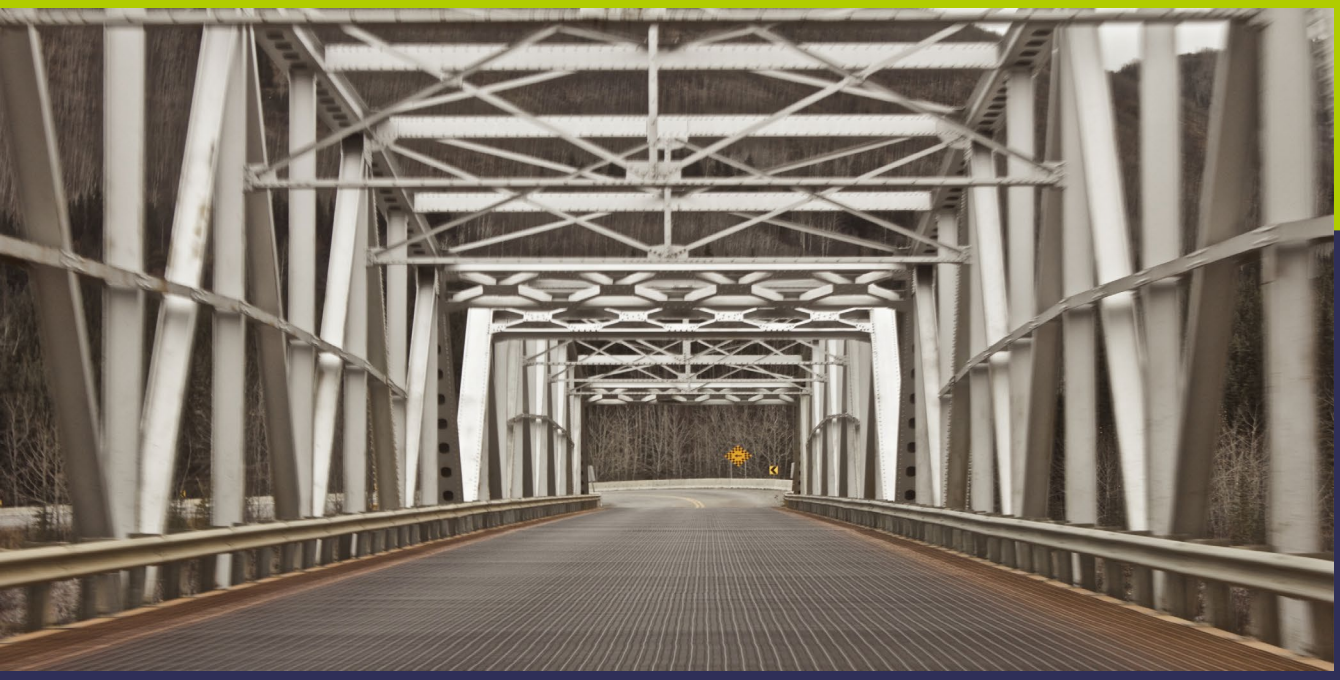
European Commission

# EUROPEAN BARRIERS IN RETAIL ENERGY MARKETS



# BULGARIA
# Country Handbook

Prepared by vaasa ETT REKK MRC CONSULTANTS AND TRANSACTION ADVISERS A member of the MRC Group of Companies THE ADVISORY HOUSE LISTEN-ADVISE-SUCCEED

*Energy*

# EUROPEAN BARRIERS IN RETAIL ENERGY MARKETS PROJECT: Bulgaria Country Handbook

VaasaETT
REKK
MRC
The Advisory House

Contact:
Philip Lewis, VaasaETT, philip.lewis@vaasaett.com
Balazs Felsmann, REKK, balazs.felsmann@rekk.hu
Chema Zabala, MRC, jmlopez@mrc-consultants.com
Florian Hirschbichler, The Advisory House, florian.hirschbichler@advisoryhouse.com

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

# SUMMARY

## Project Outline

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

### The Context

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

### Objective

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

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

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

### Competitor Perspective

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

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

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

### Scope & Scale of Research

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

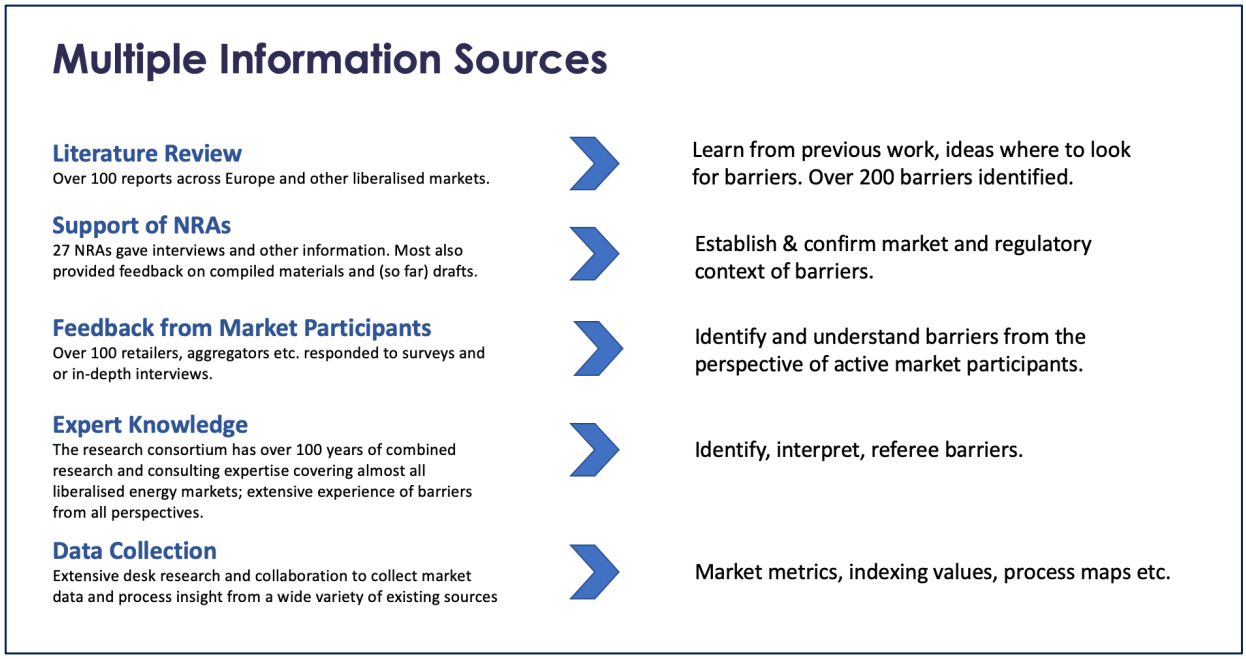

The project focuses on retail (supply), including also demand aggregation services, other additional offerings and new model retail, especially relating to the household segment customers (in some markets households and smaller SMEs may be difficult to distinguish). The project additionally concentrates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

### Sources of Information

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

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

Figure 1 - Multiple Information Sources



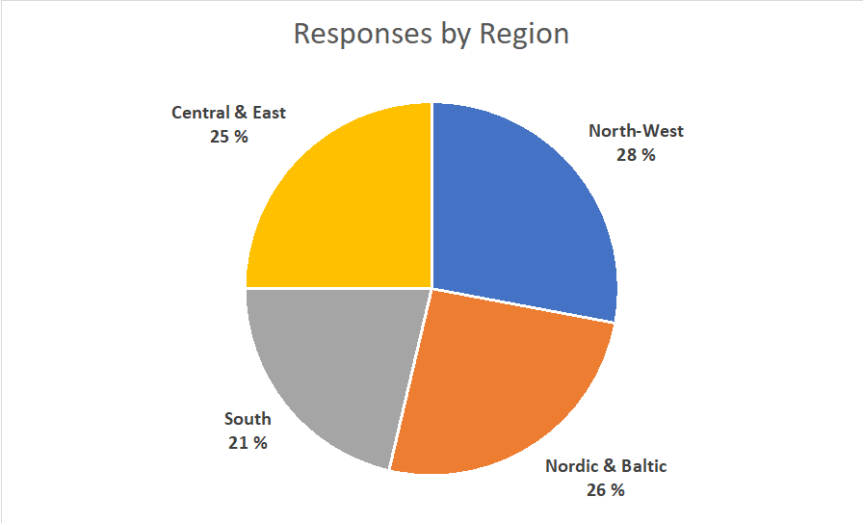

### Surveys & Interviews

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

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

### The Competitor Sample

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




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

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

### Confidentiality

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

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

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

### Deliverables

The project has three key deliverables:

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

### The Barrier Index and Ranking

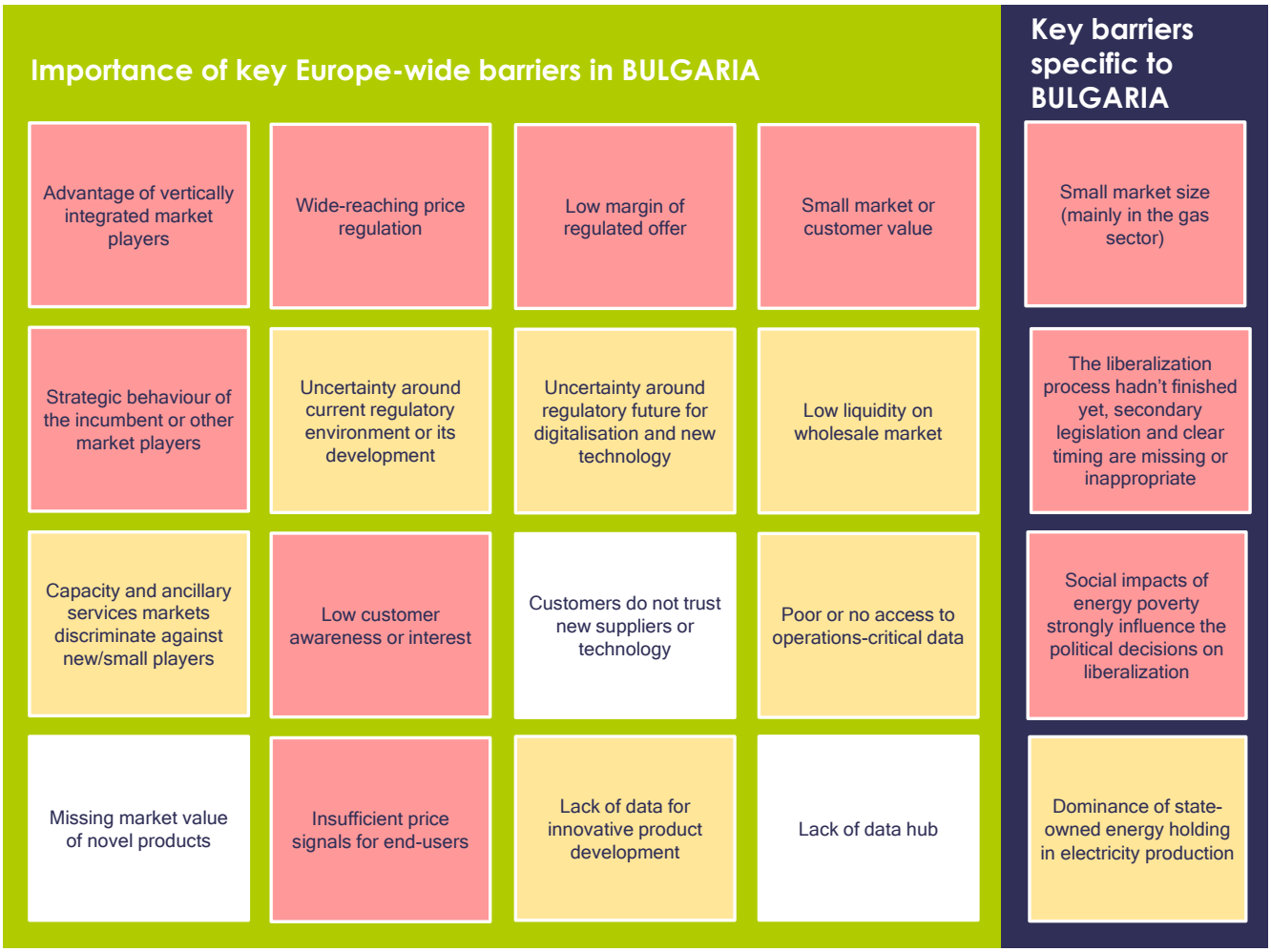
The purpose of the 'European Retail Energy Market Barriers Index' is to enable a degree of comparability between the barriers' context in each of the markets. It is based on metrics that can be collected for all markets, metrics for which available data currently exists. As such it provides a simple,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

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

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

## Key barriers in the Bulgarian market

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



## Key recommendations

- The most prevalent entry barriers in the Bulgarian retail energy markets are associated with the regulation of the end-user prices. The vast majority of households still buys electricity and natural gas in the regulated market. The government declared its commitment to radically change the current price regime and strengthen the free market, but the details of the new legislative framework is still under discussion.
- Households are not interested to shift to the free market, as the regulated market contracts offer lower prices for them. It can be observed a “moving back” tendency to the regulated market from the free market, which shows, that free market prices cannot compete with the low regulated prices. We suggest considering the restrictions to moving back to the regulated market by formerly switched customers and leave this opportunity only for vulnerable consumers.
- The regulated market suppliers have direct bilateral access to the cheaper local electricity production through the state-owned national energy holding company, BEH. Despite the fact, that all other production mandatory need to sell in the organized market (IBEX), the allocation of high proportion of local production to the regulated market reduces the validity of price signals in the energy exchange, decreases the trading volume and gives a portfolio-advantage for the incumbent companies.
- Uncertainty is also a barrier regarding the regulatory landscape for new technologies and innovative services. The legislative framework for such innovative products and services as the demand response or smart metering is still missing.
- The former incumbents still have strong market power and some of them tend to use their integrated market position to make harder the market entry of new competitors. A stricter unbundling regulation (brand unbundling or possibly ownership unbundling) would support the separation of commercial and network activities.
- In case of the further liberalization of the gas sector the main question to answer is the future role of gas in heating system of Bulgarian dwellings. Based on the plans of the National Energy Strategy and the National Energy and Climate Plan it seems, that natural gas will have minor role in the future energy system of the Bulgarian households. Under these circumstances, it is less probable to create an attractive and competitive natural gas retail market.

# MARKET OVERVIEW

## Background

The market liberalization process in Bulgaria began in 2004 during the country's pre-accession period to the European Union. As a first step, the high voltage consumers were required to buy electricity in the free market, then from 2013 this rule was extended for medium voltage consumers. In parallel, Bulgaria decided to privatize the electricity retail companies, which operated in a territorial basis with integrated commercial and distribution services. Although the liberalization in theory allowed the entrance of new market players, market remained highly concentrated and the level of competition remained low. One of the reasons behind was, that three state-owned enterprises (SOE), organized in a holding company – Bulgarian Energy Holding (BEH) supplied around 85% of the power for the liberalized market and were taking advantage of their position[1]. The dominance of state-owned vertically integrated companies (in wholesale and production) differentiates the Bulgarian market liberalization process from the majority of other EU countries. The state-owned enterprises successfully reduced the enthusiasm of political actors to change the status quo in the energy market. European Commission investigated whether BEH may be abusing its dominant market position in the wholesale electricity market in Bulgaria. To address the Commission's concerns, BEH has committed to offer certain volumes of electricity in the day-ahead market of the newly created, independently operated power exchange in Bulgaria.[2]

The liberalization process has been finished by theory in the natural gas market as well, as under the Bulgarian Energy Act, no license is required for natural gas trading. However, the state-owned former incumbent company, Bulgargaz EAD still has dominant market position. Bulgargaz's market share was 98.90% in 2018, while free market trading companies achieved only 1.1%. The share of consumer segments in the Bulgarian gas retail market significantly differs from other EU member states as the Bulgarian households have limited access to the gas network. Household gas consumption is very low, only 3.25% of the country's overall gas consumption. According to data of distribution companies, total number of natural gas customers in 2018 was 107 669, 100 439 (93%) of them households and 7 230 (7%) non-household customers.[3]

The government and the Bulgarian regulator, EWRC made several steps to break down the barriers against of stronger competition. To increase the market liquidity and transparency in the wholesale markets, power plants over 4MW installed capacity have been obliged to sell all generated electricity in the organized power exchange from 2018.

It seems, that state-owned enterprises still have strong influence on political decisions, and they can distort well-functioning free markets. Because of the influence of state-owned companies to the decision-making process, politicians are less interested to take actions against their dominant market position.

## Market structure

In the electricity market ESO EAD is the independent transmission system operator. The company is working as a legally separated unit of the vertically integrated state-owned undertaking.

[1] Staykov, K. (2019): Power Market Liberalization in Bulgaria: A Decade Old Problem
[2] https://ec.europa.eu/commission/presscorner/detail/en/IP_15_6289
[3] EWRC Annual Report to the European Commission, 2018

Four electricity distribution network operators hold licenses for electricity distribution in the respective retail areas:

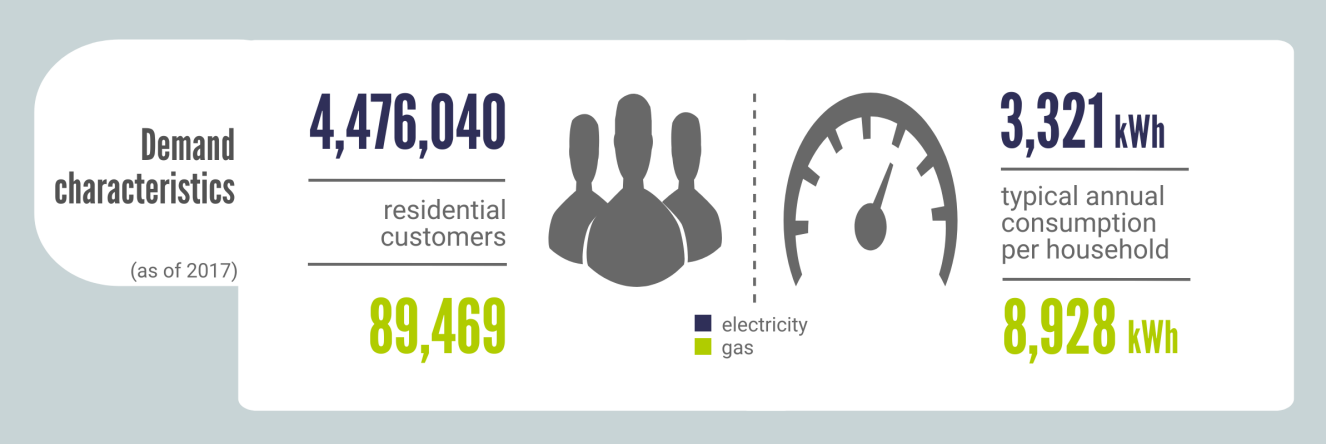
- CEZ Distribution Bulgaria AD operates in the territory of 10 districts in Western Bulgaria;
- Electrodistribution North AD operates in the territory of 9 districts in North Bulgaria;
- Electrodistribution South EAD operates in the territory of 9 districts in South Bulgaria;
- Electrodistribution Zlatni Piasaci AD has a limited geographical area of activity in the region of Varna.

CEZ is the majority shareholder of CEZ Distribution Bulgaria AD with 67% of ownership. Electrodistribution North AD is owned by a Czech private investment firm ENRGO-PRO and Electrodistribution South EAD is owned by the Austrian EVN Group.

Vertically integrated (supply and some small part of generation) undertakings have been established as a result of the 2004 privatization of the three state-owned electricity distribution operators. The retail market is dominated by these energy companies. The market shares within the regulated market segment based on the energy sales to households and industrial consumers are as follows:

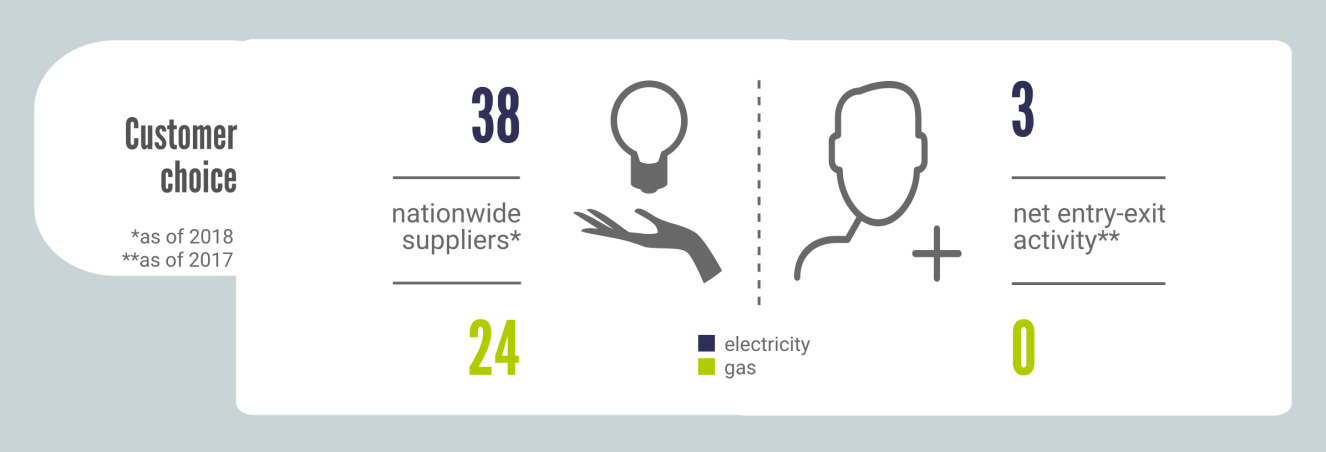
| End Suppliers | 2016 | 2017 | 2018 |
|---|---|---|---|
| CEZ Distribution Bulgaria AD | 40.71% | 40.79% | 40.01% |
| EVN Bulgaria Electricity Supply EAD | 35.24% | 35.83% | 37.19% |
| Energo-Pro Sales AD | 24.05% | 23.38% | 22.81% |

The number of household customers was 4.5 million and the overall electricity consumption of households was 11 TWh. The non-household segment achieved 13 TWh in 2018.




The active suppliers were 36 in 2018 in the household market segment, and 47 in the non-household segment. The relatively big number of suppliers did not result significant decrease in concentration. The three biggest companies' market share was 83% in the household and 70% in the non-household market segment in 2018. The number of new entrants compared to the number of exits reflects the decreasing attractiveness of the market. There were two new entries and six exits in the household market in 2018, while the figures in the non-household segment were 8 and 12 respectively.

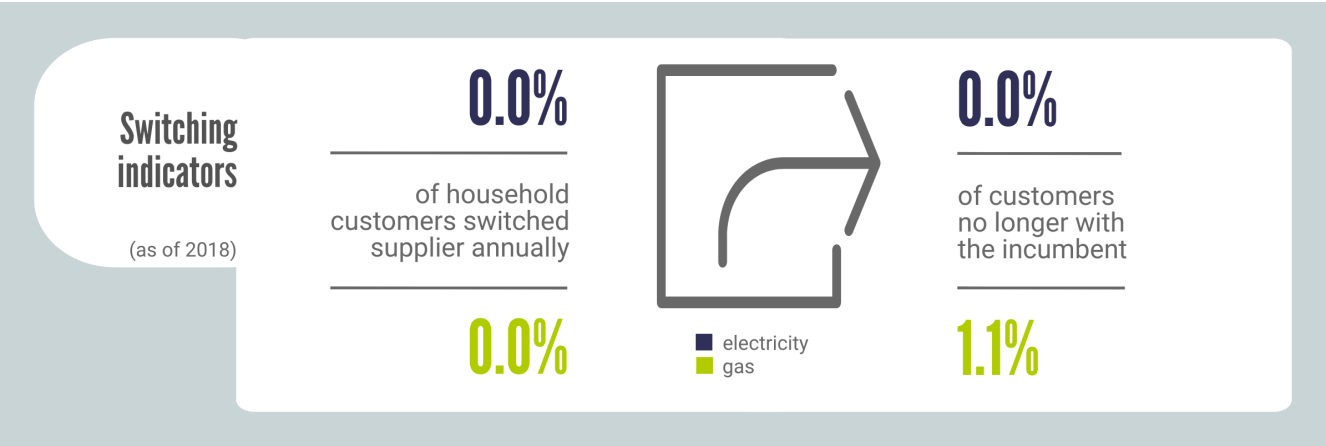
Only a negligible number of households has switched supplier in 2018, the number of switching households in the free market was only 1613, while 1108 households decided to move back to regulated supply from the free market.




Bulgartransgaz EAD acts as the transmission operator in the natural gas market. Bulgartansgaz is owned by Bulgarian Energy Holding EAD as a legally, functionally and financially separated unit. In 2018 the company transported 31 932 GWh natural gas from imports and local production, for domestic customers and export.

The public provider Bulgargaz EAD sells natural gas at regulated prices and its share in the natural gas sale in 2018 was 98.90%. The remaining 1.10% was realized by free market suppliers. At the end of 2018 there were 24 territorial distribution system operators in Bulgaria and they covered the territory of 172 municipalities. 9 of the above companies operated local grids without connection to the transmission network.

Natural gas has very limited role in the household market segment. Household gas consumption was only 3.25% of the overall 32 TWh domestic market in 2018. The number of gas-using households slightly increased up to 108 thousand in 2018 from the level of less than 90 thousand in 2016, but this amount is still very low in comparison to the population. This situation is one of the main causes that the Bulgarian gas retail market is still unattractive for new entrants.




The regulatory framework significantly has changed in Bulgaria recent years. For households and other eligible customers (public institutions, micro-enterprises) regulated price is still exists, but there are free market alternatives of the regulated offers. The number of suppliers is relatively high, both in electricity and gas market, but from retail point of view the competition is still missing or achieved very limited level.

## Political and regulatory orientation

Bulgaria as a new member of the European Union has signed a set of binding commitments: to reduce the country's greenhouse gas emissions, increase the share of renewable energy sources and reduce energy intensity. The Bulgarian Parliament approved the country's energy strategy in 2008, which reflected the country's EU accession. The document has set goals for the energy sector until 2020. The strategy was planned to achieve a more effective and transparent coordination between institutions, market entities and planned to harmonize the relevant strategic documents.

In 2018 the Parliament approved some amendments to the strategic document. The main reasons for having these amendments were to ensure the stability of the country's gas supply over the coming years. The amendments and supplements are included in the new chapter: "Ensuring the Security of Delivery; Ensuring Operating and Competitive Market of Natural Gas and the Development of the Gas Supply Network". The focus is on the organization of a gas exchange market, facilitated by the establishment of a gas hub, and the building of the necessary gas transmitting infrastructure allowing Bulgaria's connectivity to natural gas markets of the countries in the region and beyond[4].

To make the gas retail market more attractive the first thing is to decide on policy level the future role of natural gas. The National Energy and Climate Plan of Bulgaria declares only modest plans for the gas sector development. It foresees heavy utilization of biomass mainly for household heating purposes which reduces the opportunities to extend the gas distribution network.

Bulgarian government declared to continue the market liberalization and phase out the fixed prices on the regulated market, which are determined by the Energy and Water Regulatory Commission.

## Regulatory market characteristics

Prices on the regulated segment are set by the regulator – Energy and Water Regulatory Commission (EWRC).

The Bulgarian market consists of three groups of suppliers:

- Supplier of last resort (SLR) – a supplier that guarantees the universal service provision as a last resort in accordance with a license obtained from EWRC.
- End supplier (ES) of electricity - supplies low voltage electricity to cites of household and non-household end consumers connected to the electricity distribution network at regulated prices determined by EWRC.
- Free market supplier - a trader who supplies electricity to household and non-household customers at prices based on demand and supply.

Customers in the free segment can choose their electricity supplier regardless of their geographical location.

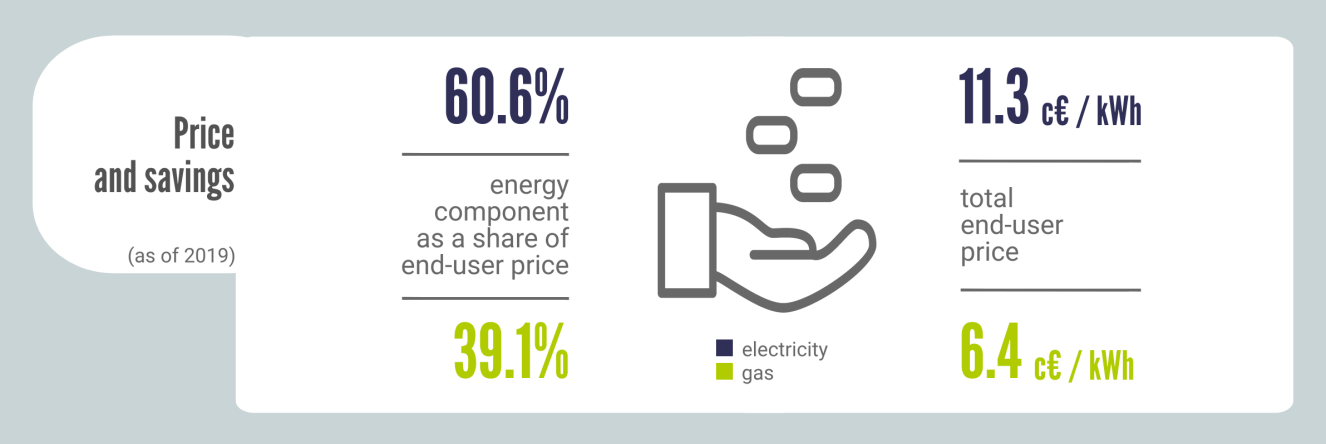
In the pricing decisions over the period, EWRC implemented a balanced approach to prevent sharp price changes. Regulated market electricity prices increased by an average of 2.03% in 2018.

Under the Energy Act, no license is required for the activity of "natural gas trade", thus legally the natural gas trade market is fully open. But in fact, partly because of the insignificant level gas consumption of the households (only 3.25 % of the total gas consumption of Bulgaria) and partly because of the insufficient level of competition, there

[4] https://www.cms-lawnow.com/ealerts/2018/11/bulgaria-updates-its-energy-strategy-in-push-towards-further-oil-and-gas-investments

were no household or non-household customers connected to gas distribution networks that had switched their natural gas supplier at the end of 2018.

EWRC applies a regulatory mechanism, which ensures incentives for the natural gas distribution enterprises to continue the development of the networks and the connection of new consumers aiming the increase of consumption. One of the incentives enhancing market competition is that EWRC approves marginal prices for the gas sale and the gas distribution companies have the right to sell to consumers at prices lower than the approved, which promotes market competition.[5]




## Other market characteristics

Wholesale market

Independent Bulgarian energy exchange was established in January 2014 as 100% subsidiary of Bulgarian Energy Holding. The real operation of the exchanges started in January 2016 with the launch of the Day-ahead market. IBEX is currently owned by the Bulgarian Stock Exchange that is a sole owner of the capital.

The Bulgarian power exchange is a monopoly platform operating major part of the power market in the country. According to the Energy Act only one license can be issued for organizing a power exchange in Bulgaria. IBEX is the obligatory channel through which generators with installed capacity of 1 MW or more have to sell their electricity. IBEX operates 3 trading platforms – Day-ahead Market, Intraday Market and Centralized market for bilateral contracts.[6]

Smart meters

Bulgaria is one of the lagging countries of the smart meters' deployment in the whole EU. The missing retail competition and the politically driven household energy tariffs are challenging the business viability of investments into smart meters. In the absence of real time consumption and electricity prices for consumers and only limited availability of time of use rates for households, public organizations and business consumers, the possibility of exploiting demand response opportunities is presently quite limited.

[5] EWRC Annual Report 2019
[6] the homepage of ATEB (Association of Traders with Electricity in Bulgaria)

## Context for aggregation/demand response

The Balancing Electricity Market was established in Bulgaria in.2014 as part of market liberalization. The balancing energy market is dominated by a few – mainly state owned - power plants. Main players in the power sector are NEK, part of the state-owned Bulgarian Energy Holding and owner of 80% of all hydro power plants in Bulgaria, historically last resort supplier and also, coordinator of special balancing energy groups.

The Bulgarian National Energy Efficiency Action Plan targeted to set the electricity transmission and distribution tariffs to ensure the inclusion of demand response in market balancing and in the provision of additional services. The legislation provides for the introduction of dynamic tariffs as a measure for the final clients to optimise their electricity use by means of:

1. tariffs that take into account the period in which energy is used;
2. tariffs for the critical peak-load periods;
3. pricing in real time;
4. discounts for reducing the use of energy during peak-load periods.[7]

Although the legal framework offers the opportunity for industrial consumers to participate in balancing service markets, there are only a few examples of this due to the low incentives. In case of households, both the technical capabilities and incentives are still missing.

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

# BARRIERS

The European Barriers to Entry and Competition in Retail Energy Markets project has researched barriers across 30 European markets. From this research four over-arching pan-European categories of barriers have emerged:

**Over-arching pan-European barrier blocks**

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

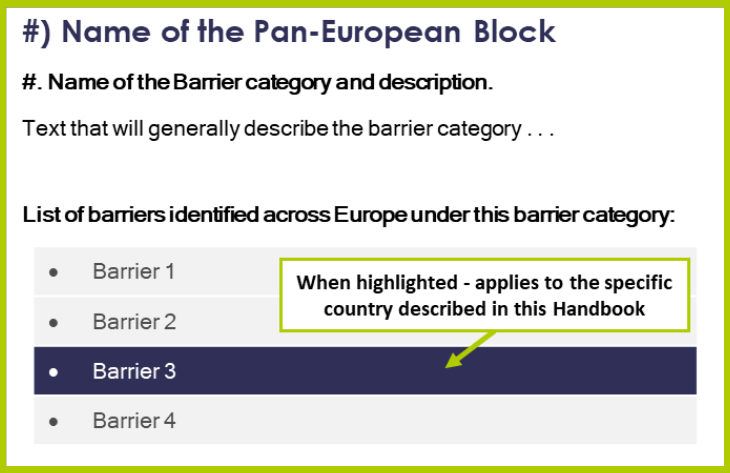
**Description of the four-over-arching pan-European barrier blocks:**

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 Bulgarian case as reported in the following chapters of this handbook.

# HOW TO READ AND INTERPRET THE FOLLOWING SECTIONS

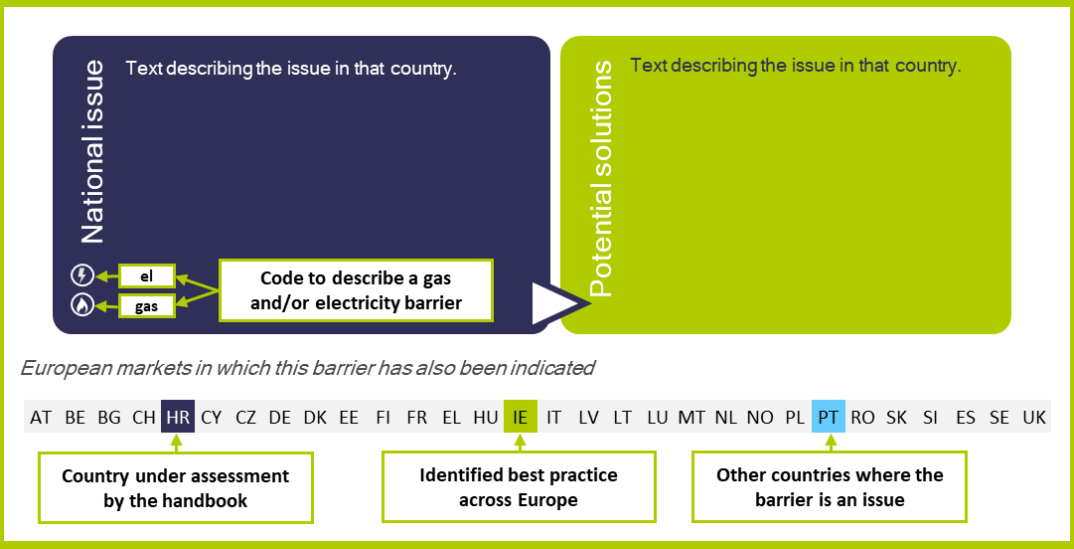
Each of the following four chapters explores one of the four pan-European blocks of barriers and report how each sub-category barrier apply to Bulgaria. When a barrier applies to Bulgaria, it will be highlighted in the table following a general description of the barrier itself as shown in the example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

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[8]:

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.
   According to CEER[9], 14 European countries out of 27 answering a recent CEER survey have price intervention in electricity for household consumers. 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. 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 Bulgaria:

   - 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. Barriers related to burden(-sharing) detected in this study are as follows:

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

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

[8] Please note: these definitions are Europe focused, not Bulgaria specific. Highlighted barriers have been identified as country specific.
[9] Monitoring Report on the Performance of European Retail Markets in 2018. CEER Report 4 November 2019.

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. The following barriers related to unpredictability of regulatory framework were detected in this study. Those highlighted in blue have been raised, indicated or identified as barriers in Bulgaria:

- 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, regulations must accommodate future developments on the energy markets, especially considering that in the future new entrants may not only be electricity and gas suppliers but also act as aggregators or energy service companies (ESCOs). Across Europe, the following specific barriers related to "innovation-friendliness" were detected by this study. Those highlighted in blue have been raised, indicated or identified as barriers in Bulgaria:

- 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 Bulgaria: Price regulation

**Price regulation discriminates against certain suppliers.** From our studies of this market[10] it is clear, that the current price system in Bulgaria (flexible prices on the liberalized market and fixed prices on the regulated market) would pose a barrier, as it limits the competition in the regulated market segment. The part of the market eligible for regulated prices is not contestable for a new entrant. Price-regulated markets can be explicitly discriminatory if they only allow one (or few) market participant to serve price-regulated customers. The level of discrimination depends on the specific design of the country regulation. For instance, by only allowing the incumbent suppliers to offer the regulated price to a specific customer segment, other market participants are per se excluded from this market.

**National issue**

Bulgaria remained one of the last countries in the EU without a fully liberalized market. In 2018, there were still two types of electricity prices in use: flexible prices on the liberalized market and fixed prices on the regulated market, which are determined by EWRC.
In gas sector the state-owned supplier has a close to 100% market share in household segment. The household gas market is very small portion of the overall consumption.

**Potential solutions**

Possibly from the next regulatory period (at the earliest in mid-2020), Bulgaria will move towards full liberalization of the electricity market by introducing market prices for small consumers. The newly announced changes in the regulation would overcome the issues regarding price regulation.

*European markets in which this barrier has also been indicated*

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**High penetration of price regulation.** From our studies of this market it is clear, that the penetration of price regulation is very high in Bulgaria. The vast majority of households is served by former incumbents. The share of the regulated prices in the household electricity retail segment is over 83% and 100% in the gas market. Respondents and related studies raised this as a barrier. The regulated market segment is not (or only partly) contestable for a new entrant. Consumers that have access to regulated services are extremely difficult to reach with competitive offers. If this market segment is big, i.e., price regulation has high penetration, only a small part of the market (generally non-household customers) is contestable. Price regulation maintains the old structure of the market, where consumers do not face risks and do not have to care about comparing offers and choosing a supplier. Price regulation keeps the market in an immature phase where neither consumers nor suppliers can learn how a competitive market works.

[10] As we got only a few responses from Bulgaria to our survey, we took our position based on other sources (such as articles, reviews, expert reports) besides the questionnaire.

**National issue**

Price regulation persist in the electricity and gas market as well. Prices on the regulated segment are set by the regulator - Energy and Water Regulatory Commission (EWRC); consumers are supplied by the end suppliers on a territorial basis. In theory, all Bulgarian companies and households have the right to purchase electricity from the liberalized market, but in fact, it is very difficult for consumers to buy electricity on the free market.

**Potential solutions**

A phase out plan for regulated electricity market and the introduction of market conditions for households would support the retail market competition. Based on the latest communication of the government, Bulgaria will consider introducing market conditions for households from mid of 2020 at the earliest.

*European markets in which this barrier has also been indicated*

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

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

**Low margin of regulated offer (margin squeeze).** From our studies of this market it can be concluded that the mark-up of the regulated price is very low in Bulgaria. Moreover, our respondents raised this as a barrier. In 2018 there was a tendency of returning to the regulated market for a significant number of customers because of the lower regulated prices.

It is common across Europe that price regulation sets the regulated price to a defined level and allows all market participants to serve customers within this regulated segment. However, this can create a barrier in the market if the regulated price is set to such a low level that only companies that can benefit of economies of scale are able to generate a sustainable margin. All other market participants will be confronted with a margin squeeze, making it very difficult to compete. The greater the size of the regulated customer segment the stronger the barrier, as it reduces the contestable part of the market for smaller players. Furthermore, a lack of transparency in the pricing mechanism increases the barrier by making it difficult for market players to anticipate the regulated price and price against it.

**National issue**

The Bulgarian mark ups in the household segment are significantly below the EU average level. The 2018 data of "number of customers moved from free to regulated market (at regulated prices)" indicates an unfavourable trend which, if persisting in the coming years, could hamper further retail market liberalization.

**Potential solutions**

The application of regulated tariffs exclusively to the vulnerable consumers can significantly decrease the market impacts of the price regulation.

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**SPANISH BEST PRACTICE CASE: Low margin of regulated offer.**

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

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

No barriers have been detected or mentioned by the respondents of our survey related to this topic in Bulgaria.

## 1.3 Description of regulatory disincentivisation barriers in Bulgaria: Regulatory unpredictability

**Suppliers face uncertainty because of a newly liberalized regulatory environment or uncertain future development of the regulatory framework.** Based on our analysis we raised this as a barrier in Bulgaria. In general, 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. Although in theory the Bulgarian

legislation allows to enter to the electricity market by free market companies, under the current price regulation the market-driven contracts can't be attractive in comparison to the regulated offers.

**National issue**

The deadline of implementation of an entire deregulation of electricity prices is still not clear. The detailed definitions of energy poverty and vulnerable consumers are still missing. The is an opportunity to moving back to the regulated market segment for households and non-household consumers, which supports the status quo.

**Potential solutions**

In general, the increasing independency of the regulator can enhance predictability on the market. A public debate about the potential ways of vulnerable consumers would be helpful for the adequate decision-making process.

*European markets in which this barrier has also been indicated*

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**Uncertainty caused by industry actors influencing legislation, e.g. incumbent or associations shape legislation.** In the research this barrier was raised as an issue in Bulgaria. While cooperation between authorities and market actors is essential for functioning and lasting market developments, industry bodies or actors may be given too much power to shape legislation, allowing the legislation to be shaped for the benefit of these actors to the detriment of other actors or customers or market competitiveness. This also increases uncertainty for market players around what the legislation will look like when complete. The case of BEH, the state-owned producer illustrates well the problem in Bulgaria. BEH unilaterally allocated financial costs for imbalances to the renewable producers and altered the forecast schedules. The Bulgarian competition authority (CPC) penalized the company for abuse of dominance on balancing market.

**National issue**

The state-owned enterprises and the former incumbents successfully reduced the enthusiasm of political actors to change the status quo in the energy market. The competition analyses have proved that the electricity trade is liberalized mainly on paper and considerable scope for abuses of market power by the dominant position operators still remain.

**Potential solutions**

The increase of independence of regulators (CPC and EWRC) and better coordination of them can support the continuation of market liberalization process. The proactive monitoring and the combination of ex ante and ex post measures would decrease the shortcomings of the liberalization.

*European markets in which this barrier has also been indicated*

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**Uncertainty regarding future regulatory developments, especially in the field of digitalisation and new technology.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. New technological advances require regulatory frameworks in order to be fully rolled out without excessive business risk for suppliers. Smart meter rollout targets, progress and associated rights and obligations can be a main source of uncertainty. Also,

regulatory uncertainty regarding the future of demand response aggregation or other novel services can hinder investment/innovation in these areas.


*European markets in which this barrier has also been indicated*

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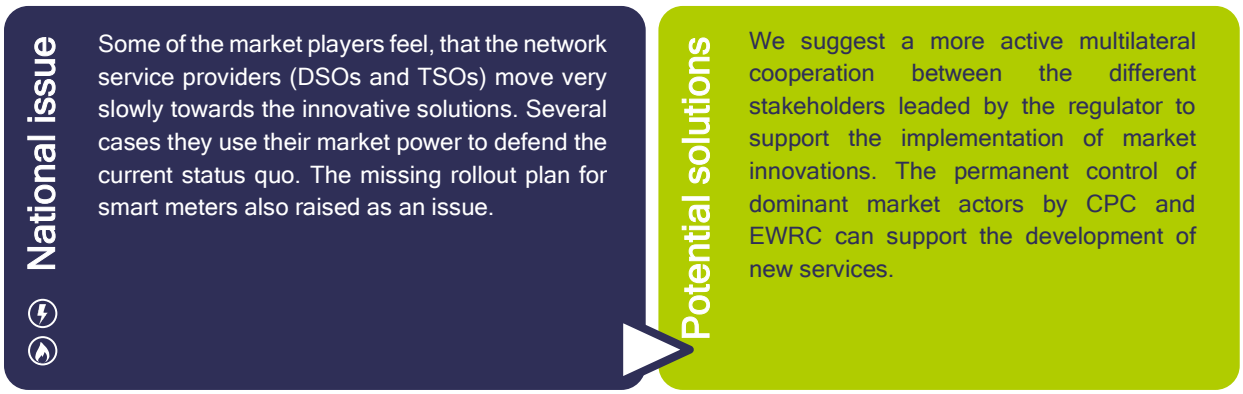
## 1.4 Description of regulatory disincentivisation barriers in Bulgaria: Access to innovation

**Lack of incentivisation for novel pilot projects or post-pilot market rollout.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. Lack of financial incentives as well as missing technical support can be a major barrier for conducting pilots in DR and other novel technologies, as the piloting firm then bears all the risk for this experimental work. Projects started as pilots may even be tied by explicit conditions that they cannot remain on market after the completion of the pilot. This discourages participation, as there is no immediate commercial reward. The small market size, the dominance of the state-owned producers and discriminative practices in balancing and ancillary services slow the development of innovations.




*European markets in which this barrier has also been indicated*

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**FINLAND BEST PRACTICE CASE: Incentivizing novel projects**

Finland was raised by respondents as the best example among the Nordic countries of authorities encouraging pilot projects in novel services/products. The high opinion was mainly due to the practice of encouraging post-market roll-out of the service/product upon project completion. This raises market players' confidence that the authorities take seriously the need for integrating novel players into the system, and the potential for soon becoming commercially active naturally acts as a strong attraction for companies to get involved in such pilots. Encouraging participation in this way benefits the energy system by making it more likely that projects and players providing crucial new developments will be found. Under the Finnish approach, with good opportunities for suppliers to cooperate with the TSO, flexibility development happens through pilots. Indeed, Finland's energy system is felt to be the most conducive

**Lack of data for innovative product development.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. Smart meters open up opportunities for novel demand-side and aggregation services that rely on almost real-time consumption data to be able to match grid requirements and balancing product bids. Aggregators must be able to access customers and their data independently of suppliers, who in effect constitute a competitor for the DR provider/aggregator.

**National issue**

Several potential barriers detected here, such as the missing or low quality of metering data from DSOs in case of low voltage consumers.

**Potential solutions**

Data standardization and harmonization of the DSO specific processes can reduce the entry barriers. We suggest to deeply focus on the data exchange and harmonization issues within the planned timeframe of household market liberalization.

*European markets in which this barrier has also been indicated*

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**No fit between new business models and existing regulation/obligations.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. 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. Regulatory 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**

The current legislation does not provide enough clarity regarding the introduction of new business models and technology. Aggregated demand response or smart metering are one of the most important fields where these problems occur.

**Potential solutions**

If legislation focuses on innovative products and business models not just on the strategical level but considering implementation as well, it may reduce this entry barrier.

*European markets in which this barrier has also been indicated*

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**Missing flexibility in tariff structures.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. Tariff structures' potential to be flexible is a main driver of demand flexibility as it allows the design of incentive-based tariffs with several Time-Of-Use tariff zones, encouraging customers to consume when it is cheaper. This is true for grid as well as energy components. Rigid or flat structures, which are defined by regulation, hinder new and innovative demand-shifting offerings on the market.

**National issue**

The dominance of regulated prices for households reduces the opportunity of free market supplier to offer an incentive alternative tariff structure for this market segment.

**Potential solutions**

It is a possibility to change grid tariff regulation in a direction that allows flexibility, by reducing the share of the grid component or other fixed price elements in the final tariff.

*European markets in which this barrier has also been indicated*

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**LATVIAN BEST PRACTICE CASE: Grid tariff flexibility**

Inflexible tariffs can **no longer pose a barrier** to innovative products in Latvia, as recent regulatory changes enabled networks to charge more dynamically for distribution. In 2016 **differentiated distribution tariffs** were introduced for electricity market, which have been shown to **reduce end-user costs**. In 2019 differentiated distribution tariffs were introduced in natural gas market. Through these tariffs, end users are incentivised to decrease their connection capacities if appropriate, reducing their distribution costs and freeing up system capacity both for security and

**Market structures does not incentivize novel products (missing perceived value).** From our studies of this market, it appears that this would pose a barrier in Bulgaria. Without an existing demand and/or mindset for novel services

such as DR, new entrants face the barrier of establishing the entire market before they can act in it. A low level of perceived value can due to a technology lag, customers' being unaware or not incentivized, or little competition between traditional suppliers resulting in little need for suppliers to innovate/differentiate. The dominance of former incumbents (vertically integrated undertakings) in the market reduces the opportunities of new entrants to offer innovative new products and services. In case of the gas market in Bulgaria the size of the household gas market seems also a barrier to new market-driven innovations.

**National issue**

the Bulgarian electricity market is dominated by former vertically integrated territorial service providers. The de facto competition in the household segment is still missing. This situation conserves the current service structures and reduces the opportunities to offer innovative solutions for a wide range of consumers.
The share of households in gas market negligible, so the economic incentives are missing to implement new innovations.

**Potential solutions**

The cooperation between regulators and network companies can help to adapt more incentive framework for small producers and consumers to participate in balancing and other system services.

*European markets in which this barrier has also been indicated*

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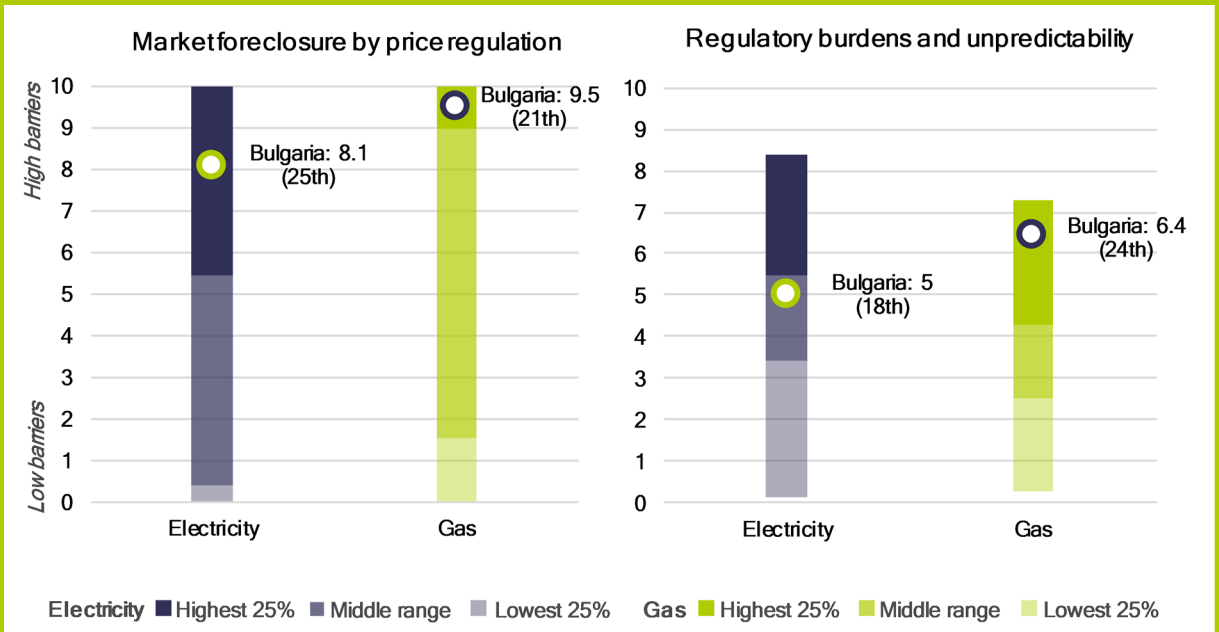
## 1.5 Bulgaria's performance in this barrier category

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

- **Market foreclosure by price regulation:** The index consists of two sub-indicators, the penetration of price regulation (among residual customers), and the mark-up of the regulated offer. A high score is attributed if the high share of the customers is supplied at regulated price, 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 reflect the non-energy share of the energy bill in an average household, which are regulated (taxes, network fees). Regulatory unpredictability was measured via the related question in the supplier survey conducted for this project. A high score is attributed if the share of the non-energy elements is high, and if survey respondents scored the question highly (as an important barrier).

**Performance indicators**




Performance indicators shows high or medium barriers in every category for Bulgaria. Although by theory Bulgarian companies and households can buy electricity in the liberalized market as well, in reality, there are very limited opportunities to shift from the regulated to the free-market segment for households, because of the artificially low regulated tariffs.

In case of the gas sector, the size of the household market segment is too small for a competitive gas market. As the planned development of the household heating systems focuses more on biomass and other renewables, rather than gas, the potential increase of household gas consumption is limited.

The high share of regulated segment for household customers both in the electricity and natural gas sector, and the low margin of the regulated tariff resulted a relatively low overall result for Bulgaria in this index component.

## 2) Market inequality

Within market inequality, barriers across Europe have been sub-categorised into two areas encompassing 8 specific barriers[11]:

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 around "unbundling and market power" were detected in this study:

   - 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.

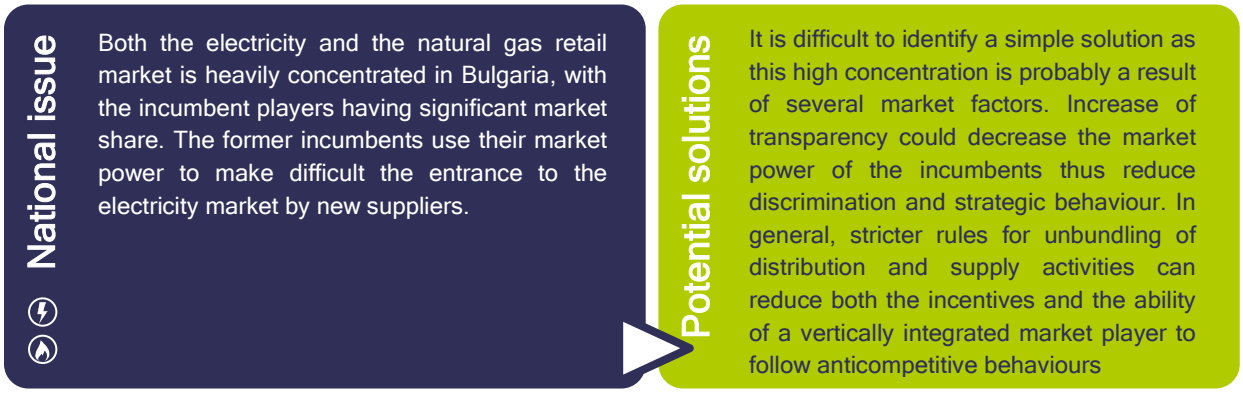
[11] Please note: these definitions are Europe focused, not Bulgaria specific. Highlighted barriers have been identified as country specific.

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. Barriers related to "equal access to and maturity of wholesale market", detected in this study are as follows:

- 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 Bulgaria: Unbundling and market power

**Discriminating, strategic behaviour of incumbent, and obstruction by other market players.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. The incumbent/existing suppliers are able to use tactics in pricing, customer access, combined billing (including the cost of social tariffs) etc. not available to new entrants. Market players with a lot of power, i.e. market share, may act in an obstructive way.




*European markets in which this barrier has also been indicated*

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**Strategic, unfair advantage of vertically integrated market players and lack of transparency. .** From our studies of this market, it appears that this would pose a barrier in Bulgaria. DSOs are required to separate distribution activities from supply both legally and in practice, so that unregulated distribution activities do not cross-subsidise any supply business. However, co-ownership is allowed, and small DSO/supplier companies are often exempted from any unbundling. Vertically integrated companies are still able to use their market power to gain an advantage in terms of information, allowing them for example to target customers based on consumption profiles or win back customers during the switching process, or in terms of access to financing through e.g. DSOs favouring sister companies when procuring services.

**National issue**

The cross-subsidization between the different elements of the value chain is an advantage for the integrated undertakings. As the household market is still regulated and served by territorial service providers, these companies can use the informational advantages against and financial capabilities to defend their market share.

**Potential solutions**

If DSOs and suppliers are only legally unbundled there is always a risk for strategic advantage of the incumbent. These risks are only avoidable, by even stricter separation of roles. Successful unbundling should be supported with efficient secondary legislation

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

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

**Limited or biased access to production.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. Market participants who also own generation assets can use their power to withdraw production capacity from the open market, thereby limiting liquidity in the wholesale market. Small suppliers with little bargaining power may be disadvantaged, e.g. if there is no standardization around PPAs. There is still a dual market for power plants in Bulgaria. To serve the regulated market segment they can sell directly electricity to BEH (the state-owned integrated undertakings), while the usage of IBEX, the Bulgarian exchange is a mandatory platform for the remaining production. The separation of the production for regulated consumers distort the market equilibrium.

**National issue**

The state-owned energy holding has dominant control over the local electricity production. The allocated production for the regulated market decreases the size of the available cheap energy sources for the liberalized market and weakens the effects of market conditions.

**Potential solutions**

The recent legislative changes in the electricity regulation applied more market-driven approaches. However, as long as the “last resort” suppliers of the regulated market will able to access to the cheapest production in a bilateral way, it will reduce the chance of competitive free market offers for end-consumers.

*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 |
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## 2.2 Description of market inequality barriers in Bulgaria: Equal access to & maturity of wholesale market

**Discrimination against new and small market players in capacity and ancillary services markets.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. The balancing landscape was designed mainly for and remains focused on large-scale generation in most of the countries. This can exclude smaller-scale/aggregated generation or demand-side bids from participating in balancing markets as they cannot meet the product requirements. Inefficient capacity markets can lead to a market distortion, benefitting specifically incumbents and other established market players who are able to meet the large generation-focused market conditions (bid minimum size, treatment of users with asymmetric balancing etc.).

**National issue**

The Balancing Electricity Market was established in Bulgaria in 2014 as part of market liberalization, so there are only limited historical experiences of the proper working.
The conditions for participation in balancing and capacity mechanisms are not properly defined, therefore - according to the view of some respondents - demand response is practically excluded from these markets.

**Potential solutions**

The monitoring market and investigations of CPC and EWRC can strengthen the prevailing of transparency on the balancing market. Implementation of the legislative framework for enabling demand response is important to enable this type of service.

*European markets in which this barrier has also been indicated*

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

**FINLAND BEST PRACTICE EXAMPLE: Consumption bids in balancing**

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

**Low liquidity in the wholesale market.** From our studies of this market, it appears that this pose a barrier in Bulgaria. 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**

Electricity transactions must be carried out on the centralized platforms, in Bulgaria. Despite the rapid growth of IBEX, the 6 terawatt-hour trading volume is 2018 is still far less compared the yearly consumption of the country.

**Potential solutions**

There is already an obligation in place to use centralized platform in electricity market. Moderate level of liquidity can be present because the incumbents have good access to primary sources, and they sell the energy to final customers directly.

*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.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. 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**

The high price and volume risk creates an entry barrier. It was mentioned that the deposit need is relatively high for a new entrant with a small portfolio.

**Potential solutions**

There is no simple solution for this issue as the regulator should take care the viewpoints of the new entrants and the market stability in a balanced way.

*European markets in which this barrier has also been indicated*

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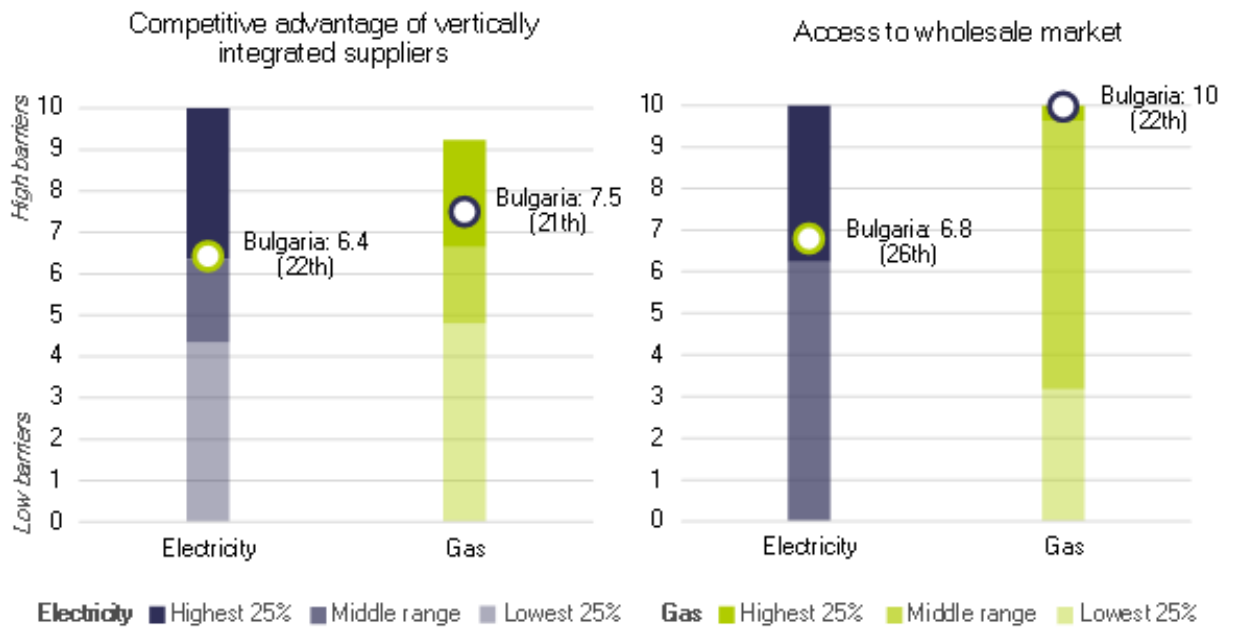
## 2.3 Bulgaria's performance in this barrier category

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

- **Competitive advantages of vertically integrated players.** The index consists of two sub-indicators, the market share of vertically integrated suppliers (on the residential market), and the strictness of DSO unbundling. A 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 the 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**




The high scores in the indicator of competitive advantage of the vertically integrated suppliers is the result of high market concentration and limited unbundling in Bulgaria. The country was ranked in the upper side of the European range for access to wholesale in the electricity sector (25th). In case of gas the wholesale market is still under formulation, it resulted the highest score and the 22nd position.

## 3) Operational and procedural hindrances

Within operational and procedural hindrances, barriers across Europe have been sub-categorised into two areas encompassing 13 specific barriers[12]:

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.
   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 around "sign-up & operations compliance" were detected in this study:

| |
|---|
| • 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 |

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

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

   European barriers relating to "data access & processes are as follows:

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

*Additional comment to the Bulgarian results in this barrier group: We do not think that the limited number of detected barriers related to the operational and procedural hindrances are reflect perfectly the current issues in the market. There are several limitations, which the readers need to take into consideration when interpret the results:*

- *In case of Bulgaria, the very low number of survey respondents limits the interpretation opportunities of the questionnaire.*
- *The retail markets are still de facto closed, there are very limited experiences of new market entrants about the accuracy and efficiency of the current procedures.*
- *As a result of the abovementioned facts, we did not find too much additional information (independent reports, analyses) which focus on the procedural issues in Bulgaria.*

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

**Poor availability of information for market entrants & active participants.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. Detailed information about legislation, licensing requirements and procedures during operations etc. are not readily available, or only in the local language. This makes it difficult for potential new entrants to (1) understand the market and judge its suitability for their business; (2) efficiently go through the entry process to establish on the market; (3) operate effectively and efficiently. Although in Bulgaria some reports of the regulator and the energy exchange are available English as well, the network operators tend to communicate with their partners only in Bulgarian language. We did not find a compact guideline about how to enter and operate in the Bulgarian energy retail sector. The translations of market data and statistics are available with limitations and delay.


*European markets in which this barrier has also been indicated*

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**AUSTRIAN BEST PRACTICE CASE: Availability of information for market entrants & active participants.**
The Austrian NRA, E-Control offers a comprehensive "starter kit" with all the necessary information for new market entrants in German and English language. Furthermore, statistical data, covering switching rates, price levels, smart metering rollout progress and others is frequently being published. Therefore, a barrier is not only non-existing, but even more, the situation in Austria can be regarded as a best practice.

**Highly complex or country-specific systems & processes.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. 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. Ad the Bulgarian liberalization process is still ongoing, the missing or inappropriate secondary legislation and the limited historical experiences increase the costs of the market participants as they need to adapt new systems and country-specific processes.

**National issue**

Although the market processes and regulation in Bulgaria is similar to other countries' frameworks, there are some issues which need to mention here. The paper contracts, the missing digital interfaces between market players and TSO/DSO and the low availability of legal and contractual documents in English raised as barriers. DSO-specific process handling and high degree of manual work also increase the cost of retailers.

**Potential solutions**

Digitalization and standardization of DSO specific processes can reduce the potential barriers.

*European markets in which this barrier has also been indicated*

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

**Missing access or poor quality of operations-critical data.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. Non-availability, delayed or low quality of operations-critical data (incl. smart meter data) presents a significant barrier as it increases the need for manual processing and therefore costs. Especially in combination with information advantage, this can give of certain market participants such as DSOs and incumbents a major advantage in providing the required service level to the customers.

**National issue**

DSOs control the access to and sharing of meter data. There is no clear secondary regulation about third party access. The quality, accuracy and timely manner of operations-critical data should be improved, mainly the quality of the metering data of DSOs. Moreover, as data exchange formats are not regulated, data management requires high degree of manual work.

**Potential solutions**

Further clarification of the current rules of access to consumers' data and standardization of data format would improve the availability of operation-critical information and reduce the manual work.

*European markets in which this barrier has also been indicated*

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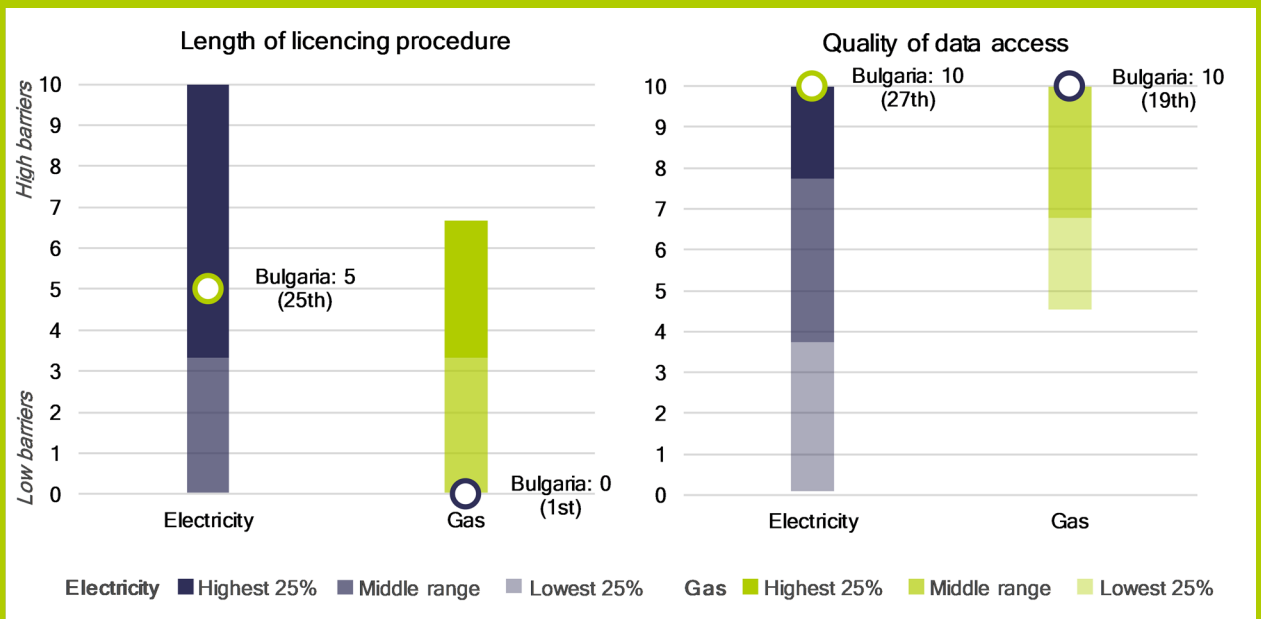
## 3.3 Bulgaria's performance in this barrier category

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

- **Length of licensing procedure:** The complexity of the licensing procedure is quantified with the legal deadline of the licensing procedure. High score if attributed if the regulator has more moths for authorization, while 0 score is attributed if there is no licensing obligation in the country,
- **Quality of data access**: The barriers relating to the quality of data access are measured with a checklist indicator, which focuses on the DSO's practices regarding data collection and access provision to suppliers. High score is attributed if the format of the data provision is not standardised, third party access is not available via website or data hub, and the smart meter rollout is small.

**Performance indicators**




Getting the licence in Bulgaria is relatively easy, that is why the country is ranked in mid-range of the European countries. In case of gas, under the current law no license is required for the activity of natural gas trade but in fact, it has impact only in the wholesale market. With respect to quality of data access the country got the highest score because of the non-available data.

# 4) Customer inertia

Within operational and procedural hindrances, barriers across Europe have been sub-categorised into one area encompassing 6 specific barriers[13]:

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 around "customer orientation" were detected in this study:

   - 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 Bulgaria: Customer orientation

**Low customer awareness or interest makes it difficult to attract customers.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. 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 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. Although in Bulgaria the energy poverty is a serious issue, for a high share of households of customers electricity bills doesn't mean a high proportion of monthly spending.

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

**National issue**

Many customers are generally not interested in switching. The attractive free market offers are missing, the switching rate is very low. In 2018 only 2748 households switched supplier in the electricity market. It is a bad signal, that 1108 of them moved back to the regulated market from the free market. The opportunity to moving back to the regulated market from the free market is still available for a wide range of non-household consumers. This fact also reduces the business viability to invest into more innovative products.

**Potential solutions**

Without the radical reform of the current regulated price mechanism it is questionable to introduce attractive products and services by free-market retailers. To increase the business interest of retailers to implement new services, we suggest remaining of the "moving back to the regulated market" option only for households.

*European markets in which this barrier has also been indicated*

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**Insufficient price signals for end-users.** From our studies of this market, it appears that this would pose a barrier in Bulgaria. 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**

The Bulgarian households buy the electricity and gas on fixed regulated prices. The end consumer price regulation does not leave significant place for competitive offers. However, in the non-household market segment the free-market offers are competitive and free-market suppliers overperform the regulated price alternatives.

**Potential solutions**

The declared reform of the price regulation and the phaseout of regulated prices can make more attractive the entrance to the household electricity market.
In case of gas the further development of the market depends on the political decision about the strategic role of gas in household heating.

*European markets in which this barrier has also been indicated*

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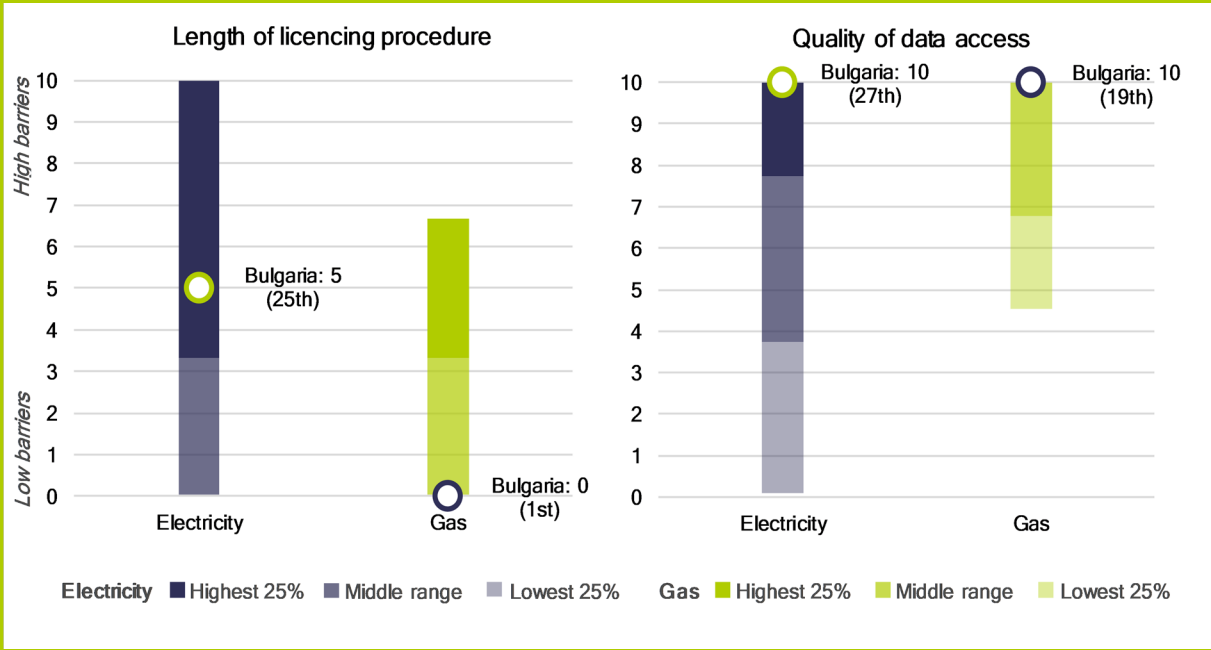
## 4.2 Bulgaria's performance in this barrier category

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

- **Comparability of offers:** The index consists of two 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**




The Bulgarian scores highly influenced by the current price regulation scheme. The regulated prices significantly decrease the attractiveness to enter to the electricity retail market.
The future development of the gas sector liberalization is a still an open issue. The current usage of natural gas by households is an insignificant part of the country's gas consumption, so it seems rational the survival of the "single seller" gas retail market in this segment. The demolition of regulatory obstacles in gas sector increased the intensity of the competition in the wholesale gas market, buts it has limited impacts on retailing.

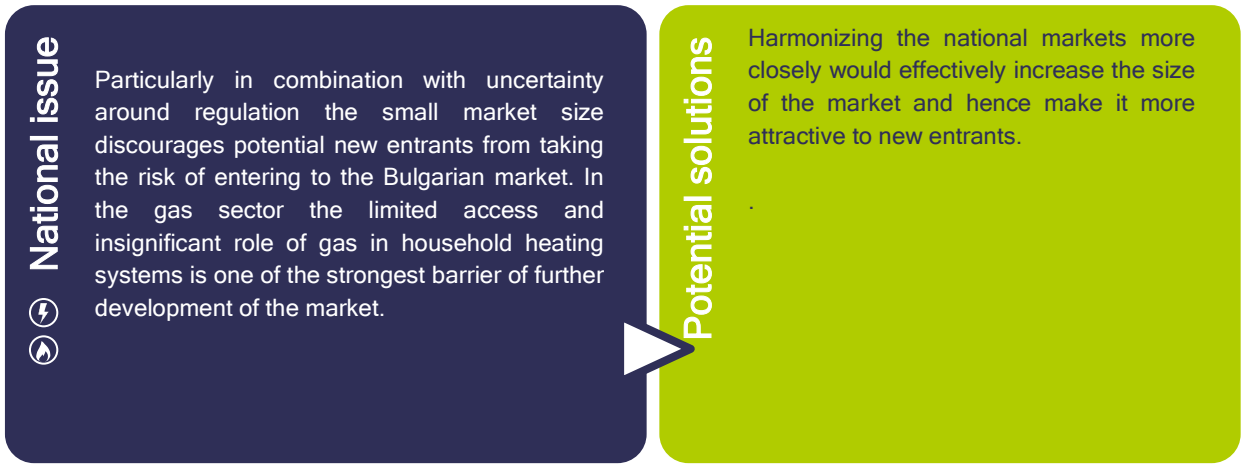
# 5) Other

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 Bulgaria: Other

**Small market or customer value.** In the research this barrier was indicated as an issue in Bulgaria. A small population and/or low consumption hinders profitability. Market size as a barrier could be ameliorated by better harmonization of markets. The small population and the existence of regulated market reduces the attractiveness to both markets. In case of gas sector, the limited access to the gas network by households significantly decrease the value of the retail market.

*European markets in which this barrier has also been indicated*

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# FINDINGS & RECOMMENDATIONS

As seen throughout this project, barriers to entry and operation can constrain the development and functioning of energy markets. Examples of such barriers identified in this project vary widely across EU countries, including issues as wide-ranging as the use of financial guarantees for access to wholesale markets, the presence of price regulation in the market, and burdensome licensing regimes, where the requirements are disproportionate to their protective function.

Bulgaria began later the liberalization process of the energy markets than other European countries. The electricity market liberalization for households and small consumers is still an ongoing process. Although the regulatory changes of recent years created the opportunity to buy electricity in the free market, the households are still served by the former incumbent territorial energy companies with regulated prices. We can say, the de facto, the Bulgarian retail market is still closed.

The main reasons behind the dominance of the regulated market are as a first the artificially lower prices in the regulated segment compared to the free market. The strong commitment from political and economic actors is missing as well. Incumbent use their market power to keep the current status quo and politicians are afraid of the potential price increasing impacts of the full liberalization.

From our study it seems clear that the biggest obstacle of increasing the competition in the Bulgarian electricity retail sector is the duality of the market, the parallel existence of the free and regulated markets. While the latter has strong political and economic support it is almost impossible to offer competitive alternative of the regulated offers. We can suggest the following actions in relation to the upcoming reform of the current system of price regulation:

- Define a clear timing of implementation of new rules and measures and communicate it clearly for the industrial and social stakeholders
- Separate the social aspects from the market prices and leave the market prices to prevail for the majority of the citizens of Bulgaria
- Give clear definition of energy poverty (which groups of the society are entitled to get special subsidies)
- Remain the guaranteed free regulated price regime only for vulnerable customers
- Analyze the access to local production and give the same rights the free market retailers to buy electricity from local producers as the retailers at the regulated market.

We see some potential measures related to the market structure. Incomplete unbundling between the incumbent suppliers and DSO is also a substantial issue for new entrants trying to compete in the market. The DSO is seen to favour the incumbent in terms of service procurement, giving them an unfair competitive advantage, and the incumbent benefits from being associated in the public perception with the DSO and hence entire electricity system. The incumbent also benefits from access through the DSO to customers' historical consumption data. We suggest to analyzing the opportunity of a stronger separation of the commercial and network affiliates of integrated undertakings. The brand unbundling can support that customers could make a distinction between the services and it can reduce the cross-subsidization between the separate units of the integrated companies.

As the Bulgarian market is still non-competitive, we got only very few comments potential barriers related to the current market procedures. However, we think that it does not mean that there are not obstacles and barriers in this field. We think, that as the higher the competition, the more important the process barriers will be as well.

In relation to the Bulgarian gas retail market, we think, that the future of gas liberalization should reflect the strategic vision about the role of natural gas in the heating of dwellings. As currently the role of household consumption is marginal in the Bulgarian gas market, we see only very limited opportunities for increasing the competition in the retail sector. Bulgaria made important steps forward to liberalize the gas sector as the country has removed the obligation to apply for a license for gas trading. This step helped to stimulate the competition in the wholesale market, but it has very limited impacts on retail sector.

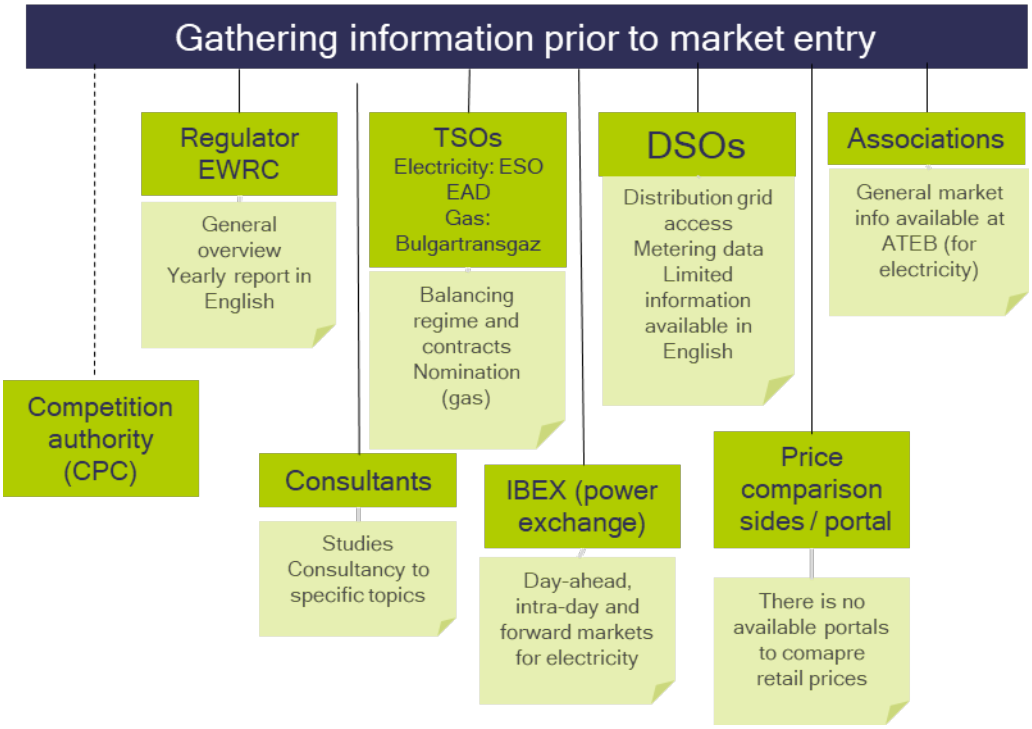
The increase of the independency of the regulatory authorities and the effective actions against companies with significant lobbying power is a prerequisite of the successful liberalization. We suggest strengthening the cooperation between the ministries and regulatory authorities as EWRC and CPC and communicate broadly and consistently to the citizens and industrial stakeholders about the market liberalization.
We recommend defining clear guidelines and regulatory decisions on customer switching procedures and data provision to enable competition both in gas and electricity markets.

# APPENDIX 1: PROCESSES

This section describes market processes in energy retail in Bulgaria. 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.

Note that although Bulgaria has systems and processes in place, these apply in practice only to commercial customers: the household market is effectively closed as a consequence of low, non-market-based regulated prices being universally available and hence strongly shaping the market. This prevents new entrants from competing and effectively blocks them from establishing.

## 1) Information gathering before market entry




In this subsection we report barriers arising as a consequence of the difficulties that suppliers are experiencing when gathering information to enter the Hungarian electricity and gas retail market.

When a retail market is properly working, the information required by a newcomer to study and implement the entrance and operation in a market is of a great importance. This include, for instance, information on end-user's consumption, metering details, switching rate etc.

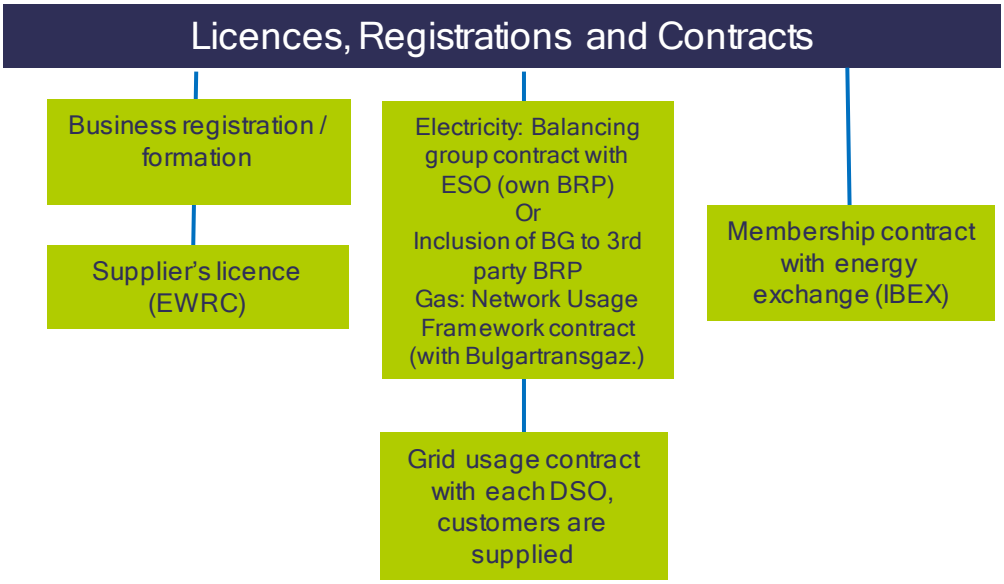
### Relevant comments on information gathering

As a part of the country report preparation we have studied the available written sources and made interviews with representatives of the regulatory authority and market association. There were very few comments on potential barriers related to information collection and because of the quality of the information.

EWRC publishes yearly reports on electricity and natural gas market. These reports are both available in English at the portal of the authority.

The Independent Bulgarian Energy Exchange (IBEX) Hungarian Energy Exchanges (HUPX for electricity, CEEGEX for natural gas and HUDEX for derivatives) are also publish the market data in English and Bulgarian.

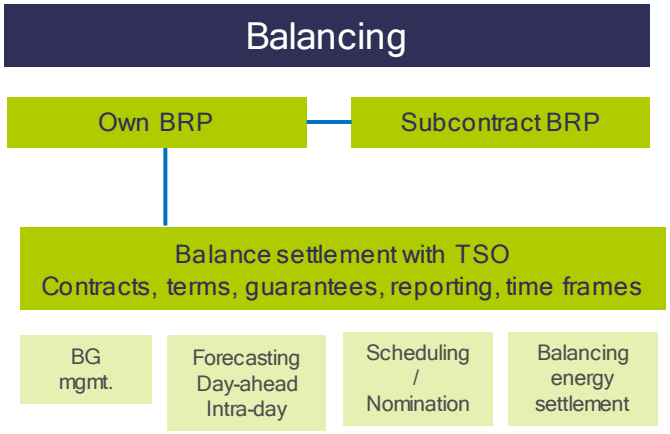
## 2) Licenses, registrations and contracts




### Further comments

- The sale of electricity to customers (both household and commercial) requires an energy **trading license**.
- Foreign energy supply companies should be seated in the EU
- Retailers who serve household consumers are required to set up and operate a customer service department for handling customer notices
- Distribution grid contract must be concluded with each DSO.
- For **gas trading don't need a license.**

## 3) Balancing

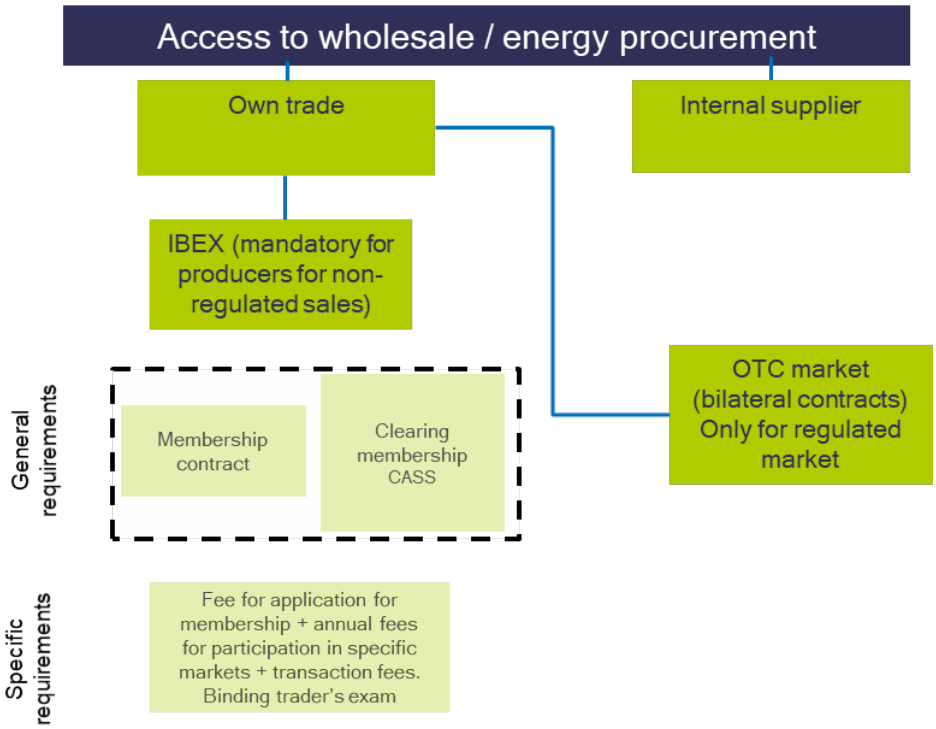



### Further comments

- TSOs procure the balancing energy (auctions)
- High complexity in forecasting due to complex load profiles and calculation methods
- Bulgartransgaz EAD organizes the gas balancing market in accordance with the provisions of the EA, Natural gas trading rules and Natural gas market balancing rules, concluding transactions for purchase and sale of balancing gas with network users at prices determined under the Daily imbalance charge calculation methodology.

## 4) Wholesale

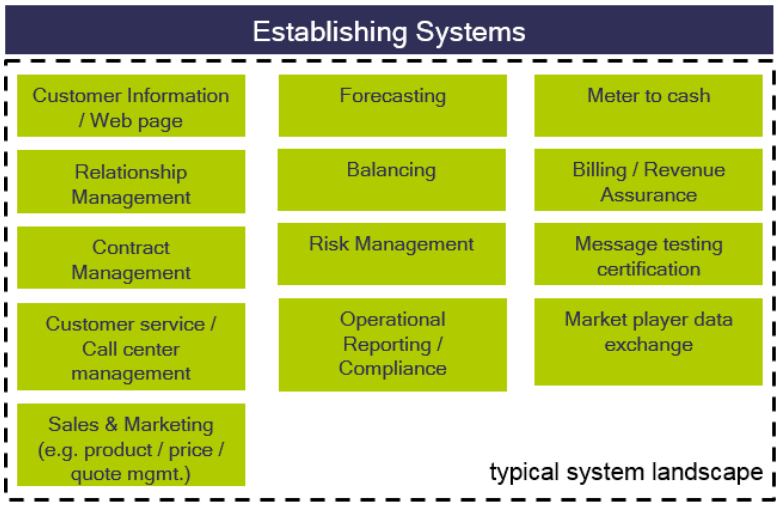
**Illustration of electricity market:**



### Further comments

- Developing electricity spot market, increasing liquidity but still relatively low
- Insignificant derivative market liquidity
- Exchange data and market information. Information available in English as well
- Missing organized gas wholesale market
- Gas trading venue (gas exchange) will be organized (Balkan Gas Hub project, which plans to connect the natural gas markets of the region).

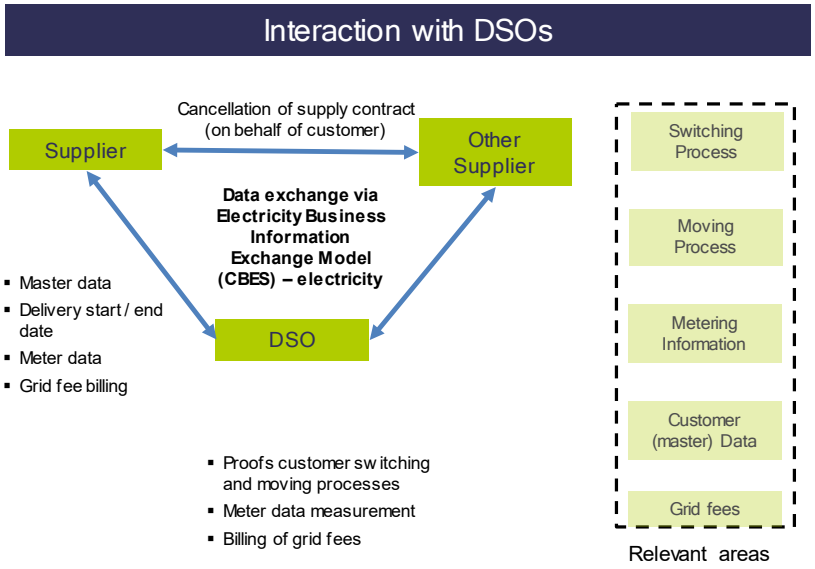
## 5) System landscape




### Further comments

- In general, there is no obligation to run specific systems in-house: almost everything could be outsourced to third parties or to group share service centers
- short term capacities are available on DSO as well as TSO market
- Poor digital interfaces (between market players or towards customers)
- Lots of specific info available only in Bulgarian
- TSO deposit need is relatively high for a new entrant with smallish portfolio

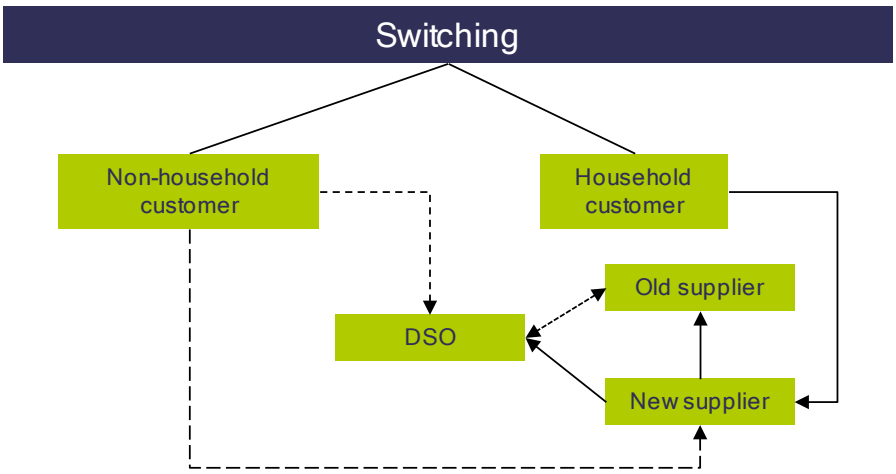
## 6) Supplier interaction with SII data hub and DSO




### Further comments

- Electricity and gas DSOs are legally separated from former integrated companies
- Remote metering is compulsory for industrial consumers over a consumption limit.
- There are only pilots for smart meter deployments.
- Challenges gathering information from DSOs or meter point operator
- DSO-specific process handling
- Decentralized databases, high degree of manual work
- In gas market, challenges of balancing could mean an additional barrier to supply customers at DSO level.

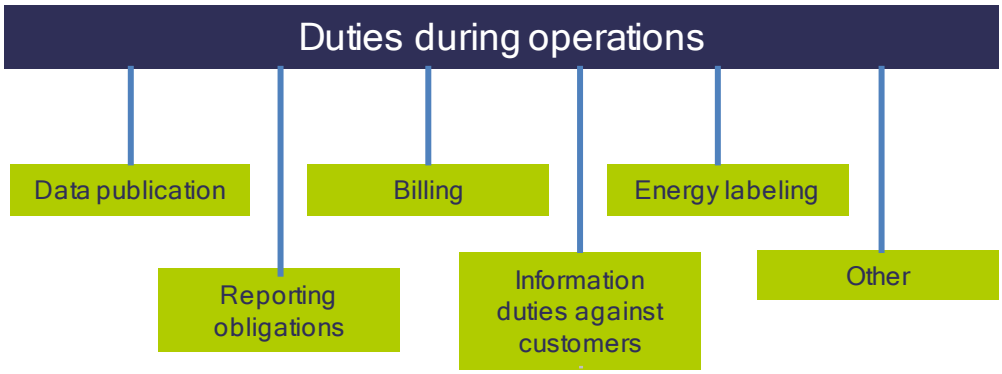
## 7) Customer switching & moving



### Further comments

- Factually there is no switching in household segment. However, even the regulated market customers can easily change to liberalized free market suppliers;
- Switching process favors existing suppliers (non-standardized procedures, no single-platform for all agents);
- No comprehensive pricing tool in place; information on pricing details and quality of services is not available.

## 8) Operational obligations / duties




### Further comments

- Regulated prices for households under the control of EWRC
- Companies delivering electricity or gas to households I the free market can define freely their prices.
- License holders are required to supply data to EWRC on a regular basis and occasionally also at HEO's request.

## 9) Market exit


### Further comments

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

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