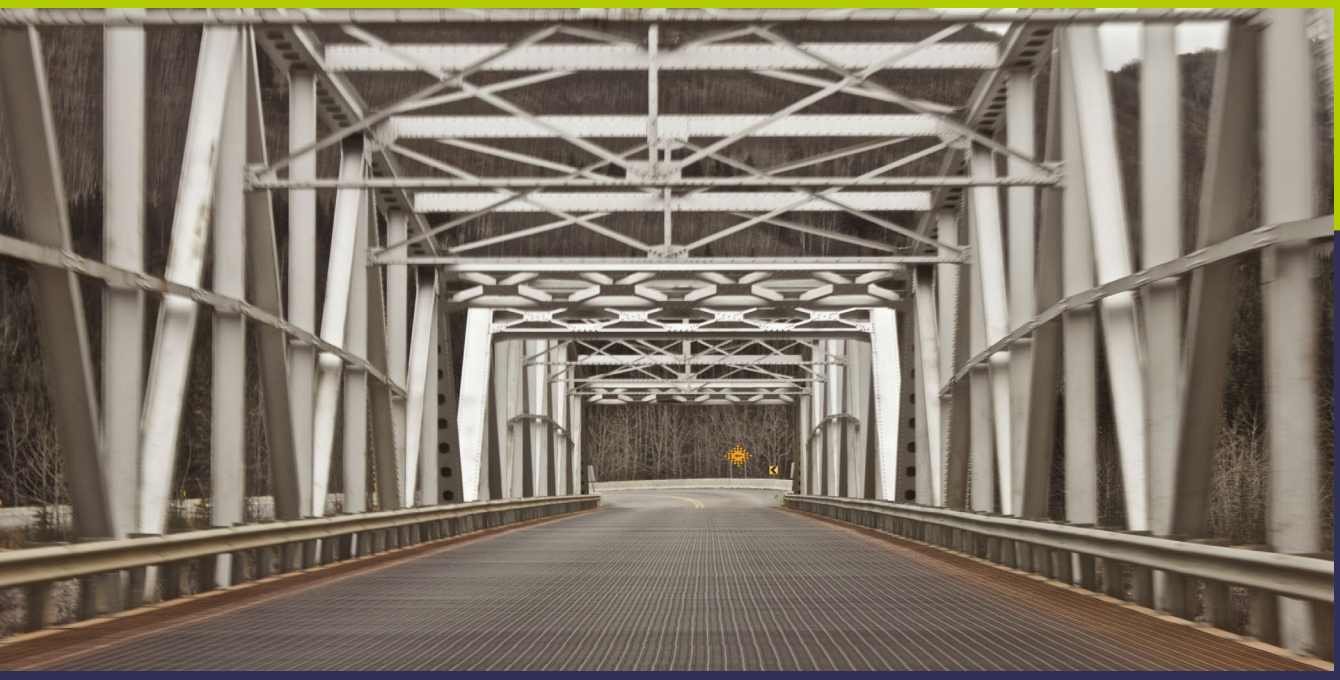
European Commission

EUROPEAN BARRIERS IN RETAIL ENERGY MARKETS



BELGIUM
Country Handbook

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Energy

EUROPEAN BARRIERS IN RETAIL ENERGY MARKETS PROJECT: Belgium Country Handbook

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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.

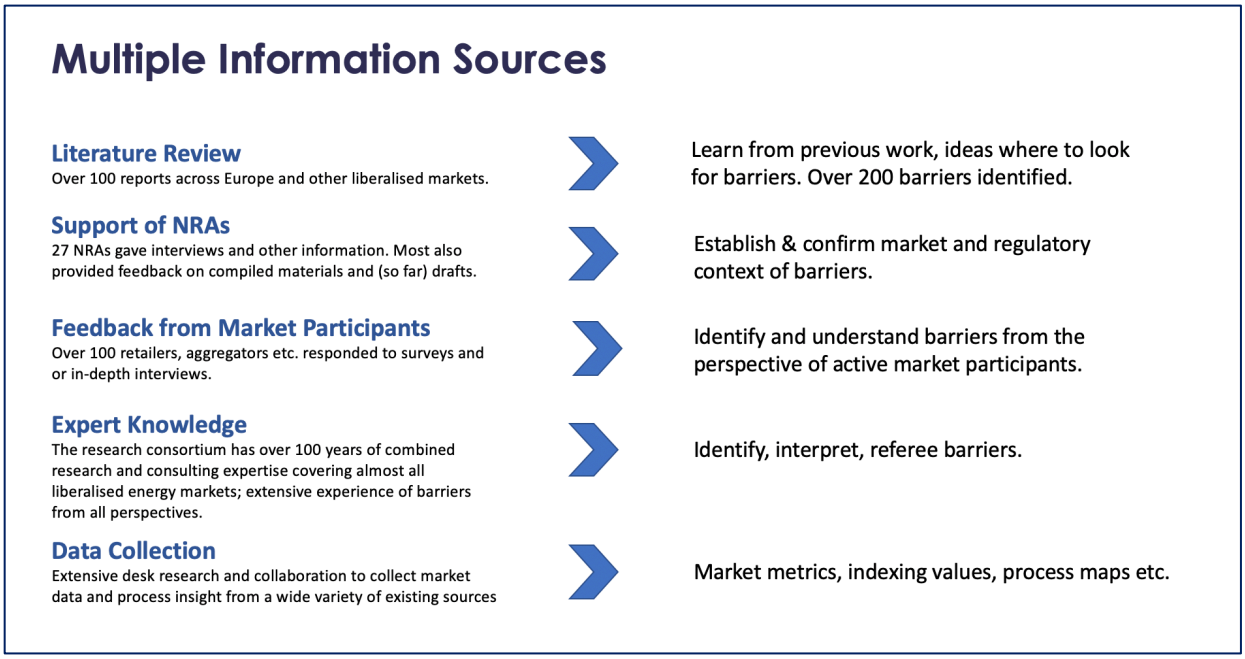
The project focuses on retail (supply), including also demand aggregation services, other additional offerings and new model retail, especially relating to the household segment customers (in some markets households and smaller SMEs may be difficult to distinguish). The project additionally concentrates 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



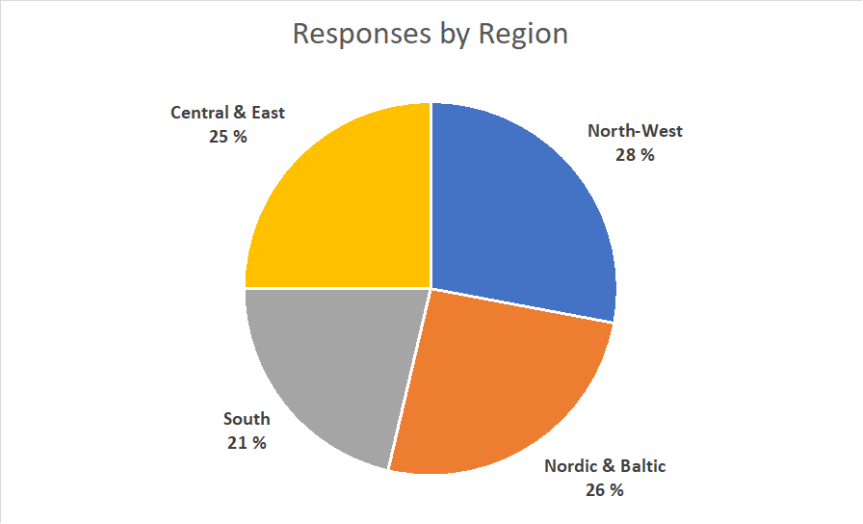
Surveys & Interviews

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

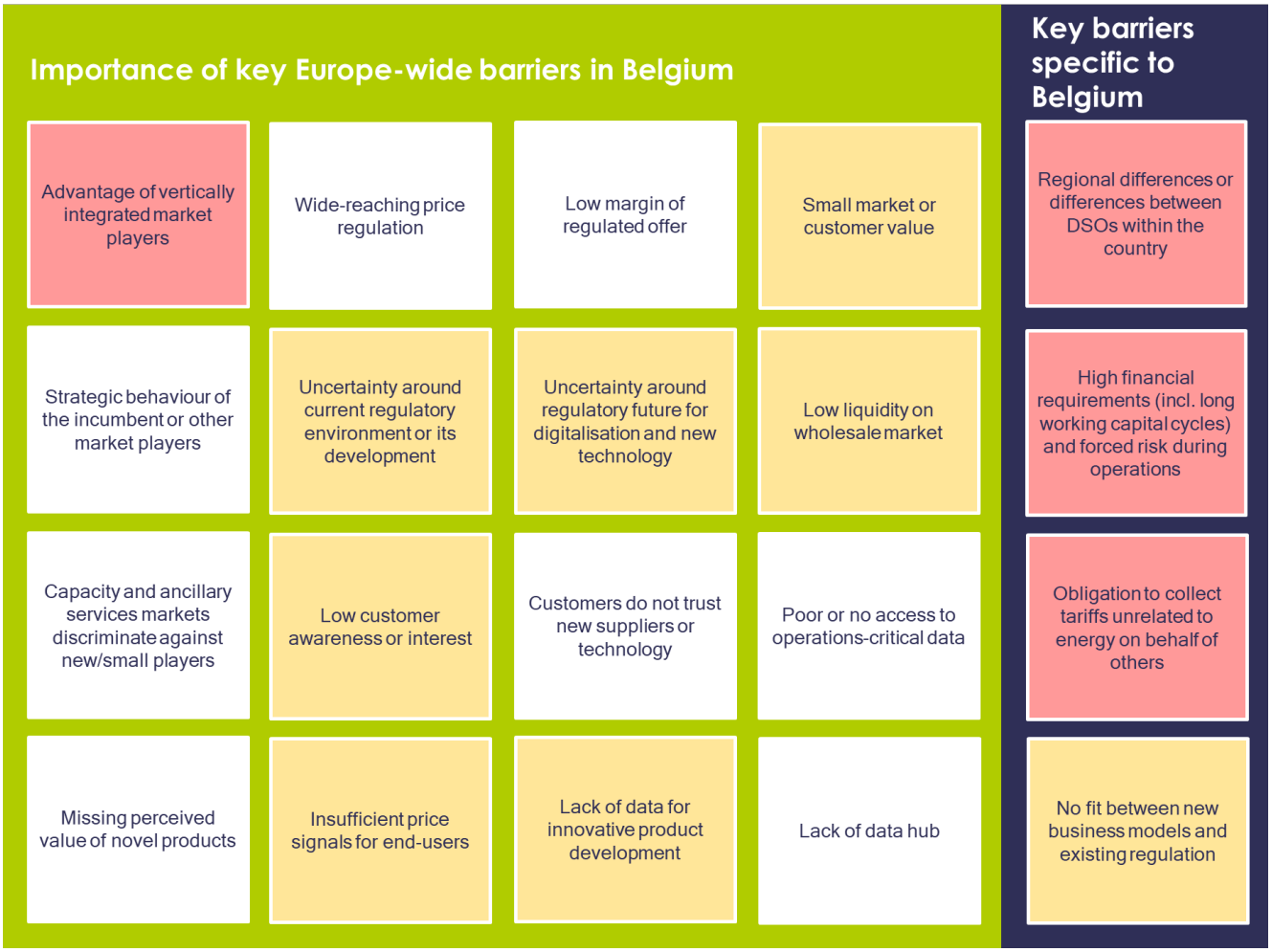
The purpose of the 'European Retail Energy Market Barriers Index' is to enable a degree of comparability between the barriers' context in each of the markets. It is based on metrics that can be collected for all markets, metrics for which available data currently exists. As such it provides a simple, 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 Belgian market

The following figure highlights the key barriers identified in the Belgian market.



Key recommendations

- **Obligations to collect tariffs on behalf of others**. Currently some grid-fees are collected by suppliers on behalf of the DSO. Regulation to protect suppliers from collection failure or a different collection method could help in reducing this barrier.
- **Regional differences between DSOs.** The current market structure is quite complex, with many differences between the regions. Standardization and harmonization of relevant systems and processes could help lowering this barrier.
- **High financial requirements (incl. long working capital cycles) and forced risk during operations.** Currently a number of guarantees, warranty deposits and warranties are required for market participants. Designing those in a non-discriminatory and proportionate way could decrease this barrier significantly. Furthermore obligations that are not in the nature of a competitive market should either be moved to regulated areas, or suppliers should be compensated for the additional effort.
- **Strategic, unfair advantage of vertically integrated market players and lack of transparency.** Complex systems and processes, as well as regulatory unpredictability pose a challenge to smaller market players, as they do not have the resources to deal with those aspects. Reduced complexity could eradicate this resource advantage and create a fairer market environment.

MARKET OVERVIEW

Measured in the number of suppliers, Belgium's energy market is relatively small. Due to the 3 different regions in the country there are also 3 different regional and 1 nationwide regulator, and with it 4 different legislations that need to be considered when entering the market.

Market background

In 2007 the electricity and gas market in Belgium was liberalized, following European legislation. However, not all parts of the energy sector are open to competition. There are on the one hand commercial activities and on the other hand regulated activities. This means that market players fulfil different roles. Electricity producers and natural gas importers are located in the liberalized part of the energy market. The management of the transmission network on which the energy is transmitted is a regulated activity and not open to competition. The EU´s Third Energy Package was transposed into national law in 2012, resulting in an increase of powers for the country´s regulators, stronger consumer protection and increased competence of regional authorities.

The country is divided into three regions, the Flemish, the Walloon and the Brussels Capital Region. For each of these regions, a regional regulator was established (VREG - Flanders, CWaPE - Wallonia, BRUGEL - Brussels), additionally there is one national regulator (CREG). These regulators are splitting the energy competences in the country between each other. The federal authority is responsible for the high voltage electricity grid with (>70 kV), the storage and transport of natural gas, the production of electricity (with the exception of the production of electricity from renewable energy sources and combined heat and power systems), nuclear power and electricity and natural gas transport tariffs. The CREG approves rates of the TSOs Elia (electricity) and Fluxys (gas) and grants federal supplier licenses in accordance with the 1999 law on the organization of the electricity market.

The regional regulators are the competent bodies for the distribution of electricity via networks with a voltage of less than or equal to 70 kV, the distribution of natural gas, the production of electricity from renewable energy sources and combined heat and power systems, rational use of energy and social public service obligations. Since July 1st 2014, all regions are also responsible for their regulation of electricity and natural gas distribution tariffs.

All the different regulators are independent from each other, from market players and from policymakers. Core competence among all of them is setting tariff calculation methods and approve tariff proposals from grid operators (TSO and DSO). They also have the authority to fine market participants that do not comply with the respective legislation.

The "Electricity Act" of 1999 and the "Special Institutional Reform Act" are two central laws in the electricity and gas sector, giving the federal and regional authorities responsibility for the energy policy. In Flanders this basic legislation is the "Energy Decree" of May 2009, in Wallonia the Decree of April 2001 and in Brussels-Capital the Ordinance of July 2001.

Prior to market liberalization, the market was in the hands of the incumbents Electrabel and SPE (Société productrice d'électricité) for electricity and Distrigaz for the gas market, who still take up most of the market share.

Market structure

The market in Belgium is relatively concentrated. Belgium's TSO for electricity is Elia and there are 24 DSOs for the whole country, which mostly are cooperating through a central organization per region, which is Fluvius for Flanders, ORES in Wallonia and Sibelga in Brussels. These cooperations are only separated in legal entities but act as a single company to the outside. In the Flemish region there are 11 DSOs active, all operated by Fluvius. The natural gas transportation network is operated by the TSO Fluxys and there are 19 DSOs in total, 11 in Flanders, 7 in Wallonia and 1 in Brussels.

Wallonia has 12 active electricity and 11 gas suppliers, Flanders has 18 electricity and 15 gas suppliers and Brussels has 8 active suppliers for gas and electricity for households respectively.[1] The 5 largest suppliers are Engie Electrabel, Luminus (EDF Group), Eneco, Lampiris (Total Group), and Essent (Eon-Innogy Group) based on end customers.

Other market players are FEBEG, an association that brings together interested electricity producers and traders, gas suppliers, as well as laboratories in the electricity and gas sector, and Synergrid, the federation of gas and electricity network operators.

The Smart-Meter rollout in Belgium is following different roadmaps for each region. Whilst Wallonia has a target of 80% market penetration until 2029, Flanders wants to roll out 1.8 million units until 2022, with a full market penetration targeted in 2024. Brussels´ plan sees a rollout of 5000 units per year. These different formulations of targets highlight the different approach that each region is taking, also making a comparison more difficult. These decisions were made only a few years ago, since the country initially replied to the EU´s directive deployment on Smart-Metering with a negative business case. Therefore, rollout on a large-scale hasn´t begun yet, with the exception of the Brussels region, where numerous "sleeping" smart meters being installed, and the Flanders region, which started deployment in July 2019. In all the regions, ownership and installation is the DSO´s responsibility.

Despite the decision of Belgium to phase-out nuclear energy in 2003, stating that the last power plant should be closed down in 2025, half of the country´s electricity is generated by nuclear power plants. This share amounts to roughly 30 TWh in 2018 (about 50% of domestic production). Second most important source is natural gas, accounting to around 19 TWh. Only 15 TWh of electricity stem from renewable sources, most importantly wind (7.5 TWh in total and 3.4TWh form offshore wind generation), Biofuels (4.5 TWh) and Solar PV (4 TWh). In 2018, total electricity generation in Belgium amounted to 59.4 TWh, significantly lower than the 71.9 TWh which have been generated in 2017. The main reason for this decline in generation is a lower level of nuclear generation.

Total electricity consumption was 76.7 TWh in 2018, the peak capacity was 12.44 GW. Net imports of electricity amounted to 17.3 TWh, substantially more than in 2017, to cover the shrinking nuclear generation.

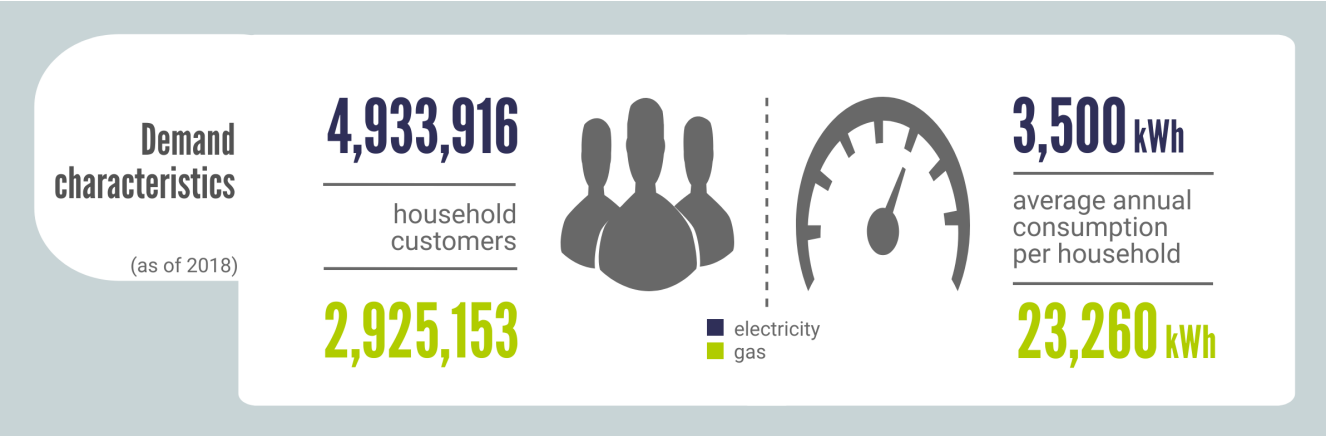
The liberalization led to the introduction of a power stock exchange in Belgium, the BELPEX, founded in 2006, with two segments, the day-ahead market and a continuous intraday market. As of today, BELPEX is operated by Epex Spot. Nordpool recently also acquired a license to operate the Belgian Exchange as well. The day-ahead market is coupled with the APX in the Netherlands and the UK, the EPEX Spot, and the Nord Pool Spot in the Nordic region. The intraday market is coupled with the Dutch APX and the Nord Pool.

[1] https://www.creg.be/sites/default/files/assets/Prices/InfographResEn.pdf

The short-term electricity price was €55.3 / MWh on average in 2018, also an increase from the previous year. This trend can be observed in many neighboring countries, as the price gap between the countries remained the same.
Gas consumption in Belgium amounted to 187 TWh, a slight increase compared to 2017. Compared to neighboring gas markets TTF or Gaspool, short-term prices were higher than long-term prices in 2018. About half of the volume was directly consumed by residential customers, a quarter was consumed by industrial customers. The remaining quarter was used for electricity generation.[2] Most of the industrial customers had contracts with variable prices (90%), about 8% had a fixed price contract and about 1% had a fixed price with an oil index. The industrial market for natural gas is still dynamic and competitive.

Unbundling as part of the Third Energy Package was finished in January 2012, when CREG certified Elia as Belgian TSO for electricity and Fluxys Belgium as gas TSO in October 2012 under the ITO model. The interconnectors were certified in 2013.
The regional governments of Flanders, Wallonia and Brussels also transposed the unbundling requirements for their 24 electricity and 18 gas DSOs. Also, the provisions of the EC directive 2009/72 for Closed Distribution Systems (CDS) were transposed in the Flemish and Walloon region.

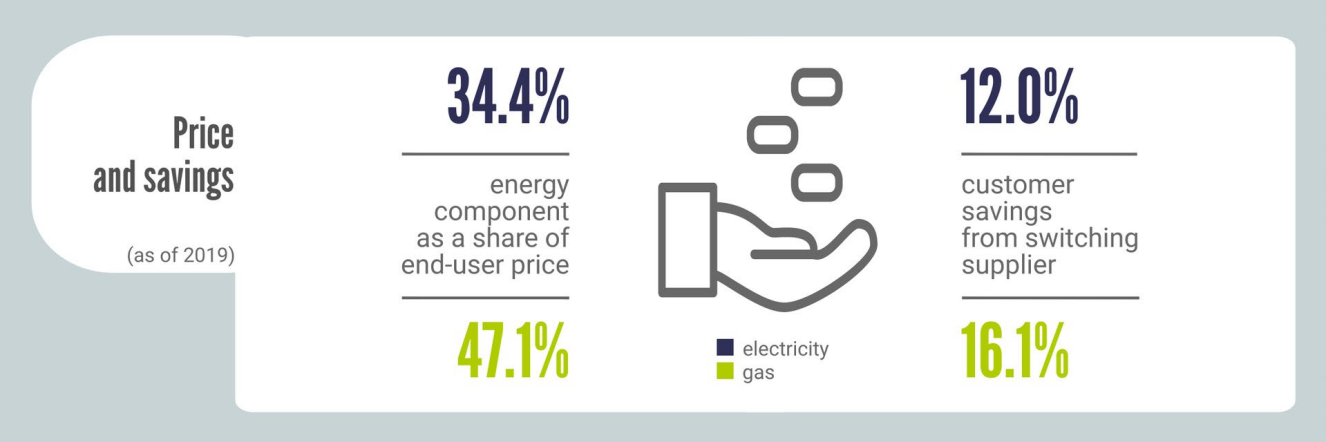
The Belgian market consists of about 5 million electricity household customers with an average annual consumption of around 3.500 kWh. There are about 3 million gas household customers, with an average annual consumption of around 23.000 kWh.



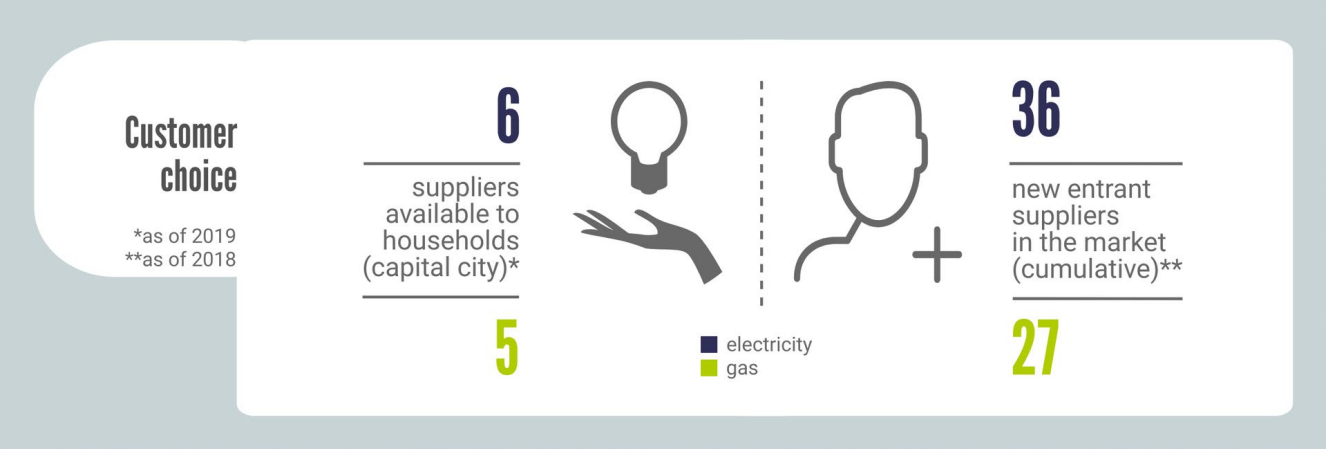
The energy price in Belgium is divided into four parts. First, the price for the energy component itself, which is set by the supplier and the only part open to competition. Secondly, there are the network costs for the TSO and DSO. Third, there are fees that are imposed by the authorities. These taxes are for example a contribution on energy, the federal contribution on electricity and gas (published by the CREG), a fee for the connection to the respective networks (only in Wallonia), an energy fund contribution (only in Flanders), a so called “overload” tax for public service missions (only in Brussels), costs for green electricity and cogeneration. Fourth, the VAT, which is applied on all components, except the federal contribution, the connection fee of the Walloon region and the overload

[2] https://www.creg.be/en/highlights-annual-report-2018-creg#h2_2

protected customers. The costs and fees vary from region to region. Each region has a green certificate system for renewable energies, in Flanders there is also a certificate system for CHP in place. Each region also has its own quota for green certificates and suppliers can be fined for not reaching this quota. These fines are not charged directly to consumers, suppliers transfer the costs through a contribution fee, which is practically constant. Direct transferring of fines is not possible in Belgium, as contracts usually do not allow for it. Compared with neighboring countries the taxes are relatively high, at around 15-20 €/MWh.
The energy component accounts for 34.4% of the electricity price and 47.1% of the gas price. Potential savings from switching a supplier range from 12.0% for electricity to 16.1% for gas consumers.



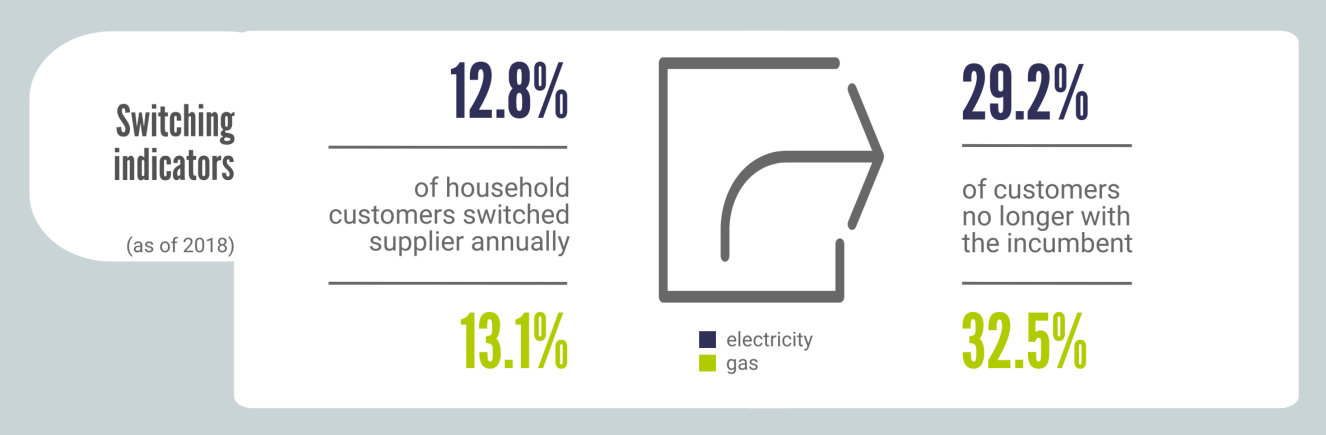
As of 2019, 6 suppliers for households were active on the capital Brussel´s electricity and 5 were active on the gas market. The whole country saw 36 new suppliers entering the residential and non-residential electricity sector, and 27 new gas suppliers. The numbers of new entrants to the market do not imply, whether they are currently active or not.



The market in Belgium is relatively concentrated. The 5 largest suppliers are Engie Electrabel, Luminus (EDF Group), Eneco, Lampiris (Total Group), and Essent (Eon-Innogy Group) based on end customers. The three largest companies (CR3) take up 80% of the non-residential market share in electricity, there are 5 suppliers with

a share above 5%. The three largest suppliers for gas take up about 70% of the non-residential market, about 7 suppliers have a share above 5%.
As for the residential electricity market, the three largest suppliers have a market share of about 70%, while 5 suppliers in total have a share of above 5% for electricity. In the residential gas market, the picture is exactly the same.

As of 2018, customer switching rates were at a level of 12,8% for electricity and 13,1% for gas in the Brussels area. 29.2% of the electricity customers and 32.5% of gas customers are no longer with the incumbent supplier.



Political and regulatory orientation

Belgium set a draft National Energy and Climate Plan (NECP) to fulfill its part of the EU´s energy roadmap to 2050. Belgium plans to reduce its carbon emissions by 35% until 2030 (based on 2005 levels), for the non-ETS (Emission Trading System) sectors. Many measures to reduce GHGs have already been adopted, mostly the most cost-effective ones and mostly in ETS relevant sectors.
The EU renewable energy target for 2030 is set to at least 32% of final energy consumption. The measures outlined in the NECP can only result in a share of 18.3%. With regards to energy efficiency, the EU target is set to at least 32.5% by 2030, whereas the total contribution in the plan foresees 29%, 22% in primary energy savings and 7% in final energy savings on a 2007 baseline.
Since the country also plans to phase out nuclear energy until 2025, energy security is also a challenge for the near future. The plan foresees a solution in an energy mix based on flexible capacity, load shifting, storage and renewable energy. A capacity compensation mechanism will be developed until 2025, to maintain the level of energy security and to attract new capacity developments.

In the period of 2020-2030 a regular evaluation of the results of existing market coupling will take place on the basis of yet to be determined KPIs. Also, the country plans to introduce tariffs based on capacity and consumption,

to ensure fair distribution of network costs. Additionally, energy infrastructure and interconnections with Germany and the UK will receive extra funding to develop further.[3]

Regulatory market characteristics

Gas and Electricity prices in Belgium are set by the market, with the Economic Minister having the ability to intervene, through price caps. When a new supplier wants to offer a new product at a specific price, he has to justify the price compared to the business costs. The prices are monitored by CREG but the regulator can, however, not enforce actions against non-compliant suppliers.

In Belgium, specific permits are required to construct and operate new power plants onshore. This includes a production permit, an environmental permit and an urban planning permit. Details vary in the three regions. Small and very small plants under 25 MW do not require a specific license.

To sell the produced or otherwise acquired electricity and/or gas, a supply license is needed to participate in the market. This varies on voltage level and regional location of the consumers; it can either be a federal or a regional license, that lasts for five years or unlimited, respectively, and can be renewed as long as needed. Also, suppliers must comply with criteria specified by the energy legislation, especially with regards to technical and financial capabilities.

When trading energy in Belgium, no license is required. It is only necessary to communicate stock and volume information to the regulator CREG and other authorities that monitor the market.

More details on the licensing processes can be found in the Appendix of this document.

Across the country, various billing methods are applied for energy components and services. The CREG subsequently set a couple of guidelines to increase transparency for the consumers[4] . In general, there are three kinds of bills: an installment bill that divides yearly gas or electricity consumption over the year, to be paid monthly or quarterly. Then there is the adjustment bill, also called annual bill that corrects the bill based on the readings of the meter. Finally, there is the closing bill, which is issued when switching supplier.

Network costs do not depend on the supplier, as they are almost entirely controlled by the federal regulator. The payments are collected by the suppliers and passed on. Furthermore they are not negotiable, and any change needs to be approved by the regulating authority.

Each supplier also has to conclude a grid access contract with the DSO on behalf of the end user in order to prevent the DSO from having to conclude contracts with all involved end users, which would be time-consuming and expensive, especially in terms of communication and invoicing. If the supplier only supplies to the distribution network, the DSO will ensure access to the Elia transmission system. The costs charged by Elia to the DSO will be invoiced to the supplier, who in turn bills them to the end user (cascade system). The supplier does not sign a direct contract with Elia as the DSO settles access with Elia. The supplier who wishes to access the network, is to request access rights for use and delivery of electricity. It is important to know that a financial guarantee is to be provided to the network operators.

[3] https://ec.europa.eu/energy/sites/ener/files/documents/ec_courtesy_translation_be_necp.pdf
[4] https://www.creg.be/sites/default/files/assets/Publications/AnnualReports/2018/CREG-AR2018-EN.pdf

The federal regulator CREG can be viewed as pro-competition and is very consumer oriented. The body is acting proactively in improving the market climate in Belgium through its own proposals and guidelines. The same goes for the VREG, CWaPE, and BRUGEL regional regulators.

Context for aggregation/demand response

On the Belgian day-ahead wholesale and intraday markets load access & participation and aggregated load are accepted. However, there is still a couple of barriers, such as participation in the EPEX Spot market, where the participant needs to have a balance responsibility partner (or be one).

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

- FCR (Frequency Containment Reserve - Primary Control):
  Primary Control is fully opened to any technology. It allows full load access and aggregation for following four products:
  - R1 Sym. 200 mHz: Participants either have to increase their consumption (or reduce their injection) or reduce their consumption (or increase their injection) in the event of change in frequency in one direction or the other. It will be expected that the participant reacts in proportion to the deviation within a frequency range of 200 mHz.
  - R1 Sym. 100 mHz: Identical to the previous product, but it will be expected that the participant reacts in proportion to the deviation within a frequency range of 100 mHz.
  - R1 Up (f < 49.9 Hz): Participant agrees to reduce their consumption (or increase their injection) if the frequency falls below 49.9 Hz.
  - R1 down (f > 50.1 Hz): Participant agrees to increase their consumption (or reduce their injection) if the frequency rise above 50.1 Hz.
- aFRR (Automatic Frequency Restoration Reserve - Secondary Control):
  Secondary Control is not yet open to flexible demand, it will be opened to new technologies probably in July 2020.
- mFRR (Manually Activated Frequency Restoration Reserve - Tertiary Control):
  Tertiary Control has been opened for all technologies a couple of years ago. Tertiary Control allows load access and aggregation for following two products:
  - R3 Standard: Activation up to 8 hours per day, within an unlimited number of activations.
  - R3 Flex: Activation of up to 2 hours every 12 hours, with a maximum of 8 activations per month.
  - R3 for non-reserved volumes: Offers of MW/h flexibility on a 15-minute basis will be accepted

More detailed information about the participation regarding the different reserve programs can be found on the website of Elia, Belgium's TSO.

One of the main barriers in the Belgian market is that, currently aggregators need to have prior agreement from the customer's retailer/BRP to contract with the customer. However, Belgium's Energy Pact 2018 removes this obligation theoretically. The new framework would allow aggregators to sign contracts for ancillary services with the directly TSO after passing a prequalification process, so they do not have to ask for the consumer's BRP or retailer permission. As the federal structures in the country are very fragmented, a coherent legislation on this topic is yet to be transposed in regional law. However, since the country also has the obligation to prepare a national energy plan for the 2021-2030 period, it can be expected, that new frameworks of any kind would be included there. So, for the time being, the barrier remains a topic for aggregators.

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

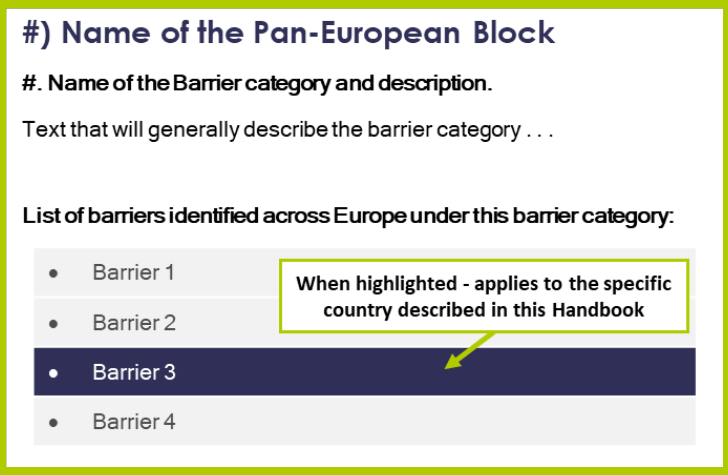
Description of the four-over-arching pan-European barrier blocks:

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.

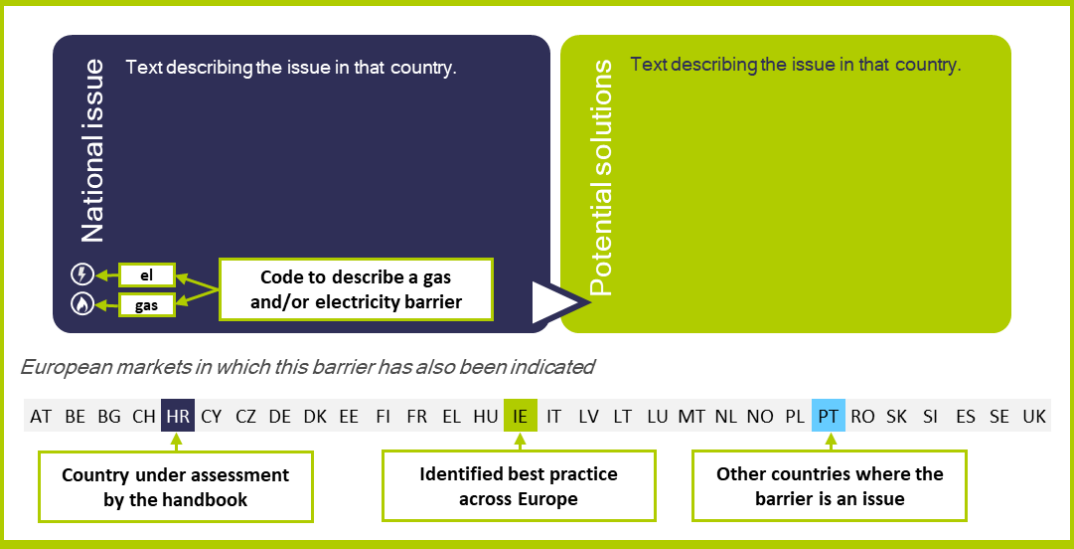
Within each of these high-level blocks are contained sub-categories, which are also mostly pan-European in nature. Each of these sub-categories contain the specific barriers which relate to individual markets as described in the following chapter. Altogether, we identified 45 barriers, most of which broadly across Europe. Only a selection of them apply to the Belgian 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 Belgium. When a barrier applies to Belgium, 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 Belgium. 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[5]:

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.[6] 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 Belgium:

   - 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 Belgium:

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

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

- Suppliers face uncertainty because of a newly liberalized regulatory environment or uncertain future development of the regulatory framework
- Uncertainty caused by industry actors influencing legislation, e.g. incumbent or associations shape legislation
- 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, regulation 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 Belgium:

- 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 Belgium: Price regulation

No barriers around price regulation were identified in Belgium, as price regulation does not exist in the market

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

Obligation to collect tariffs unrelated to energy on behalf of others. In the research this barrier was identified as an issue in Belgium. The obligation to collect non-energy-related tariffs, with the risk of delayed or non-payment, presents a barrier as it can substantially increase the total risk for the supplier as well as required cash reserves. Combined billing, a billing regime in which the supplier provides the customer with one bill containing the cost for electricity and for the network, usually also encompasses taxes and others service fees. The supplier is considered the only contact point responsible for all those charges, and are thus also financially responsible for collecting them, e.g. having to pay the DSOs regardless of whether the suppliers manage to collect money from their customers. Suppliers hence assume this risk, which might be increased further when DSOs require suppliers to pay them advanced deposit. In some countries energy suppliers may be tasked with collecting fees for unrelated services, e.g. TV licence fees (e.g. Italy), or providing other services, e.g. energy efficiency measures.

National issue

Several respondents raised the obligation to collect grid-fees on behalf of the DSO as a main issue. Especially the missing compensation for the associated administrative costs and for any outstanding invoices lead to the existence of this barrier in the market. The minimum contract duration of three years for the Brussels region and the resulting long time until contract cancellation by the supplier is increasing the level of this barrier further.

Potential solutions

Charges unrelated to suppliers business should be collected with different methods Regulation should protect suppliers (in the free market) from collection failure establishing the tax charges collection as mere pass-through or, alternatively, establishing a recovery fund.

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**

1.3 Description of regulatory disincentivisation barriers in Belgium: 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 raised as an issue in Belgium. 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

The high frequency of legal changes, conflicting legal frameworks by different regulatory bodies, uncertainty regarding nuclear phase out, the capacity market (especially the role of aggregators) and the renewable support scheme have been raised specifically by respondents as main sources of uncertainty, therefore presenting a main barrier in the market.

Potential solutions

Actions aiming at stabilizing the current regulatory framework with certain and tracked directives at political level.

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
AT	BE	BG	HR	CY		DE	DK	EE	FI	FR	EL			IT	LV	LT						RO	SK		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 Belgium. 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 (including electricity storage) can hinder investment/innovation in these areas.

National issue

Several respondents raised concerns about the Smart Meter rollout, because the rollout plans for some regions are not specified yet and the penetration rates are still very low.

Potential solutions

Prompt approval of the pending regulation to assess the appetite in the market.

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
AT	BE	BG		CY	CZ	DE	DK			FR	EL	HU		IT		LT			NO	PL		RO	SK		ES	SE	UK

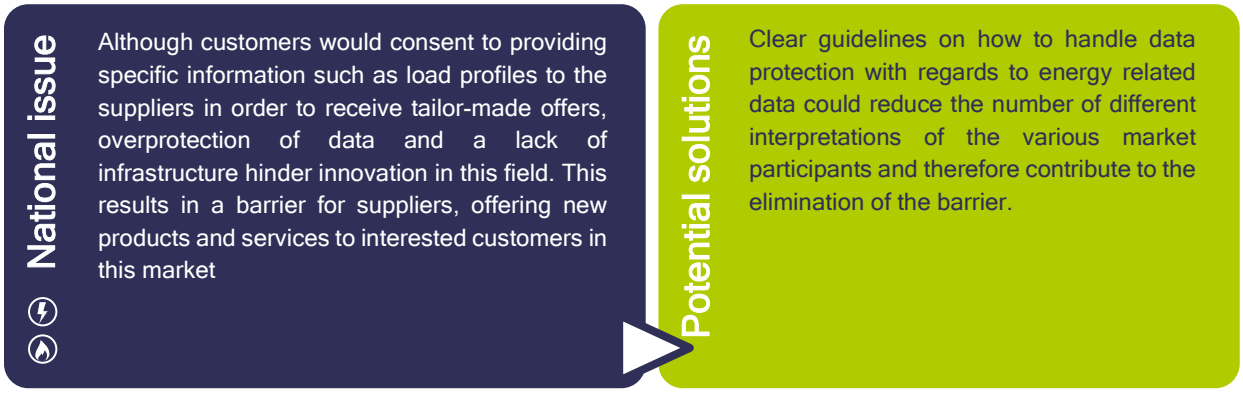
Uncertainty regarding environmental obligations and non-renewable generation capacity. In the research this barrier was raised as an issue in Belgium. Environmental obligations such as energy efficiency schemes and certificates of origin may present a barrier as they lead to an increasing amount of bureaucracy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

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 Belgium: Access to innovation

Data protection issues. In the research this barrier was raised as an issue in Belgium. 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.



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 data for innovative product development. In the research this barrier was raised as an issue in Belgium. 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 Demand-reponse provider/aggregator.

National issue

As mentioned in "Uncertainty regarding future regulatory developments, especially in the field of digitalisation and new technology", Smart Meter rollout plans are not defined yet in every region and the penetration rate is still very low. Therefore, innovative product and service development is substantially limited due to this barrier.

Potential solutions

Set a strategic long-term plan for new services about future development around the smart meter rollout to not hold back services development and/or potential investments.

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 Belgium. 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. Regulator requirements/obligations designed for traditional suppliers may not make sense for innovative players who are nonetheless bound by them. Unclear current regulation around demand response aggregation, such as missing role definitions, makes it challenging for novel services to enter and grow.

National issue

Based on the response of several market participants, the existing regulatory frameworks as well as the associated systems are not considered innovation friendly as they do not provide the necessary fit for new business models. Undefined rules on how aggregation will be able to participate in the capacity markets was specifically mentioned.

Potential solutions

Measures that would improve the environment around innovative products: Gradually reducing the threshold for demand to participate in the market and creating a framework defining the participation of aggregation in the capacity markets.

European markets in which this barrier has also been indicated

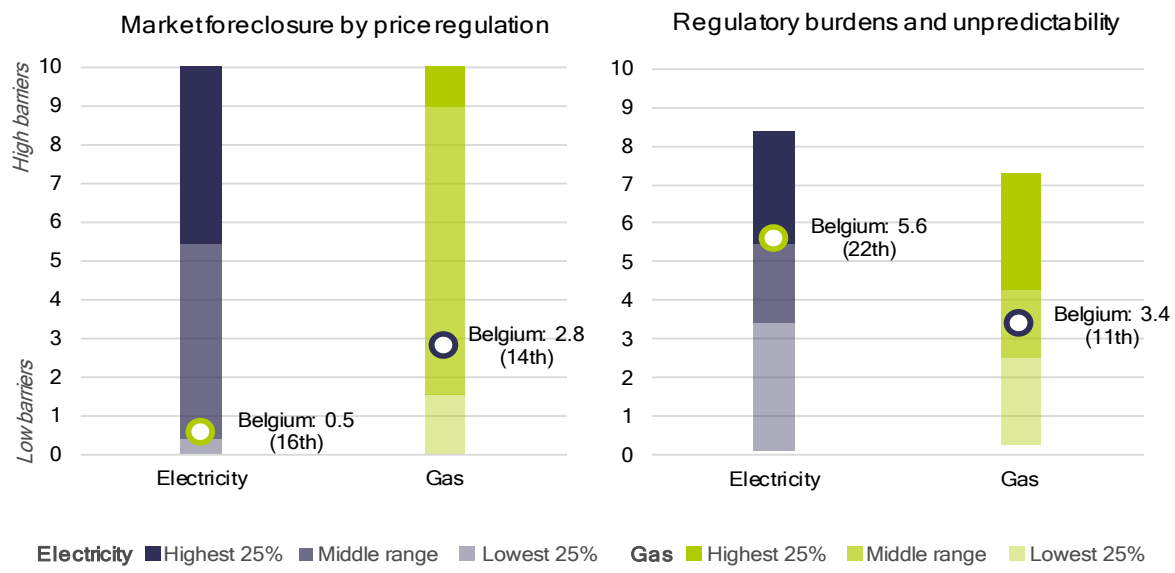
AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

1.5 Belgium´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 Belgium 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



Belgium's score regarding market foreclosure by price regulation is 0.5 for the electricity market (16th place) and 2.8 for the gas market (14th place). Regarding the regulatory burdens and unpredictability, Belgium's score is 5.6 for electricity (22nd place) and 3.4 for gas (11th place).

2) Market inequality

Within market inequality, barriers across Europe have been sub-categorised into two areas encompassing 8 specific barriers[7]:

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 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 Belgium:

   - 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.

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

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 Belgium:

- 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 Belgium: Unbundling and market power

Strategic, unfair advantage of vertically integrated market players and lack of transparency. In the research this barrier was raised as an issue in Belgium. 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.

National issue

Due to the larger number of resources available to big market players, they have a strategic advantage in dealing with the uncertainties outlined in "1.3 Regulatory Unpredictability" and the complexity as outlined in "Highly complex or country-specific systems & processes". Vertically integrated market players also benefit from a competitive advantage due to synergies in their upstream and downstream activities (e.g. reduced hedging and generation of green certificates). As raised by several respondents, this results in a barrier for certain new and smaller market participants.

Potential solutions

The barriers described in „Regulatory unpredictability" and "Highly complex or country-specific systems and processes" disadvantage smaller suppliers substantially more as they do not have the necessary resources available and outsourcing those areas leads to a substantial cost disadvantage. Therefore, the associated complexity needs to be reduced in order to create a level playing field.

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

UK BEST PRACTICE EXAMPLE: 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.

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

Low liquidity in the wholesale market. In the research this barrier was raised as an issue in Belgium. 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. Market participants with a lot of market power can withdraw their production capacities from the wholesale market and thus discriminate against other players.

National issue

Several respondents raised the issue of low liquidity in the wholesale market due to a high level of market concentration and the uncertainty around nuclear phase out.

Potential solutions

A high liquidity on the wholesale market is crucial for ensuring a fair market. One source of uncertainty and driver of low liquidity is the nuclear phase out which has to be addressed properly, in order to eliminate this barrier. Increasing the liquidity in the market will also reduce the strategic advantage of market participants which are able to use synergies between upstream and downstream 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

High price or volume risk in energy procurement. In the research this barrier was raised as an issue in Belgium. 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

On top of the issues, highlighted above in "Low liquidity in the wholesale market", additional volume and price risk has been identified as a barrier by several market participants.

Potential solutions

Also see "Low liquidity in the wholesale market"
By introducing Smart Meters and allowing clearing based on the real consumption profile (as compared to SLPs), some of the associated volume and price risk van be eliminated.

European markets in which this barrier has also been indicated

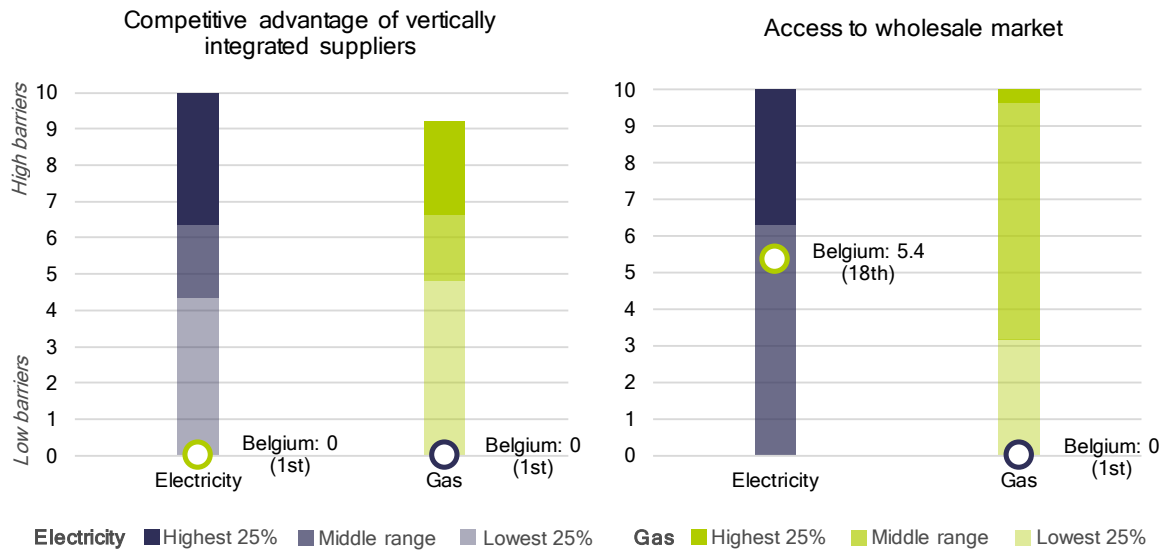
AT BE BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

2.3 Belgium´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 Belgium 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



Belgium is ranked in 1st place with a score of 0 when it comes to the competitive advantage of vertically integrated suppliers in the gas and electricity market. Regarding access to wholesale market, the score is 5.4 for electricity (18th place) and 0 for gas (1st 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[8]:

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 licence. Entrance processes for suppliers often requires commitments such as a minimum standard of customer service obligations, requirements on service quality, to provide financial guarantees or to have a communication system in place.

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

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 Belgium:

- 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

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 "data access & processes" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in Belgium:

- 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 Belgium: Sign-up & operations compliance

High financial requirements (incl. long working capital cycles) and forced risk during operations. In the research this barrier was identified as an issue in Belgium. High financial requirements such as securities and minimum account balances for balancing services and procurement, as well as long working capital cycles, e.g. due to expensive IT infrastructure, can present a barrier due to the amount of capital that must be set aside. This is a challenge especially for small and new retailers. A high level of risk, e.g. non-refusal right of customers, can similarly act as a barrier.

National issue

A 2 month turnover guarantee (by DSOs) in some regions, BRP warranty deposits and warranties for the Spot and Forward markets have been raised by several respondents as a barrier. Furthermore, the obligation to offer a "social tariff" to "protected clients", a minimum contract duration of 3 years in the Brussels region (for household customers) and the risk associated with non-payment of the billed grid fees and a non-refusal right have been pointed out as significant barriers in the market.

Potential solutions

Guarantees, deposits and warranties should be designed in a non-discriminatory and proportionate way, taking the supplier size and the related risk into account.
Obligations which are not in the nature of the competitive market should be moved to the regulated areas or suppliers need to be compensated for any additional effort or risk, arising out of this obligation.
See also "Obligation to collect tariffs unrelated to energy on behalf of others"

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

Excessive reporting requirements during operations. In the research this barrier was raised as an issue in Belgium. Excessive reporting requirements to governmental bodies, the NRA and other market participants cause high administrative and hence infrastructure costs to suppliers. This is a barrier to entry and operation in cases where suppliers cannot see how this reporting is necessary to protect customers or benefit the market and can particularly affect small suppliers.

National issue

The reporting requirements, as determined by the different regulators, have been described as excessive by several respondents. Especially the reporting requirements around social tariffs have been described as time consuming and-system - intensive.

Potential solutions

Additional reporting requirements, which are derived from special obligations such as social tariffs should not cause any additional non-compensated effort.
Furthermore, stronger harmonisation of all reporting requirements throughout the country is 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

Excessive information requirements around billing and energy labelling. In the research this barrier was raised as an issue in Belgium. Excessive billing and labelling information constitutes a barrier when the market participants are required to disclose a disproportionate amount of information on the customer bill, which may be challenging to collect and curate.

National issue

Billing requirements include more than hundred mandatory particulars, which according to some respondents, is considered excessive. Especially in combination with the regional differences as pointed out in "Regional differences or differences between DSOs within a country", this presents a barrier in the market.

Potential solutions

It is recommended to thoroughly analyse the current billing requirements. All information on the bill that does not add any value for the customer can be regarded as disproportionate and should not be required.
A country-wide harmonisation of all billing requirements will further help in eleiminating 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 Belgium. 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

Some respondents raised the issue of complexity in some processes. The processes around offering the "social tariff", the general settlement cycle and the process around stopping the supply after recurring non-payment (in Brussels region) have been specifically pointed out as highly complex. The green certificates scheme is not only country-specific, some market participants also mentioned a lack of harmonisation within the country.

Potential solutions

Need for standardization across Europe of systems and procedures required by the country retail market. When these systems are similar to those required in other markets, suppliers´ investment can be capitalized when expanding to other markets.

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 Belgium. 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

The current market structure consists of 4 regulators, 7 DSOs and with different legislation, regulation and processes in each region, increasing the complexity for suppliers substantially. On top of that, all services have to be provided in the three official languages which further increases this barrier in the market.

Potential solutions

A countrywide standardisation and harmonisation of the processes and the unification of all relevant IT systems will substantially 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
AT	BE		HR			DE	DK		FI	FR	EL									PL		RO			ES		

Unduly burdensome environmental obligations. In the research this barrier was raised as an issue in Belgium. Environmental obligations such as energy efficiency schemes and certificates of origin may present a barrier as they can lead to increased bureaucracy and costs. Such obligations can be perceived as a barrier particularly if their relevance to the market is not clear to suppliers or if their implementation is felt to be unfair.

National issue

Several respondents raised concerns around the green certificates scheme in Belgium. Lack of liquidity on the certificates market and insufficient compensation of the green certificates in case of a social tariff have been specifically mentioned as an issue. Furthermore, the scheme is country- and sometimes region-specific.

Potential solutions

Liquidity for green certificates needs to be high in order to allow small supplier and new entrants to compete with established market participants, which can generate their own certificates via their generation facilities. Also, social tariffs need to incorporate the true cost of green certificates.

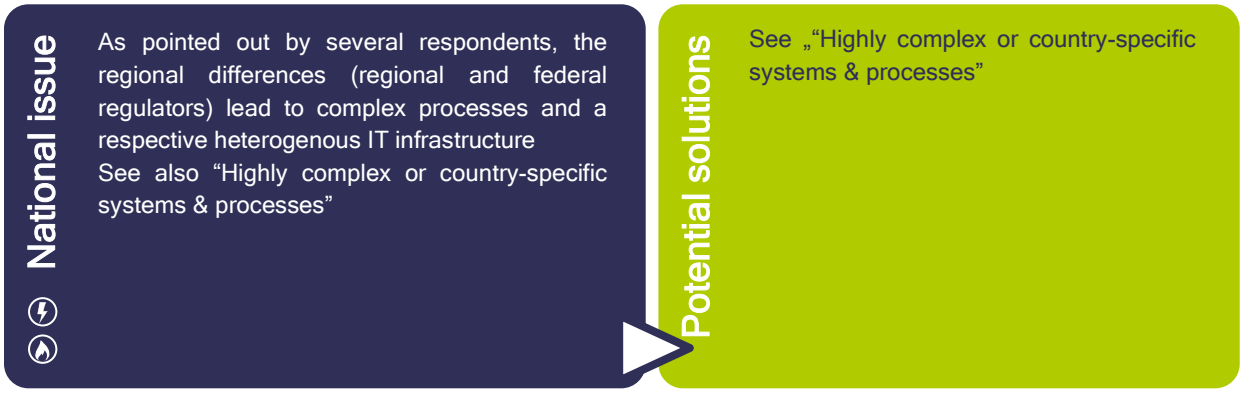
Region-specific schemes are further reducing liquidity in the market and should therefore be harmonised.

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
AT	BE																	NL						SI			UK

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

Complex, heterogenous IT infrastructure and/or low level of digitalisation. In the research this barrier was raised as an issue in Belgium. 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.



European markets in which this barrier has also been indicated

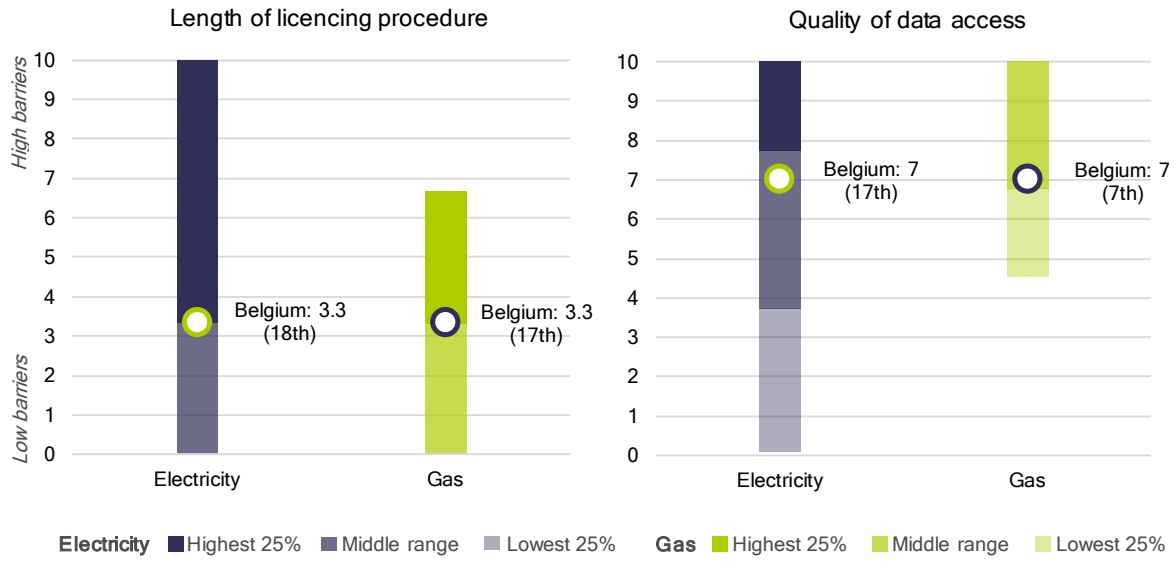
AT **BE** BG HR CY CZ DE DK EE FI FR EL HU IE IT LV LT LU NL NO PL PT RO SK SI ES SE UK

3.3 Belgium´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 Belgium 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 time (months) 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



Belgium's score regarding the length of the licencing procedure is 3.3 for the electricity market (18th place) and 3.3 for the gas market (17th place). Regarding the quality of data access Belgium's score is 7 for electricity (17th place) and 7 for gas (7th place).

4) Customer inertia

Within operational and procedural hindrances, barriers across Europe have been sub-categorised into one area encompassing 6 specific barriers[9]:

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 Belgium:

   - 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 Belgium: Customer orientation

Low customer awareness or interest makes it difficult to attract customers. In the research this barrier was raised as an issue in Belgium. 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.

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

National issue

Although switching rates are relatively high, some respondents raised concerns about the low level of customer awareness regarding customer choice options. "Dis-empowerment" of the consumers by the introduction of public service obligations has been mention specifically.

Potential solutions

Advertising by switching platforms and by suppliers themselves are currently the only observable sources for raising awareness. Further analysis into the root causes of the low level of awareness and lack of information is recommended. Also here, it is very important to distinguish between the regions as some show higher levels of engagement than others (eg..Flemish region according to the latest "Marktmonitor" by VREG).

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

Insufficient price signals for end-users. In the research this barrier was raised as an issue in Belgium. Many factors can mean that market price signals do not reach end users, e.g. small energy component of bill, low energy prices, simplified/estimated settlement, etc. With limited price signals, there is little incentive for customers to engage with the market as they have limited power to bring their costs down, or to see an impact of their behaviour on their bills.

National issue

As pointed out by several market participants, the share of the energy component, compared to the total bill is relatively low (see Market Overview). Therefore, it is difficult for suppliers to make a substantial difference.

Potential solutions

The price signals are mainly derived by the absolute overall price levels as well as by the share on the energy component of the bill. How the potential savings are visualised (relative to the energy component) is key in sending the correct signals, especially when the overall price levels are relatively low.

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

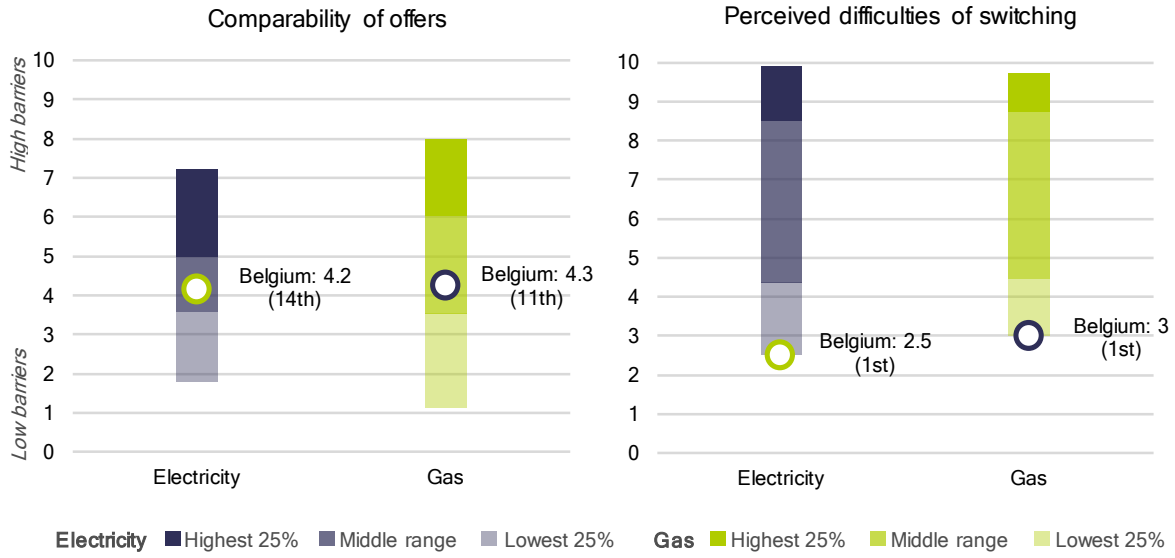
4.2 Belgium´s performance in this barrier category

The following figure shows quantitative indicators of how far customer inertia acts as a barrier in this market. The values for Belgium 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



Belgium's score regarding comparability of offers is 4.2 for the electricity market (14th place) and 4.3 for the gas market (11th place). Regarding perceived difficulties of switching, Belgium's score is 2.5 for electricity (1st place) and 3 for gas (1st 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 Belgium: Other

Small market or customer value. In the research this barrier was raised as an issue in Belgium. A small population and/or low consumption hinders profitability. Market size as a barrier could be ameliorated by better harmonization of markets.

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

FINDINGS & RECOMMENDATIONS

This handbook provides a high-level framework of relevant barriers to entry and operate for energy suppliers into the **Belgian** 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' main concerns relate to "regulatory unpredictability" and "access to innovation".

Several causes for uncertainty have been raised, including the future development of the regulatory framework, and regulatory developments in the field of digitalization and new technology and environmental obligations. 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 have been indicated. Clear guidelines on how to handle data protection; setting a strategic long-term plan for new services about future development around the smart meter rollout and defining clear rules allowing demand response and aggregation to participate in all markets, will help in eliminating the existing 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 "strategic, unfair advantage of vertically integrated market players and lack of transparency". Smaller suppliers do not have as many resources as large ones, and together with complex and expensive procedures this poses a barrier to them. A reduction of complexity would create a level playing field.

"Low liquidity in the wholesale market" as well as "high price or volume risk in energy procurement" have been raised as issues around equal access to and maturity of wholesale market. One source of uncertainty is the nuclear phase out which has to be addressed properly, in order to eliminate this barrier. Increasing the liquidity in the market will also reduce the strategic advantage of market participants which are able to use synergies between upstream and downstream activities.

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”. Due to the regional differences in the country, processes are very diverse and complex. Standardization and harmonisation of those systems and processes would greatly help lowering these barriers for suppliers and make data access and market entry much easier for new suppliers.

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” and “insufficient price signals for end users” have been raised specifically in this category.

APPENDIX 1: PROCESSES

This section describes market processes in energy retail in Belgium. 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

Gathering information prior to market entry

Regulator	TSOs	DSOs	Associations	Fereso
• Comprehensive information on energy market • Information / services for new market entrants • Supplier license • Green electricity quota	• Grid infrastructure • Balancing regime (also in English) • BRP contract • Transport contract (gas)	• Grid tariffs • Grid access and usage (access contract) • (Smart) Metering	• Energy transition, market policy, news • Position Papers	• Info on financial reconciliation process for energy and gas (imbalance settlement party)

Other Authorities	Atrias	Market prices and volumes	Price / Tariff comparison	Energy agencies
• Federal public service (SPF Economy) • Ombudsmen for Energy	• Technical documentation on market processes and communication (DSO level)	• Exchanges (EEX, EPEX Spot Belgium, PEGAS, ZTP, ...)	• Official price comparison tool operated by each regulator • Plenty of private tools (>10)	• Info on regional green certificate systems • Important info source for producers

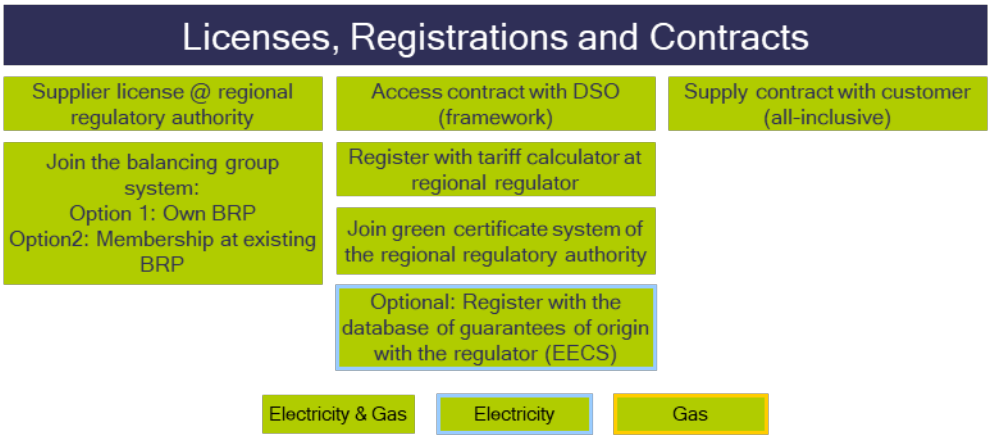
Further comments

- **Main route of information** goes through the regulators and DSOs
- All **regulatory authorities** (federal as well as regional) offer comprehensive information on the Belgium energy market (structure, market players, roles, market statistics etc.)

- For federal energy regulation, **CREG** provides first-hand information (e.g. on TSO grid access and charges, federal supplier licences to serve large / industrial customers, social tariffs, federal levies or public service obligations)
- **Each region in Belgium has its own energy retail regulation[10] and characteristic**. E.g. green electricity certification and quota systems or smart meter rollout are handled differently in each region. A supplier must handle a region as an own energy market – the regional regulatory authorities are the main point of contact
- The regional regulatory authorities provide **information for market entry** (e.g. requirements for supplier licenses and contracts to close). If required complex business cases or questions can be discussed in physical work-meetings
- **TSO** (elia for electricity / fluxys for gas) with information on physical infrastructure, trans-national transport and grid services (e.g. balancing energy).
- **Distribution grids** are operated by fluvius (Flanders), ORES and Resa (Wallonia) and Sibelga (Brussels). They provide information on distribution grid access usage and tariffs. They are also responsible for the smart meter rollout
- The association **FEBEG[11]** represents electricity producers and the traders and suppliers of gas and electricity as well as the laboratories in the electricity and gas sector. On the grid side there is a federation for grid operators (TSO/DSO) named **Synergrid[12]** . They have relevant information on grid access, especially for generators
- Each regulator operates his own **tariff comparison tool** for standard products (residential / SME). Beside there are also more than 10 private price comparison tools on the market
- **Atrias[13]** is a platform, founded by the Belgian DSO's, for consultation between grid operators, suppliers and regional regulator on market processes, standards and data exchange. Technical documentation on market processes and data exchange standards are published on the platform (UMIG - Utility Message Information Guideline)
- For green power production, the energy agencies provide information on registration for the green energy certificates

[10] Energy laws are made on federal as well as on regional level. They are both equally binding for market players
[11] https://www.febeg.be/
[12] http://www.synergrid.be/index.cfm?&language_code=NED
[13] http://www.atrias.be/Pages/Start.aspx

2) Licenses, registration and contracts



Further comments

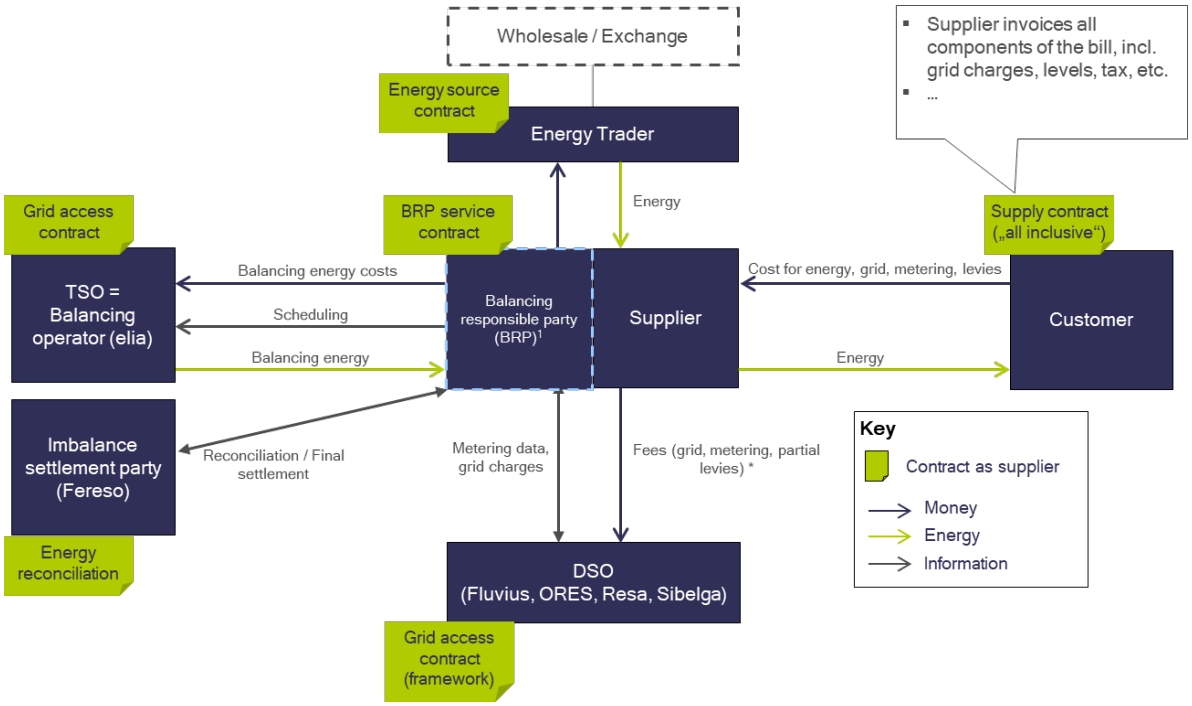
- **Supplier licenses** to serve residential customers and SME are granted by the regional regulatory authorities (VREG, CWaPE, BRUGEL), only valid for the specific region. Regulators proof technical, financial[14] and legal capacities. The process takes around 2 months
- Supplier must **join the balancing system** either as own balancing responsible party (in the gas market equivalent role as shipper) or designate a third party to this effect.
- Each supplier must conclude an **access contract** with the distribution grid operators (**DSO**) in the area or areas where he supplies costumers; this contract also contains implicitly the grid usage agreement of the end customer (customer does not need to sign a separate contract) NOTE: A financial guarantee must be provided to the DSO; the amount depends on the number of customers to be served
- Suppliers must **register at the tariff calculator** of the regulators and provide information on their standard products (Residentials and SME). Only exception is Wallonia, where suppliers are not obliged to send their offers to CWaPE.
- Electricity suppliers must **fulfil a minimum quota of regionally sourced green energy**. Therefore, suppliers must register with the green certificate system of the regional regulatory authorities (create an account). Certificates can be traded but are not interchangeable between the regions. Since May 2019, the region of Wallonia is handling everything around green electricity certification through the Public Service of Wallonia (SPW: Service Public Wallonie).
- If a supplier wants to sell “green” electricity to end customers, he must proof the origin of that electricity with guarantees of origin (GO). Therefore, a registration with the **GO database** of the regional regulatory authority is mandatory. In Wallonia this database is managed not by the regulator, but by the SPW, only the approval of fuel mixes is handled by the regulator CWaPE.

[14] Financial capability requirements vary with business volumes; Different forms of capabilities proofs are accepted, e.g. money, bank guarantee, bail of third party etc.)

Overview of contracts to be closed as electricity supplier:

- DSO- supplier framework contract - agreement that gives suppliers the right to use the distribution network. That access contract is not a contract for each connection individually, but a framework agreement for all customers of a supplier in the territory of the distribution system operator
- TSO- BRP contract – "ARP contract"15 –
- No contract between electricity supplier and TSO needed if only residential / SME customers are served

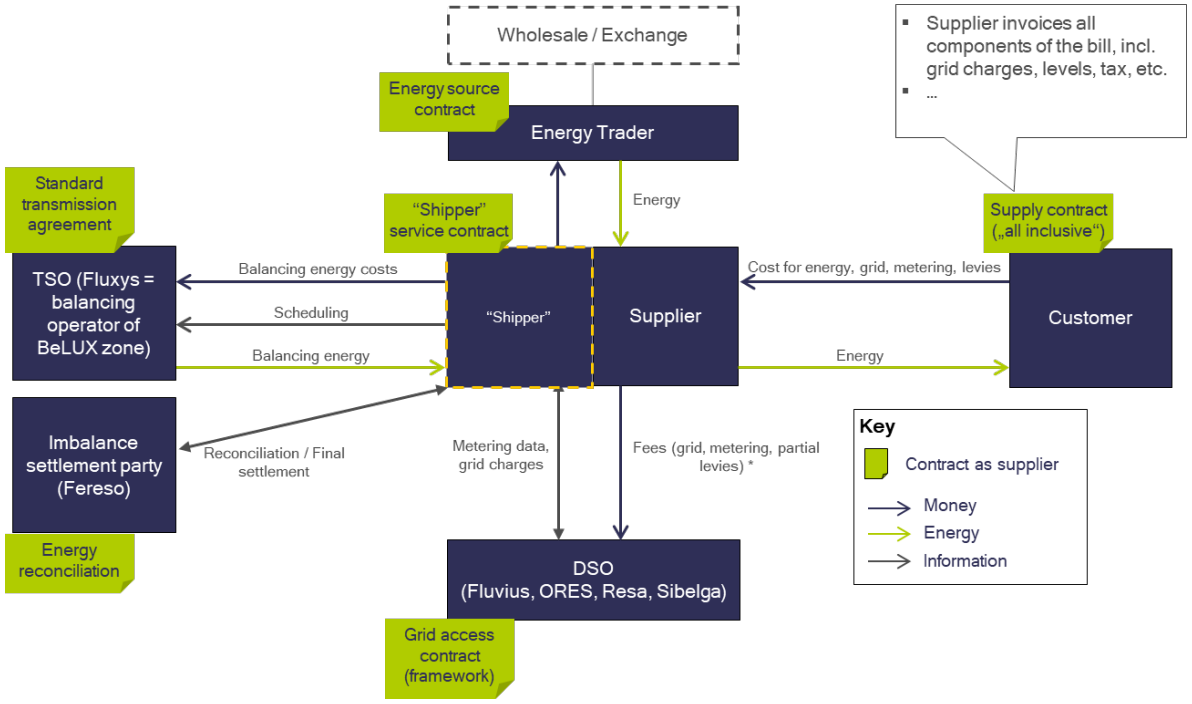
Overview of contracts to be closed as electricity supplier:



The contractual situation is similar on the natural gas side. There is no balancing responsible party, however, the "shipper" plays a comparable role (technically the market works differently).

[15] https://www.elia.be/en/products-and-services/balance/arp-contract

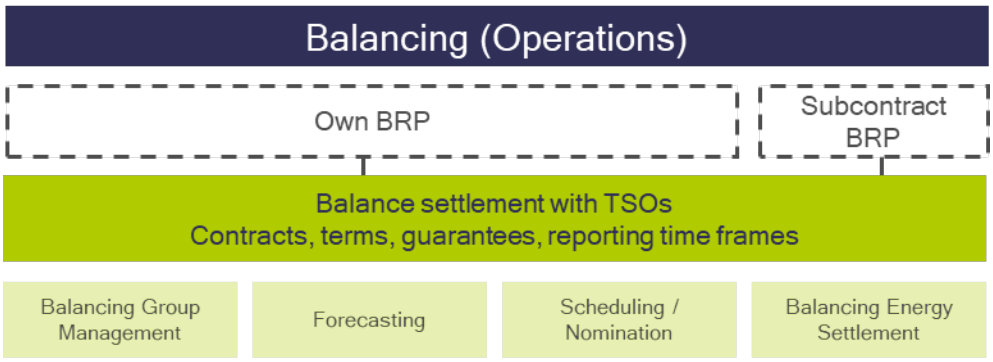
Overview of contracts to be closed as gas supplier:



- Standard transmission agreement[16]

[16] https://www.fluxys.com/en/products-services/empowering-you/terms-conditions/tandc_fluxys-belgium-transmission

3) Establishment & operation of balancing



Further comments

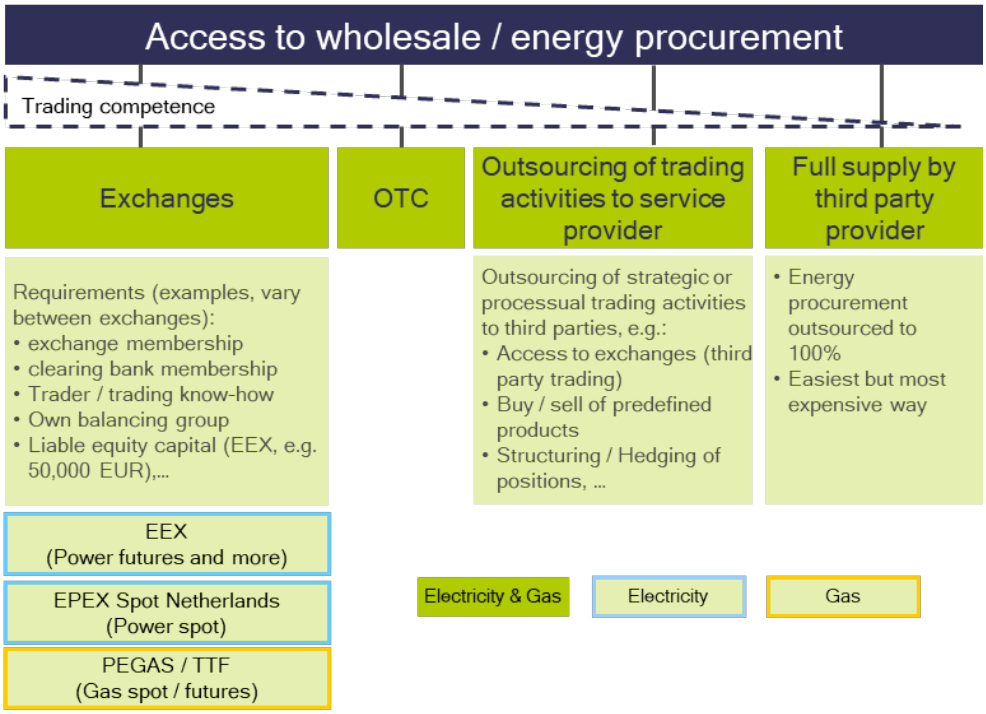
Option 1 (own BRP):

- Elia BRP contract: https://www.elia.be/en/about-elia/publications/Public-Consultation/Archives/Formal-consultation-on-the-draft-proposal-for-the-Balancing-Responsible-party-contract-brp
- General requirements for access the services of fluxys (Gas) are similar. For more information have a look at the contract - Standard transmission agreement

Option 2 – BRP service provider:

- Availability of BRP service provider? Enough choice in the market? (relevant for prices level of service) → there has been a big one in the past, serving 12 small suppliers, who went bankrupt; after that there came a couple of new ones on the market (situation is better now)

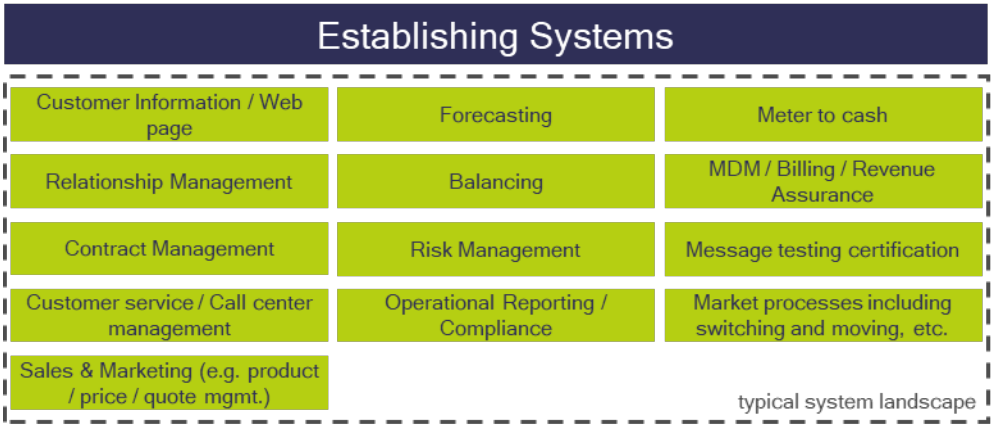
4) Acquiring wholesale / energy procurement



Further comments

- 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

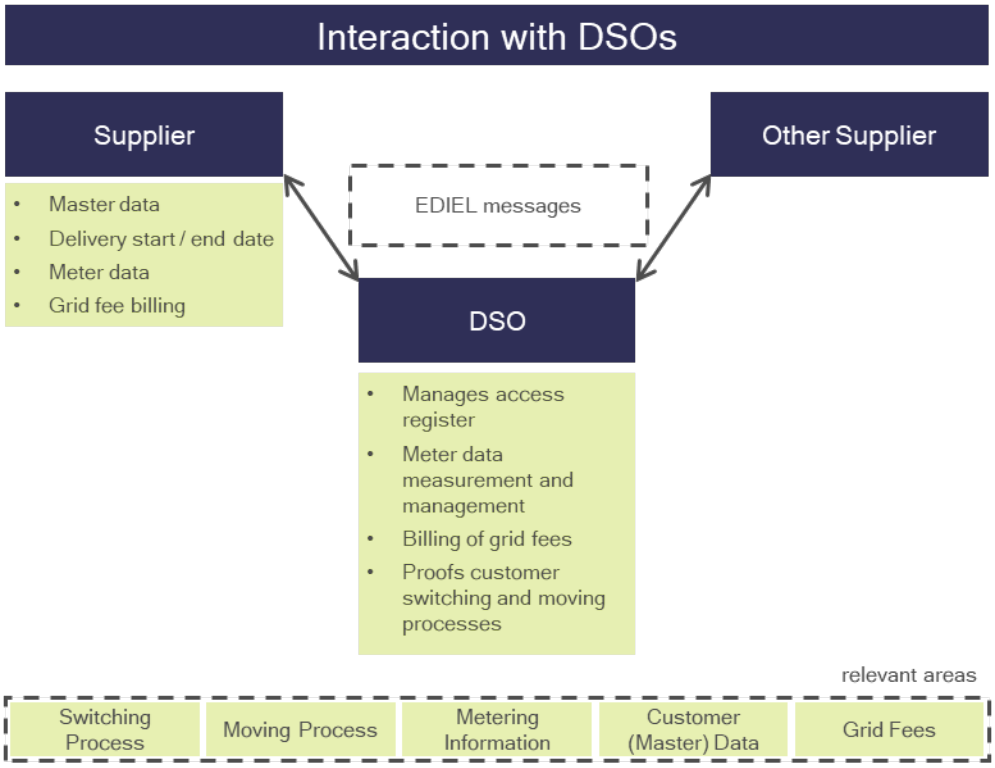
5) Provision of system landscape



Further comments

- In general, there is no obligation to run specific systems in-house everything could be outsourced to third parties
- Data exchange with market players is standardized using UMIG4.1 process standard and data formats. Data communication with DSO and other market players can be done in three ways:
- Integration of communication standards into own IT system
- Contracting an IT service provider for data communication
- Using a web service tool provided by Atrias
- Note: Due to social public obligations there are high reporting obligations suppliers must fulfil towards the regulators. E.g. there is a clear dunning process in Belgium and a supplier must report how many customers are at what step in the dunning process. This causes specific requirements on the CRM system which might not be part of standard CRM tools.

6) DSO related operations / market communication



Further comments

- Business processes and market communication between market actors are standardized and publicly available on the atrias platform (Technical documentation)
- All organization wishing to exchange structured information electronically, will have to adhere to this UMIG, and will have to be certified by Atrias
- **Suppliers mainly communicate with the DSOs** for market processes. The DSOs operate several "clearing houses" which checks and process the received messages and trigger further communication and events
- E.g. switching request is send from the new supplier to the DSO and if the checks are OK the old supplier gets informed and the registry updated
- In 2021 there will be an update in the market model. Market communication / messages will then be handled only by one clearing platform / hub (just the communication, the data will still be stored at the DSOs). Furthermore, modification on the market processes will get implemented (change from UMIG 4.1 to 6.x). Each market party only needs one connection with this platform in order to exchange data with all other utility market parties

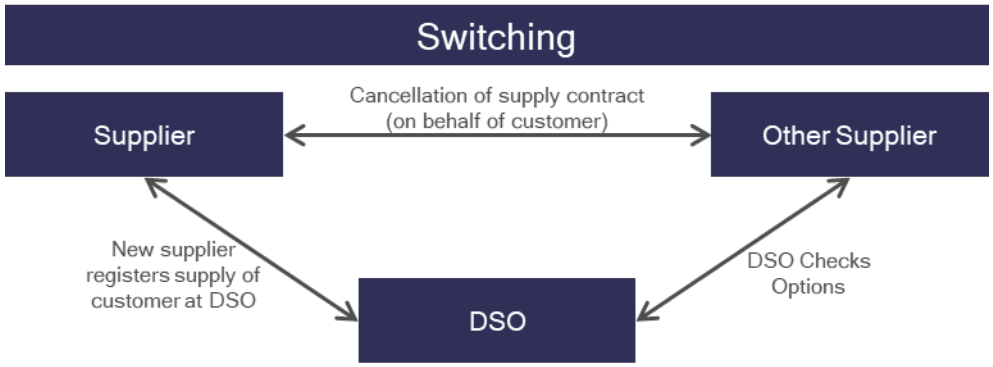
Smart Metering (only general information available):

- Rollout and data processing are managed by DSOs

- Time plans for the rollout differ within the regions of Belgium. Best information are given at the regional regulatory authorities websites

The mass roll-out of smart meters has started in 2019 (in Flanders, Brussels area), which is relatively late compared to the neighboring countries.

7) Customer switching and moving



Moving In	Moving Out	Universal service
• Default supplier would step in if no other contract is signed. • Only upon switching there is a risk of an energy cut-off, when one contract is canceled and no new one is signed	• Standard is that the contract moves to the new address, if possible (supplier serves in that region; there is no active supply contract at the new address, etc.)	• Checking and processing of switches is done by the DSOs (clearing houses). Old supplier cannot block the switch. • Suppliers are not allowed to impose commitment periods to residential customers

Further comments

Switching:

- Residential customers can choose between two contract types:
    - Fixed-term contract (fixed energy prices for a defined period, up to several years)
    - Variable or indexed contracts (monthly fluctuation of energy prices)
- Residentials and SMEs can enter into a new energy contract with a new supplier at any time (cancellation period of 1 month)
- Switching is for free, however, certain discount from the actual contract might get lost (requ. is to stay a full delivery year). Also, annual fees might apply in full height
- The new provider terminates the contract on behalf of the customers
- Popular are fixed priced contracts (only the energy component is fixed) up to 3 years; customers can still switch the supplier at any time

- There is no default supplier when switching. When moving in end customers must conduct a contract with an energy supplier, otherwise a default supplier steps in.

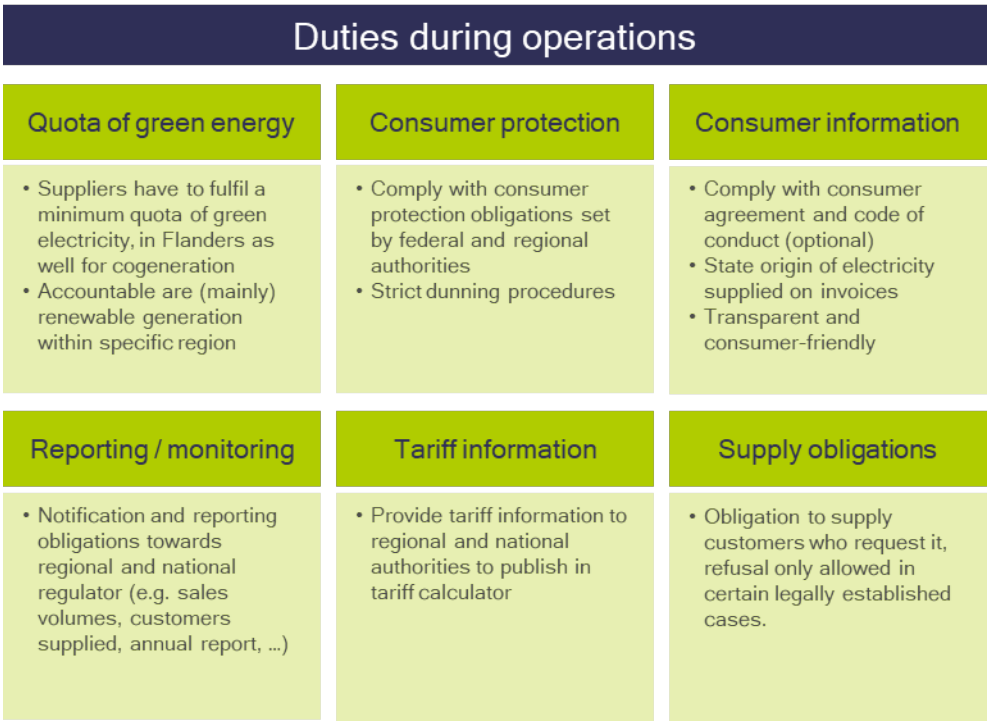
Social tariffs:

- The social rate for electricity and/or natural gas is a reduced rate reserved for certain categories of persons or households.
- The social rate is the same for all energy suppliers and distribution system operators
- CREG sets the amount every 6 months
- The categories of people who qualify for the social tariff are defined by federal law. Additionally there are regional categories, that add up to the federal ones.
- CREG calculates the social tariff based on the lowest commercial rates available on the market and the lowest distribution costs. In addition, there are no fixed costs included in the social tariff. The social tariff is the same for all energy suppliers or distribution system operator

Please note:

- Grid costs and fees differ with region; some surcharges / fees are set by CREG, other by the regional authorities. Also the way they are charged (as part of grid costs or dedicated costs block) varies with the region. Overall it is quite complex

8) Operational obligations / duties



Further comments

Obligations of supplier in terms of communication to the consumer:

- Suppliers are committed to making their invoices clear, legible and understandable.
- Note: The amount of the community levy and calculation method (applied on energy costs or grid charges) varies amongst municipalities need to integrate the different levels into your accounting and billing system if you act in several markets
- Also the invoices contain a lot of mandatory information quite complex for end customer
- The details of their commitments in the field of communication to the consumer are given in Chapter II of the agreement "The consumer in the free market of electricity and gas".

Consumer protection:

- High consumer protection in place – induced in the regional regulation
- E.g. customers cannot be easily cancelled after non-payment. That is only possible if they go through strict dunning procedure
- Procedure details are set by regional regulatory authorities - in particular the payment deadlines, the reminder and formal letter charges, the mandatory notifications, etc.
- In Flanders, a supplier must continue to supply a consumer in default for a period of 105 days and this consumer is then taken over by his distribution system operator = debt risk for supplier
- Comply with consumer agreement
- Optional sign the federal “code of conduct”: protect consumers against possible unlawful practices or misleading information in their relationship with energy suppliers. The obligations of the code of conduct apply to the supplier and its possible sales agents and relate to the information of the consumer and to the conclusion of the agreement for the supply of electricity and / or gas. As a supplier you don’t have to sign it, but it is a proof of quality and therefore a value add for your brand.

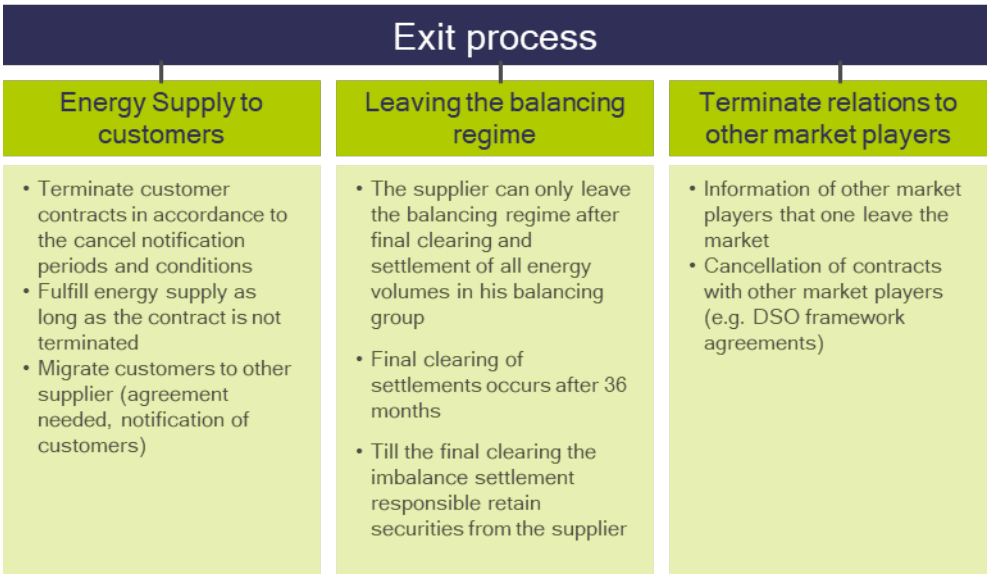
Quota of green electricity

- Already described in process area 1)

Reporting:

- Report certain information on a monthly/quarterly/yearly/ad hoc basis
- Overall reporting obligations seem to be relatively high
- More information are given on the regulatory authorities websites

9) Exit Process



Further comments

- Energy suppliers can leave the market, but they must fulfil 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.

Market insights:

- The year 2018 was characterized by several energy supplier business stoppages (bankruptcy, portfolio transfer, etc.). This difficult market environment had a negative impact on clients' perception of the quality of services
- The VREG grants the delivery licenses for an indefinite period. If checks or mandatory reports from suppliers show that they do not respect the rules and conditions, the VREG can also withdraw the supply license again

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