interviews. Malta (a closed market for household customers) and Slovakia were the only markets from which responses were not received, although three additional markets received a level of response which was considered insufficient on which to conclude barriers based solely or primarily on respondent feedback. In these markets, namely Bulgaria, Cyprus, Czech Republic, the project consortium applied their expert insight and additional desk research to support the analysis of the markets. Switzerland, also a closed market for household customers, also naturally received insufficient response. The responses from 24 markets were therefore considered sufficient for the purpose of interpreting the barriers within those markets primarily based on respondent feedback. It is important to note that the response rate in no way impacted the index, which is not dependent on responses.



Analysis of the sample shows that responses were spread evenly among the regions. 66% of responses were non-incumbent competitors compared with 34% which were former incumbents in the markets concerned. In many cases the former incumbents are only former incumbents in one region within the overall country they are in. A large proportion of the former incumbents are furthermore active across multiple regions and countries, and therefore are both incumbents and non-incumbents, defenders and challengers. Among the non-incumbent players were a mix of more established competitors and more recent new entrants, along with more traditional supplies, new model suppliers and aggregators.

More information on the nature of the sample and responses can be found in the Final Report for this project.

Confidentiality

The importance of data protection and anonymity within the project cannot be stressed enough. Most respondents provided information on condition of anonymity. It was promised by default to questionnaire respondents and was in most cases explicitly requested by interviewees. Many participants additionally stated that they were nervous to respond at all since they were active in a market where there were only a handful of suppliers (or at least independent suppliers) which they felt meant that their responses could easily identify them. This risk was perceived as even greater in cases where the participant had made public statements on issues that would be contained in the research (the risk of readers putting two and two together was a concern). In some cases,

respondents stated that they even feared a backlash from other stakeholders if their identity was revealed, or (for e.g. a brand-new entrant in a market with one brand-new entrant) stated that if we revealed that they were a new entrant the market authority would instantly know who they were and that they were afraid it might inhibit their entry process.

Under such circumstances, it was decided that not only would all responses be anonymous, but also that the type of respondents would not be revealed in connection with given responses on a country level. It has been claimed by a handful of market authorities that this policy reduces the value of the research. The researchers feel that it in fact increases the value of the research since it has allowed respondents to provide information in an uninhibited fashion in a European market where, by and large, independent suppliers – and especially independent new entrant suppliers – are few and far between.

Deliverables

The project has three key deliverables:

- **28 country specific handbooks** detailing the barriers identified in each country together with suggestions for possible solutions. While most of the handbooks cover electricity and gas markets, some only cover electricity or cover gas to a lesser extent due to the absence or limited presence of gas. Additionally, two countries, Malta and Switzerland do not have country reports due to their closed nature with respect to household customers.
- **A robust, peer-reviewed barriers index** of how easy it is to do business in each country. The European Retail Energy Market Barriers Index, contained in the separate European Retail Energy Market Barriers Index Report, allows the objective comparison of market barriers across the focus markets. The report also includes a ranking of the focus markets.
- **An overall Final Report** containing a full project description and bringing together the findings and common learnings from all countries.

The Barrier Index and Ranking

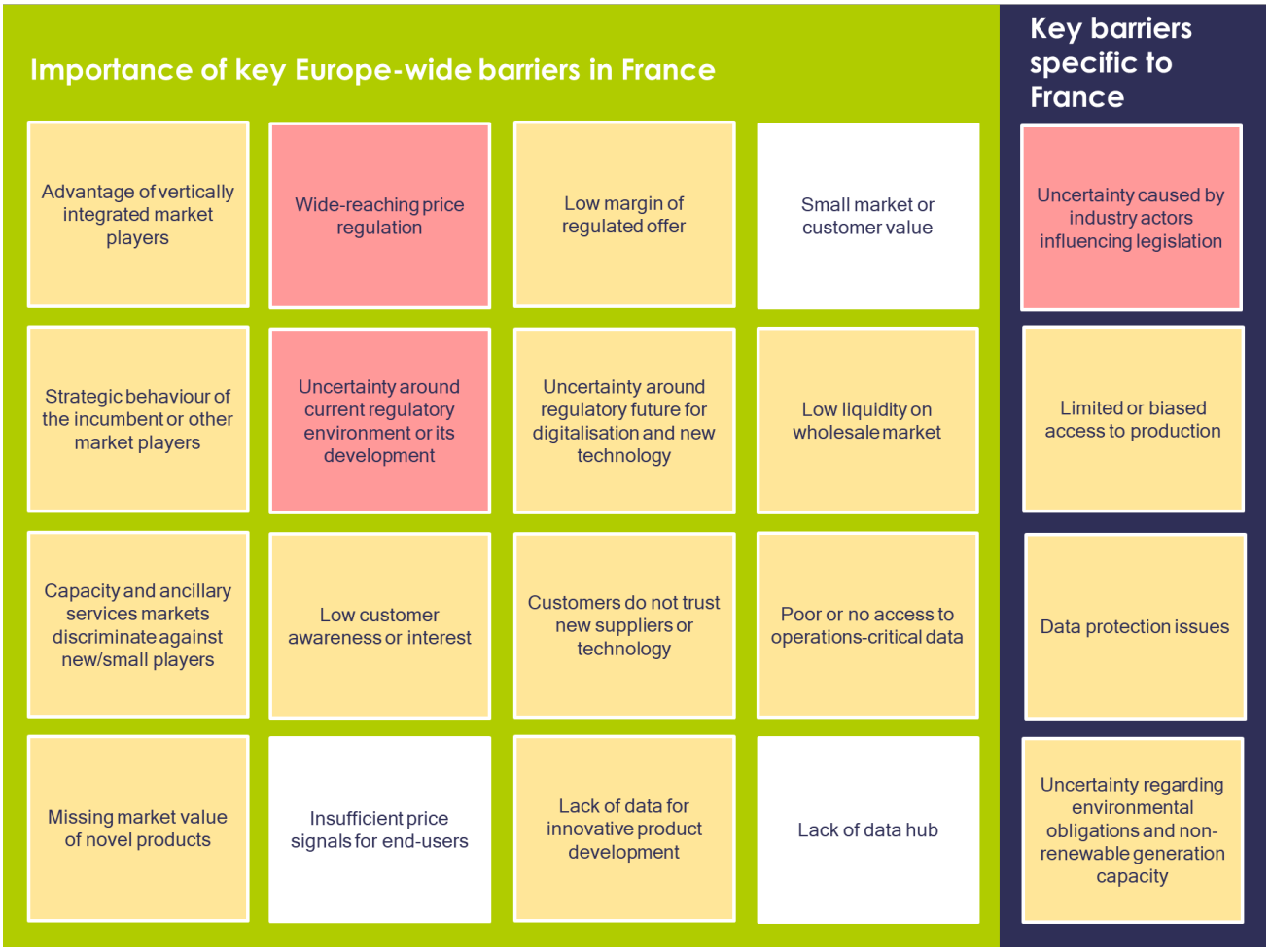
The purpose of the 'European Retail Energy Market Barriers Index' is to enable a degree of comparability between the barriers' context in each of the markets. It is based on metrics that can be collected for all markets, metrics for which available data currently exists. As such it provides a simple, best-available proxy benchmark measure for each of the categories of barriers identified by the project, for each market, and thereby ranks each market. It is intended to be used as an evolving periodical index and ranking on a European and national level.

The index and ranking should, however, presently be considered more of an approach and an indication than an absolute or definitive ranking. It represents the current state of market monitoring data in Europe and will evolve over time as data availability improves. Over time we would expect and recommend that governments and NRAs advance new metric collection to better enable future editions of the index and ranking.

A full description of the Index, its methodology and detailed findings and the ranking can be found in the separate Index report for this project. Within each country handbook the index values for that given country is presented.

Key barriers in the French market

The following figure highlights the key barriers in the French market.



LEGEND

Has not been raised, indicated or identified as a barrier in this country

Has been raised or indicated as an issue in this country

- May include issues that still are present in the country or are experienced by suppliers even though regulation to address the issue has been enacted by the regulator and effects still awaited; reporting a lag between the regulatory framework structure and its awaited effects
- May include issues where suppliers suffer the effects despite the country being relatively advanced on this topic compared with other EU countries, pilot projects being in place or institutions working to overcome the problem.

Has been identified as an issue in this country and is supported by facts, data or substantial respondent evidence in light of limited initiatives deployed by institutions to control or overcome the issue.

Key recommendations

- **Wide reaching Price regulation.** Price regulation is in place for both gas and electricity. In combination with a low margin of this offer, this was identifed as one of the main barriers in the French market. For gas, regulated prices are already planned to be phased out. For electricty, a step-by-step phaseout, that is clearly communicated to give participants security and also ensures affordability for end-customers at the same time, can eliminate this barrier.
- **Uncertainty around current and future regulatory environment**. Several causes for uncertainty have been raised, including the future development of the regulatory framework, regulatory developments in the field of digitalization and new technology and environmental obligations & non-renewable generation capacity. Long term regulatory planning, clear communication of proposed regulatory changes as well as full transparency on deviations from initially proposed plans can substantially reduce the level of uncertainty.
- **Uncertainty caused by perceived influencing of legislation by industry actors.** Market participants consider the market environment to be very protective towards the state-owned historic suppliers and other powerful actors because of perceived lobbying activities from incumbents and other powerful market players. Maximum transparency can help decrease the uncertainty and help establish a climate of trust and fairness among market participants.

MARKET OVERVIEW

The French residential electricity and gas market is still dominated by the historic suppliers EDF and Engie, while the wholesale market sees an increasing market share of alternative suppliers.

Market background

Based on the EU´s 1st Internal Energy Market Package, the energy market in France was progressively opened up, starting from 1999. In 2000 the French energy regulator CRE was created to ensure smooth functioning of gas and electricity markets. Additionally to EU regulation, there are some national specifics like ARENH or the national capacity mechanism. Industrial customers were able to choose their suppliers in 1999, which was followed by small and medium enterprises in 2004. With the transposition of the second energy package in the same year, the major players in the country EDF and Engie (resulting from the merging of GDF and Suez) were transformed into limited liability companies with the majority of shares being held by the state itself by the time of the unbundling. While EDF remained largely state-owned, Engie is only 24% state-owned by 2020.Also, the country implemented the legal and functional unbundling of network activities, which led to the appointment of a legally independent unit of EDF, the RTE, as TSO (now 50.1% owned by EDF). The French electricity and natural gas markets for residential customers are open since 2007. Historic suppliers EDF and Engie remain the major actors, with many new energy suppliers offering electricity and/or gas across France since then (e.g Total Direct Energie, Planete Oui, eni, and others). With the adoption of the NOME law in 2010 for a new organization of the electricity market, transposing the Third Energy Package, the country´s NRA CRE received new competences in the fields of grid tariffs definition, investments in network infrastructure development, TSOs' certification and regulation of the access to nuclear power generation (ARENH) of the incumbent, next to the definition of regulated gas and electricity prices.[1]. With the NOME law, greater price liberalization for customers was achieved, mainly because it ordered EDF to offer a part of the historic nuclear´s fleet capacity to other, alternative suppliers at a regulated price until 2025 to allow for a fair competition with the incumbent (ARENH).

The opening of energy markets brought a great deal of choice to residential customers. Next to the choice of the supplier, the energy price (regulated or competitive offers) and the energy plan (fixed prices/variable prices/green energy plan) can be chosen.

However, more than a decade after the market was opened to competition, just over one in two French people know that it is possible to change suppliers, and the procedure is free, simple and fast because it only lasts for the duration of a call and requires absolutely no action on the part of the consumer. Most recent surveys from late 2019, on the other hand, found out that now 87% of the French consumers are now aware of this possibility.[2]

The residential electricity market is dominated by EDF, with a market share of about 74% based on site number. (Q4 2019)[3] However, the company loses an average of 100,000 clients per month, the main beneficiary of this is

[1] https://ec.europa.eu/energy/sites/ener/files/documents/2014_countryreports_france.pdf
[2] https://www.energie-mediateur.fr/publication/2019-13eme-edition-du-barometre-energie-info/

Engie and Total Direct Energie. The second largest residential supplier in the country is Engie.,the main challenger is Total Direct Energie, other actors with smaller market shares are e.g Eni, ekWateur or enercoop.

France´s electricity market is one of the most concentrated in the whole EU. The regulated tariffs still pose a challenge for alternative suppliers that seek to enter the wholesale and retail markets, despite these tariffs are reflecting supply costs of a new entrant since 2014. That year a new calculation method was established, ensuring contestability of regulated prices by alternative suppliers.

The non-residential electricity market sees EDF´s market share at around 74% based on total site number, however the incumbent only covered about 55% of the total non residential demand in Q4 2019 (~280 TWh)[3].

The residential gas market in France is dominated by Engie, holding a market share of about 67% based on the number of clients, mainly due to their offering of regulated tariffs and market offers, that undercut other competitors. This market share covers about 69% of the total residential demand of 120 TWh. The main alternative supplier is EDF, with a share of 13.2%, followed by Eni with 6.7% and Direct Energie with 5.5%. Worth noting is, that Total Spring (a market share of 1.5%) and Direct Energie merged into Total Direct Energie, a company that started supply in 2019. The numbers the shares of late 2017, no new figures have been published by the regulator ever since.

The non-residential gas market has an incumbent share of about 54% of non-residential sites, covering 30% of the demand of 345 TWh.[3]

Market structure

When looking at the French energy market structure, one might note a similar number of suppliers for gas and electricity, especially when comparing to countries like Austria, but in reality the market is very concentrated.

The Top 5 energy suppliers for residential consumers were EDF, Engie, Direct Energie, Eni and Total Spring. The recent acquisition in 2019 of Direct Energy by Total reduced that number of main players in the market to 4.

As of 31st of December 2019 there were 30 national electricity suppliers active and registered on the energie-info platform in France. Around 160 non-national suppliers are also active in the territory, including ELDs. There were 18 national gas suppliers active in the French market, around 30 non-national gas suppliers were also active in the territory. (19 ELDs and around 12 other suppliers).[3]

About 90% of each of these markets is in the hands of EDF and Engie. The electricity TSO is RTE (50.1% share held by EDF) for the entire country, the gas TSOs are GRT gaz (75% owned by Engie) and Terega. The electricity distribution networks are managed mainly by the DSO Enedis, which is a subsidiary of EDF. It serves more than 95% of the consumers in France, the other 5% are served by more than a hundred of smaller DSOs. Among them, 7 DSOs are serving over 100,000 customers each, and are regulated by the CRE. In France these smaller DSOs are called ELDs and are usually owned by municipalities, which either run their own (small) local supply companies or sign contracts with another the operation of the networks. In France there are currently over 100 ELDs, that share responsibility for delivering electricity to customers with larger DSOs and most of the time only have a couple of thousand customers. In some rare areas they are the only choice for customers for electricity supply. This definition came into place after the whole French grid was nationalized and the incumbent companies were created

[3] https://www.cre.fr/Actualites/observatoire-des-marches-de-detail-du-4eme-trimestre-2019

in the 1950s. The smaller grids, that were already in public hand, remained and were classified under the term ELD.

In the gas sector there are 23 DSOs, with GRDF (100% owned by Engie) being the largest by far. 22 of these are known as local distribution companies.

The countries NRA is the CRE – Commission de régulation de L'énergie - which regulates the markets for both gas and electricty, with the mission to "contribute to the proper operation of the electricity and natural gas markets, to the benefit of final customers". The CoRDIS Committee, an independent part of the CRE, has competences in regards to sanctions and acts as a settlement institution regarding access and use of public electricity and gas grids.

Next to these bodys, the French Competition Authority (FCA) has competences to prevent and sanction anticompetitive practices in any economic sector. It is also obliged to inform the NRA of any suspicious behavior in the gas and electricity sector. Another instance in France is the Higher Energy Council, which acts as an advising body on national energy policy and regulatory acts, and consists out of several members including Members of the Parliament.[4]

Next to that, the AFIEG operates as an independent organization, founded by French companies and European subsidies in the gas and electricity sector. AFIEG includes the largest alternative suppliers on the non-households segments but also members that operates on the households segments. AFIEG aims for the promotion of an opened and fair energy market since the current market situation still sees the market dominated by the incumbents EDF and Engie. The association ANODE sees a similar mission for itself, with the largest alternative suppliers on the household segment in France being members. Yet alternative suppliers are not represented equally in the Higher Energy Council because, in contrast to the ANODE, AFIEG is not a member of this Council, dominated by incumbents and TSOs and DSOs in spite of numerous requests to the French administration. The lack of updating of the composition of this body might be seen as an institutional barrier to the development of competition in France, since a lot of issues which are studied by this Council are not open to discussion for important players that could usefully complete and challenge the views of the incumbents.

Based on the CBA (cost benefit analysis), the country decided to rollout gas smart meters by 2023. 35 million electricity smart meters (Linky) are planned to be rolled out by 2021 (95%). The DSOs are responsible for the rollout, consumption data reading, validation and storage. In 2018 market diffusion was 22.2%, after the rollout started in 2017. By the end of 2019 over 20 million smart meters should be installed, which corresponds to a diffusion rate of about 60%. It is expected to be done by 2023.[5]

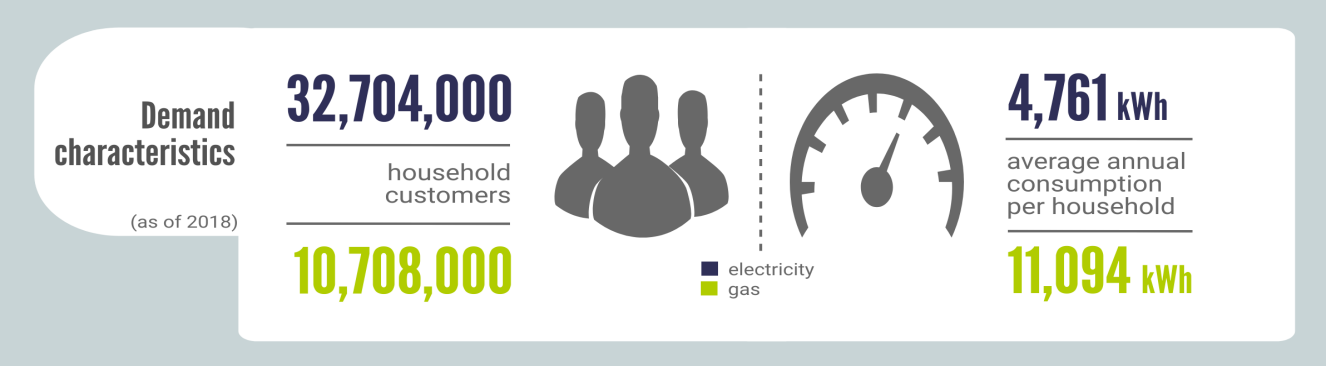
In 2017 France´s electricity generation was around 530 TWh, while the demand was 482 TWh, making the country an electricity net export country with 38 TWh. The vast majority stems from nuclear production capacity (71.6% or 380 TWh), 10% or 54 TWh from fossil sources (gas, coal, oil). The remaining 90 TWh (around 17%) is covered by renewable energy sources, 10.1% by hydropower, 4.5% by wind and 1.7% each by biomass and solar (state: 2017). The gas market is characterized by a net trade balance of +483 TWh, of which 583 TWh are imported mainly through pipelines and LNG terminals and 100 TWh are exported through neighboring countries. Domestic and industrial consumption amount to a total of 439 TWh. [6]

[4] https://thelawreviews.co.uk/edition/the-energy-regulation-and-markets-review-edition-8/1194446/france
[5] https://www.vert.lt/SiteAssets/teises-aktai/EU28%20Smart%20Metering%20Benchmark%20Revised%20Final%20Report.pdf
[6] https://www.cre.fr/en/Documents/Publications/Annual-reports/Activity-Report-2017

The French wholesale electricity market adheres to the West European design, with producers, suppliers and traders able to buy and sell energy bilaterally via brokered contracts or on the EPEX and EEX power exchanges. It is characterized by low liquidity and the major share of trading is OTC[7].
Virtual Gas Trading points in France were the PEG Nord and TRS (Trading Region South), which were merged in November 2018 to a single point, the PEG. It serves as the most important exchange for natural gas in France and combines the EEX´s and Powernext´s gas market activities, thus increasing the liquidity.

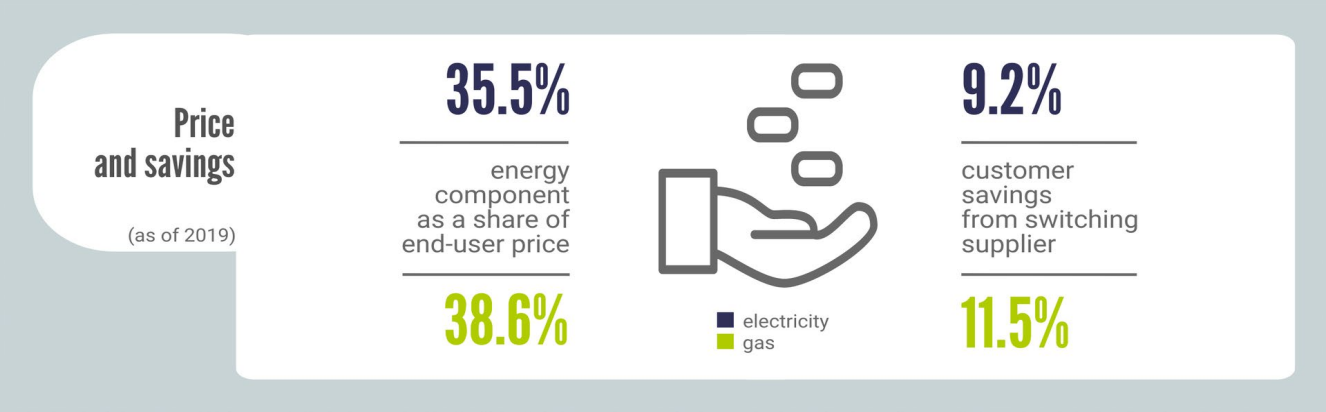
Looking at the state of unbundling in France, the Third Energy Package´s requirements have been fulfilled on all sides. The country´s TSO RTE and GRT Gaz and Tenega are certified as TSOs under the ITO model. The DSOs are legally and functionally unbundled, while ownership unbundling was not required. The smaller market participants are exempt from the requirements due to the “de minimis rule”, as they serve less than 100,000 customers.

The French market consists of about 33 million domestic electricity customers with an average annual consumption of 4,761 kWh. By contrast, there are only 10,7 million gas household customers with an average consumption of 11,094 kWh.



The energy component of the electricity bill, when using a non-regulated tariff, including taxes, accounts for 35.5% for electricity and 38.6% for gas customers, while the rest is made up of grid tariffs, taxes and other duties. The costs of financing and operating the electrical transmission and distribution networks are passed on to end users through the so-called TURPE (Tariff d’Utilisation des Reseaux Publics d’Electricite). TURPE, set by CRE, is charged to suppliers and passed through to end customers. Costs associated with congestion management, energy balancing (excluding revenues recovered via imbalance charges), transmission and distribution losses and the purchase of ancillary services are also recovered via TURPE. The energy component as share of total bill was calculated as annual average 2019 from data with monthly granularity for an average household in the capital region (HEPI data were used). Potential savings range between 9.2% for a switch to a different electricity provider and 11.5% for another gas supplier on the base of the by-default tariff in the Paris region. To account for seasonal changes in alternative suppliers´ offers, an average of three data points of 2019 was calculated.

[7] https://ec.europa.eu/energy/sites/ener/files/documents/2014_countryreports_france.pdf



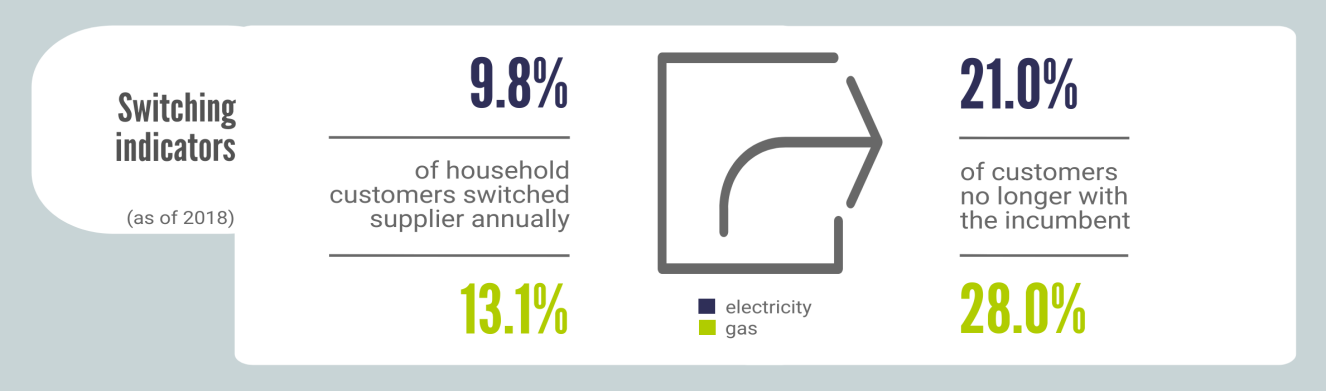
As mentioned for Q4 2019 above, household customers can choose between numerous suppliers for electricity (30 national and 160 ELDs and non-national), which do not all operate nation-wide (for example ELDs) and 18 national for gas (around 30 non-national). The vast part of them still stay with the incumbents EDF and Engie, but in the recent years this share was decreasing steadily. The regulated tariffs are seldom the best offer for the customers and might see further increases in the coming years under the current methodology, if wholesale prices remain high. The calculation method for the regulated tariffs was legally confirmed by France´s high justice court. The number of market participants is still increasing, as of 2017, a net of 7 new suppliers joined the electricity market and 3 joined the natural gas market. Customers in the capital of France, Paris, were able to choose from 28 suppliers for electricity in Q1 2019 and 16 for gas (on average). To ensure comparability with other handbooks, this metric was used in each country.

In France price regulation is still existent for residential customers in electricity and gas and for small businesses in electricity, and over the past years the number of customers that changed their supplier and got a contract at market price with an alternative supplier has been increasing. The incumbent suppliers have been losing customers in their main market for years, with the largest part of the customers switching to the other historic supplier (for example gas customers switched from Engie to EDF, electricity customers switched from EDF to Engie). This leads to an electricity market, where the majority of the household customers are supplied by EDF or the second largest supplier, Engie, the gas market sees also the main part of residential customers in the hands of these two historic suppliers. The third largest supplier holds only about 6% (Total Direct Energie) or 7% (Eni)

for electricity and gas respectively. This shows the power of incumbent players in France´s household energy markets.

When looking at the market for non-residential customers, one should point out, that price regulation for large and medium-sized customers has been phased out in 2016. The non-residential market is dominated by the historic suppliers, with a market share of 75% of respective customers.[8] The gas retail market share of historic suppliers is about 55% on a non-residential customer base.[9]

Annual customer switching rates for electricity customers were at about 10% for electricity customers and 13% for gas customers in 2018. About 25% of the household customers are no longer with the electricity incumbent, 32% percent of gas household customers switched to an alternative supplier. It has to be pointed out that many of those customers only switched from EDF to Engie for electricity, or from Engie to EDF for gas supply, since both incumbents are now active in both energy markets. Contract lengths in France are unlimited and can be terminated at any time for household consumers. Switching is for free and without risk for the customer for electricity, but since the introduction of the energy and climate change law in November 2019, returning to regulated tariffs for gas at any time with no penalty is not possible any more. In contrast to other countries, there are no complex price regimes involving bonuses or similar, the usual pricing base, to which alternative suppliers compare, is the regulated tariff.



Political and regulatory orientation

The French regulator´s orientation towards the energy development has different focus fields. On the one hand guaranteeing independence for system operators, establishing a harmonized set of rules for the networks and markets, to enable an energy flow between EU member states. On the other hand, it´s goal is to ensure competition between the energy suppliers for the benefit of consumers, who should always have access to the best and fairest price.

Recently, in 2019, France announced the start of an ambitious energy transition under the Energy and Climate Change Law, outlining a national low-carbon strategy, carbon budgets, a carbon price trajectory and a planning framework for energy investment. Part of this plan is the reduction of the nuclear fleet´s share in total energy

[8] https://www.cre.fr/Actualites/observatoire-des-marches-de-detail-du-4eme-trimestre-2019
[9] https://www.cre.fr/Actualites/observatoire-des-marches-de-detail-du-4eme-trimestre-2019

production from about 75% to 50% in the electricity mix by 2035. This requires investments in renewable energy and efficiency to keep up security of supply.

The 2016 IEA review of France's energy policies highlighted these and several other areas that are critical to the success of the energy transition. For example, planned growth of the share of electric vehicles and variable renewable electricity will require enhanced power system operation and flexibility, including demand-side response, smart grids and metering, and more interconnections. Recently, France is examining scenarios of very high shares of variable renewables to understand the implications for electricity security and systems operation, including in the regional context. [10]

In short, the main goals are[11]

- to reduce greenhouse gas emissions by 36% until 2030 and to be carbon neutral by 2050. To achieve those targets, more specific policies need to be defined.
- to have a share of 32% renewables in the energy mix
- taking petrol fueled vehicles off the streets by 2040
- increasing the price on carbon emissions

Regulatory market characteristics

Small energy customers in France can choose between regulated tariffs (TRV) and market prices offered by alternative suppliers, like fixed prices, variable prices, combined gas and electricity offers and green energy offers. The electricity TRV are set by CRE. They are calculated on the base of the cost from the whole value chain, which includes the capacity guarantee, transmission costs (TURPE) and commercial costs of EDF, the price of regulated access to historical nuclear electricity (ARENH), a wholesale market adjustment factor as well as an risk margin. This calculation methodology aims to ensure the "contestability" of these tariffs by alternative suppliers, i.e. the ability of alternative suppliers to offer consumers market offers at prices equal to or lower than the TRV. However, some new market entrants face the challenge of not being able to compete with these regulated tariffs, that are only offered by the incumbents. One of the mentioned reasons is, that the regulated tariff is calculated using a 2 year wholesale market price smoothing and takes commercial costs into account through taking EDF´s costs as a base. Especially in regards to the smoothing of the market price, accounting for the different situations of new suppliers and timings of market entry poses a challenge to the regulator, who is responsible for the pricing, as the period for smoothing has a high influence on whether the TRV price is competitive for new entrants or not. The TRV prices would always see a lag behind the current market conditions, causing good or bad situations for new participants. This issue was also declared a general economic interest in France and the NRA is constantly working on further improvements of the mechanism. As mentioned, alternative supplier costs are also not included separately, and with EDF having more than 27 million customers with TRVs and a strong position on the market, the incumbent has very low acquisition costs. For new entrants this is a factor that represents a large part of their costs.

Gas TRVs are scheduled to phase out in 2020 for non-residential and in 2023 for residential customers. With no change in the legislation, Electricity TRVs will be on offer for the time being for residential and small businesses

[10] IEA country profile
[11] https://www.gouvernement.fr/en/climate-plan

as France´s State Council (supreme administrative court) decided not to follow arguments brought by alternative suppliers requesting the court to withdraw them.
Upon entering the market, new power or gas suppliers need to apply for a license with the Ministry for the Ecological and Solidary Transition. Licenses are granted based on technical, economic and financial factors, as well as compatibility with the Energy Code. This process takes a maximum of 2 months. Furthermore, they must join a balancing group, conduct framework agreements with the TSOs/DSOs and join the capacity mechanism, established in 2017.
Also, if the supplier wishes to obtain electricity from the country´s nuclear power plants, he has to join the ARENH mechanism.
More detailed information on these steps can be found in the chapter “Licenses, registrations and contracts” in the Annex.
The NRA, CRE is a neutral authority acting for the proper functioning of the energy market.

As previously mentioned, France established a mechanism, ARENH, that allows alternative suppliers access to the electricity, produced by the historic nuclear fleet. With the opening of the electricity market to competition, it appeared essential to regulate access to nuclear energy in France. As EDF is the only producer of nuclear electricity, legislation has been put in place to ensure that all suppliers can access it. However, this mechanism is limited both in time (it will end in 2025) and in terms of quantities (up to a quarter of the production of the historic nuclear fleet, which equals 100 TWh). Over the period 2011-2025, the ARENH price should reflect the full costs of the historical nuclear fleet. As from 1 January 2012, the ARENH price was set by ministerial decision at €42/MWh excluding tax. CRE initial estimates were around 39 €/MWh. The supply volume between 2011-2014 was at an average of 60-70 TWh. This volume dropped sharply in 2015 and 2016 due to lower-than-rate market prices, while alternative suppliers, driven by low power prices on the European market, were expanding rapidly. They had two options: buy from ARENH or buy on the wholesale markets.
Since the wholesale market prices increased in 2018, many market participants looked to EDF and the cheaper ARENH for additional supply. This high demand resulted in exceeding supply quotas set by law.
Thus alternative suppliers needed to turn to the wholesale markets, which in turn led to higher prices, that were passed onto many French customers.
This situation is the cause for the current controversy in France and could lead to a reform or removement of the ARENH mechanism. An increase of the available volume to 150 TWh is currently one main topic of discussion. Also, some minor aspects of the calculation method for ARENH is planned to be changed by the CRE in 2020. Current plans see the complete capacity being opened for alternative suppliers until 2025, with a dynamic, market oriented but capped price for the available volume, however detailed works on this topic are pending.

To comply with its Energy Efficiency Targets in 2020, France introduced a so-called “white certificate” mechanism in 2006. It aims to make financing of energy saving projects easier for all the participants, first of all the industry and then other individuals. The POPE law, that came into effect in 2006, forces all parties to save energy however possible, be it by installing new boilers in a power plant or by insulating one´s attic.
The mechanism sets periods of time with final energy savings, that need to be reached in those timeframes. In the first period, a volume of 54 TWh had to be reached, in the now active “fourth period”, which started in 2018, this target is up to a more stringent 1.600 TWh. Hand in hand with this increase, more sectors have been opened to

the mechanism and with it the possible measures. Nevertheless, industrial participants struggle to reach their targets especially due to the fact, that some projects take a long time to be implemented. Subsequently they turned to the certificate market, as they are under pressure to somehow reach their own efficiency targets.
This resulted in a surge in certificate prices, which were five times higher in April 2019 than three years ago.
Especially electricity suppliers tried to offset their additional costs by increasing their retail electricity prices, which led to an increase of annual household electricity price, according to consumer associations. [12]

Other market characteristics

In 2017, the traded wholesale market volume of electricity amounted to 1,030 TWh, traded at an average price of 44.97€/MWh. Traded on the PEG Nord, market volume of gas amounted to 588 TWh at 17.5 €/MWh. More than half of the electricity trades were Bilateral OTC Trades, Exchange Trades only amounted to about a quarter of the traded volume. while Spot Market Trades only present a fraction of the total volume. This is a fact to be noted, especially when comparing to the traded volumes in Germany, a country with similar production volumes, that has a very active market. It could be related to the allocation of ARENH volumes or the dominance of EDF in the electricity market, which generates and sells a large volume directly to customers. It shows that the French electricity market suffers from low liquidity.

The country´s capacity mechanism, which is operational in France as of 2017, is another market characteristic that stands out. It aims to secure energy supply in times of scarcity on the electricity system, but also to stabilize the grid with an increasing amount of volatile renewable generation in the future. The country already estimated, that without a mechanism like that, power cuts in extreme weather situations like cold spells would be very likely. Additionally, a demand response scheme was approved, that rewards customers to shift their load away from hours, where electricity is scarce, thus also creating a new sector for demand response in the country. The CRE approves to rules and reviews both mechanisms, which have been found compliant with EU state rules by the EU Commission, every year,. The EU´s ongoing plans to reform the current electricity market design is seeking to significantly improve market functioning and may reduce the need for such mechanisms in the future. [13]
It is open to all capacity providers, residential and industrial, generation, DR, aggregators or storage, including market participants from other EU member states, to make sure that a market, where capacity obligations can be traded between providers (e.g. utilities with power plant capacity) and electricity suppliers, can be competitive and cost-effective. Also the mechanism´s cost is individualized by supplier, considering factors like consumption profiles and risk of security of supply. The providers offer additional capacity in extreme weather situations, when demand is peaking, receiving certificates in return. Suppliers need to purchase those certificates to cover their customers demand. They can be traded bilaterally or via auctions.

Another characteristic of the French power market occurs in the field of hydro-electric generation. Hydro-electric power plants with a capacity larger than 4.5GW are operated under concessions, that the French government

[12] https://www.euractiv.com/section/energy/news/price-of-energy-saving-certificates-causes-friction-in-france/
[13] https://ec.europa.eu/commission/presscorner/detail/en/IP_16_3620

awards for a certain period. In the coming years several hydropower concessions are going to expire and therefore need to be renewed. However, the European Commission saw the ongoing processes not in line with EU law (among other member states), as they did not involve any tendering procedures in some cases. This causes alternative suppliers to worry on a lack of competition in the sector, that is dominated by incumbent companies EDF and Engie. Currently the country is still discussing the topic with the European Commission, as they want France to "ensure competitive bidding for hydroelectric concessions". [14]

Context for aggregation/demand response

On the French wholesales market (day-ahead and intraday) load access & participation, aggregated load and aggregated generation are accepted.

The following points are providing an overview of the basic products and their requirements due to demand response in the reserve-market of France:

- FCR (Primary Control): Primary Control allows limited Demand Response, and full Aggregated Demand Response and Aggregated Generation access.
- aFRR (Secondary Control): Secondary Control does allow limited Demand Response Access & Participation and limited Aggregated Demand Response. In addition, Aggregated Generation is allowed.
- mFRR (Tertiary Control): Tertiary Control allows Demand Response, Aggregated Demand Response and Aggregated Generation access.

In the French market aggregators don't need prior agreement form BRPs. However, the BRP – aggregator adjustment mechanism sets compensation amounts which aggregators must pay to BRPs as they are granted with the amount of energy that the consumer hasn't consumed due to DR action but has still been delivered by the supplier to the system.
The compensation between aggregators and retailers/BRPs is regulated and a standardised framework put in place in 2013.

Control energy market - Conditions for participation
Demand response aggregator can participate at the Day ahead market from 2013 onwards (only country so far)
Further information are given on: http://clients.rte-france.com/lang/an/clients_traders_fournisseurs/services_clients/dispositif_nebef.jsp

- The Block Exchange Notification of Demand Response mechanism, known as "NEBEF", allows consumers to participate in energy markets through load reductions.

[14] https://www.hydropower.org/country-profiles/france

- All consumption sites connected in mainland France may participate in the NEBEF mechanism by providing demand response in exchange for remuneration on energy markets (either over-the-counter or via day-ahead and intraday power exchanges).
- You may participate:
    - either directly by becoming a demand response aggregator (DRA), if the site has a minimum load reduction capacity of 100 kW,
    - or indirectly, calling on a third party DR aggregator. The consumption site then receives payment according to the terms of the contract with the demand response aggregator.
- To become Demand Response Aggregator, you must:
    - sign a participation agreement to NEBEF rules,
    - obtain a technical approval that certifies your ability to manage load reductions,
    - have a balance perimeter (by being Balance Responsible Party - BRP - or with a third party BRP)

BARRIERS

The European Barriers to Entry and Competition in Retail Energy Markets project has researched barriers across 30 European markets. From this research, barriers to entry have been identified and grouped into four over-arching pan-European barriers' blocks.

Over-arching pan-European barrier blocks

Barrier Blocks		
	1	Regulatory disincentivisation
	2	Market inequality
	3	Operational and procedural hinderance
	4	Customer inertia

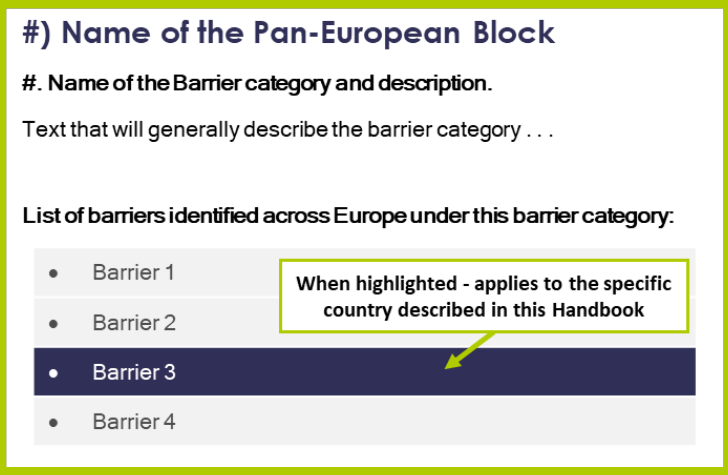
Description of the four-over-arching pan-European barrier blocks:

1. **Regulatory disincentivisation:** barriers arising as a consequence of the general regulatory framework of the natural gas and electricity retail markets. We address the impact of price regulation, burden (-sharing), regulatory unpredictability and access to innovation. All these items may disincentivize competition within the natural gas and electricity retail markets, as well as entrance by new suppliers.
2. **Market inequality:** barriers arising from an uneven playing field for different types of suppliers. Often, certain market players already have a competitive advantage by being very close to the formerly integrated DSO (or still being vertically integrated in case the de-minimis rule applies), controlling a large amount of generation capacity or having a large market share. If market rules do not prevent this, such players can exercise their market power to treat other market players in a discriminatory way, creating market barriers. We examine issues related to unbundling, historical roles and access to market mechanisms.
3. **Operational and procedural hindrances:** barriers arising as a consequence of the complexity and national/regional differences in standards and procedures in different process areas, affecting how easily new entrants can enter and operate in the energy retail market. We look at issues and differences in licensing, signing up and operations compliance, as well as data access, processes and data management from the suppliers' point of view.
4. **Customer inertia:** barriers arising due to customer behavior and attitude. For the energy market to function, end-users must be willing and able to switch supplier. If customers do not switch supplier, suppliers need not worry about losing customers, so there is no incentive for suppliers to improve their services, minimize prices or innovate to compete for customers. We examine barriers related to customer inactivity or disinterest in the energy markets.

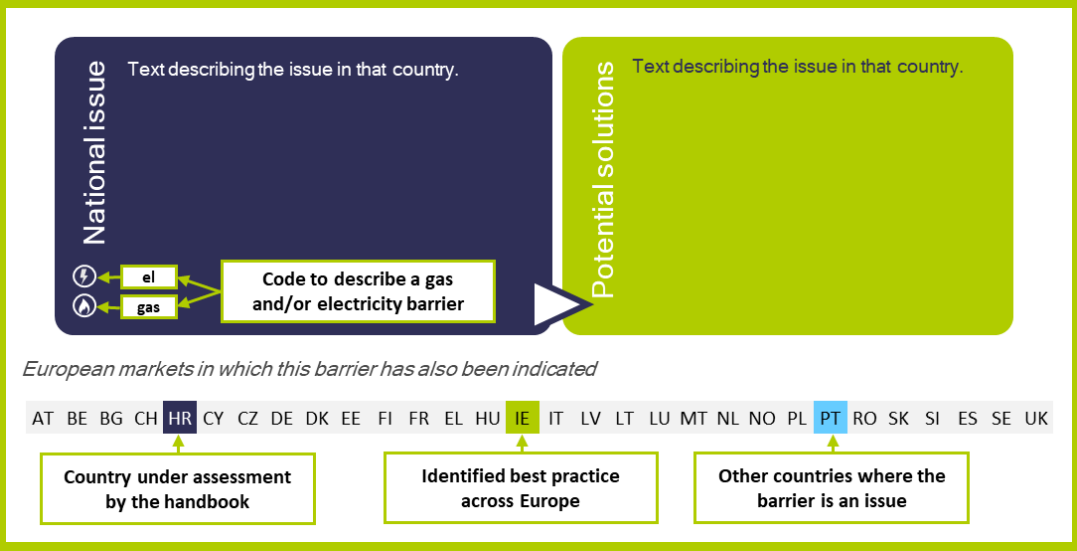
Within each of these high-level blocks are contained sub-categories, which are also mostly pan-European in nature. Each of these sub-categories contain the specific barriers which relate to individual markets as described in the following chapter. Altogether, we identified 45 barriers, most of which broadly across Europe. Only a selection of them apply to the French case as reported in the following chapters of this handbook.

HOW TO READ AND INTERPRET THE FOLLOWING SECTIONS

Each of the following four chapters explores one of the four pan-European blocks of barriers and report how each sub-category barrier apply to France. When a barrier applies to France, it will be highlighted in the table following a general description of the barrier itself as shown in the example below:



As showed in the above figure, the table lists all the barriers we have identified in Europe within the specific barrier category. Only if a sub-category barrier is highlighted in the table, it means that suppliers raised it as a barrier, and it is a prevalent issue in France. Highlighted sub-category barriers are then briefly described following a twofold methodology which reports what the suppliers are experiencing in the market as a national issue and suggests potential solutions to the problem as depicted in the below figure



At the end of each chapter, Country's performance within the category, according to quantitative indicators, is then presented. For additional market context, please see Appendix 1: Process Maps, which gives a high-level graphical overview of the most critical steps involved in establishing and operating as a supplier in the national market.

1) Regulatory disincentivisation

Within regulatory disincentivisation, barriers across Europe have been sub-categorised into four areas encompassing 17 specific barriers[15]:

1. **Price regulation.** Regulated prices usually refer to regulation or control of end-user's prices by a public authority, usually the National Regulatory Authority (NRA). Price regulation can take different forms, such as setting or approval of prices, price caps or various elements of these. In Europe, there still exist Member States which have maintained end-user regulated prices during the market opening process and after, in the intention of protecting households or even non-household customers from significant increases in energy prices, especially in a context of limited competition. In some cases, this regulation has led to below cost prices and to low margin to cover the supplier activity risk, discouraging investments and the emergence of newcomers.
   In the majority of the 30 analyzed countries, energy prices are no longer regulated. Where regulated prices remain, NRAs tend to consider them as a significant barrier to entry for alternative suppliers. All Member States, where NRAs consider regulated prices as a significant barrier, are planning to remove them, at least for non-household customers.[16] Across Europe, the following specific barriers related to "price regulation" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in France:

   - Price regulation discriminates against certain suppliers.
   - High penetration of price regulation
   - Low margin of regulated offer (margin squeeze)

2. **Burden sharing.** Energy suppliers across Europe are often required to collect payments for services not part of their business, or to provide other services such as services related to energy efficiency, or to manage assets such as those of the metering system. These requirements can pose a barrier for suppliers' operation on the retail market by raising their costs and distracting focus from their core business and might deter entry into the retail market by newcomers. Across Europe, the following specific barriers related to "burden(-sharing)" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in France:

   - Obligation to collect tariffs unrelated to energy on behalf of others
   - Obligation to keep a minimum-security stock as a gas reserve

[15] Please note: these definitions are Europe focused, not France specific. Highlighted barriers have been identified as country specific.
[16] CEER Benchmarking report on removing barriers to entry for energy suppliers in EU retail energy markets. April 2016 [footnote wording and format to be improved].

3. **Regulatory unpredictability.** The establishment of an internal natural gas and electricity market in the European Union is an ongoing process. European legislative packages are boosting this process, making market regulation evolve rapidly. Transposition of regulation into the national regulatory frameworks is not always smooth and NRAs' actions are sometimes unpredictable. This leads to uncertainties for suppliers related to unclear and unknown future developments of the regulatory framework, including the attitude of the institutions that regulate the retail market and oversee market operation and organization. This uncertainty is a barrier that impacts suppliers' business, preventing their entrance in the market, making strategic business planning difficult or forcing them to adopt different approaches during operation. Across Europe, the following specific barriers related to "unpredictability of regulatory framework" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in France:

- Suppliers face uncertainty because of a newly liberalized regulatory environment or uncertain future development of the regulatory framework
- Uncertainty caused by perceived influencing of legislation by industry actors
- Uncertainty regarding future regulatory developments, especially in the field of digitalization and new technology
- Attitude of authorities hinders development of the market
- Uncertainty regarding environmental obligations and non-renewable generation capacity

4. **Access to innovation.** Most European energy market are currently designed based on practices as they were during the period of national monopolies by what today are incumbent suppliers. Allowing suppliers and new entrants to be innovative depends not only on the opportunity to compete on prices, but also to diversify, welcoming new products, market actors and business models. When national regulatory frameworks do not take into account innovation in the retail market (regarding e.g. availability and functionality of smart metering, the possibility of flexible contracting and tariffs, or whether the demand side can bid in the balancing system), this may pose a barrier for new market entries, particularly more modern players. If new entrants are to be enabled in order to increase the level of competition in the retail market, regulations must accommodate future developments on the energy markets, especially considering that in the future new entrants may not only be electricity and gas suppliers but also act as aggregators or energy service companies (ESCOs). Across Europe, the following specific barriers related to "innovation-friendliness" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in France:

- Data protection issues
- Lack of incentivisation for novel pilot projects or post-pilot market rollout
- Lack of data for innovative product development
- No fit between new business models and existing regulation/obligations
- Missing flexibility in tariff structures
- Missing information and incentives for demand-side grid management

- Market structures do not incentivize novel products (missing perceived value)

1.1 Description of regulatory disincentivisation barriers in France: Price regulation

High penetration of price regulation. In the research this barrier was identified as an issue in France. Consumers that have access to regulated services are extremely difficult to reach with competitive offers. If this market segment is big, i.e., price regulation has high penetration, only a small part of the market is completely open to competition. Price regulation maintains the old structure of the market, where consumers are not strongly incentivized to compare offers of different suppliers on the market. If not designed adequately, price regulation can keep the market in an immature phase where neither consumers nor suppliers can learn how a competitive market works.

National issue

Regulated sales tariffs for gas and electricity are available for all residential and, in electricity, for small non-residential customers across France (details, see market overview). In combination with a low margin of the regulated offer (see "Low margin of regulated offer"), this presents a main barrier in the energy markets.

Potential solutions

For gas, regulated prices are already planned to be phased out. For electricity, a step by step phase out of the regulated prices (ensuring affordability at the same time) will eliminate this barrier.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

PORTUGUESE BEST PRACTICE CASE: Roadmap for removal of regulated retail prices.

Portugal removed end-user price regulation for non-household customers and the transitional period ended in 2016. As part of the phase-out process, which started in 2010 for gas non-household customers and in 2011 for electricity non-household customers, a transitional period was defined by the government in Portugal in order to enable customers supplied under regulated end-user prices to choose a new market supplier and move to the liberalised market. During this period, the NRA (ERSE), sets a tariff (called the 'transitional tariff'), which may include an additional value, whose objective is to promote customers to switch to a market tariff.
Lastly, under the terms of Government Ordinance N. 39/2017 of 26 January 2017, consumers who still have regulated tariffs have a transitional period until 31 December 2020 to choose an electricity market supplier. While, under the terms of Government Ordinance N. 144/2017 of 24 April 2017, consumers who still have regulated tariffs have a transitional period until 2023 to choose a natural gas market supplier.

Low margin of regulated offer (margin squeeze). In the research this barrier was raised as an issue in France. It is common across Europe that price regulation sets the regulated price to a defined level and allows all market participants to serve customers within this regulated segment. However, this can create a barrier in the market if the regulated price is set to such a low level that only companies that can benefit of economies of scale are able to generate a sustainable margin. All other market participants will be confronted with a margin squeeze, making it very difficult to compete. The greater the size of the regulated customer segment the stronger the barrier, as it reduces the contestable part of the market for smaller players.

National issue

Several market participants reported, that the **regulated price is set to a level, which does not allow to compete in the market.** The most important points include the **smoothening of the wholesale market prices** over a 2 year period and the level of additional costs which are accounted for. Those costs can be substantially smaller for the incumbents as they already have a large customer base (low customer acquisition costs) and can utilise **economies of scale.**

Potential solutions

Defining the length of a smoothening method will by definition always result in a benefit or loss for one side of the market, depending on the market movement. In order to not increase the frequency of regulatory changes, the mechanism should not be changed too often.
Certain, but not all cost factors which are substantially lower for suppliers, utilizing economies of scale can be offset by new entrant and small supplier exemptions (such as the already existing exemption for collecting "Certificats d'économie d'énergie" for new entrants)

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

SPANISH BEST PRACTICE CASE: Low margin of regulated offer.

Before 2014, the price regulation regime (PVPC) raised many complaints from electricity companies, claiming that the price was set below cost or may have too limited margin to cover the risk of activity.
Hence, a new Royal Decree was issued (RD 216/2014), establishing a new methodology for calculating the PVPC, including the energy cost, the applicable access tariffs and a commercial margin.
The main difference is that the energy cost is now calculated on an ex-post basis, using the average price resulting in the spot electricity market during the period covered by the bill. In the case of consumers with an operative smart meter installed (as of now, more than 98%), since 1 October 2015, a real consumption tariff following the spot price, is applied. The real time price is published by the electricity TSO through ESIOS platform.
Having a pass-through of the energy cost from the electricity spot market is considered as a best practice within the price regulation category. This prevents the energy component of the regulated tariff to be set below cost. However, the customers exposure to the volatility of the spot market may trigger further Government interventions.
Discussions still exist about the value of the commercial margin, which still is seen as too low by reference suppliers and limits the ability to compete of new and small companies. Also, having a price regulation in place that applies to the 95% of the retail market is perceived as hindering competition among suppliers. Suppliers wish a phase-out of price regulation regime, with a clear plan defined by the relevant institutions.

1.2 Description of regulatory disincentivisation barriers in France: Burden (-sharing)

No barriers around burden-sharing were identified in France.

1.3 Description of regulatory disincentivisation barriers in France: Regulatory unpredictability

Suppliers face uncertainty because of a newly liberalized regulatory environment or uncertain future development of the regulatory framework. In the research this barrier was identified as an issue in France. Uncertainty can arise from a brand-new regulatory environment, which may include poorly defined responsibilities between actors, lack of or understaffed responsible departments/authorities that the supplier must communicate with, etc. Also, suppliers may experience uncertainty because of unpredictability around what the future regulatory framework will look like and hence what business opportunities will be possible.

National issue

Several participants have raised that a high number of regulatory changes, retrospective changes and a lack of transparency regarding the future developments is increasing the level of uncertainty. Uncertainty specifically exists around **the future development of the ARENH** scheme and price levels of "white certificates (see section "market overview")

Potential solutions

Decreasing uncertainty by clearly communicating proposed regulatory changes as well as deviations from initially proposed plans will help market participants in readjusting the strategy without completely stopping their service offering.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

Uncertainty caused by perceived influencing of legislation by industry actors.

In the research this barrier was identified as an issue in France. While cooperation between authorities and market actors is essential for functioning and lasting market developments, industry bodies or actors may be given too much power to shape legislation, allowing the legislation to be shaped for the benefit of these actors to the detriment of other actors or customers or market competitiveness. This also increases uncertainty for market players around what the legislation will look like when complete.

National issue

Several participants have mentioned strong lobbying influence from the incumbents and other powerful market actors in France. Furthermore, some participants perceive the market environment as protective towards the state-owned competitors.

Potential solutions

A maximum level of transparency for all market participants can substantially decrease the uncertainty caused by lobbying activities.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

Uncertainty regarding future regulatory developments, especially in the field of digitalisation and new technology. In the research this barrier was raised as an issue in France. New technological advances require regulatory frameworks in order to be fully rolled out without excessive business risk for suppliers. Smart meter rollout targets, progress and associated rights and obligations can be a main source of uncertainty. Also, regulatory uncertainty regarding the future of demand response aggregation or other novel services can hinder investment/innovation in these areas.

National issue

As in many countries, participants in France also raised uncertainty regarding the smart meter rollout and especially the associated data quality and availability, which is crucial for the development of new products and services, including demand response aggregation. This barrier is further elaborated on in "Data protection issues" and "Lack of data for innovative product development".

Potential solutions

See "Suppliers face uncertainty because of a newly liberalized regulatory environment or uncertain future development of the regulatory framework"

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

Uncertainty regarding environmental obligations and non-renewable generation capacity. In the research this barrier was raised as an issue in France. Environmental obligations such as energy efficiency schemes may present a barrier, in case they lead to an increasing amount of bureaucracy and costs. The uncertainty regarding the design of environmental regulation must therefore be incorporated into suppliers' business planning. Furthermore, uncertainty around the future of nuclear, coal and gas generation capacities increases price risk.

National issue

Survey participants mentioned a high level of uncertainty regarding the price of white certificates (=CEE), the future of nuclear power in France and especially the linked ARENH scheme (see section "market overview")

Potential solutions

Long-term regulatory planning will reduce the level of uncertainty in the market. Specific supplier obligations or schemes which are linked to obligations should be designed for a relatively long time period and the cornerstones of a subsequent regulation should be defined as soon as possible

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

1.4 Description of regulatory disincentivisation barriers in France: Access to innovation

Data protection issues. In the research this barrier was raised as an issue in France. GDPR and national data protection regulation can present a barrier to innovative product development due to difficulties in obtaining information on e.g. consumption patterns that would allow companies to develop market-relevant services.

National issue

Especially with regards to the increasing amount of data becoming available via smart meters, this issue is becoming more and more important. In order to avoid any chance of non-compliance, some participants describe a tendency towards completely preventing data generation. This hinders market participants in offering new products and services and can therefore be considered a barrier.

Potential solutions

Clear guidelines on how to handle data protection with regards to energy related data could reduce the number of different interpretations of the various market participants and therefore contribute to the elimination of the barrier.

European markets in which this barrier has also been indicated

AT BE BG CH HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU MT NL NO PL PT RO SK SI ES SE UK

Lack of data for innovative product development. In the research this barrier was raised as an issue in France. Smart meters open up opportunities for novel demand-side and aggregation services that rely on almost real-time consumption data to be able to match grid requirements and balancing product bids. Aggregators must be able to access customers and their data independently of suppliers, who in effect constitute a competitor for the DR provider/aggregator.

National issue

In France, linked to the barriers "Uncertainty regarding future regulatory developments, especially in the field of digitalization and new technology" and "Data protection issues", this barrier results out of a lack of data, therefore for being able to offer novel services, especially in the field of demand response aggregation.
Several participants mentioned a lack of quality in the metering data or overall absence of the data.

Potential solutions

See "Uncertainty regarding future regulatory developments, especially in the field of digitalization and new technology".and "Data Protection Issues"

European markets in which this barrier has also been indicated

AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK

No fit between new business models and existing regulation/obligations. In the research this barrier was raised as an issue in France. Regulatory frameworks need to provide an environment for not only piloting new business models but also allow for further advancements without risking any grid stability, e.g. net-metering schemes and self-consumption. Unclear current regulation around demand response aggregation, such as missing role definitions, makes it challenging for novel services to enter and grow.

National issue

Several market participants raised strong concerns about the barriers associated with demand response aggregation. Besides data availability see "Lack of data for innovative product development"), roles definition and access to the wholesale market present major challenges in France.

Potential solutions

France can be considered a frontrunner regarding demand response aggregation, including roles definition and customer access. Nonetheless, the market participant responses imply that the information is not clearly communicated or other causes hinder the practical implementation. A deeper analysis is therefore recommended.

European markets in which this barrier has also been indicated

AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK

Market structures does not incentivize novel products (missing perceived value). In the research this barrier was raised as an issue in France. Without an existing demand and/or mindset for novel services such as DR, new entrants face the barrier of establishing the entire market before they can act in it. France has implemented a capacity market that aims at offering market value of flexibility, especially on the aggregators / demand response side.

National issue

Several participants mentioned a low level of awareness on the customer side, as well as a lack of transparency in flexibility needs. Those issues are creating a barrier for market players offering novel services such as demand response aggregation

Potential solutions

In France, the combination of the capacity and energy market, including intraday, is aiming at providing improved transparency on flexibility needs at different timeframes. This transparency should be further expanded in order to cover the full value chain.

European markets in which this barrier has also been indicated

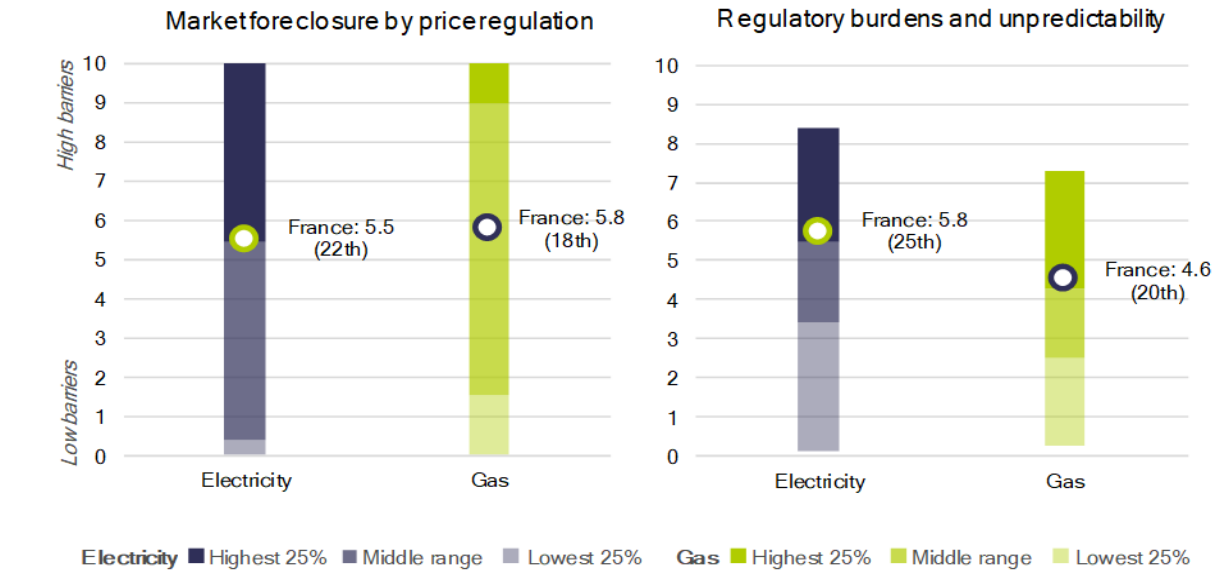
AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

1.5 France's performance in this barrier category

The following figure shows quantitative indicators of how far regulatory disincentivisation acts as a barrier in this market. The values for France are shown against the range across all analyzed countries. These scores contribute to the performance index. The performance indicators of regulatory disincentivisation are the followings:

- **Market foreclosure by price regulation:** The index consists of sub-indicators, the penetration of price regulation (among residual customers), and the mark-up of the regulated offer. High score is attributed if the penetration is high, and the mark-up is significantly lower than the average mark-up on the competitive markets.
- **Regulatory burdens and unpredictability:** The index consists of two sub-indicators. Regulatory burdens reflects to the non-energy share of the energy bill in an average household, which are regulated (taxes, network fees). Regulatory unpredictability was measured with the related question in the supplier's survey. High score is attributed if the share of the non-energy elements is high, and the survey respondents gave high score for the question.

Performance indicators



France's score regarding marketforeclosure by price regulation is 5.5 for the electricity market (22nd place) and 5.8 for the gas market (18th place). Regarding the regulatory burdens and unpredictability France's score is 5.8 for electricity (25th place) and 4.6 for gas (20th place).

2) Market inequality

Within market inequality, barriers across Europe have been sub-categorised into two areas encompassing 8 specific barriers[17]:

1. **Unbundling and market power.** In order to facilitate better competition and improve performance of the individual parts of the energy companies, the Energy Directives introduced rules for legal, functional and accounting unbundling between DSOs and supplier. Although legal unbundling has been implemented throughout all EU member states, barriers arising from vertical integration can still be observed in many markets, raising the question if the required level of unbundling is sufficient in order to meet the goal of a fair and competitive retail market. Companies serving less than 100 000 customers are only obliged to implement accounting unbundling.

   In order to avoid confusion among end customers between the separate parts of integrated energy businesses, brand unbundling has been a focus area for NRAs over the last years. Nevertheless, in several EU countries, the difference in the branding of the supplier and the DSO is perceived as insufficient. Strategic and unfair advantages for incumbent suppliers around transparency, pricing and access to information and data occur in most of the European countries studied. Access to production

[17] Please note: these definitions are Europe focused, not France specific. Highlighted barriers have been identified as country specific.

capacities can also be limited for small suppliers if market players with a large generation portfolio can withdraw production capacity from the accessible markets. Balancing and ancillary services markets can also be distorted as they are often still designed to mainly benefit large-scale generation, discriminating against smaller market participants. Below, we describe these barriers related to market power in more detail.

Across Europe, the following specific barriers related to "unbundling and market power" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in France:

- Lack of brand unbundling
- Discriminating, strategic behaviour of incumbent, and obstruction by other market players.
- Strategic, unfair advantage of vertically integrated market players and lack of transparency.
- Limited or biased access to production.
- Discrimination against new and small market players in capacity and ancillary services markets.

2. **Equal access to and maturity of wholesale market.** The wholesale markets present one of the most important sources for energy procurement for all market participants. New and small suppliers tend to have weaker bargaining position in bilateral negotiations, which occurs higher sourcing costs, therefore leading to a competitive disadvantage. Access to a well-functioning wholesale market (an energy exchange) therefore enables smaller suppliers to buy energy for competitive prices.

   Barriers related to the wholesale market can arise by discriminatory market platform access and the absence of any viable alternative. Furthermore, a lack of available products and low liquidity can both lead to an increase in risk, disadvantaging small market participants substantially more than large, established suppliers. Across Europe, the following specific barriers related to "equal access to and maturity of wholesale market" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in France:

   - Discriminatory market platform access (standards, guarantees, etc.)
   - Low liquidity in the wholesale market
   - High price or volume risk in energy procurement

2.1 Description of market inequality barriers in France: Unbundling and market power

Discriminating, strategic behaviour of incumbent, and obstruction by other market players. In the research this barrier was raised as an issue in France. Competitors are concerned that the incumbent/existing suppliers may be able to use tactics in pricing, customer access, combined billing etc. not available to new entrants. For example, although against existing competition laws, it is alleged that large established players can afford to apply predatory

pricing for certain customers to retain them[18]. Market players with a lot of power, i.e. market share, may act in an obstructive way, especially around data exchange. This can especially disadvantage small suppliers with only a limited customer base to draw data from. If regulated DSOs are involved in other areas of activity such as customer care or flexibility services, it can narrow deregulated suppliers' potential to expand into these areas.

National issue

Several respondents raised concerns regarding strategic behavior of the incumbents. Examples such as the Engie case, where the incumbent was fined €100 million for using customer information out of the former monopoly in order to sell their market offering, seem to confirm that such a behavior existed in the market.
Especially in the field of data exchange, several participants raised concerns about existing discrimination, thereof representing a barrier in the market

Potential solutions

The Engie case does not only show (wrongful) strategic behaviour of the incumbent, but also that the risk is mitigated by competition laws, monitoring and substantial financial penalties
A standardised approach for data exchange, via a data hub, as it is the case in France can help reducing this barrier as it will create a level playing field for all market participants. As 95% of the market is covered by the Enedis portal, which is accessible by all the suppliers, a fair basis is established. Nonetheless, a high data quality needs to be ensured.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI **FR** EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

Strategic, unfair advantage of vertically integrated market players and lack of transparency. In the research this barrier was raised as an issue in France. DSOs are required to separate distribution activities from supply both legally and in practice, so that unregulated distribution activities do not cross-subsidise any supply business. However, co-ownership is allowed, and small DSO/supplier companies are often exempted due to the De-Minimus rule from any unbundling. The remaining closeness between the separate parts of the unbundled business can still incentivize a strategic behavior of the vertically integrated market players.

National issue

In the past, the NRA, CRE asked several DSOs to take action in order to ensure that they have sufficient personnel resources (directly) employed in order to ensure independence. Cross-subsidization via cash-pooling and other methods and the situation around hydroelectric power concessions (see section "market background") have been mentioned specifically by participants as key issues and therefore representing a barrier.

Potential solutions

The continuation of monitoring activities as well as the further enhancements in the regulatory environment to create a level playing field for all market participants (eg. tenders for hydroelectric power concessions)

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI **FR** EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE **UK**

[18] Although raised by survey participants, the research has not lead to the identification of any factual evidence of such a behaviour

GREAT BRITAIN BEST PRACTICE CASE: Unbundling of DSOs and supply businesses

Great Britain provides an example of well-functioning separation between distribution and supply. Ten of the 14 electric DNOs (distribution network operators) are free standing companies, while 4 are part of groups that include generation and supply businesses. Of the 4 companies that distribute gas, only 1 is part of a group that also owns a gas supply business. The companies that have generation or gas supply affiliates are effectively unbundled. In this study, we found no evidence of incomplete unbundling presenting a problem in Great Britain. DNOs are prohibited from providing end-user services, they are invisible to the customer, and no suppliers in the study had experience of the supplier/DNO relationship being exploited.

Limited or biased access to production. In the research this barrier was raised as an issue in France. Market participants who also own generation assets may have a competitive advantage in procuring energy. In contrast, small suppliers with little bargaining power may be disadvantaged, e.g. if there is no standardization around PPAs. The French ARENH scheme can be referred to as such a standardized PPA for nuclear energy procurement.

National issue

Limited access to production was mentioned by several participants as a main barrier in France. The identified issues focus specifically on the ARENH scheme, the lack of liquidity in the wholesale market and hydroelectric power concessions (see section "market overview"). A lack of liquidity and lack of alternative procurement options lead to high energy procurement costs for new and small market participants, compared to other established market players.

Potential solutions

By adjusting the volume as well as refining the calculation mechanism of the ARENH scheme, France can take substantial steps is eliminating this barrier. On top of that, levelling the playing field in the area of hydroelectric market concessions (as described in the "market overview") will be crucial.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

Discrimination against new and small market players in capacity and ancillary services markets. In the research this barrier was raised as an issue in France. Inefficient capacity markets can lead to a market distortion, benefitting specifically incumbents and other established market players who are able to meet the large generation-focused market conditions (bid minimum size, treatment of users with asymmetric balancing etc.).

National issue

In France, the recently introduced capacity mechanism, was mentioned by several participants as a main issue. The mentioned main aspects are the complexity, costs and the increasing risk due to unpredictability and a lack of available hedging options. The current design of the mechanism disadvantages small supplier, without any generation capacity, disproportionally more than vertically integrated market players and therefore represents a barrier in the market.

Potential solutions

Additional costs for the suppliers as well as the end consumers due to the mechanism need to be compared to a reduction in price volatility and therefore reduction of the costs. It is therefore recommended to continue monitoring the overall economic effects of the current system and focus on adjustments in order to eliminate any remaining discriminatory aspects.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

FINLAND BEST PRACTICE EXAMPLE: Consumption bids in balancing

Several respondents active in aggregation and demand response expressed satisfaction at how Finland has redesigned balancing products to make them amenable for demand-side bids, complemented by its market-centric approach to DR. This indicates a willingness to let flexibility play a bigger part in the evolving energy system. Indeed, Finland's attitude to DR is positive and flexible, with respondents feeling that Fingrid is easy to work with and open to novelties. Many of the market structures for DR are an example of how to incorporate demand-side flexibility into the energy system. Some products are necessarily constrained by e.g. fast response times or minimum bid size due to their function, which make them difficult for DR providers to fulfill. However, open-minded amendments such as allowing pooling of loads, enabling step-wise activation or reducing minimum bid size where possible have opened up several products to DR. Developments remain ongoing, e.g. imbalance settlement for aggregators is currently under discussion. Progressive changes at the consumer end have also helped open the aggregation market in Finland, for example allowing 3rd party providers to access customers. Market players reported that the other Nordic countries are now developing in the same direction that Finland already has done, in this and other DR- and novelty-related aspects.

2.2 Description of market inequality barriers in France: Equal access to & maturity of wholesale market

Low liquidity in the wholesale market. In the research this barrier was raised as an issue in France. A lack of liquidity in the wholesale market is a barrier to operation as it leads to higher prices and risks, and therefore increases sourcing costs. This usually affects smaller suppliers disproportionately heavier as their options are limited.

National issue

See "Limited or biased access to production"

Potential solutions

See "Limited or biased access to production"

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI **FR** EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

High price or volume risk in energy procurement. In the research this barrier was raised as an issue in France. Volume and price risk, due to the difference in time and volume between procurement and billing, raises risks for market participants and therefore presents a barrier. This is a particular problem in combination with a lack of hedging opportunities that would allow companies to insure against wholesale price fluctuations.

National issue

Some participants mentioned the high volatility in the French wholesale market is increasing the risk and therefore leading to high margin calls and collateral. This increases the total costs for energy procurement, especially for new and small suppliers as they might not be able to benefit from a cash-pooling clause or other large player advantages. Therefore, this presents a barrier in the French market

Potential solutions

Margin calls and collaterals should be designed in a non-discriminatory and proportionate way, taking the supplier size and the related risk into account. Further research into this topic is highly recommended.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI **FR** EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

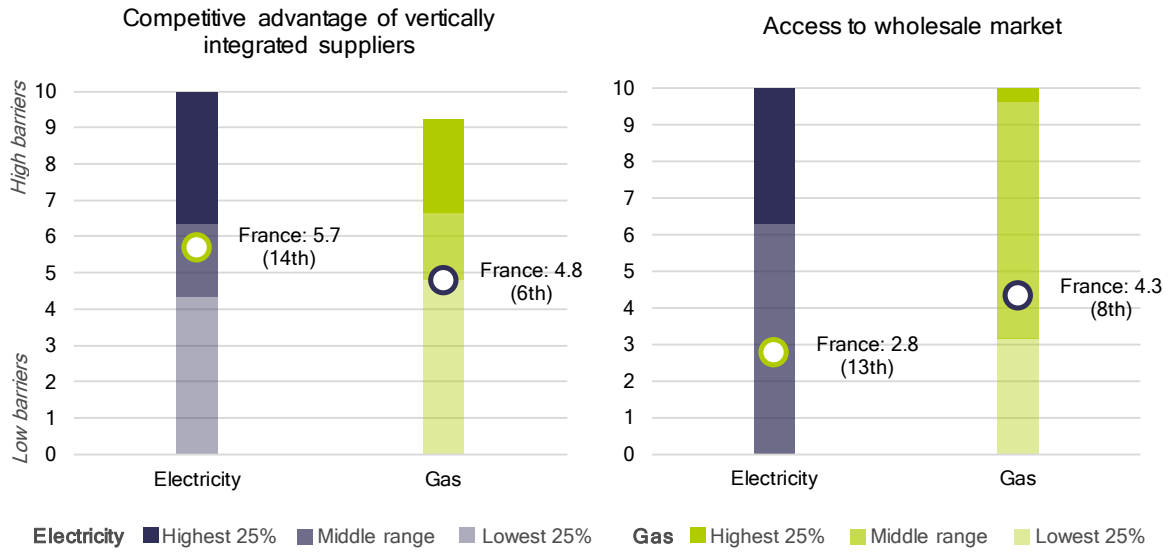
2.3 France's performance in this barrier category

The following figure shows quantitative indicators of how far market inequality acts as a barrier in this market. The values for France are shown against the range across all analyzed countries. These scores contribute to the performance index. The performance indicators of market inequality are the followings:

- **Competitive advantages of vertically integrated players:** The index consists of sub-indicators, the market share of vertically integrated suppliers (on the residential competitive market), and the strictness of DSO unbundling. High score is attributed if the vertically integrated suppliers have a high aggregated market share, and the unbundling regime is not very strict (brand unbundling is not in force, high share of local, integrated companies).

- **Access to wholesale market:** The indicator measures the accessibility of wholesale market by quantifying the liquidity of wholesale markets. High score is attributed if the traded volume is relatively low compared to the consumption of the country (churn rate). Traded volume includes volumes that are traded at hub as recorded by brokers (OTC) or exchanges and does not include 'contracted' (LTC or other bilateral deals) volumes which are conducted 'off market'.

Performance indicators



France's score regarding the competitive advantage of vertically integrated suppliers is 5.7 for the electricity market (14th place) and 4.8 for the gas market (6th place). Regarding access to wholesale market France's score is 2.8 for electricity (13th place) and 4.3 for gas (8th place).

3) Operational and procedural hindrances

Within operational and procedural hindrances, barriers across Europe have been sub-categorised into two areas encompassing 13 specific barriers[19]:

1. **Sign-up & operations compliance.** Sign-up, licensing or registration, along with other administrative requirements or system establishment such as arranging contracts with relevant stakeholders (TSOs, DSOs, BRPs) are among the first steps that a new supplier undergoes to enter and operate in a retail energy market. To deliver natural gas or electricity to final consumers in Europe, an energy supplier usually needs to be registered to a certain institution list, or to proceed with a notification, or follow a process to grant a license. Entrance processes for suppliers often requires commitments such as a

[19] Please note: these definitions are Europe focused, not France specific. Highlighted barriers have been identified as country specific.

minimum standard of customer service obligations, requirements on service quality, to provide financial guarantees or to have a communication system in place.

In most responding NRA countries, suppliers need to register and make contracts with certain stakeholders (mainly TSOs and DSOs) to procure the access to the energy grid: transport capacity, balancing. This procedure can be very different from a country to another. Accessing wholesale markets and balancing may also require a license or prior agreement/registration with the market operator. In some markets, business processes to enter and operate in the retail market can be extremely detailed and burdensome. The lack of a functioning national wholesale market may also hinder the entrance of retail companies that are not vertically integrated.

Across Europe, the following specific barriers related to "sign-up & operations compliance" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in France:

- Poor availability of information for market entrants & active participants
- Heavy administrative process for entry (registration / licensing)
- High financial requirements (incl. long working capital cycles) and forced risk during operations
- Excessive reporting requirements during operations
- Excessive information requirements around billing and energy labelling
- Highly complex or country-specific systems & processes
- Regional differences or differences between DSOs within a country
- Cumbersome or biased switching process
- Unduly burdensome environmental obligations
- Unduly burdensome or insufficiently regulated market exit

2. **Data access & processes.** Data access and management refers to the processes by which data are sourced, validated, stored, protected and processed and by which it can be accessed by suppliers or customers. In a well-functioning energy retail market, it is important that the information required to operate in the market is available to newcomers (subject to applicable legislation on data protection). This may include information on, for example, individual consumption or more specific meter details. This data is required in order for suppliers to carry out their market role, such as initiating a switch, or billing a customer. A standardized approach to the provision and exchange of data creates a level playing field among stakeholders and helps to encourage new, challenging market actors to enter the market. In order to avoid data management and access processes acting as a significant barrier to entry, Member States' initiatives to standardize data format and processes, including investments in data hub infrastructure, have the potential to make a positive impact.

Across Europe, the following specific barriers related to "sign-up & operations compliance" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in France:

- Lack of data hub
- Complex, heterogenous IT infrastructure and/or low level of digitalisation
- Missing access or poor quality of operations-critical data

3.1 Description of operational and procedural hindrances barriers in France: Sign-up & operations compliance

High financial requirements (incl. long working capital cycles) and forced risk during operations. In the research this barrier was raised as an issue in France. Not only high financial requirements such as securities and minimum account balances for balancing services and procurement can present a barrier also, a high level of risk, e.g. non-refusal right of customers, can similarly act as a barrier. This is a challenge especially for small and new retailers.

National issue

Some participants specifically mentioned the regulation regarding the "winter break" as a barrier. During the winter break, suppliers are not allowed to disconnect any gas or electricity customer, even in case of unpaid bills.

Potential solutions

Although all suppliers are covered by this obligation to the same extent, new suppliers might be discouraged from entering the market due to the substantial additional risk. A mechanism, compensating all market participants in time, can help in eliminating this barrier.

European markets in which this barrier has also been indicated

AT **BE** BG HR CY CZ **DE** **DK** EE FI **FR** EL HU **IE** IT LV LT LU **NL** NO **PL** PT RO SK **SI** **ES** **SE** UK

Highly complex or country-specific systems & processes. In the research this barrier was raised as an issue in France. The systems landscape (forecasting, customer service etc.) can require significant costs, especially when first being established. Limits to or costs of outsourcing can fall disproportionately on smaller suppliers with less expertise in-house. If these systems are similar to those required in other markets, this investment can be capitalised on when expanding to other markets; if they are country-specific, expansion requires the same investment again in the new market.

National issue

Several participants reported a high level of country-specific systems and processes. Foreign market players might decide not to enter the market because of these specific obligations and French market participants can not utilise the related processes and systems in other countries, therefore presenting a barrier.

Potential solutions

An increasing level of harmonisation regarding various obligations throughout Europe could be very beneficial. This would not only benefit market players which are active in several member states, it would also benefit local market players because it will lead to lower associated costs for processes and systems.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

Regional differences or differences between DSOs within a country. In the research this barrier was raised as an issue in France. Different regions within the country or different DSOs' grid areas have different processes, data formats etc. This requires more effort from the supplier to be active across many regions, compared to if there were national standardisation. Examples of such difference include DSOs' reporting on operational data and non-transparent forecasting methodology.

National issue

Some participants have mentioned that due to the high number of DSOs in combination with a lack of standardisation, suppliers face a barrier, as they are required to work with several IT systems and according to several different processes.

Potential solutions

A countrywide standardisation of the processes and the unification of all relevant IT systems can help in reducing this barrier. As the DSO Enedis is covering 95% of the market, this barrier is less prevalent than in other European markets, however further harmonisation will help in completely eliminating this barrier.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

3.2 Description of operational and procedural hindrances barriers in France: Data access & processes

Complex, heterogenous IT infrastructure and/or low level of digitalisation. In the research this barrier was raised as an issue in France. Heterogenous and complex IT infrastructure, required to communicate and exchange data with all relevant market participants, or a high level of manual processes in such exchanges, can both increase costs substantially. Such systems can be financed more easily by large market players via economies of scale, so small players are disadvantaged for technical reasons.

National issue

It was raised by some participants, that the currently required IT systems and processes are very complex and therefore expensive. This also leads to manual processes due to the fragmented landscape.

Potential solutions

As mentioned above, France is managing Europe's largest data hub which decreases the barrier substantially. Nonetheless, IT system costs should be further reduced and the remaining paper-based processes should be fully digitalised.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

Missing access or poor quality of operations-critical data. In the research this barrier was raised as an issue in France. Non-availability, delayed or low quality of operations-critical data (incl. smart meter data) presents a main barrier as it increases the need for manual processing and therefore costs. Especially in combination with information advantage, this can give of certain market participants such as DSOs and incumbents a major advantage in providing the required service level to the customers.

National issue

This barrier is closely linked to "Uncertainty regarding future regulatory developments, especially in the field of digitalization and new technology", "Data protection issues" and "Lack of data for innovative product development". Several responding suppliers raised concerns about delayed access and a low quality of the provided data. Information advantages also exist in case the incumbent has a more detailed or longer consumption record or other critical customer information

Potential solutions

Although all market participants might be subject to delay and data quality issues to the same extent, certain players, which are basing their business models on timely and correct provisioning of data can be affected more heavily. Therefore, data quality and data availability need to be ensured.

European markets in which this barrier has also been indicated

AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

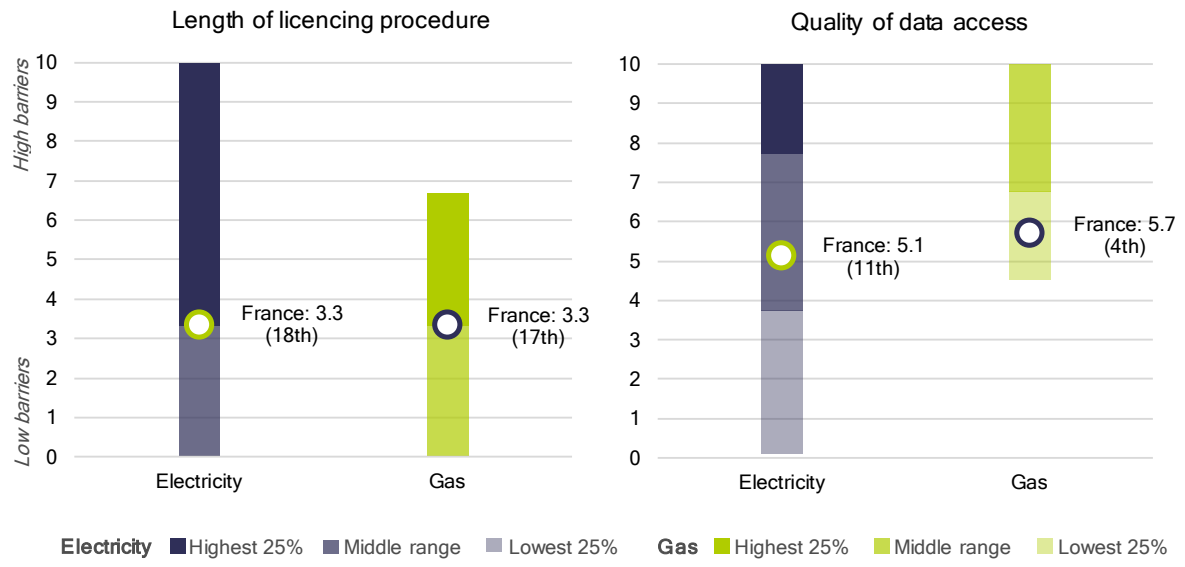
3.3 France's performance in this barrier category

The following figure shows quantitative indicators of how far operational and procedural hindrances act as a barrier in this market. The values for France are shown against the range across all analyzed countries. These scores contribute to the performance index. The performance indicators of operational and procedural hindrances are the followings:

- **Length of licensing procedure:** The complexity of the licensing procedure is quantified with the legal deadline of the licensing procedure. High score if attributed if the regulator has more moths for authorization, while 0 score is attributed if there is no licensing obligation in the country,

- **Quality of data access**: The barriers relating to the quality of data access are measured with a checklist indicator, which focuses on the DSO's practices regarding data collection and access provision to suppliers. High score is attributed if the format of the data provision is not standardised, third party access is not available via website or data hub, and the smart meter rollout is small.

Performance indicators



France's score regarding the length of licencing procedure is 3.3 for the electricity market (18th place) and 3.3 for the gas market (17th place). Regarding quality of data access, France's score is 5.1 for electricity (11th place) and 5.7 for gas (4th place).

4) Customer inertia

Within operational and procedural hindrances, barriers across Europe have been sub-categorised into one area encompassing 6 specific barriers[20]:

1. **Customer orientation.** Whether customers want to or can engage with the market depends on a broad range of market characteristics, including how well authorities inform and support customers and how energy companies are viewed by the customer. For example, if there is no trusted central place to compare offers from different suppliers, customers may struggle to make an informed choice; or if customers perceive all energy companies as irresponsibly profit-driven, or providing a poor service, they may feel there is nothing to be gained from switching. Moreover, across Europe, most energy markets have been liberalized relatively recently (last 20 years, some only a few years ago), so for a considerable portion of customers the potential for them to engage may still feel unfamiliar.
   Across Europe, the following specific barriers related to "customer orientation" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in France:

   - Lack of information regarding available offers and switching possibilities
   - Low customer awareness or interest makes it difficult to attract customers
   - Insufficient price signals for end-users
   - Changing supplier is cumbersome or has little pay-off for the customer
   - Consumers prefer status quo
   - Lack of trust in new or foreign suppliers and in new technology

4.1 Description of customer inertia barriers in France: Customer orientation

Low customer awareness or interest makes it difficult to attract customers. In the research this barrier was raised as an issue in France. If customers are not well informed about their opportunities to participate in the market or are not motivated to use them, or find the market too complex to access, they are not driven to seek out or engage with new energy suppliers. If energy is not a core priority for customers in their lifestyle (due to e.g. low prices, lack of interest/"sexiness" etc.), it is difficult to engage them in the market overall. This barrier also prevents uptake of novel services such as DR, as the benefits are difficult to promote to customers who do not already value energy or their role in the market.

[20] Please note: these definitions are Europe focused, not France specific. Highlighted barriers have been identified as country specific.

National issue

Several participants mentioned the low level of customer awareness regarding the participation in the market and the related switching options. Especially in combination with high market share - incumbents and a price regulation, this presents a major barrier in the French market.

Potential solutions

Neutral information campaigns focusing on general market functioning and customer options can help in levelling the playing field and reduce this barrier. Recent reports already show an improvement in this area as a substantial increase in consumer awareness was recorded *.

* https://www.energie-mediateur.fr/publication/2019-13eme-edition-du-barometre-energie-info/

European markets in which this barrier has also been indicated

AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK

Consumers prefer status quo. In the research this barrier was raised as an issue in France. Customers can experience strong incentives to stay with their current, usually incumbent supplier (e.g. because of mistrust of switching processes, perceived quality of other suppliers, or because there is no explicit driver to make the effort to engage in the market).

National issue

This barrier is closely linked to "Low customer awareness or interest makes it difficult to attract customers" and "Insufficient price signals for end-users". As mentioned by several participants, adding a high level of loyalty towards the incumbent suppliers and fear of losing quality when switching to an alternative supplier, leads to the manifestation of this barrier.

Potential solutions

Minimum quality standards for customer support services for all market participants can be established in order to minimise customer complaints and therefore reducing mistrust in suppliers, in general. Lowering the perceived difficulties of switching (see 4.2) will further reduce this barrier.

European markets in which this barrier has also been indicated

AT	BE	BG	HR	CY	CZ	DE	DK	EE	FI	FR	EL	HU	IE	IT	LV	LT	LU	NL	NO	PL	PT	RO	SK	SI	ES	SE	UK

Lack of trust in new or foreign suppliers and in new technology. In the research this barrier was raised as an issue in France. Lack of trust in new and/or foreign suppliers can be caused by previous bankruptcies in the market or simply customer unfamiliarity with the new supplier's quality of service. This presents a barrier for new suppliers trying to attract customers, as they have to invest heavily in building a new relationship. Customers and hence retailers may also mistrust new technology, at least until they have been convinced that it is useful and will not disrupt their lifestyle, which is difficult to do until enough people use the technology.

National issue

As one of the results of the barrier mentioned in "Low customer awareness or interest makes it difficult to attract customers", customers are not informed enough to distinguish between the responsibilities of DSOs and suppliers. Therefore, a fear of quality loss, such as outages can develop, which leads to a lack of trust in new suppliers on the market.

Potential solutions

See "Low customer awareness or interest makes it difficult to attract customers"

European markets in which this barrier has also been indicated

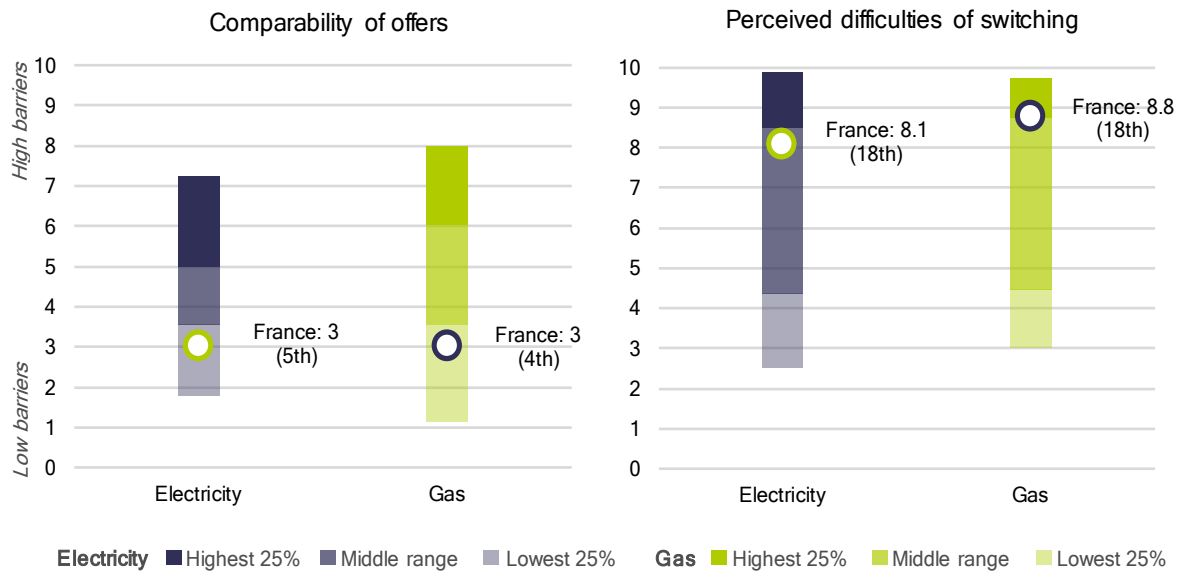
AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

4.2 France's performance in this barrier category

The following figure shows quantitative indicators of how far customer inertia acts as a barrier in this market. The values for France are shown against the range across all analyzed countries. These scores contribute to the performance index. The performance indicators of customer inertia are the followings:

- **Comparability of offers:** The index consists of sub-indicators. The first measures consumer's ability to compare offers, based on a survey commissioned by the DG Justice and Consumers. The second is a checklist indicator which quantifies the availability of comparison websites, based on their number and functionalities. High score is attributed if the consumers gave low scores for comparability, and there are no comparison websites in the country.
- **Perceived cost of switching:** The difficulties of the switching process is also measured based DG Justice's survey. The indicator incorporates the experience and opinions of customers who have switched, and also of those who haven't because they faced obstacles or thought it might be too difficult. High score is attributed if the high share of consumers has bad experience or opinion on switching process among all customers who considered to switch.

Performance indicators



France's score regarding the comparability of offers is 3 for the electricity market (5th place) and 3 for the gas market (4th place) [21]. Regarding the perceived difficulties of switching France's score is 8.1 for electricity (18th place) and 8.8 for gas (18th place).

5) Other

Other aspects of the market not directly related to its functions, as addressed above, may also impact suppliers' ease to enter and operate in the market. These relate to characteristics of the market that are not necessarily a barrier per se, but their impact on the energy retail environment could be minimized to benefit market function.

5.1 Description of other barriers in France: Other

No barriers around other fields were identified in France.

[21] Other studies, such as the study by the "Médiateur National de l'Energie", are also investigating the awareness around switching options and are showing different results (87% of the consumers are aware of the switching options).

FINDINGS & RECOMMENDATIONS

This handbook provides a high-level framework of relevant barriers to entry and operate for energy suppliers into the **French** retail electricity and gas markets, as well as examples of actions that relevant institutions as NRAs, ministries, etc., have taken, are taking or could take in the future to remove them.

In particular, the handbook groups the barriers to entry and operate in the energy retail market into four different categories as listed below.

1. Regulatory disincentivisation.
2. Market inequality.
3. Operational and procedural hindrances.
4. Customer inertia.

In this section we report the main findings and recommendations for each category.

Under the first group, **regulatory disincentivisation**, suppliers raised concerns regarding “price regulation”, “regulatory unpredictability” and “access to innovation”.

A high penetration of price regulation in combination with a low margin of the regulated offer has been identified as a main barrier. For gas, regulated prices are already planned to be phased out. For electricty, a step-by-step phaseout, that is clearly communicated to give participants security and also ensures affordability for end-customers at the same time, will eliminate this barrier.

Several causes for uncertainty have been raised, including the future development of the regulatory framework, perceived influencing of legislation by industry actors, regulatory developments in the field of digitalization and new technology and environmental obligations & non-renewable generation capacity. Long term regulatory planning, clear communication of proposed regulatory changes as well as full transparency on deviations from initially proposed plans can substantially reduce the level of uncertainty.

Raised barriers regarding access to innovation are mainly driven by data availability and data security aspects. Also, a perceived missing fit between new business models and existing regulation has been indicated. Clear guidelines on how to handle data protection and increasing the information level on already existing options for demand response aggregation, will help in eliminating the barriers.

Regarding **market inequality**, barriers have been identified arising from a perceived uneven playing field for different types of suppliers. Suppliers responding to the survey or interviewed reported barriers regarding “unbundling and market power” as well as “equal access to and maturity of wholesale market”.

The respondents raised that market power barriers arise from “discriminating, strategic behaviour of incumbent, and obstruction by other market players”, “strategic, unfair advantage of vertically integrated market players and lack of transparency”, “limited or biased access to production” and “discrimination against new and small market players in capacity and ancillary services markets”. Ensuring a high level of data quality; continuation of monitoring

activities as well as further enhancements in the regulatory environment to create a level playing field for all market participants; adjusting the volume as well as refining the calculation mechanism of the ARENH scheme, are some of the recommended steps in order to eliminate the existing barriers.

“Low liquidity in the wholesale market” and “high price or volume risk in energy procurement” have been raised as issues around equal access to and maturity of wholesale market. Redesigning margin calls and collaterals in a non-discriminatory and proportionate way will potentially reduce this barrier.

Operational and procedural hinderances are regarded as barriers by some of the suppliers responding to the survey or being interviewed. Barriers have been raised regarding “Sign-up and operations compliance” and “Data access & processes”.

“High financial requirements”, “highly complex or country-specific systems & processes” and “differences between DSOs within the country” are issues indicated with respect to operational compliance. Compensating suppliers for forced risk during operations and increasing the level or harmonisation in systems and processes within the country and throughout Europe will substantially reduce this barrier.

“Complex, heterogenous IT infrastructure and/or low level of digitalisation” and “missing access or poor quality of operations-critical data” also present relevant barriers in the market. Besides the continuation of managing Europe’s largest data hub, it is recommended to further reduce the remaining paper-based processes and ensure a high level of data quality and availability for all market participants.

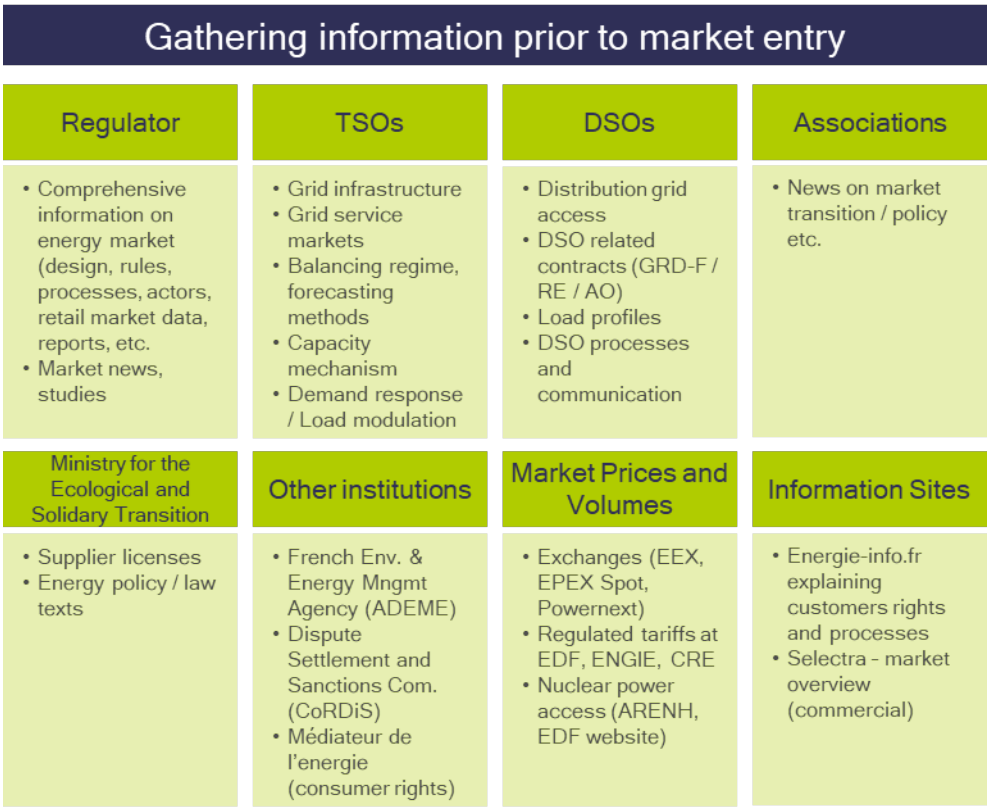
Customer inertia barriers category, groups all those issues related to customer behaviour and attitude within the retail energy market.

“Low customer awareness or interest makes it difficult to attract customers”, “consumers prefer status quo” and “lack of trust in new or foreign suppliers and in new technology” have been raised specifically in this category. Neutral information campaigns focusing on general market functioning and customer options and the introduction of minimum quality standards for support services are two options for reducing customer inertia barriers.

APPENDIX 1: PROCESSES

This section describes market processes in energy retail in France. This provides context for the market barriers described above by giving a high-level overview of the most critical aspects involved in establishing and operating as a supplier in the national market. The stages of market entry and operation are described in sequence, each with an illustration ("process map") showing that stage's various processes together with comments/details on market specifics.

1) Information gathering before market entrance



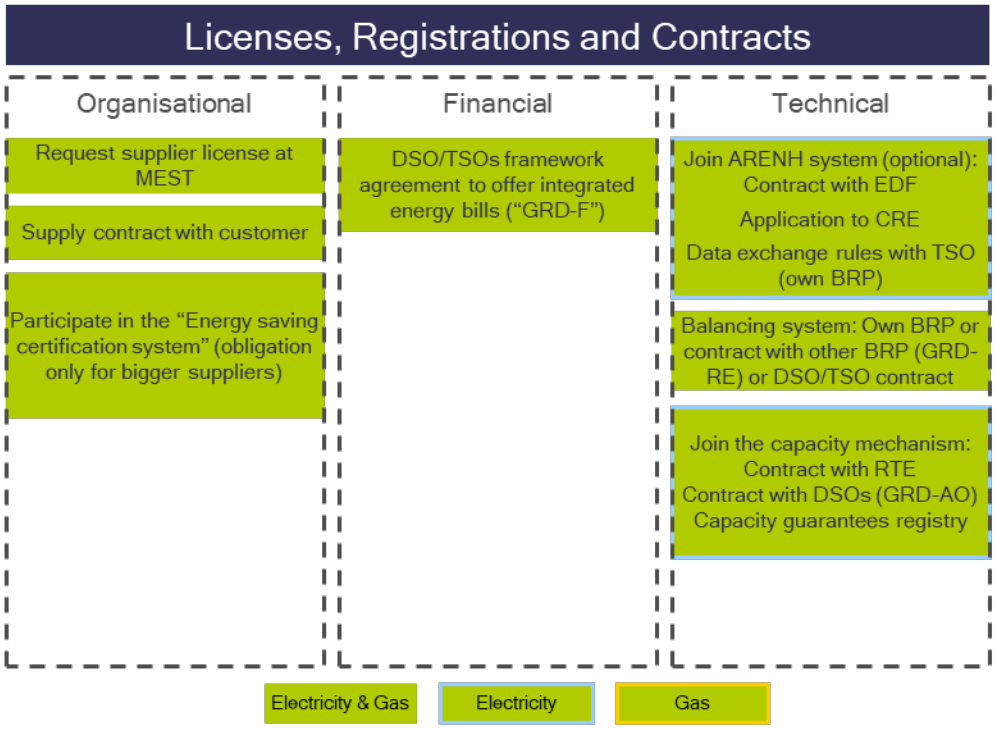
Further comments

- Typical way of information: Ministry - TSO - DSO
- Most information given in French
- There is no guide for new market entrants available -> information has to be gathered together from different points of contacts in the market
- CRE with most comprehensive information on the energy market:
    - Annual reports on the functioning of the French retail electricity and natural gas markets
    - Quarterly reports on market observations (state of play of market opening, suppliers activity, prices, market dynamics, statistics, …)

  - News/publications on energy market, energy transition
  - Laws and further information (incl. links to external sources)
- RTE (TSO electricity) - Information on balancing regime and BRP obligations (also available in English); Info document on forecasting method; quite complex; Also describe demand response participation (NEBEF)
- Energie-info.fr
  - Website of the National Energy Ombudsman, offers comprehensive information on the supply of electricity and natural gas
  - Explanation of customer rights and processes
  - Access to an independent offer comparator, the only one set up by the public authorities
  - practical sheets with a wealth of information and energy advice (invoicing, changing suppliers, taxes, etc.).
- Associations:
  - A.n.o.d.e – independent energy suppliers (B2C)
  - AFIEG – independent energy suppliers (B2B)
  - UFE – Union Francaise de l'ectricite - professional association of the electricity sector. It represents employers in the sector within the electrical and gas industry
- Ministère de la Transition écologique et solidaire – supplier licenses are granted by the minstiry (« Autorisation d'achat d'électricité pour revente »). Further information can be found there
- French Environment & Energy Management Agency (ADEME) – information on energy efficiency obligations and white certificate schemes[22]
- The Dispute Settlement and Sanctions Committee (CoRDiS) – relevant for issues regarding grid access

[22] https://www.iea.org/policiesandmeasures/pams/france/name-22969-en.php

2) Licenses, registration and contracts



Further comments

- **Supplier licenses** are granted by the Ministry for the Ecological and Solidary Transition. The authorisation is granted based on:
  - Technical, economic and financial capacities of the applicant
  - Compatibility of the applicant's project with the obligations levied on electricity suppliers further stated in Chapter V of Title III of the legislative part of the Energy Code
  - The experience shows that there had not been trouble to get a license (view point of CRE) No license has been denied yet, according to CRE.
  - On average it takes 2 months to get the license (if all information is prepared)
  - After 2 months without an answer, the license is granted by default
- Each supplier **must join the balancing** system in the energy market. Supplier can do that by either:
  - Get licensed as a balance responsible party themselves (Option1)
  - Or get affiliated with an already existing balancing group (service contract with another BRP)
- Alternative suppliers in France have the option to obtain electrical energy from nuclear power plants:
  - buy it from EDF via the "**Regulated Access to Historical Nuclear Energy" (ARENH)[23] system.** Under this system, nuclear electricity can be obtained at a fixed cost (42 euros per MWh). However, each supplier is subject to a quota and can only purchase a certain volume of electricity since the maximum energy volume offered under ARENH is currently limited to 100 TWH .
  - Suppliers who wish to exercise their right to ARENH therefore make a request to CRE, by transmitting their customers' consumption forecasts during hours of low national consumption.

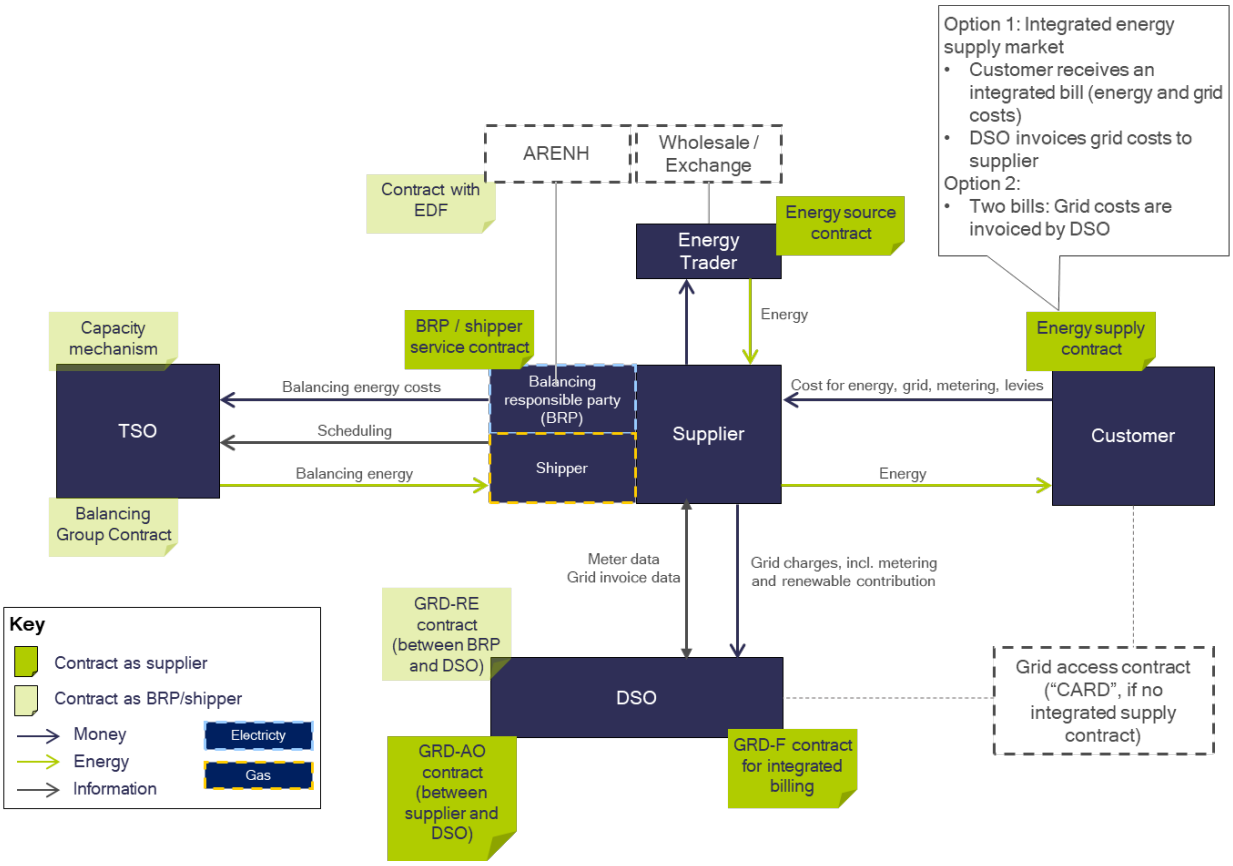
[23] Volume and price of the ARENH system are currently under discussion (increase of 100 TWh limit)

The calculation methology is fully transparent. Should the case arise, that the ARENH cap is reached, the allocation granted to the suppliers is reduced proportionally during one week after application. The detailed forecasts by the suppliers, are known only to CRE and the supplier, the fees calculated for each supplier are publicly avaliable,.

- Supplier must conduct framework agreements with the DSOs to use the energy grids as well as to offer combined billing to the end customers. In theory customers could also conduct a separate contract with the DSO, in practice combinded billing is the market standard
- Electricity suppliers must join the capacity mechanism, established in January 2017. Depending on their maximum load, energy suppliers are assigned a capacity obligation each year. This obliges them to make sure they provide enough capacity to the system to cover energy peaks in consumption. The capacity certificates, sold by capacity providers (generators, DR providers, aggregators and storage sites) , will be exchanged by auctions and on OTC. One capacity certificate is equivalent to 0.1 MW.
- Suppliers of energy (relevant only for bigger suppliers[24]) must meet government-mandated targets for energy savings achieved through the suppliers residential and tertiary customers. Suppliers are free to select the actions to meet their objectives, a list of ratified activities was elaborated to help the various actors to facilitate the operations. Those exceeding and undercutting their objectives can trade energy savings certificates as required for common compliance.

[24] E.g. for electricity around 50.000 to 100.000 household customers (check report of the ministry of ecology)

Overview of contracts to be closed as electricity and gas supplier:



- GRD-F: The DSO-S contract sets out the necessary provisions with regard to access to the Public Distribution Network and its use between DSO and supplier; it is needed for integrated billing
  NOTE: Financial securities are needed (bank guarantee, deposit, etc.); Small suppliers are exempt from this requirement (ask CRE again about limit)
- GRD-RE: The DSO-BRP contract relates to the process of reconstituting flows under the Balance Responsible Entity system (mainly data exchange topics)
- GRD-AO: The purpose of this contract is to define the rights and obligations of the Parties for the implementation of the Capacity Obligation
- Capacity mechanism contract (TSO): is conducted with the capacity responsible party (in practice the BRP)
- BRP contract defines the economic, technical and operational responsibilities of the balance responsible party

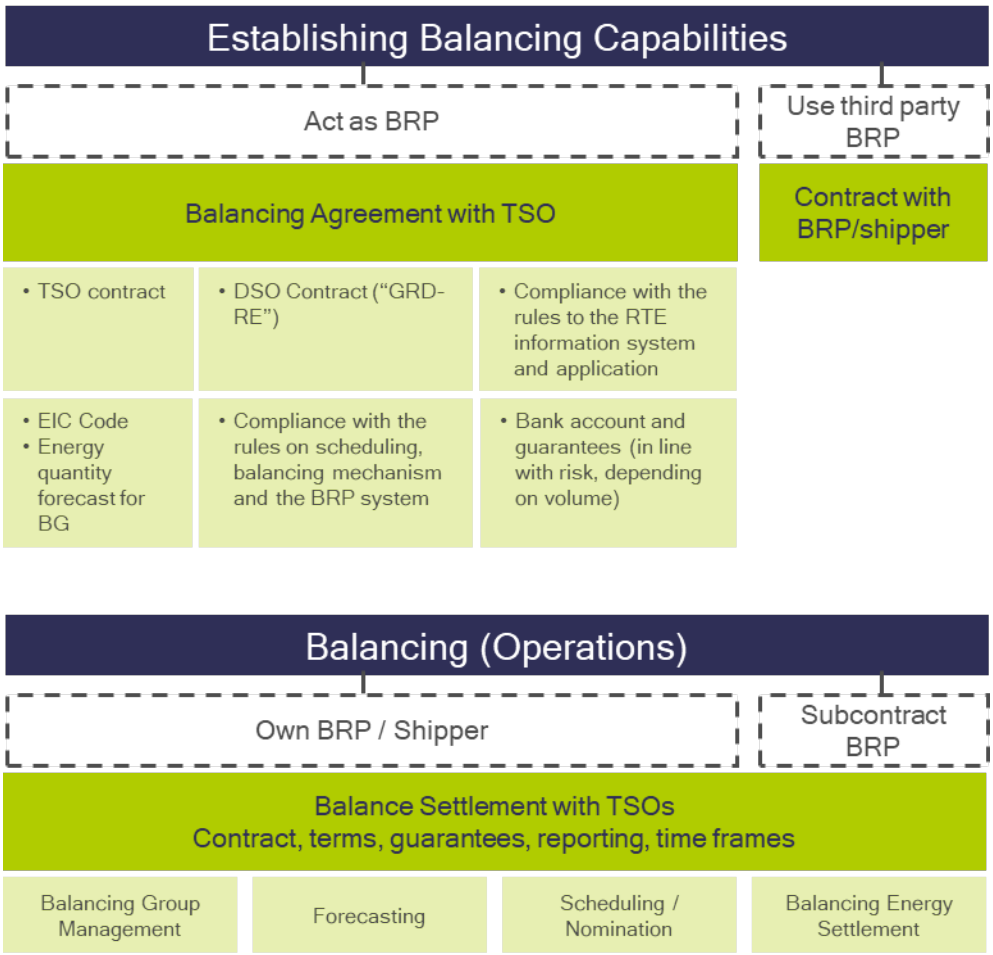
Overview of contracts to be closed as gas supplier:

- The high-level contractual model is similar for gas
- Instead of the Balancing responsible party there is the market role of a "shipper"

Further comments

- Registration at the Ombudsmen is recommended but not compulsory
- Guarantees of origin (GO): There is no mandatory GO database to register. Supplier must show their energy mix on the bill. GOs or certificates are not validated automatically. However, CRE as well as the "Direction Générale de la Concurrence, de la Consummation et de la Répression des Fraudes – DGCCRF" can ask for a proof of accordant GOs
- GRD-RE and GRD-AO: basically, specifies how the data are exchanged, with NRA approval.
- TSO and DSO contracts are standardized and approved by CRE
- Another issue with limited importance (market share less than 5%) are ELDs: Data exchange and processes differ amongst the ELDs. The cost of adapting processes is offset by a very limited customer market. It is foreseen to tackle this issue by streamlining contracts and processes across all DSO (incl. ELDs). One idea is to establish a platform for handling the supplier-DSO contracts and processes. Yet, this is still in a conceptional phase (not in place within the next few years) → For supplier the situation with the ELD is not such a big problem (they can access most of France with the big DSO). However, customers in the can't choose an alternative supplier

3) Establishment & operation of balancing



Further comments

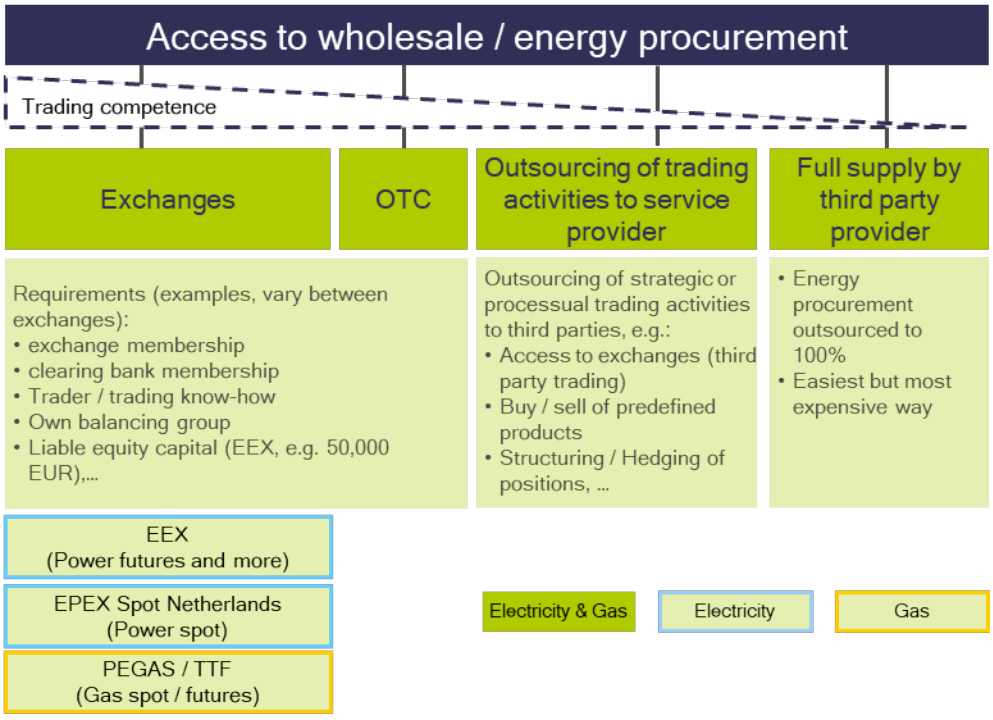
General:

- Option I (be your own BRP) is more complicated, technically more difficult and more expensive than option II. On the other hand, no business-critical information (e.g. purchasing strategy, channels etc.) have to be passed to a third party, who might be even active on the same market.
- BRPs are not obliged to offer balance group management as a service
- The preferred option depends on trading knowledge, business model and resources
- BRP licenses are granted by RTE (TSO). All relevant information as well as the BRP contract are available online:
  http://clients.rte-france.com/lang/an/clients_traders_fournisseurs/services_clients/dispositif_re.jsp

Load profiles / curves:

- Matrixes and Calculation models to calculate the load profiles are available at the DSO (enedis / GRDF)
- The way load forecasts are done in France is quite complex. The system is designed to forecast the general average consumption in France based on various input factors. There are no consumer groups specific load profiles which makes forecasting difficult for suppliers with a focus on specific customer groups
- For smart meter equipped customers, there is the option for quarterly settlement (at no additional costs)

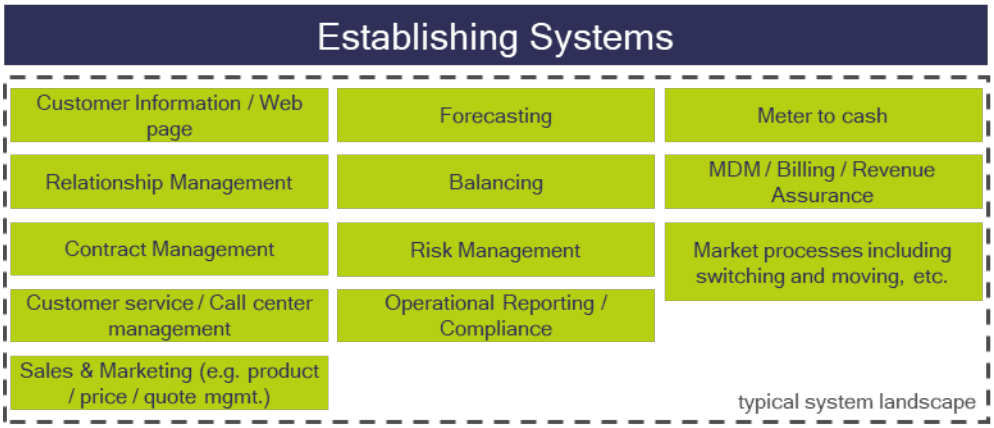
4) Acquiring wholesale / energy procurement



Further comments

- The French wholesale electricity market adheres to the West European design, with producers, suppliers and traders able to buy and sell energy bilaterally via brokered contracts or on the EPEX and EEX power exchanges; PEGAS most important exchange for gas
- Energy procurement and related risks can be fully outsourced to external service provider (most expensive)
- Trading on behalf of supplier can be done by the BRP or other third parties (e.g. brokers, financial institutions, …)
- Depending on business model and internal trading know-how suppliers can procure energy directly on wholesale markets (exchange, OTC)
- In between there are many hybrids forms possible, meaning that only single or many trading activities can be outsourced to third parties (individual agreements)
- There are no obligations in the way of procuring energy
- Own generation capacities are not mandatory
- About 70% of procurement in the French wholesale market through ARENH for alternative suppliers, therefore total volumes comparably low

5) Provision of system landscape

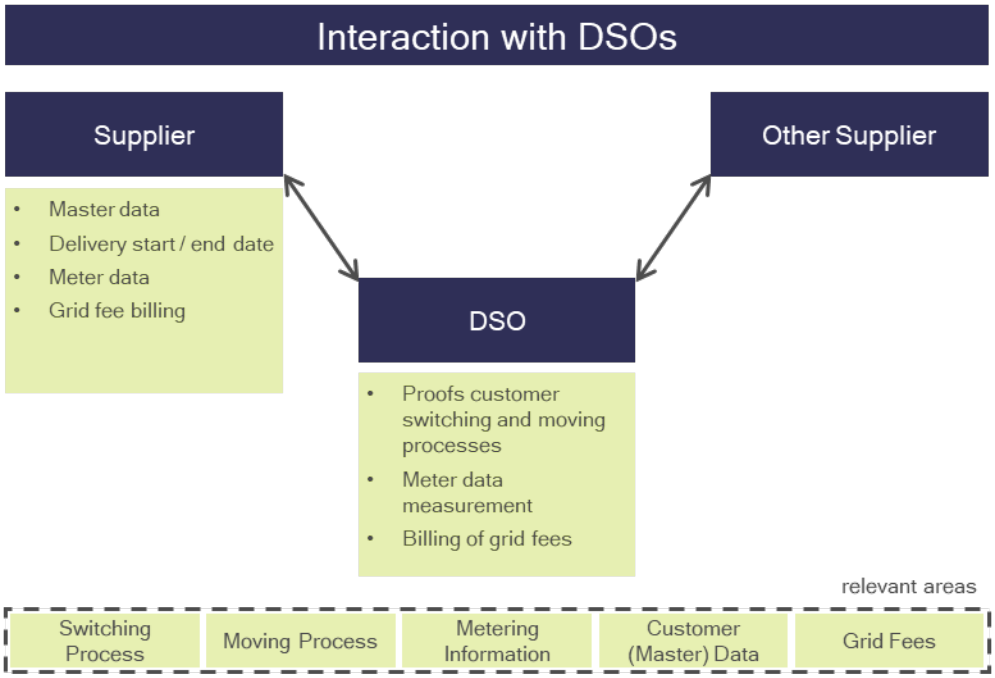


Further comments

- In general, there is no obligation to run specific systems in-house → everything could be outsourced to third parties[25]

[25] Activities can be outsourced but not legal responsibility. Supplier is responsible to fulfil his obligation as a supplier

6) DSO related operations / market communication



Further comments

Market standards:

- The Energy Regulation Commission (CRE) has set up consultation bodies between the various stakeholders (DSOs, suppliers, energy associations, customer associations, …), known as the "Electricity Working Group" and the "Gas Working Group" (groupe de travail electricité / gas).
- Market processes, standards and practical arrangements for the functioning of the retail energy market are discussed and elaborated in these working groups. This includes also common data exchange formats for communications
- For automated processing of data suppliers must integrate the communication standard into their IT systems. For sending messages to the DSO there is also a Webservice / API in place. Communication from the DSO runs in defined communication channels.

Switching:

- There is no direct communication between new and old supplier (actually the new supplier does not necessarily know who the actual supplier is)
- The supplier notifies the DSO about the switch on behalf of the customer, who then informs the old supplier
- Communication runs via the DSOs. In theory the DSO knows who the customer of a meter point is. In practice this information is often not provided by the supplier. Thus the DSO knows per meter point the supplier and balancing responsible party in any case, but not necessarily the end customers name

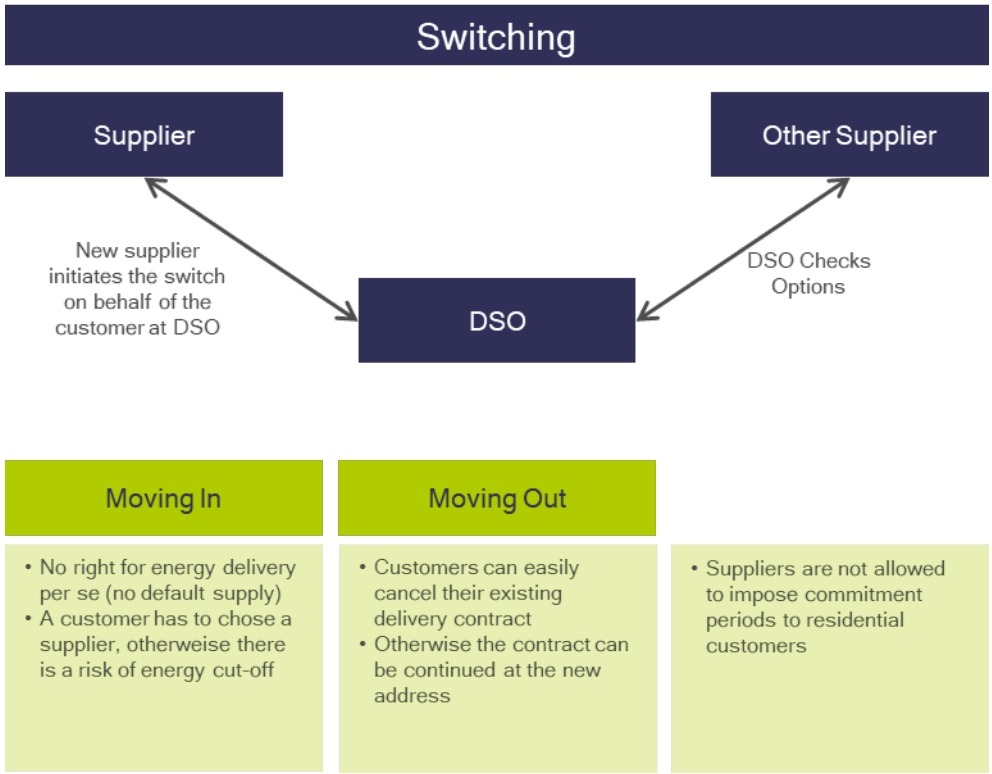
DSO

- Responsible for “official” meter reading (approx. twice a year). Between two official meter reading, Supplier might use own meter reading for invoicing.
- Responsible for Smart Meter rollout and data provision (once a day)

Smart Metering:

- Rollout and data processing are managed by DSOs
- Rollout started in 2015
- Goal, by 2021 35 Mio. linky smart meters
- 95% penetration by 2020
- Enedis is responsible or the implementation and ownership of the rollout as well as for third-party access to metering data

7) Customer switching and moving



Further comments

Switching:

- Contracts lengths are unlimited for residential customers and can be terminated at any time

- Switching is for free and without risk for the customer, he can return to regulated tariffs at any time with no penalty
- The new provider terminates the contract on behalf of the customers
- No complex price regimes (bonuses etc.); alternative suppliers often use the regulated tariff-prices as reference (e.g. xx% less than regulated tariffs)
- Popular are fixed priced contracts up to 3 years (non-regulated); fix are only price components; customers can still switch the supplier at any time

Default / Last resort supply:

- There is no default supplier (like in Germany) who takes over electricity supply in case a customer moves in and does not have a supply contract → Risk of energy cut-off
- There is a supplier of last resort yet. Framework adopted in November 19, creation planned for 2020.

Additional info on customer prices:

- Electricity: TURPE: The costs of financing and operating the transmission and distribution networks are passed on to end users through the so-called TURPE (Tarif d'Utilisation des Reseaux Publics d'Electricite). TURPE, defined by CRE, is charged to suppliers and passed through to end users. Costs associated with congestion management, energy balancing (excluding revenues recovered via imbalance charges), transmission and distribution losses and the purchase of ancillary services are also recovered via TURPE. TURPE is identical throughout the national territory

8) Operational obligations / duties

Duties during operations		
Supply obligation	Energy labeling	Reporting
• Suppliers are obliged to supply any customer who requests it	• Transparency about primary energy source shares of energy generation	• No regular reporting obligations • Ad hoc requests from CRE

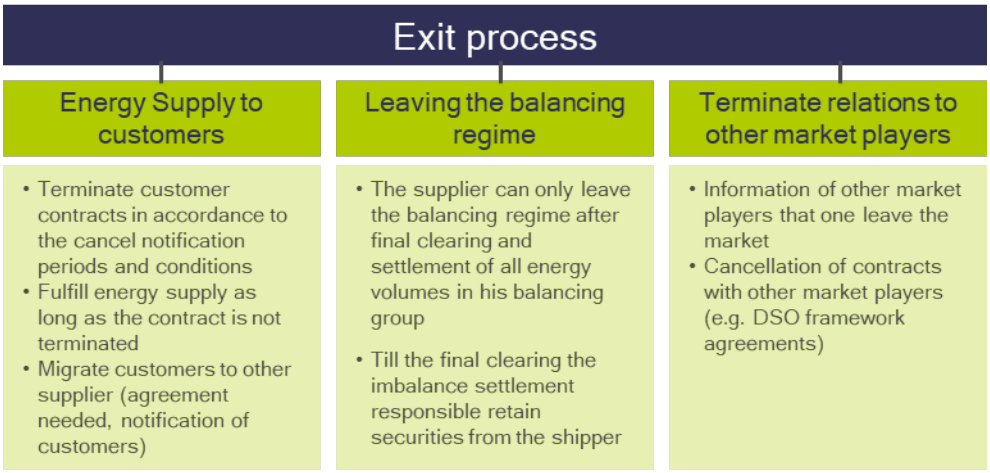
Further comments

Reasonable rates and conditions

- In general there are only a few important obligations for energy suppliers in France
- Supply obligation: Suppliers in France must serve any customer who requests it. There are only a few exemptions were a customer can be rejected

- Energy labelling: Suppliers must label their energy mix. However, there is no mandatory system to follow. They must name the certification system they refer to. E.g. it could be the energy mix stated by powernext; TÜV certification or ECCS certification. There is no central database in place to prove automatically if all certificates are hold. CRE can request at any time the proof of certificates as well as DGCCRF (https://www.economie.gouv.fr/dgccrf)
- Reporting: Currently there are no regular reporting obligations in place. Supplier must answer requests from CRE situation based. According to CRE there will be some monitoring obligations set up in the future
- Capacity mechanism: Suppliers must fulfil the obligations of the capacity mechanism - prove of enough certificates

9) Exit Process



Further comments

- Energy suppliers can leave the market, but they must fulfill their obligations in the role as energy supplier
- There are no penalties for leaving the market per se. Penalties might arise in case legal obligations are violented.
- Conditions for cancellation of bilateral contracts (e.g. with service providers or balancing responsible parties) are depending on the individual contracts

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