



Study on “Barriers to cross-border entry into retail energy markets”

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STUDY ON “BARRIERS TO CROSS-BORDER ENTRY INTO RETAIL ENERGY MARKETS”

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MANAGEMENT SUMMARY

E-Bridge Consulting GmbH (E-Bridge) and its partners¹ were commissioned by the Agency for the Cooperation of Energy Regulators (ACER) to identify and assess potential barriers to cross-border entry into retail energy markets for electricity and gas across the European Union (EU). On behalf of ACER this study is primarily based on in-depth interviews with 28 European energy suppliers. Our work approach, the main findings of the study and recommendations for overcoming the barriers are summarised in this summary report.

Work approach

First, we have chosen 42 appropriate candidates for the interviews and pre-evaluated their willingness to participate. We have discussed our choice and justified the intentions behind in close cooperation with ACER.

After a record of the final list with 28 interviewees we have drawn up a questionnaire based on specific characteristics of the selected interviewees (e.g. already active in foreign markets) as well as on previously identified barriers (e.g. in Market Monitoring Report 2012, MMR 2012). The questionnaire has been reviewed and accepted by ACER. Half of the interviews were conducted by E-Bridge and its partners face-to-face and the other half via telephone.

The questionnaire consists of 43 questions divided into five different blocks. The first block includes general questions, market activities of the interviewees and opinions about entry barriers. Block two deals with barriers to market entry related to customers and their behaviour. In the third block we consider barriers arising from the regulatory framework. The following block four asks for issues related to the wholesale market. Finally, interviewees had the chance to provide additional ideas about barriers on entry into retail energy markets and how these barriers might be removed or reduced (block 5).

The answers provided the basis for the analysis of the barriers to market entry. The results of the analysis were used to derive policy recommendations, which could help to reduce entry barriers and thus trigger more competition among suppliers.

Results

The order of the following issues is identical to the structure of the questionnaire. All of the listed problems (i.e. entry barriers) were mentioned by more than one interviewee. As we found a high overlap in the received answers between gas and electricity retail markets, the below listed barriers concern both markets if not specified otherwise.

The strongest barriers to entry into retail energy markets seem to be the lack of harmonisation, retail price regulation, high uncertainty concerning future regulatory developments and low liquidity of wholesale markets in less advanced markets. In more advanced markets the interviewees mentioned low margins and tough competitions as an issue in specific markets. Therefore, some of these companies have even left these highly competitive markets in the last years and acquired their customers in "new" markets. This effect mostly applies to suppliers of

¹ Wagner, Elbling & Company (WECOM), Regional Centre for Energy Policy Research (REKK), PMI-Consulting, and University of Giessen (Chair of Industrial Organization, Regulation and Antitrust – CIORA)

“free²” industrial segments. We have seen only a few companies who intend to enter the household and small industrial customer markets as these are in some member states “closed” markets mainly due to regulated retail prices.

Barriers to entry and expansion

General issues

In the first block we asked for margins in retail energy markets. For the majority of interviewees these margins seem to be too low. This may be based on two different effects: On the one hand retail price regulation may lead to margin squeeze (e.g. for Croatia, France, Italy, Poland and Hungary) We discuss this point in the regulatory chapter. On the other hand low margins may be due to intense competition (e.g. in Austria, Germany and Netherlands). Of course, the second point is not a barrier to entry from a pure economic point of view, but, together with given entry costs limiting the scope for entry. Another often mentioned issue is the access to relevant information for new entrants. There are some countries, where relevant data is missing, e.g. customer databases in Bulgaria and France or price information / statistics in Croatia, the Czech Republic, Hungary, Poland and Slovakia. In this context it was additionally pointed out that in most member states important information and documents are available only in the respective local language. This problem seems to be particularly relevant for Eastern and Southern European Markets, where language barriers are even higher, but are also valid for each Member State where the relevant documents are not available in common foreign languages (at minimum in English).

Moreover, we asked for exit costs that could prevent entry. Some answers showed the lack of standardised and clear rules for exiting a retail market. In Hungary, for example, retailers are not allowed to exit the regulated market segment (while staying in the profitable non-regulated segment) before another supplier takes over all customers. Consequently, providers of Universal Service have to finance their losses over a longer period. Indeed, this could be a barrier to market entry, as retailers always bear the risk that their expectations will not be met and therefore need a clear exit strategy. Other explicitly mentioned entry costs are linked with licensing procedures, which will be addressed below in this report.

Customers and their behaviour

We summarise the issues mentioned by interviewees concerning customers and their behaviour in the following.

One problem is bad access to market information for customers, especially for profiled³ customers. This is based on the fact that reliable price comparison tools do not exist or are under construction in some EU countries (e.g. Croatia, France, and Rumania)⁴. Other statements complain about

² Free customers: Customers that can switch suppliers and didn't belong to a price regulated segment in the Member State.

³ Profiled customers: customers with standard load profiles (i.e. households and small business units).

Non profile customers: intensive energy customers with an individual demand forecast (industrial plants and generation).

⁴ In some countries there are price comparison tools but these instruments are not sufficiently reliable to give the customers adequate information (from the viewpoint of our interviewees). In markets with price regulation price comparison tools are less important. However, in France, where prices are also regulated, such tool is required in order to compare market offers and regulated prices.

missing communication between NRAs and the customers (e.g. announcements of market liberalisation and its consequences for market participants). In some countries the customers do not even know that they have the opportunity to change their energy provider, e.g. in Croatia and Poland. Indeed, the application of retail price regulation matters in this circumstance, since there is no real incentive for customers to get informed about prices as the scope to set prices is limited for new entrants in markets with already capped regulated prices at low levels. Apart from the information about different offers, the customers' willingness to change the provider is important for potential entrants. Several interviewees stated that they observe an established customer relationship of incumbents and therefore less price sensitive customers (especially profiled) in most EU countries. This requires more effort from newcomers to poach customers and is sometimes based on objective problems and bad experiences with new market players, for example discounters like TelDaFax and Flexstrom in Germany or small suppliers like BizzEnergy and Electricity4Business in UK, who went bankrupt and, as a result, more than 1.5 million customers are affected and a great number of them lost money. In other cases interviewees claim that there are unjustified fears, e.g. consumers expecting lower security of supply with new entrants than with the incumbent. According to interviewees this effect is reinforced by NRAs tolerating lack of transparent unbundling / branding rules of incumbents (for example same name of former state-owned producer / distributor and retailer in Croatia - HEP Group; or similar names and logos in France - EDF and ErDF). Even if the customers intend to change the suppliers, there may be additional barriers like difficult and non-transparent switching procedures, e.g. in France, Italy, Slovakia and Slovenia, long contractual termination periods (e.g. in Germany, Poland and Hungary) or cease charges for customers (Poland).

Regulatory framework

The next questions in our survey cover issues regarding the regulatory framework. The largest barrier mentioned in this context is retail price regulation. Most of the interviewees complain about very low or negative margins in the retail business. This means that regulated prices are too low from a viewpoint of interviewees and often even below wholesale price level. This is especially seen in Croatia, Hungary, Poland, Latvia, Lithuania, Italy and France. Sometimes regulatory periods are simply too long and in some countries the price calculation is non-transparent and more influenced by political decisions than by market based and economically sensible considerations (especially in Eastern Europe). Another issue is the difficult and time consuming licensing procedure for entrants based on requirements of NRAs. In addition to high bureaucracy and the amount of documents that have to be provided there exist extensive reporting and financial obligations and various licenses that are requested (especially in Bulgaria, Croatia, the Czech Republic, Spain, Hungary, Italy, Poland, Romania and Slovakia). For example in some countries it is mandatory to provide an official translation of legal documents (Poland) or a resident lawyer is required (the Czech Republic and Spain - in Croatia a local taxable subsidiary is even required). Additional issues for smaller entrants are requirements about high bank guarantees in order to get a license (e.g. in Hungary). In addition there are countries with a high degree of uncertainty about future regulatory developments. The interviewees mentioned a non-transparent decision making process which is often influenced by politics (especially in Eastern Europe). However, also in old Member States the regulatory changes are often at short notice, and characterised by ex-post de facto amendments (France, Italy or the Netherlands), resulting in high and unpredictable financial consequences for suppliers. High environmental obligations are not regarded as a high entry barrier. However, some of the interviewees lament the lack of harmonisation of environmental rules / obligations across the EU and their role as tax collectors for Member States (in particular in

Germany). It was also mentioned that the missing possibility of cross-border trading of environmental certificates (for electricity) is a potential barrier to entry. In summary, the stability of the regulatory framework and the fear of political influence are main factors that hinder further cross-border market entries.

Wholesale markets

In general, wholesale regulation seems to be a significant barrier to entry. This includes, for example, obligations / quotas about country of origin of the traded natural gas in Poland, or political influence (i.e. effective political lobbying) by the incumbent (e.g. EDF on wholesale price regulation in France (ARENH)). As important documents are mostly not available in foreign languages (at minimum in English), language issues are also a crucial point for grid access. Some interviewees also mentioned a complex and difficult access to the grid due to high reporting obligations, especially in new Member States in Eastern Europe. Further problems are complex national network codes and high IT requirements. The access to cross-border capacities and associated regulation also play a relevant role for potential entries. Such barriers were explicitly mentioned for France, Hungary and Eastern Europe. Another important issue is liquidity of the energy markets. In particular, interviewees frequently stated that dominant incumbents and missing diversification in power production are responsible for illiquid markets (Bulgaria, Croatia, Hungary, Romania and Slovenia). Furthermore, disrupted exchanges are barriers to entry and expansion (especially in Eastern Europe). In Croatia, for example, no OTC market exists, while the OTC market in Romania is dominated by a state owned incumbent. In Slovenia future trading products do not exist and in Croatia there is no power exchange at all. Moreover barriers to entry due to the balancing regimes were stated by the interviewees. In particular, balancing is still underdeveloped (poor quality and complex access to requested data in Romania and Poland) and often very expensive for retailers (Austria, Bulgaria, Croatia and France) - especially in gas markets. Due to portfolio effects these barriers are even higher for smaller suppliers (and hence for potential new entrants). Additionally, many interviewees mentioned high storage obligations (for gas) as an issue especially for Bulgaria, France and Poland. The conclusion of this block of questions is that the existence of a transparent and functioning wholesale market - especially characterised by liquid exchange based trading possibilities and access to cross-border capacities - significantly influences the decision to enter a new market.

Additional problems

In the last section of our questionnaire the interviewees had the opportunity to name further relevant problems which may prevent (cross-border) entries in retail energy markets of the EU. In essence, the most of the earlier mentioned issues were confirmed by the answers. In addition, the lack of standardisation of contracts (e.g. between supplier and DSOs), processes and reporting obligations concerning market entries in the various member states appear to be significant barriers to market entry. This is especially relevant for relative small market players, as their playing field is even more restricted. They generally do not dispose of the required national expert knowledge and an external expertise is also costly for them. Moreover, it has become apparent that uncertainty about future regulatory developments is often higher for foreign entrants than for local ones. Foreign retailers have fewer contacts with the NRAs than the local retailers and thus their information disadvantage further increases. They need local native speaker as contacts to be updated regarding the development in the regulatory framework. Sometimes the process is too complex to follow for foreign potential market entrants (U.K is explicitly mentioned here).

Overcoming the barriers

First of all, for most of the interviewees it seems to be very important that market designs of EU retail energy markets need to be harmonised in order to reduce barriers to entry and expansion. It was frequently mentioned that it would be a powerful simplification if market entries and exits and the involved legal frameworks, licensing procedures, reporting obligations and supplier processes were harmonised all over the EU. It was accepted by the interviewees that the member states need an opportunity for particular arrangements to handle local specifics. However, it was stressed that for this purpose it is very important to define general principles (e.g. licensing procedures). It is also important that all relevant documents be available in English and the data exchange be standardised. In addition, common requirements of the switching procedure for customers should be defined in a simple and transparent way. Another important issue is a strong commitment to privatisation and price liberalisation in order to prevent political influences on retail energy markets that are often running contrary to economic standards. Various interviewees desire a stronger monitoring of the NRAs and the transparency of their decisions by ACER. For gas it was mentioned that larger market areas and virtual balancing zones as well as a reduction in storage obligations may help overcome the barriers to entry. However, for electricity further market coupling and a specific harmonisation of RES support schemes seems to be promising.

1 Introduction

E-Bridge and its partners (Wagner, Elbling & Company (WECom), Regional Centre for Energy Policy Research (REKK), PMI-Consulting, and University of Giessen (Chair of Industrial Organization, Regulation and Antitrust – CIORA) were commissioned by the Agency for the Cooperation of Energy Regulators (ACER) to identify and assess potential barriers to cross-border entry into retail energy markets for power and gas across the European Union (EU). On behalf of ACER this study is primarily based on in-depth interviews with 31 European energy suppliers.

Our work approach and the main findings of the study and recommendations for overcoming the barriers are summarised in the following of this report.

The work approach is generally described in chapter 2. It illustrates the scope of the questionnaire and explains the methodology of conducting and evaluating the results. The subsequent chapters show the results for the different groups of questions in more detail. In Chapter 3 general problems for entrants in retail energy markets are presented. Chapter 4 includes the answers regarding the problems related to customers and their behaviour. Responses regarding the regulatory framework are shown in chapter 5 followed by problems related to wholesale markets (chapter 6). Chapter 7 mentions finally additional problems and suggested solutions.

2 Our work approach

Our work approach aims at conducting the survey and its evaluation on a sound academic base. According to our contract the core of our task is to guarantee the highest possible quality of selection of interviewees, formulation of questions, and evaluation of answers. In order to achieve this requirement we proposed the following work packages (see also Figure 1):

First, we chose appropriate candidates for the interviews (see section 2.1) and evaluated their willingness to participate. We discussed our choice with ACER and explained the underlying rationale. After a record of the final list of interviewees we drew up a questionnaire. This questionnaire considers both specific characteristics of the selected interviewees (e.g. already active in foreign markets) and previously identified barriers to entry (e.g. as mentioned in the Market Monitoring Report - MMR 2012⁵). Preparation of the questionnaire was realised after consultation with and approval by ACER.

In the next step we conducted the interviews. About one half of the interviews was conducted face-to-face and the other half via telephone by E-Bridge and their partners. Previous establishment of contact and clarification of general conditions ensured a high level of cooperation by the interviewees. Not only the given answers, but all necessary information, e.g. place and time of the interview, bystanders etc. were carefully documented.

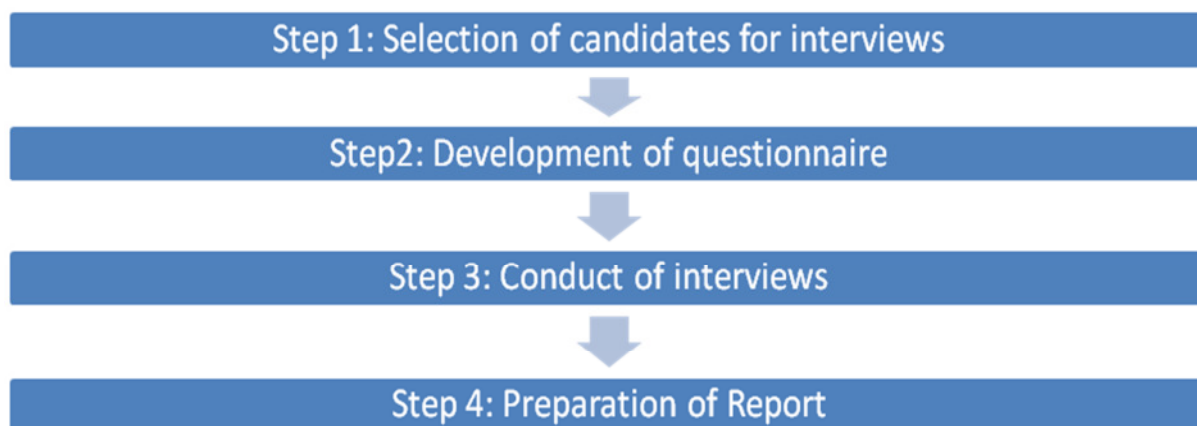
Finally, we produced this report. Based on an in-depth analysis of the interviews conducted, it contains a presentation and assessment of the identified barriers. In addition, we derive

⁵ ACER: Market Monitoring Report 2012 -

http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER%20Market%20Monitoring%20Report%202013.pdf.

recommendation on workable approaches for ACER and the National Regulatory Authorities (NRAs) to deal with these barriers.

Figure 1: Stepwise work approach



2.1 Interviewees

Our consortium has an extensive network of market participants, who provide services to households and small-businesses as well as to industrial customers. The selection of the interviewees was based on the ownership to identify foreign involvement and their activity in (cross-border) retail markets. The aim was to select ideally so-called “maverick” retailers for the interviews or at least non-incumbents who are exposed to the (practical) challenges of an energy supplier in for them new markets. Moreover we interviewed companies at different stages of the supply chain: international trading companies; former regional suppliers; new founded market entries and energy service companies, who support new entries with services (e.g. market communication, balancing or nomination process). All of them are active in several EU retail energy markets.

In order to ensure reliability, in particular to minimise the extent of strategic responses, the survey was confidential with respect to interviewees apart from their nationality and main activities. The following table provides an overview of the number of interviewees, their home countries and activities:

Table 1: Overview of interviewees

Interviewee ID	Home country	Gas / Electricity	Profiled customers	Non-profiled customers
1.	Belgium	Electricity	X	X
2.	Croatia	Electricity	X	X
3.	France	Electricity	X	X
4.	France	Electricity	X	X
5.	Hungary	Electricity	X	X
6.	Italy	Electricity	X	X
7.	Slovakia	Electricity	X	X
8.	Slovenia	Electricity	X	X
9.	Switzerland	Electricity	X	X
10.	Switzerland	Electricity	X	X
11.	The Czech Rep.	Electricity	X	X
12.	Austria	Gas	-	X
13.	Austria	Gas	X	X
14.	France	Gas	X	X
15.	Germany	Gas	X	X
16.	Germany	Gas	X	X
17.	Germany	Gas	X	X
18.	Germany	Gas	X	X
19.	Germany	Gas	X	X
20.	Italy	Gas	X	X
21.	Norway	Gas	-	X
22.	Poland	Gas	X	X
23.	Poland	Gas	X	X
24.	Slovenia	Gas	X	X
25.	Spain	Gas	X	X
26.	France	Gas / Electricity	X	X
27.	Germany	Gas / Electricity	X	X
28.	Germany	Gas / Electricity	X	X

Most of the companies are located in Germany (7), followed by France (4), Austria, Italy, Poland, Slovenia, and Switzerland (2). With the exception of two suppliers all companies supply both, profiled and non-profiled customers.

2.2 Questionnaire

The questionnaire contains 43 questions split into six blocks (see Figure 2). The first block concerns general questions about the interviewee and its market activities like entries in and exits from

European retail energy markets. There are also some questions about the general opinion on barriers on entry.

Figure 2: Structure of the questionnaire: Categories of questions



The second block covers general attributes, like entry and exit costs, access to market information, and profit margins.

Block 3 concerns barriers to entry related to customers and their behaviour. The questions are separated for profiled (households and small businesses) and non-profiled customers (industrial customers). Here we ask about access to information and the costs that customers face when they want to switch their energy supplier. Additionally, we ask about administrative burdens for customers, who want to switch and the general willingness to change the supplier of customers in particular countries.

The fourth block covers barriers concerning the regulatory framework. Hence, there are questions about retail price regulation, licensing procedures, environmental obligations and regulations, and the transparency of future regulatory developments.

The fifth block concerns issues related to wholesale market. We ask about network access, liquidity of energy wholesale markets and balancing.

Block 6 gives the interviewees the chance to provide additional ideas about barriers to entry into retail energy markets and how these barriers can be removed or at least reduced.

An economic introduction to and interpretation of the related problems is given for each question in the discussion of our results.

For each problem we split our questions / statements into three parts:

- In order to satisfy quality criteria based on test theory we used the well-known Likert-scale to formulate a first part of our questions. Therefore, we asked the interviewees to what extent (1 - totally disagree up to 6 - fully agree) they agree to a given statement. We formulated the particular statements (if possible) as if there existed no problems with respect to the particular entry barrier. This is a conservative approach, which balances the need to identify barriers to entry on the one hand and the tendency of interviewees to agree with a given statement on the other hand. This Likert approach is state-of-the-art in test theory and offers decisive advantages, e.g. we can assign cardinal numeral values for the given answers. Hence, we can calculate a mean value for the importance of the particular barriers in specific countries. To ensure reliability we only present these values for countries with at least two responses for a particular question. However, we include the remaining replies in the qualitative part of our evaluation.
- In a second part we give the interviewees the chance to mention countries with existing barriers in a purely qualitative way (without giving a value for the extent of agreement). For these countries we could not measure the strength of barriers. However, we do that for the sake of completeness, since we ensure that interviewees can mention problematic countries without being forced to quantify their answers in terms of Likert values.
- In a third part we asked for underlying information and reasons for the particular problems in some member states.

Even though the questions and criteria are based on test theory, it is important to notice that this is a survey study rather than a market study. The given answers might be incomplete or maybe even incorrect, due to strategic responding. Therefore it is important to distinguish between received answers of specific interviewees - and hence with specific interests - and an entire market overview. This study was not designed for deeper analysis of the interviewees' opinions and Member State specific issues. All findings can be investigated in further detailed studies.

2.3 Interview phase

We conducted the interviews during May and June 2014 in a period of 3 weeks. About two third of the requested firms (42 firms were contacted in total) participated in the survey. Especially smaller ones declined, probably because of limited time and resources.

On average each interview lasted more than two hours. Nevertheless, not all answers were as detailed as desired. Unfortunately our sample does not provide answers on all member state. For some countries we received answers on all questions whereas for others we received answers just for a few questions. Of course, it does not mean that there are no problems existing in countries for which we did not receive answers or no answers for specific questions. It rather means that we did not receive (reliable) answers about this country concerning the respective questions. The presented results reflect the highest quality possible given the limited scope (i.e. time and resources) of this project. Nevertheless, it might be an interesting future topic to conduct impact studies on particular barriers and countries on behalf of ACER.

The following list presents an overview of member states and regions for which we received answers during the interviews:

- Austria; Belgium; Bulgaria; The Czech Republic; Croatia; France; Germany; Hungary; Italy; Netherlands; Poland; Romania; Serbia; Slovakia; Slovenia; Spain; United Kingdom (UK); EU in general; Southern and Eastern Europe.

2.4 Evaluation

Following the three different types of questions we also split the presentation of the results in three parts:

In a first step we provide a short introduction and a diagram, presenting the strength of a particular problem in certain member states, based on the obtained Likert values (extent of agreement). The chart presents the average values of all answers for a given country and problem. As mentioned above and according to test theory, one can use the obtained Likert values (extent of agreement given by the interviewees) as cardinal numeral values and use them to calculate a mean value.

The second part contains the purely qualitative mentioned countries, underlying problems and reasons mentioned by the interviewees. We try to present these issues as clear and consistent as possible.

In the third part we provide an economic interpretation and background information based on our knowledge and experiences in retail energy markets - if available. This part was not expressly provided by the interviewees, but contains issues we "read between the lines" during the interviews, also.

Once again, the parts mentioned by the interviewees do not necessarily correspond to our opinion or the reality of retail energy markets. They might be incomplete or maybe even incorrect, due to strategic responding (like values above, also). Therefore it is important to distinguish between received answers of specific interviewees - and hence specific interests - and an entire market overview.

The above arguments lead to the following template for the presentation of the results for the different chapters. This template also provides a preview on how to interpret the charts etc.

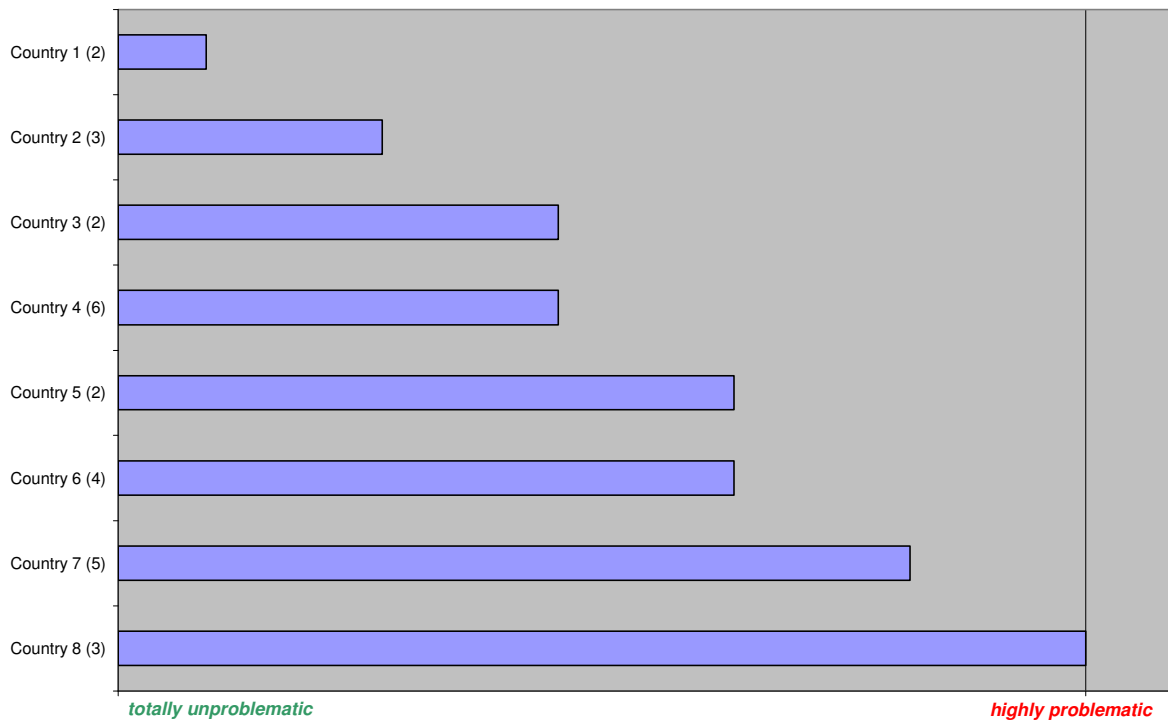
Topic of problem

Question: Here we present the corresponding questions.

Rationale: This text is a short economic introduction to the related problem and offers the motivation behind the question.

Likert Scale:

Figure 3: Example - Intensity of problems per country concerning a particular barrier



Interpretation: The figures show the average mentioned intensity of barriers per country (mentioned by the interviewees) for gas and electricity, respectively. As already mentioned above we included countries only if we received at least two responses according to a specific question and country. The number in brackets represents the number of responses for a particular country per question. The reasons for problems in these countries and other countries with potential problems (mentioned by the interviewees) are listed below in the qualitative part.

Qualitative enumeration of countries with barriers

Other countries and additional information - Gas / Electricity

- Country A (number of interviews mentioned this country in the qualitative part of their answers): reason 1; reason 2...
- Country B...

These countries and reasons (summarised) were stated by interviewees in qualitative additions to the above mentioned (quantitative) values. They might be incomplete or maybe even incorrect, due to strategic responding (like values above, also). Therefore it is important to distinguish between received answers of specific interviewees - and hence specific interests - and an entire market overview.

[Remark: Of course, if a country is not listed at all, this does not mean that there are no problems existing. This means, however, that we received no (reliable) answers about this country concerning this question.]

Interpretation and background information

In this part of the table we will provide an economic interpretation and background information about the mentioned countries and reasons - if available.

3 General problems for entrants in retail energy markets

3.1 High Entry Costs

Question: Are there remarkable entry costs which can prevent market entry in specific member states?

Rationale: As potential new market entrants usually have initially small market shares and the potential return involves higher risks, high cost for entering the retail energy market could prevent market entries. These entry costs are usually sunk costs and amortisation takes particularly long if market shares are small.

Likert Scale:

Figure 4: High entry costs (gas)

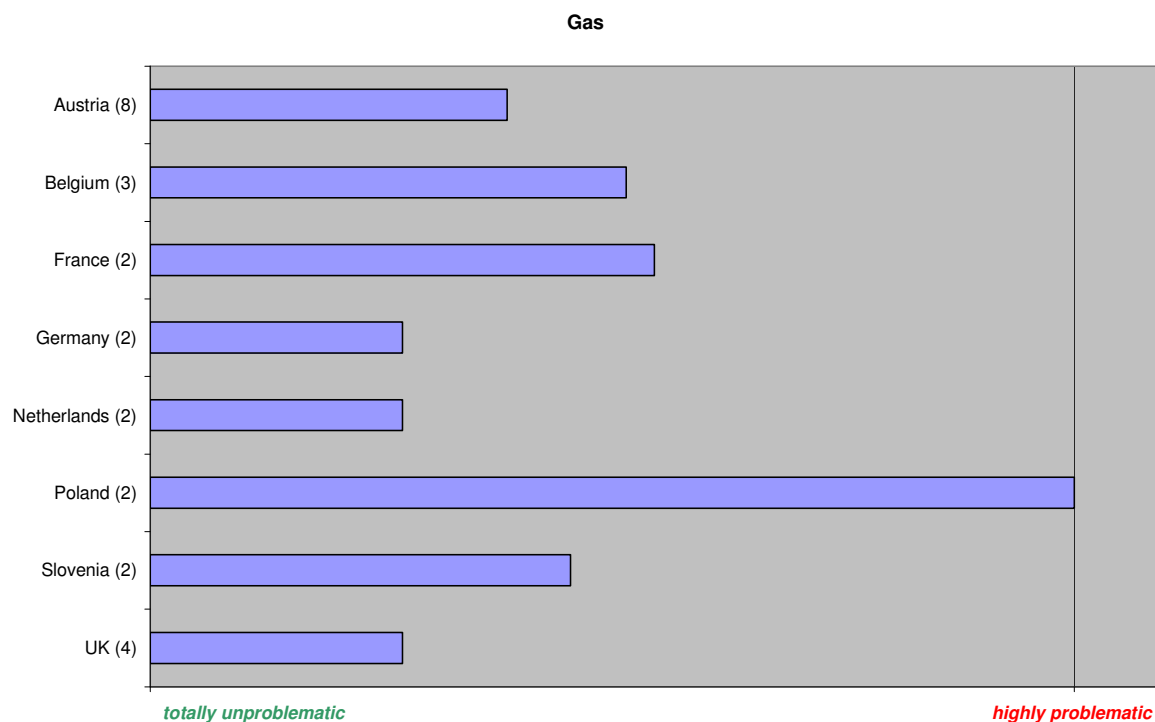
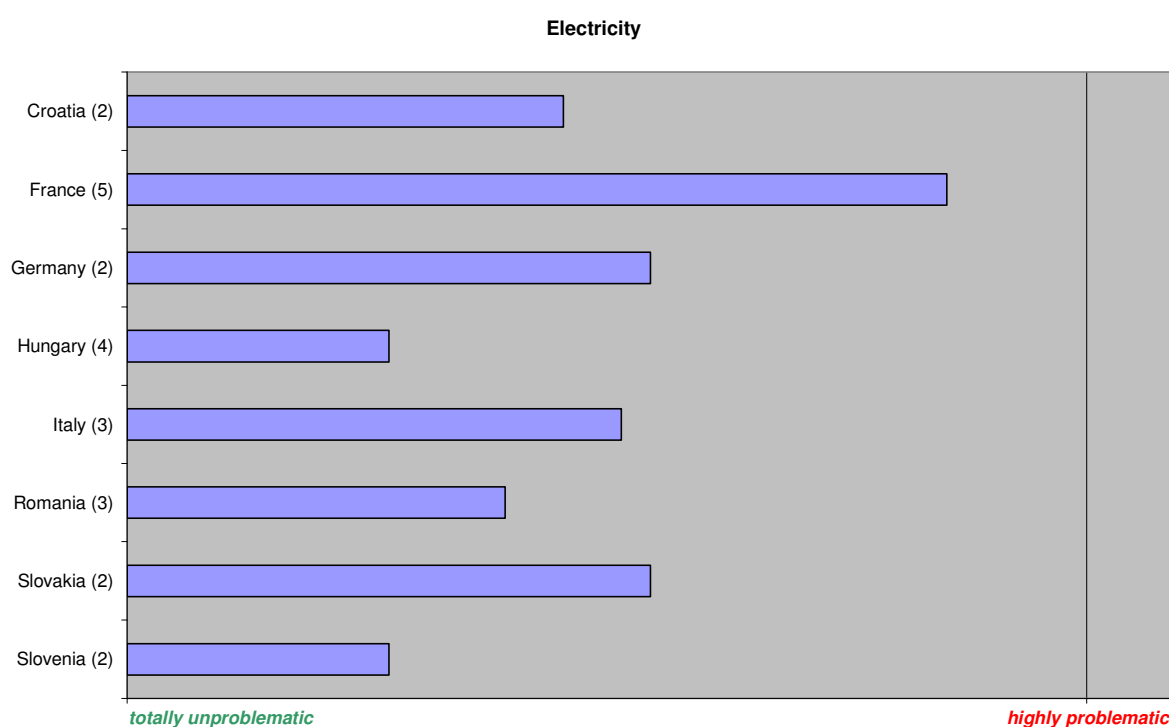


Figure 5: High entry costs (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- Southern and Eastern Europe (3): High entry costs due to indirect state protection of incumbents through complex entry requirements etc.
- Belgium (1): Relatively high requirements concerning staff and systems.
- Bulgaria / Croatia / Romania / Slovenia (1): Obligation to establish a local legal entity.
- The Czech Rep. (1): Need to buy market shares because market is inflexible.
- France (5): Relatively high requirements concerning staff and systems; north-south capacity reservation; storage obligations.
- Germany (1) / Netherlands (1): Relatively high requirements concerning staff and systems.
- Poland (4): High costs due to complex regulatory requirements and non-transparent network data; requirement for officially translated good-conduct certificate of all board members of mother company and various documents required for registration; limited wholesale market; storage and security of supply obligations for imports, i.e. supplier need to prove a certain amount of storage capacity available in order to be allowed to supply local customers. Even though these capacities may be located in neighbouring countries, missing import capacities at border point makes the supply almost impossible.
- Spain (1): Reporting obligations in local language; reporting has to be done (signed) by someone with Spanish Foreign (fiscal and legal) Identification Number (NIE).

Other countries and additional information - Electricity

- Bulgaria (1): Obligation to establish a local legal entity.
- Croatia (1): Obligation to establish a local legal entity.
- France (5): Some costs are linked to the metering system (IT is not embedded in the metering system, especially as far as small customers are concerned); high communication costs, since the government does not communicate liberalisation (despite obligation to make communication campaigns); a "regulation-team" is required due to complex regulatory framework and frequent changes; financial costs due to relatively high bank guarantees (ARENH⁶, RTE and wholesale market).
- Germany (1): Relatively high costs concerning sales channels.
- Italy (1): Relatively high costs concerning sales channels.
- Romania (2): Obligation to establish a local legal entity.

Interpretation and background information

For new market players the level of administrative obligation is a comparative disadvantage as the costs need to be spread to a smaller number of customers. For example the obligation to establish a local branch in the country as usually the case in Eastern countries is a major obstacle for new entrants. Usually this process takes a long time such that new entrants face the chicken and egg issue. Either they spend the money to establish the branch without having a customer or they may not be allowed to sign a supply contract as the required administrative obligations have not been fulfilled. In some cases these start-up costs are even higher than the potential profit of the initial deal. However, such initial deals are fundamental to develop new businesses in foreign countries.

The establishment of virtual trading points may help to reduce start-up costs as the administrative obligations are significantly reduced.

3.2 Poor information access for entrants

Question: Are there any problems associated with access to relevant data for entrants in a certain member state, which can prevent market entry?

Rationale: Access to market data and information is of high importance for entering a new market. Especially for small suppliers it is important that the required data be easily available and be inexpensive. Usually the newcomers do not have required local market knowledge. Purchasing the data/information might put newcomers under financial pressure and is a disadvantage over already existing market players (of course this fact is associated with "High entry costs", also - as mentioned above).

⁶ ARENH is the French mechanism allowing new entrants the access to nuclear power, including a regulated wholesale price: <http://www.developpement-durable.gouv.fr/Le-prix-de-l-ARENH.html>.

Likert Scale:

Figure 6: Poor information access for entrants (gas)

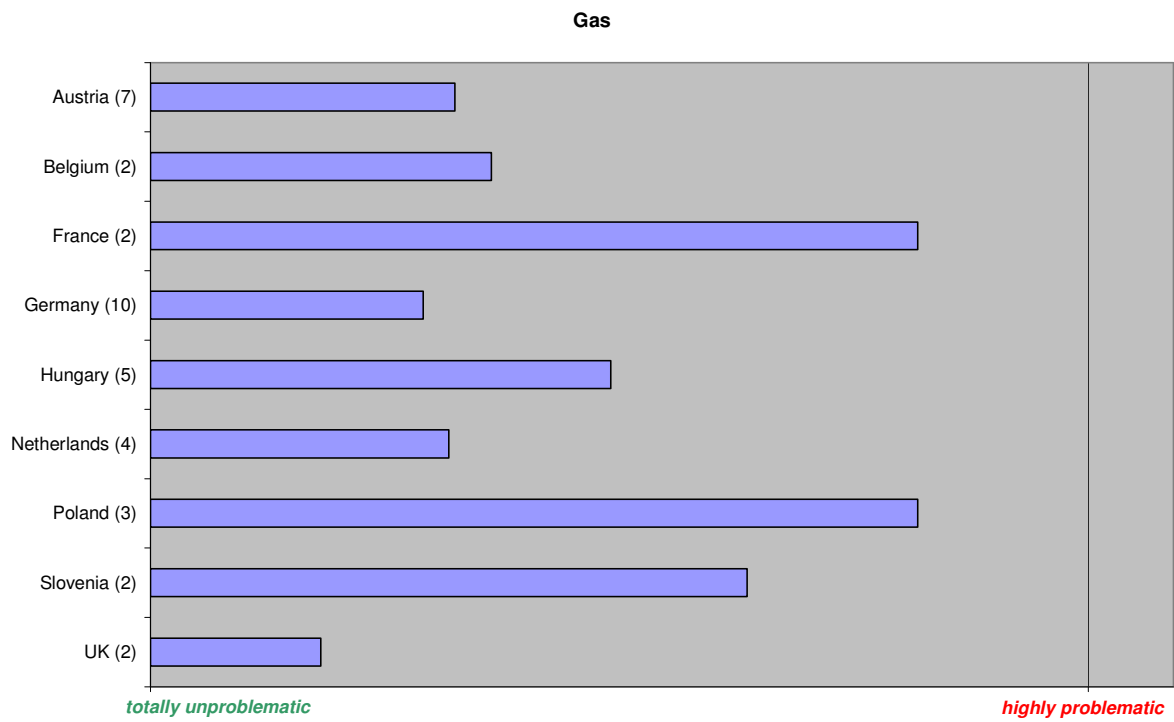
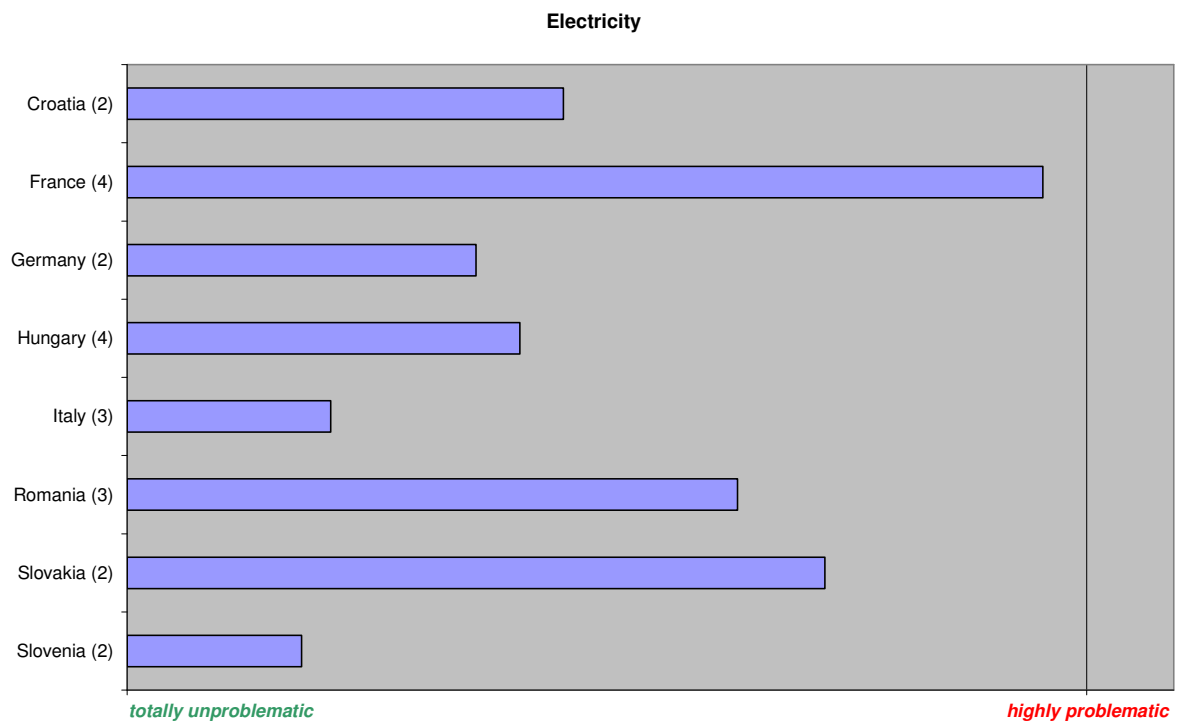


Figure 7: Poor information access for entrants (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- General (7): Required information and data is available only in respective local language (problem especially for Eastern Europe).
- Belgium (1): No customer database available.
- Croatia (1): Only legislation is available, other relevant data is missing (e.g. data associated with switching supplier).
- The Czech Rep. (1): Price statistics are not available; missing transparency.
- France (2): Consumption data is not available by GrDF (DSO); no information about customers in regulated tariffs available.
- Germany (1): No customer database available.
- Netherlands (1): No customer database available.
- Poland (1): Price statistics are not available; missing transparency - expert knowledge is required.

Other countries and additional information - Electricity

- General (3): Required information and data is available only in respective local language.
- Bulgaria (1): Lack of data on electricity markets because there exists no power exchange and hence no market signals.
- Croatia (1): Only regulatory obligations are available, but no further data.
- France (5): Consumption data is neither easily available nor free of charge; incumbent (EDF) does not give access to market studies; incumbent (EDF) has exclusive information about customers in regulated tariffs and does not share with other suppliers
- Romania (1): Customer information is less developed than in other EU countries.

Interpretation and background information

Availability of relevant information and market data only in local languages is a significant barrier to market entry. Potential entrants particularly from other countries have to spend additional resources in order to gain this information or to be able to compete with incumbents. In addition, several interviewees claim that important studies and data is available only for the incumbent (e.g. in France and Croatia) but not for other suppliers. This fact can lead to a strong advantage of the incumbent and can hinder entry or expansion of other suppliers. In order to attract new market players it is crucial that information is easy to reach. Therefore, information should be available at least in English apart from the local language. Furthermore, all relevant market data to identify market opportunities should be available for entrants and not be private information of the incumbent.

It is a barrier to entry that information and data is not available in English for all countries, but according to the interviewees, this holds especially for Eastern Europe, since these languages are less common than the ones of Western Europe.

3.3 Low profit margins

Question: Are there retail energy markets with very low margins and if so what are the reasons for this?

Rationale: The motivation to enter a market is to earn profit. Profits of retailers usually result from the difference between the cost for buying in the wholesale market and the price for selling gas or electricity in the retail market. If this difference is too low, the market is unprofitable and the incentive to enter the market is reduced. A low difference may either occur due to high competition in the retail market which may force the market participants to sell at a price close to marginal costs. This effect would prove the functioning of the retail market. Alternatively low margins may result from institutional conditions e.g. low regulated retail tariffs or the obligation to source from a single supplier (e.g. importer of gas or power producer). In this case even a relative (downstream) cost advantage of a potential entrant might not turn into a competitive advantage. (The charts show the answers for markets segments where there is competition).

Likert Scale:

Figure 8: Low profit margins (gas)

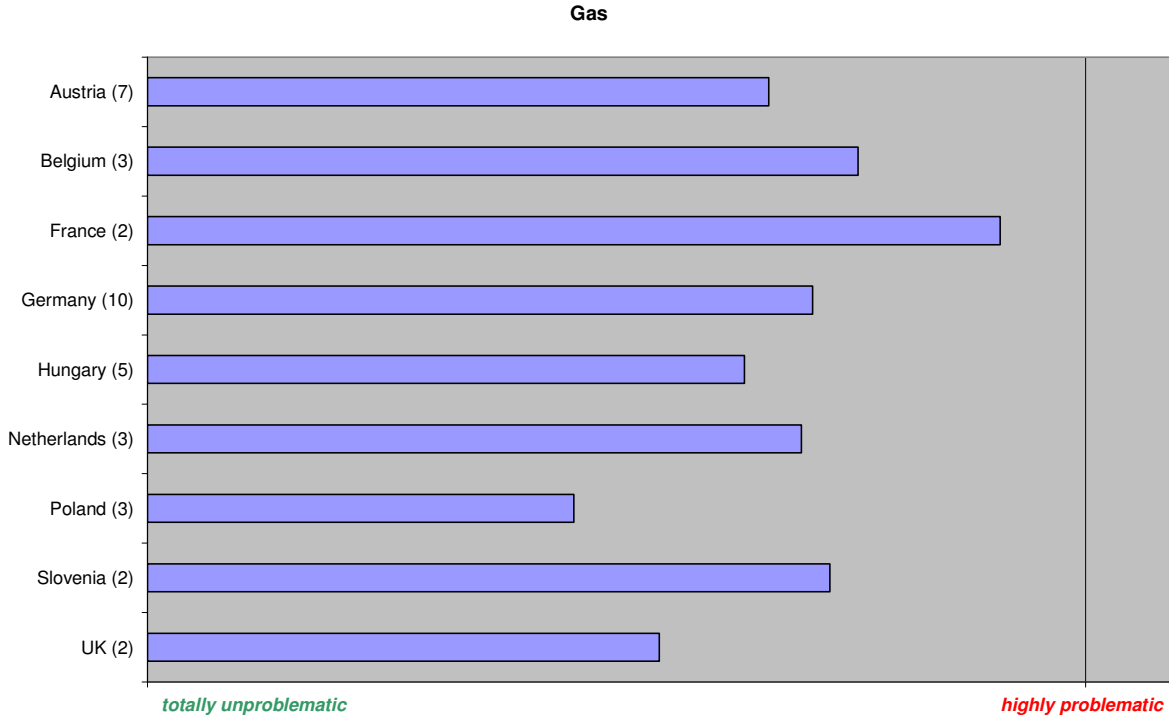
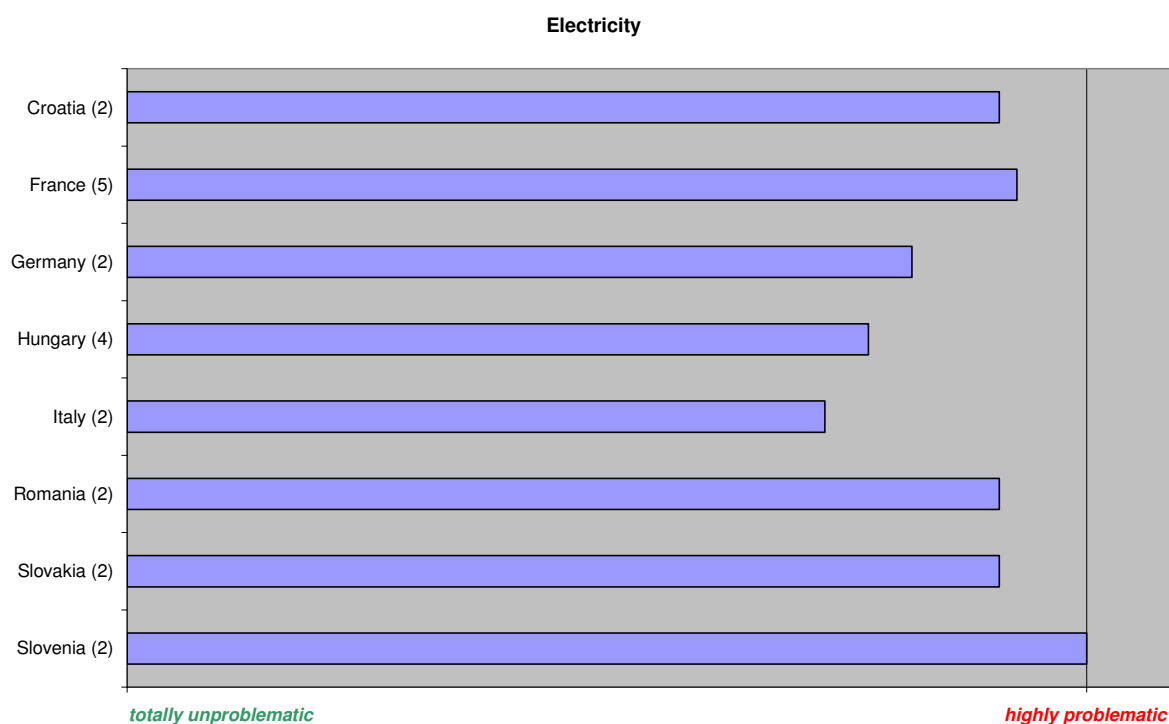


Figure 9: Low profit margins (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- General (4): Intense competition (in unregulated segments); regulated retail price is below wholesale price level (margin squeeze).
- Eastern Europe (1): Regulated retail price is below wholesale price level (margin squeeze).
- Austria (3), Germany (3), Netherlands (1): Intense competition.
- France (2): Intense competition (in unregulated segments); regulated retail price is below wholesale price level (margin squeeze); decreasing margins due to the unpredictable reimbursement system of GRTgaz.
- Hungary (1): Intense competition (in unregulated segments); regulated retail price is below wholesale price level (margin squeeze).
- Poland (4): Regulated retail prices - for the regulated customer segments - are below wholesale price level (margin squeeze).

Other countries and additional information - Electricity

- Eastern Europe (4): Regulated price is below wholesale price level (margin squeeze).
- Austria (3), Belgium (2), Germany (1), UK (4): Intense competition.
- Croatia (1): Intense competition (in unregulated segments).

- France (5): Suppliers' margin is determined by the difference between ARENH (regulated wholesale price) and regulated retail prices: ARENH is too high and regulated retail prices are too low in the profiled segment; in addition, ARENH has become a reference wholesale price, in the non-profiled segment thus suppliers cannot benefit from lower prices on wholesale markets, which tend to squeeze margins.
- Hungary (2): Intense competition (in unregulated segments).
- Italy (1): Regulated price is below wholesale price level (margin squeeze); Intense competition (in unregulated segments).
- Romania (3): Intense competition (in unregulated segments).

Interpretation and background information

Retail price regulation as seen quite often in Eastern European retail energy markets seems to be a real problem for profit margins. Regulated retail prices are often below the wholesale level, as the supply costs for energy of households is of high political importance in these countries. This fact was already shown in the MMR 2012. The political importance of retail energy prices makes the forecast and development of new businesses unpredictable for new entrants. High uncertainty concerning the long run evolution of price regulation together with the long term obligations associated with energy supply contracts causes a high degree of risk and deters market entry.

In Member States with highly developed markets⁷ the low margins mainly results from the intensive competition. Competition intensity increased in recent years as excess supply occurs in some countries due to reduced demand. However, it seems to be quite likely that suppliers (and hence the interviewees) will mention too low margins anyway based on strategic responding. Given former analysis (e.g. MMR 2012), this may apply to Germany, Netherlands and UK, since the margins were relatively high reported in these countries in the MMR 2012. In wholesale near industrial market segments these market view is realistic as pricing is mostly based the transparent wholesale forward curves now and the difference of the offers in the markets depends on traders market models. Therefore, these answers have to be treated with caution as we saw an increasing number of market exits of international suppliers in these countries.

From a different perspective, one could argue that illiquid wholesale markets associated with high wholesale prices are the main problem. However, the interviewees mentioned that regulated retail prices are too low. Especially, political influence and non-transparent price calculation deter potential entrants.

This problem seems to be one of the key issues from the viewpoint of retail energy suppliers, since the respective questions were answered with a high frequency and with rather similar evaluations. Indeed, insufficient margins can be a really high barrier to entry: Persistently low or negative margins prevent a sustainable business model, as costs and issues related to entering a retail energy market (entry costs) cannot even be amortised over time.

⁷ Mostly mentioned Austria, Belgium, Great Britain, Germany, the Netherlands,

3.4 Exit costs

Question: Are there any costs and issues associated with exiting retail energy markets in certain member states which can prevent market entry?

Rationale: Specific costs for exiting a market (in addition to sunk entry costs) can be a barrier to market entry. Since potential entrants always bear the risk that they are unprofitable, they take the costs of market exit into consideration from the beginning. Thus, they need a clear and economical exit opportunity.

Likert Scale:

Figure 10: Exit costs (gas)

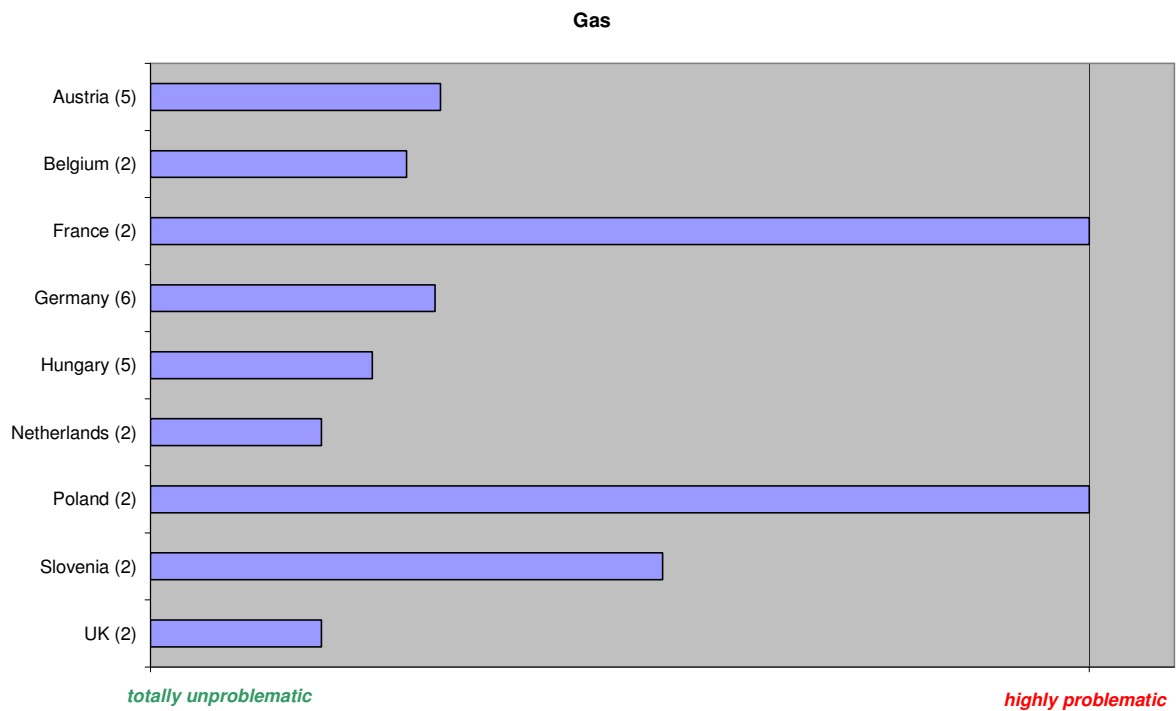
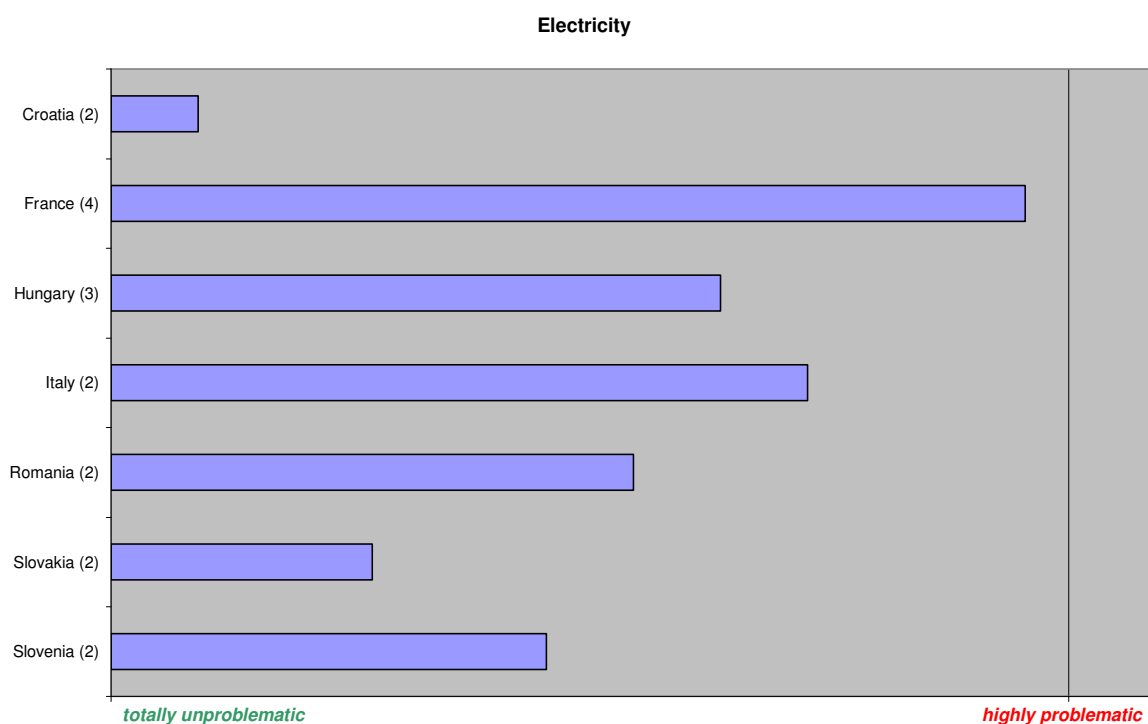


Figure 11: Exit costs (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- General (1): Sunk costs for liquidity contracts etc. are higher in markets with illiquid wholesale markets.
- Hungary (2): No legislation on rules for exiting the regulated segment: licence holders cannot return the licence even if they suffer losses (It is not possible to exit without going bankrupt) - Individual agreement with NRA is required: A new supplier has to take over all customers (state owned MVM is the only possible buyer).
- Poland (2): Sunk investments for storage and security of supply obligations.
- France (2): Long term sourcing contracts (e.g. north-south auctions imply a 4-years contract); sunk investments for storage obligations.
- Other countries and reasons - Electricity
- Hungary (2): Exiting the regulated segment is unprecedented and there exists no clear rules.
- France (2): Long term sourcing contracts (including bank guarantees, especially for ARENH).
- Romania (1): Problems to sell the position back.

Interpretation and background information

We received not many answers concerning this problem. Hence, we assume that this barrier is not as important as others for potential market entry. Nevertheless, it seems to be important that clear rules for exiting the regulated market segments are needed (possibility of exiting without going bankrupt). At the same time long-term contracts (e.g. for sourcing) associated with required bank guarantees could also hinder market entry.

A crucial element in reducing exit costs for market participants is the development of a liquid wholesale market. This may be reached by the implementation of a virtual trading point where trades are to be executed. Liquid wholesale markets may facilitate that new entrants can sell contracts easier, which became non-profitable. Besides the development of liquid markets, obligations which prevent suppliers to leave the market by selling their portfolio on the market should be abolished as these represent barriers to market exit.

In Hungary the enforced residential price reduction further deepened this problem in the regulated segment of the retail power market, and mother companies have to finance losses for the Hungarian subsidiaries on the longer term.

4 Problems related to customers and their behaviour

4.1 Limited access to information for customers

Question: Are there any problems associated with access to relevant information (e.g. offers and prices) for customers in specific member states?

Rationale: Acquisition and comparison of relevant price information might require time, effort and costs for customers. These costs should be minimised and the customers should easily be able to identify new offers of new market entrants with either better prices or better products and services.

Likert Scale:

Figure 12: Limited access to information for customers (gas)⁸

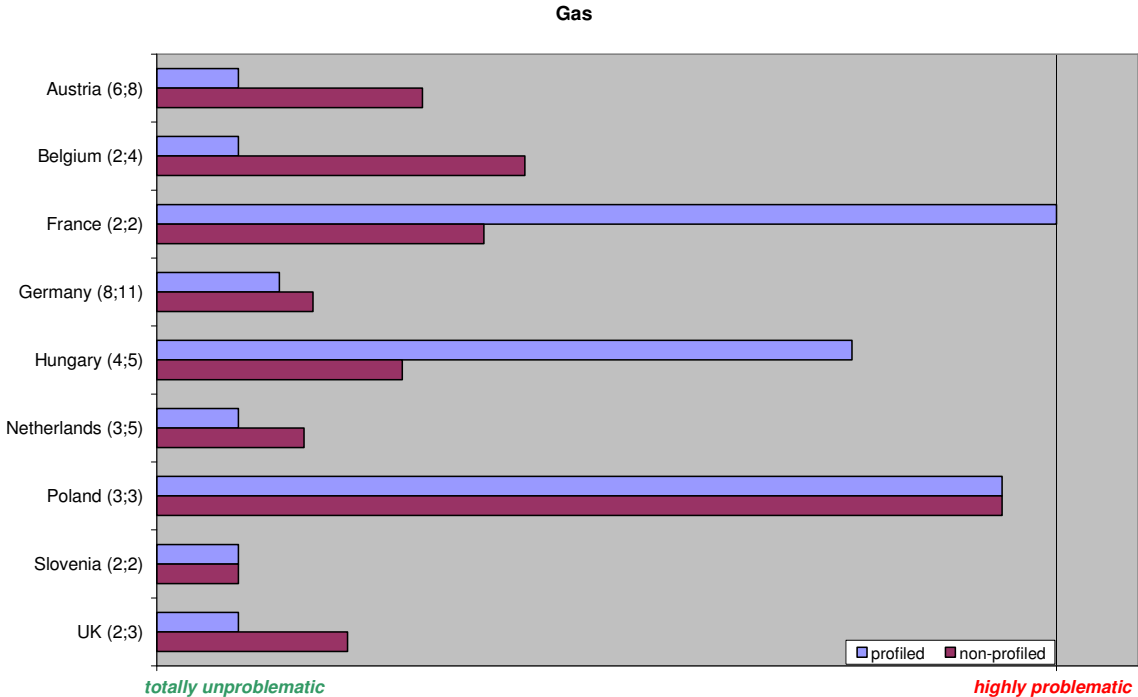
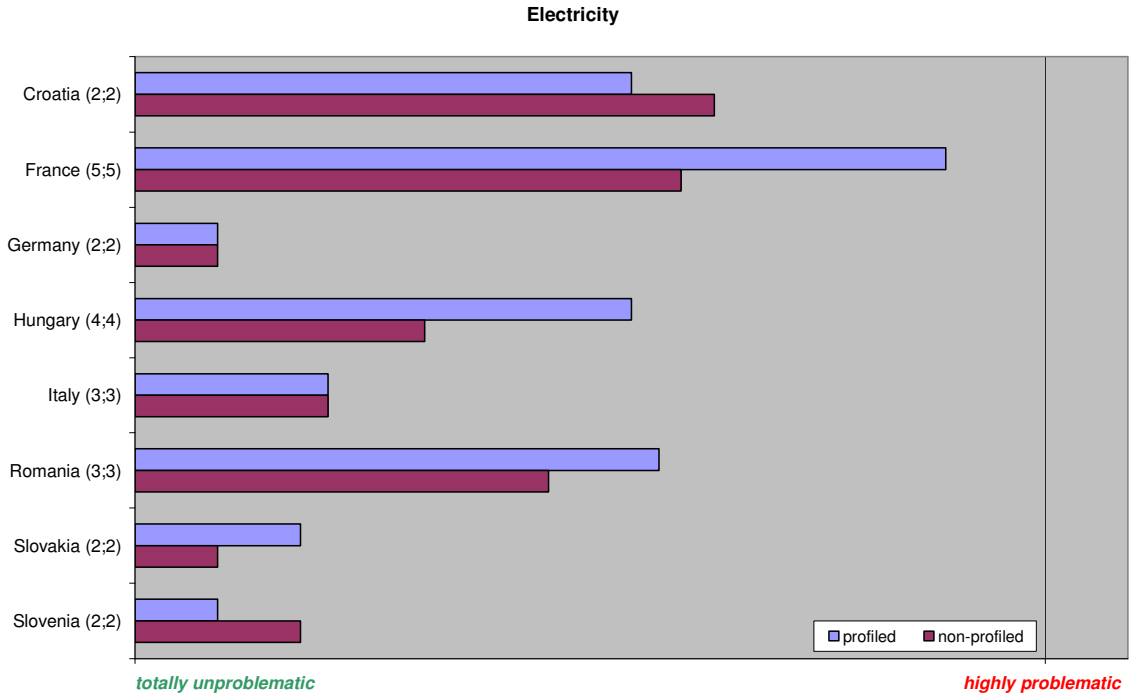


Figure 13: Limited access to information for customers (electricity)



⁸ Profiled customers are households and small businesses - non-profiled are industrial customers. The first number in brackets represents the number of received answers concerning profiled and the second concerning non-profiled customers.

Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- General (2): Customers in not fully liberalised markets are lacking information due to difficult price benchmark opportunities with liquid hub.
- Croatia (1): Uninformed profiled customers due to determining behaviour of the state and political driven price cuts (regulated prices).
- France (1): Lack of communication and "pedagogy" on opening of markets by public authorities (NRA as an exception); Lack of transparent unbundling (e.g. names of GDF (supplier) and GrDF (DSO)).
- Hungary (3): Uninformed profiled customers due to paternalistic behaviour of the state and political driven price cuts. There are no competitive offers for profiled consumers.
- Poland (3): Complex tariff system; no (reliable) price comparison tools⁹; awareness of opportunities is very low for profiled customers.

Other countries and additional information - Electricity

- Croatia (1): Customers are not aware about market opening, yet.
- France (4): No reliable price comparison tools for profiled customers; lack of communication and "pedagogy" on opening of markets by public authorities (NRA as an exception).
- Hungary (2): Paternalistic behaviour of state and the politically driven price cuts makes universal service customers not interested in information gathering and changing suppliers; no price comparison tools.
- Romania (2): No price comparison tools.

Interpretation and background information

First of all, it is important that public authorities take care that all customers are aware of existing competition. Authorities need to comply with rules concerning public communication campaigns aiming at informing customers. Only if the customers are well informed about their opportunities, it is possible for them to switch their supplier. Another important point is a clear and transparent unbundling of former integrated incumbents, also (e.g. similar names / logos of producer and supplier). This would ensure that customers are aware of unbundling and hence of liberalisation. A further step is to establish transparent and reliable price comparison tools. With a central platform for easy comparison, selection and contact option to supplier, switching costs would be minimised.

⁹ Since, there exists a price comparison tool in Poland, this statement is at least doubtful (interviewee's view).

4.2 Low price sensitivity of customers

Questions: Are there any countries with particularly low price sensitivity of customers? What are the reasons for this?

Rationale: Price sensitivity measures how strong the final purchase decision depends on the energy price. If customers are not price sensitive, their decision to change retail energy supplier depends on other factors than energy prices (and potentially incurred switching cost). If on the other hand, customers are totally price sensitive they would switch their supplier if savings achieved due to lower energy prices are higher than their switching costs.

Likert Scale:

Figure 14: Low price sensitivity of customers (gas)

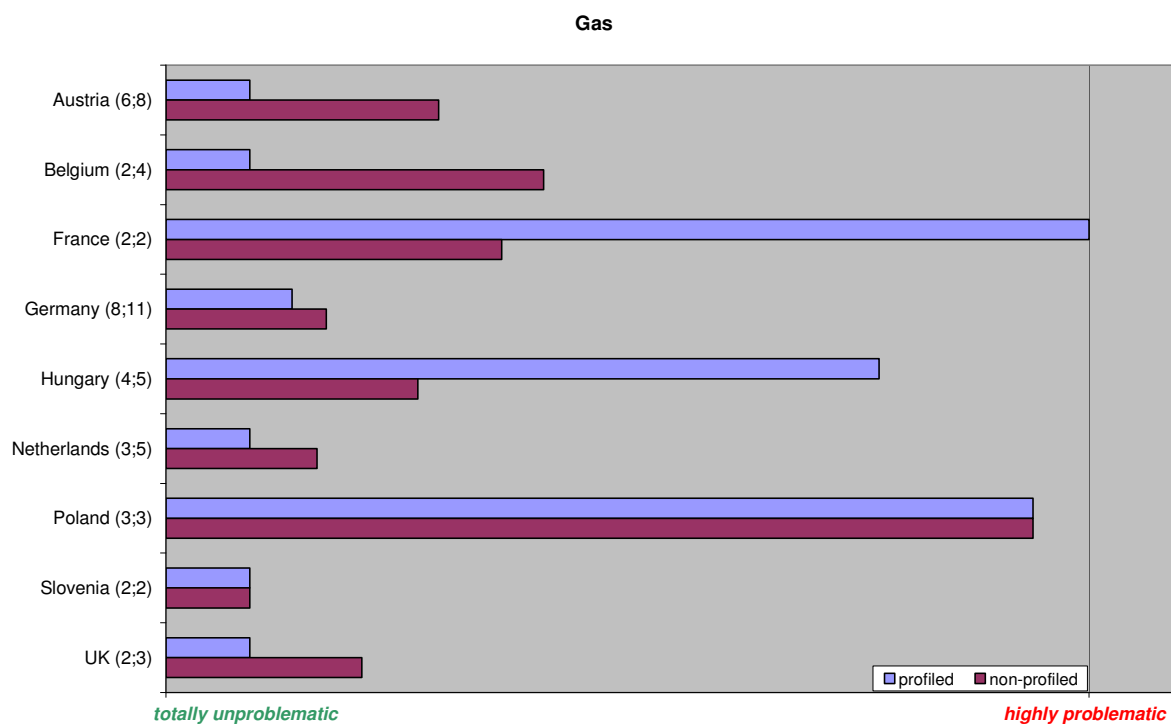
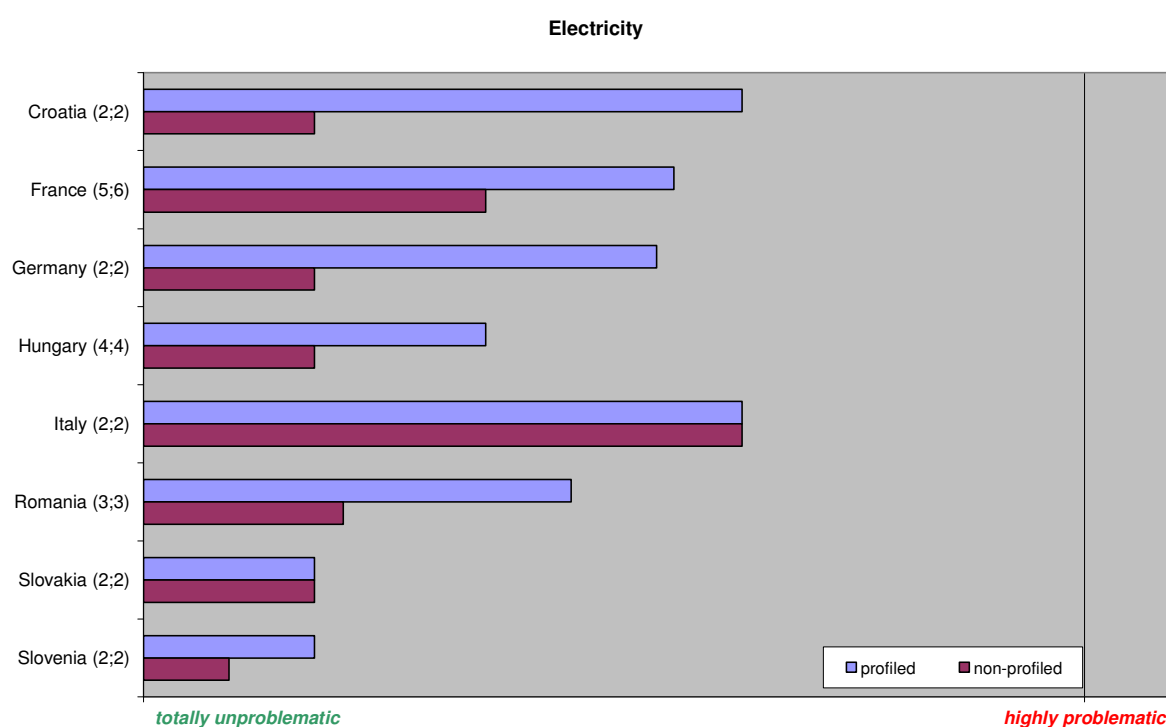


Figure 15: Low price sensitivity of customers (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- General (3): Dominant incumbents and regulated tariffs can lead to less or no sensitivity.
- Eastern Europe (1): Established customer relationship of incumbents; customers distrust an open market.
- Austria (2): Established customer relationship of incumbents.
- France (3): Established customer relationship of incumbents; customers distrust an open market.
- Germany (2): Established customer relationship of (local) incumbents; bad experiences with entrants (bankruptcy etc.).
- Poland (2): Established customer relationship of incumbents; lack of transparency.

Other countries and additional information - Electricity

- Eastern Europe (1): Established customer relationship of incumbents; customers distrust in open market.
- Austria (1): Established customer relationship of incumbents.
- France (4): Established customer relationship of incumbents; customers distrust in open market.

- Italy (1): Due to complexity of Italian retail market, profiled customers often stick to the supplier, which is a subsidiary of a DSO.
- Romania (2): Established customer relationship of incumbents.

Interpretation and background information

Indeed, customers are not totally price sensitive because they often have a higher willingness to pay for higher service quality (invoicing, call centres etc.) and innovative products (e.g. green energy offers). This fact is not a barrier to entry as such, since an efficient entrant can freely decide which service quality or products he wishes to offer. But there exist obviously other factors which cannot be influenced by entrants. For example the price sensitivity is limited due to regulated prices. Since, it might be rational for customers to stay uninformed about other suppliers (also providing regulated offers) because information and switching costs (e.g. time) are often higher valued than potential improvements of service quality. Additionally, customers have established relationships with former monopolists/incumbents this requires more effort from newcomers to poach customers. This aspect mainly applies to profiled rather than non-profiled customers.

4.3 High switching costs for customers

Question: Are there any problems and costs for customers that want to change their retail energy supplier in certain member states?

Rationale: Acquisition and comparison of relevant price information might require time and effort and causes switching costs for customers. Other relevant switching costs are associated with conclusion of a new and termination of an old contract, respectively. In order to facilitate market entries and expansions it is very important to reduce these costs. This can ensure that customers are aware about new offers and hence can switch to efficient suppliers (better prices and/or products and services).

Likert Scale:

Figure 16: High switching costs for customers (gas)

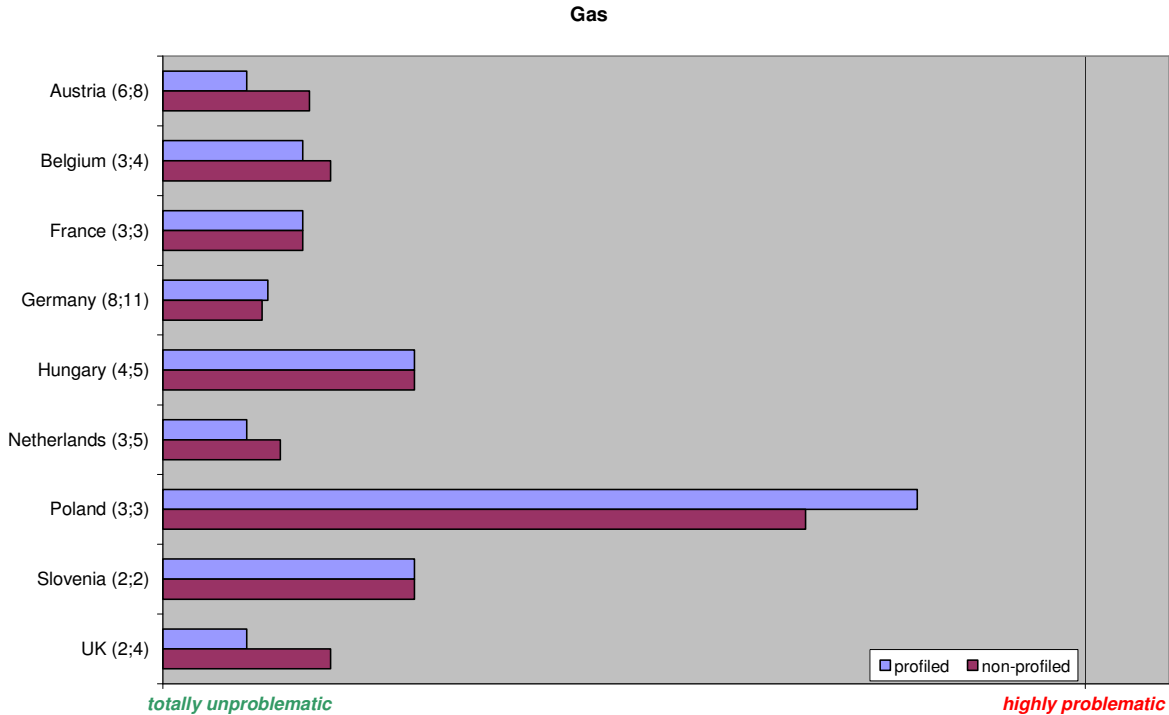
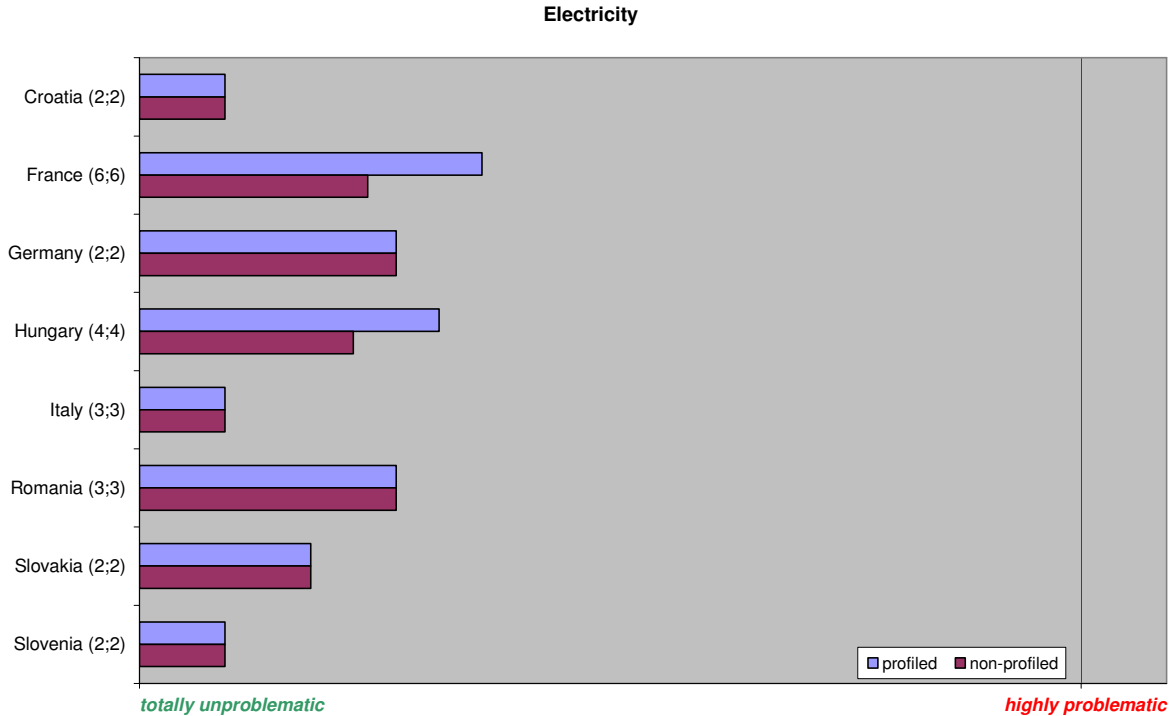


Figure 17: High switching costs for customers (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- Croatia (1): Switching process is relatively administrative and bureaucratic (no IT support).
- Hungary (1): Long termination periods (up to 18 months).
- Poland (3): Long term contracts; risk of exit costs for customers caused by contracts without termination rights; TPA processes are regulated but often ignored.
- UK (1): Difficulties because of different services providers (metering, accounting, transport).

Other countries and additional information - Electricity

- France (2): Penalty if subscribed power (e.g. 6kV) has been modified until 12 months before switching (profiled customers); switching costs due to remote metering (for profiled SME - determined by the metering mechanism in TURPE).
- Germany (1): No exit options and long contract periods.
- Romania (1): Obligation to pay all outstanding invoices before supplier changing is possible.

Interpretation and background information

Given the fact that we received very few answers concerning high switching costs and given the low intensity values (listed above) we assume that this point is not a high barrier to entry in most of the EU retail energy markets. However, there should be a limit to termination periods on the one hand and the duration of a switching process on the other hand.

For a detailed (and apparent more up to date) overview we would like to refer to MMR 2012 (page 238-240). Accordingly, most of the member state (18 for gas and 23 for electricity) facilitate retail energy customers a switching period below three weeks and without any charges.

5 Problems associated with regulatory framework

5.1 Retail price regulation

Question: Are there any problems associated with retail price regulation which can prevent entry in certain member states?

The answers concerning retail price regulation are very similar to the ones concerning low margins. As already mentioned there are regulated prices which are indeed too low (see MMR 2012).

Likert Scale:

Figure 18: Retail price regulation (gas)

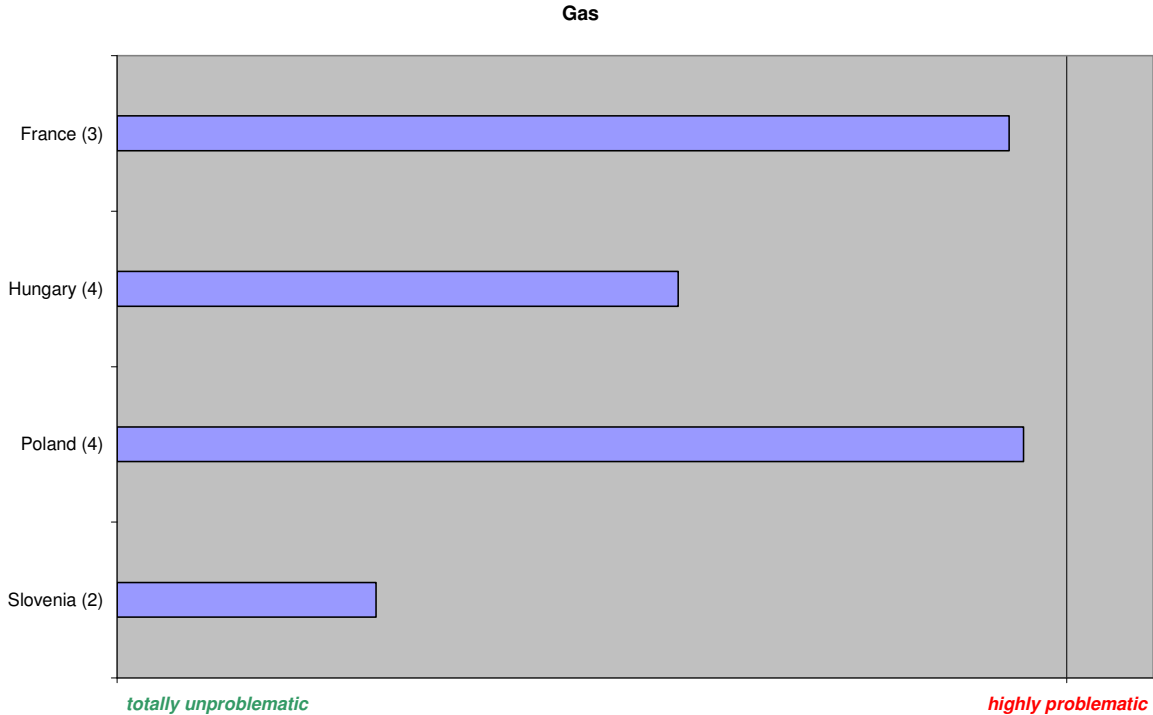
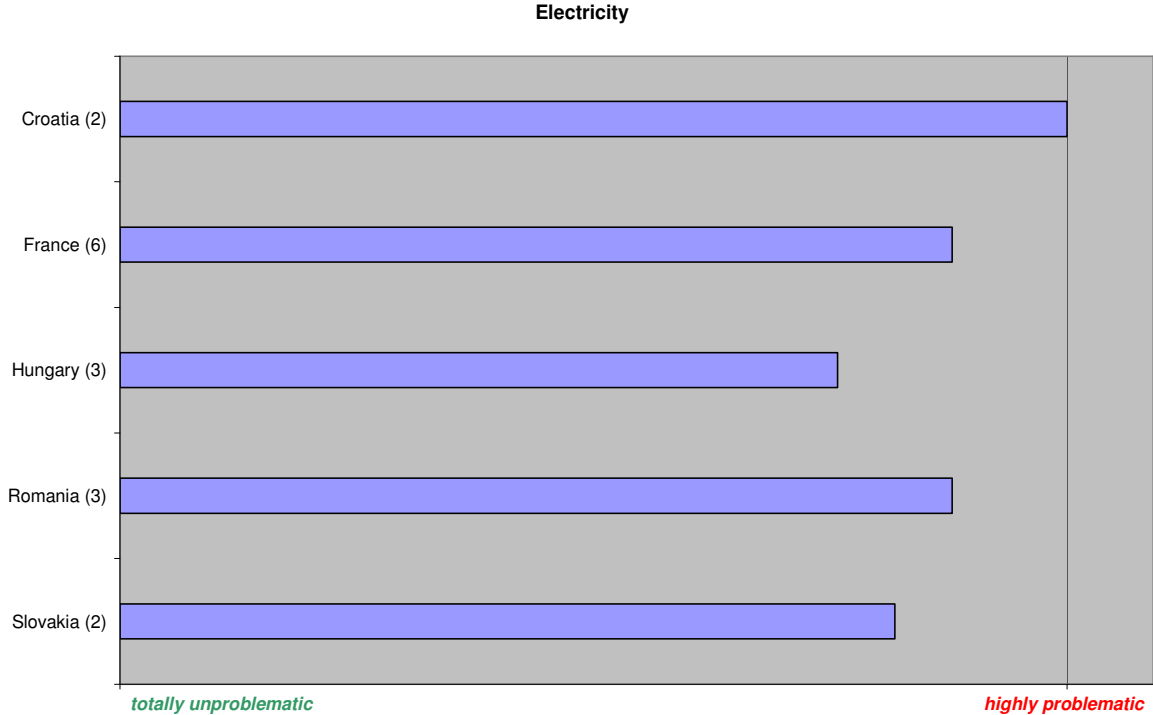


Figure 19: Retail price regulation (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- Eastern Europe (2): Margin squeeze due to retail price regulation.
- Croatia (1): Margin squeeze due to retail price regulation; non-transparent price calculation.
- France (1): Margin squeeze due to retail price regulation; unpredictable and political driven price developments; consumers still have the choice between regulated and non-regulated prices. Exclusive supplier of regulated contracts is the incumbent gas supplier.
- Hungary (3): Margin squeeze due to retail price regulation; unstable regulation.
- Italy (1): Unpredictable and political driven price developments.
- Poland (2): Margin squeeze due to retail price regulation; unpredictable and political driven price developments; high market share of incumbent (97%) without reasonable gas release programs deters possibility for new entrants to compete successfully and to gain market shares

Other countries and additional information - Electricity

- Eastern Europe (3): Margin squeeze due to retail price regulation.
- Croatia (2): Margin squeeze due to price regulation; non-transparent price calculation.
- Spain (1): Margin squeeze due to retail price regulation.
- France (2): Margin squeeze due to retail price regulation
- Hungary (2): Margin squeeze due to retail price regulation; unstable regulation.
- Poland (1): Margin squeeze due to retail price regulation.
- Romania (2): Margin squeeze due to retail price regulation.

Interpretation and background information

Retail price regulation may be a high barrier to entry if the prices are driven due to political influences rather than economically. In this respect interviewees especially criticise the high degree of uncertainty about future price developments and non-transparent price calculation. Accordingly, retail energy prices are often subject to political intervention. Additionally the missing opportunity to leave the market after price reduction is mentioned (as already described in the results concerning "Exit costs").

This problem seems to be one of the key issues for retail energy suppliers, since the concerning questions were highly frequently answered. Indeed, this can be a really high barrier to entry: Persistently low or negative margins prevent a sustainable business model, as costs and issues related to entering a retail energy market (entry costs) cannot even be amortised over time. Some of the interviewees mentioned that they would welcome a full price liberalisation, therefore.

5.2 High uncertainty concerning future regulatory developments

Question: Are there member states with a high degree of uncertainty concerning future regulatory developments?

Rationale: Energy business highly depends on regulation and on the lasting commitments e.g. signing supply or capacity contracts. Consequently, stability of regulatory framework is crucial for market participants. Frequent and intensive interventions or changes of the regulatory framework reduce the attractiveness of an energy market.

Likert Scale:

Figure 20: High uncertainty concerning future regulatory developments (gas)

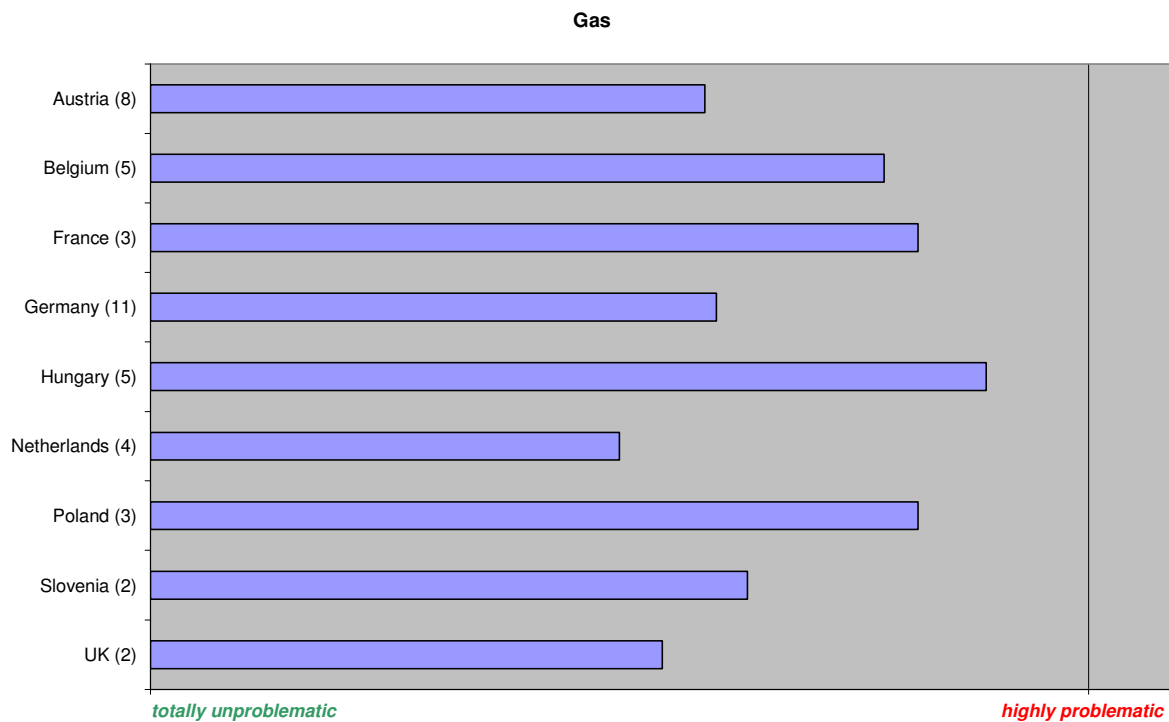
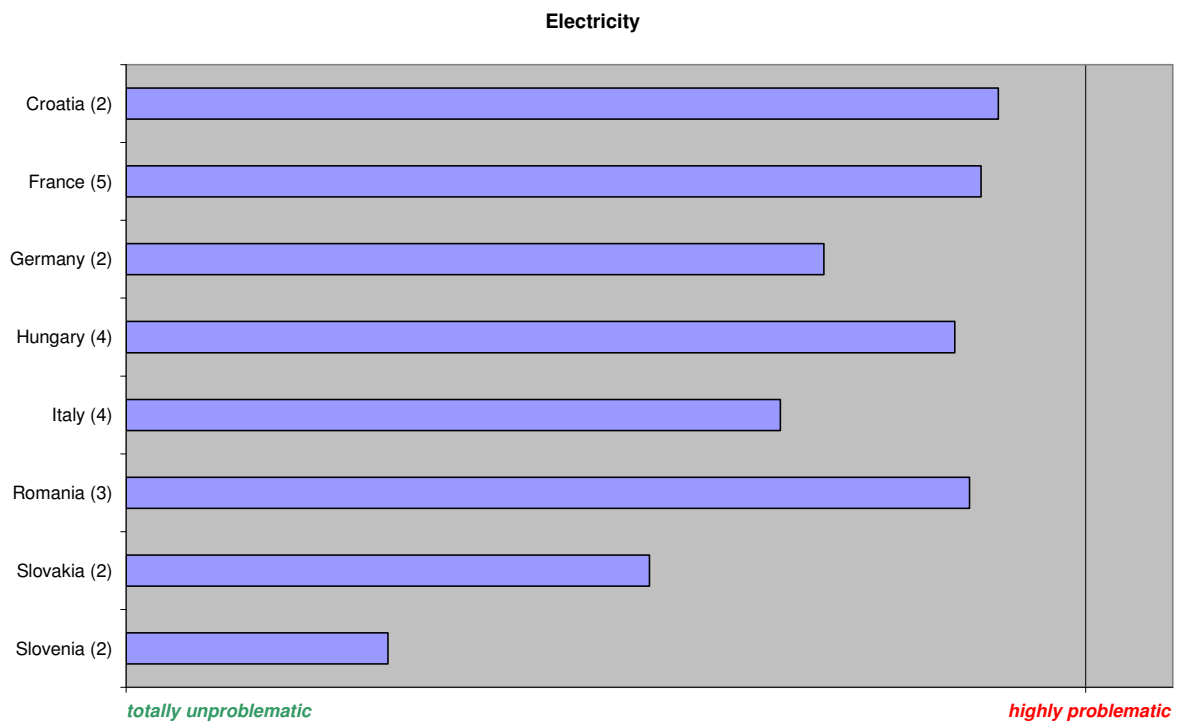


Figure 21: High uncertainty concerning future regulatory developments (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- General (1): Political influences on regulatory framework.
- Eastern Europe (2): Political influences on regulatory framework.
- Belgium (1): Uncertainty due to differences between the 4 NRAs (4 regions).
- Croatia (1): Political influences on regulatory framework.
- The Czech Rep. (1): Political influences on regulatory framework.
- France (1): Retroactive changes; changes during one period despite commitment of former government; political influences on regulatory framework.
- Hungary (1): Frequent regulatory changes; changes at short notice.
- Italy (1): Changes at short notice.
- Poland (3): Political influences on regulatory framework; state-owned market players.

Other countries and additional information - Electricity

- Eastern Europe (4): Political influences on regulatory framework.
- Belgium (2): Uncertainty due to differences between the 4 NRAs (4 regions).

- Croatia (2): Political influences on regulatory framework.
- France (4): Retroactive changes; changes during one period despite commitment of former government; uncertainty about ARENH tariffs; political influences on regulatory framework.
- Hungary (4): Frequent regulatory changes; changes at short notice.
- Italy (1): Changes at short notice; changes in details.
- Romania (3): Political influences on regulatory framework.

Interpretation and background information

Uncertainty about future regulatory developments seems to be an important issue for the interviewees. Most of them complain about frequent changes and changes at short notice, which make the process of planning very difficult. Given the wide range of answers concerning this problem, uncertainty about future regulatory developments might be one of the main barriers to entry into retail energy markets.

A main aspect is also fear about political interventions, which are often opposed to economic standards.

In addition, states can be shareholders of incumbents (e.g. the French State is shareholder of EDF and GDF incumbents). In such a shareholder configuration, state is judge and interested party at the same time, when a political decision is taken. As a consequence, the political decision is both unpredictable and unstable, sometimes leading to modifications compared to former commitments. It has also been noted that the splitting of the decision process between NRA, administration and political decision can be complex. E.g., in France, the level of regulated retail electricity tariffs cannot be challenged by the French competition authority (DGCCRF), because they result from a government decision. This can be interpreted as a privilege of the incumbents, since the decision of the shareholder state cannot be appealed.

The French situation is in contrast to that in Italy. There, from the beginning of the opening of the markets, a stable frame was put in place, giving visibility over 10 years and limiting the market share of the incumbents; in addition, a metering system was implemented to favour competition.

5.3 Complex licensing procedure

Question: Are there member states with complex and time consuming licensing procedures? What are the reasons for this?

Rationale: As already mentioned above, high cost for entering the retail energy market could prevent market entries. Complex and time consuming licensing procedures are a specific form of entry costs, which are mainly influenced by the regulatory framework. Hence, the NRAs have a chance to work on this task.

Likert Scale:

Figure 22: Complex licensing procedure (gas)

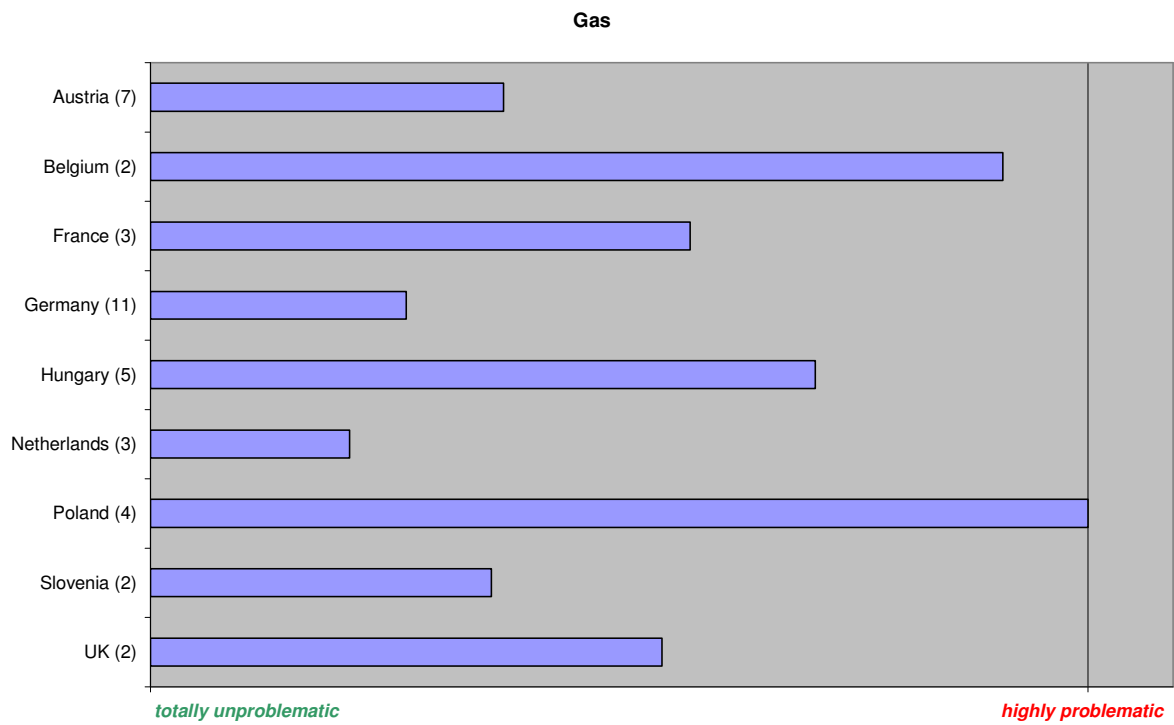
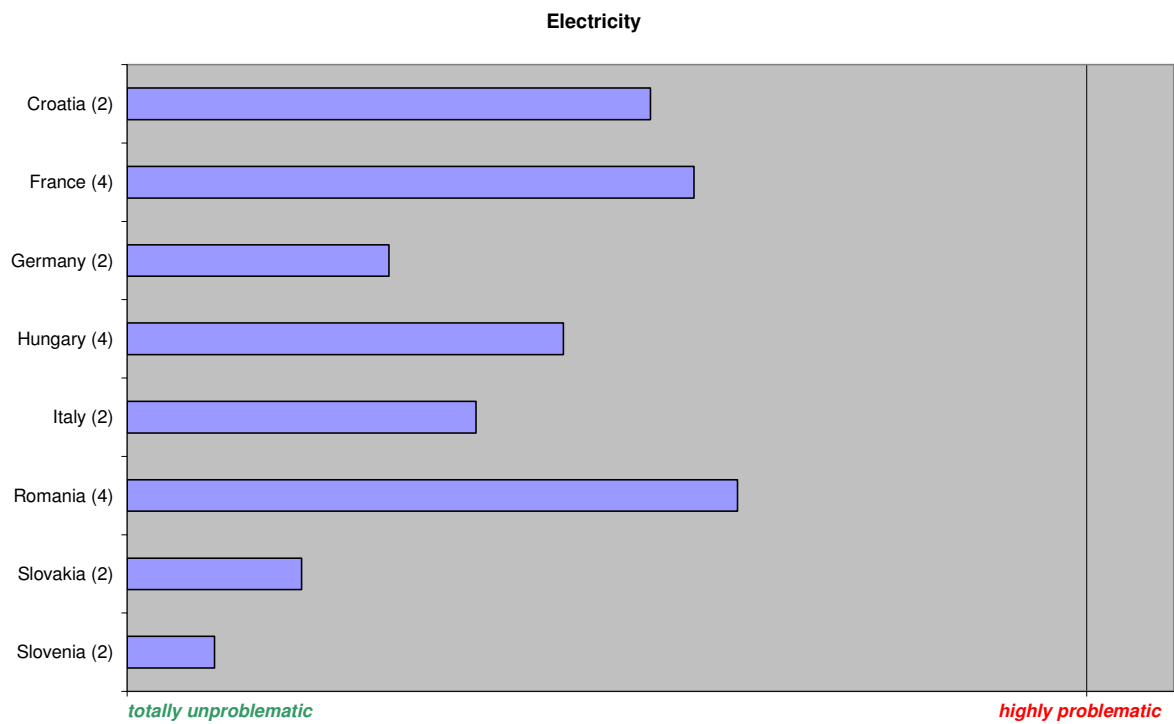


Figure 23: Complex licensing procedure (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- General (4): Entire licensing procedure has to be conducted in the respective local language (problematic especially for Eastern Europe).
- Belgium (1): Regional licenses required by the (4) regional NRAs.
- Croatia (1): High reporting obligations (3-years business plan, submission of general terms and conditions / contract and invoice template, number of employees and their working fields etc.).
- The Czech Rep. (2): A local lawyer is required; amount of required licenses (e.g. from tax authority) and documents; relatively high reporting obligations.
- France (1): Complex procedures and high bank guarantees for GrDF.
- Hungary (2): Amount of required licenses (e.g. from tax authority) and documents; relatively high reporting obligations.
- Italy (1): Amount of required licenses (e.g. from tax authority) and documents; relatively high reporting obligations.
- Poland (5): Long licensing duration (6-12 months); amount of required licenses (e.g. from tax authority) and documents; relatively high reporting obligations.
- Slovakia (1): Amount of required licenses (e.g. from tax authority) and documents; relatively high reporting obligations.
- Spain (1): Amount of required licenses (e.g. from tax authority) and documents; relatively high reporting obligations.

Other countries and additional information - Electricity

- Croatia (1): High reporting obligations (3-years business plan, submission of general terms and conditions / contract and invoice template, number of employees and their working fields etc.).
- France (2): Complex procedures and high bank guarantees for ARENH licensing; additional procedures linked to capacity market (starting 2016); French law NOME could oblige suppliers to adopt a social status (IEG – Industries Electriques et Gazières), inherited from incumbents, which can impede their competitiveness.
- Hungary (2): Relatively high bureaucracy; high bank guarantees.
- Romania (2): Relatively high bureaucracy.

Interpretation and background information

In general, the mentioned language issues are problematic. Especially in case for documents etc. required from entities, e.g. such as tax or company register. In addition, often a local citizen is

necessary. Further, reporting obligations (in local language) are not only an initial problem of start-up but problematic along the entire activity in a market. These problems seem to be a high barrier to entry, since answers were relatively frequent.

Additionally, the licensing procedure and sourcing contracts (either bilateral or regulated, e.g. ARENH) rely on bank guarantee mechanisms.

- a. Small suppliers do not have an easy access to bank guarantees and must compensate by cash resources, which are also costly.
- b. Non incumbent suppliers bear the cost of bank guarantees (e.g. bank guarantees for ARENH are not paid by EDF retail to EDF production; but are paid by other suppliers to EDF production).

To avoid this distortion effect, a less expensive substitution mechanism could consist in the rating and scoring of suppliers by credit agencies.

National TSOs and DSOs impose network procedures which are adapted to big suppliers, not to small suppliers (e.g. when a customer changes supplier in France, the switching procedure of ErDF is very difficult for the new supplier). Procedures related to regulatory changes and meeting minutes should be easily accessible on line, including the practical modalities and the contact persons.

5.4 High environmental obligations

Question: Are there environmental obligations which can prevent entry in the certain member states?

Rationale: Environmental obligations are playing an increasingly important role in retail energy markets. Differences and unequal treatments in national frameworks may influence the entry decision of foreign retail suppliers in the particular member states.

Likert Scale:

Figure 24: High environmental obligations (gas)

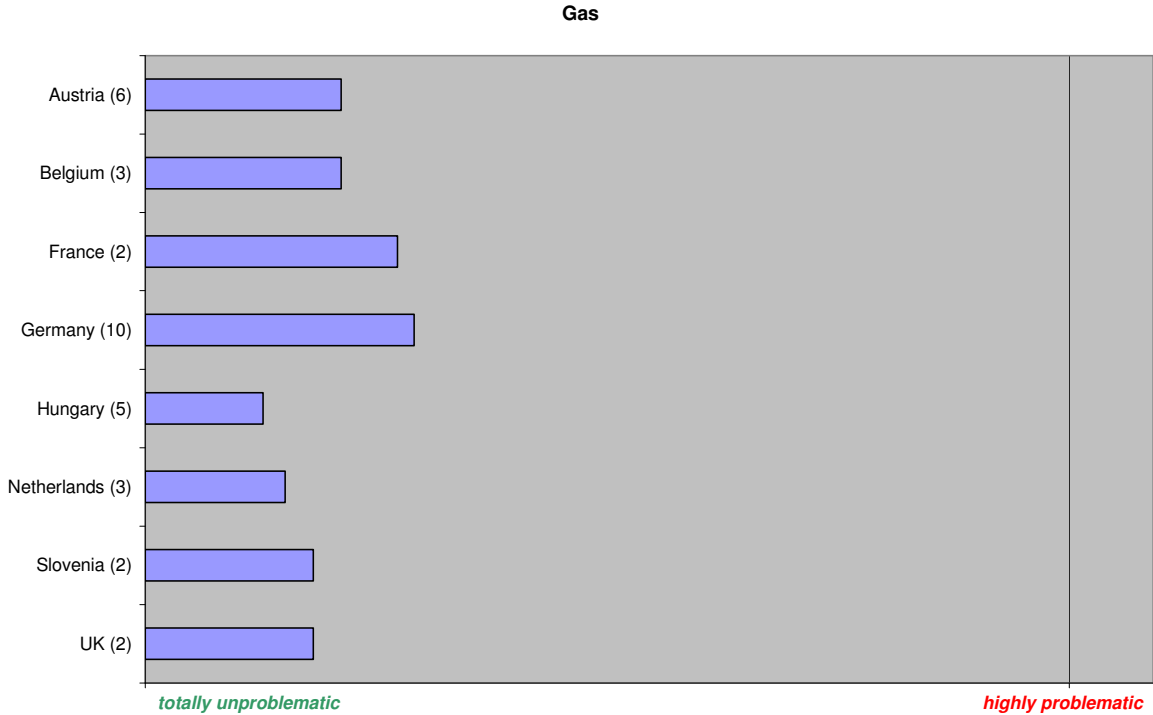
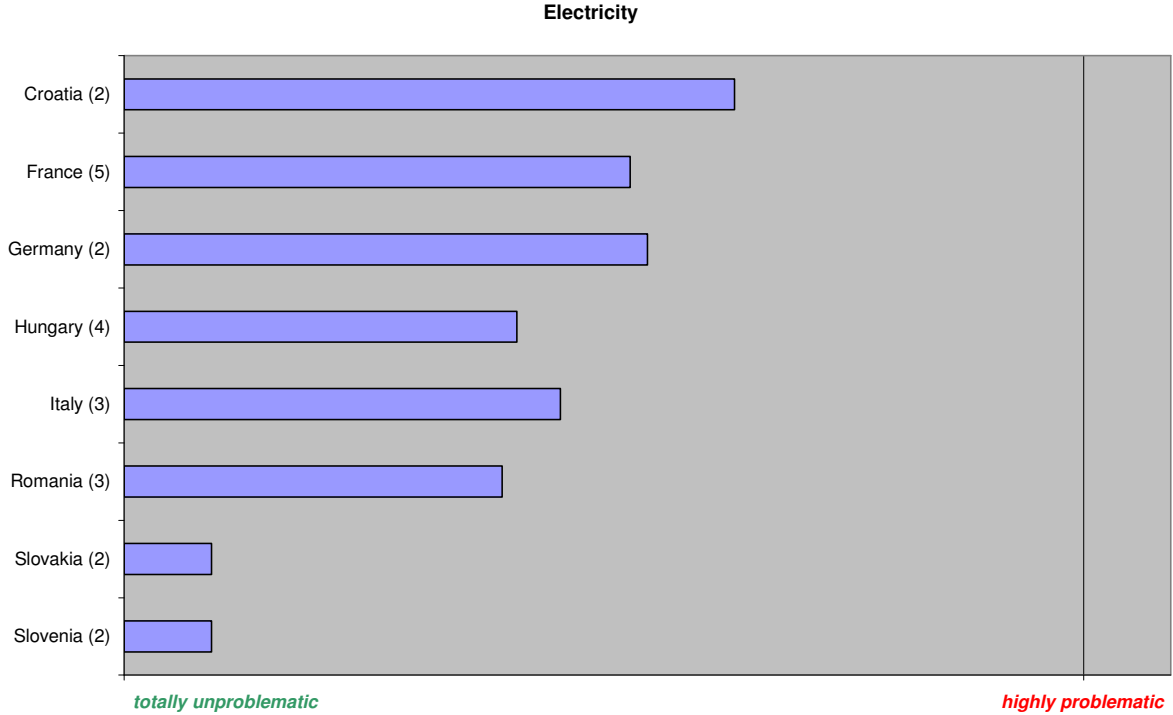


Figure 25: High environmental obligations (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- General (1): Green gas certificates are not international tradable and hence it is difficult to transport green gas without losing its advantages.
- Northern Europe (1): Higher costs as in Southern and Eastern Europe
- Poland (2): White Certificates are not properly handled in tariff process and have to be covered by supplier rather than be passed on to customers. Furthermore there is an obligation to obtain a certificate but no trade or availability of the same.

Other countries and additional information - Electricity

- General (2): Feasibility of declaration obligations is difficult for international trading; lack of harmonisation of certificates etc.
- Croatia (1): Obligatory to purchase energy generated by RES (renewable energy sources) at a very high fixed price for suppliers.
- France (3): The development of decentralised RES is supported by a feed-in tariff with an exclusive benefit for EDF; no possibility exists for alternative suppliers to develop services related to green energy.
- Hungary (1): Costs for RES support are placed on industrial customers and it is difficult to charge these costs in the competitive segment.
- Romania (2): Uncertainty about quota allocation; high quota of RES energy (25%) is required.

Interpretation and background information

The main point of criticism concerning environmental obligations is absence of common support frameworks and certificates. It seems to be very promising to harmonise support schemes in order to enable international trade of certificates and hence facilitate cross-border entry into retail energy markets.

However, environmental obligations seem not to be a high barrier to entry into retail energy markets, at least into gas markets.

For electricity markets we received some interesting additional information: In Hungary renewables production volatility are passed to the balancing groups, meaning they have to cope with this volatility as well, although this is applied in equal treatment on all participants. In Croatia an interviewee complained about the incumbent, who can avoid paying for the renewable costs of the system, and consequently can offer more competitive prices to its consumer.

6 Problems related to wholesale markets

6.1 Low liquidity of wholesale markets

Question: Are there illiquid wholesale markets that can prevent entry into retail energy markets in particular member states?

Rationale: A well-functioning, transparent and liquid wholesale energy market is crucial for the proper function of a retail energy market; problems in upstream markets often result in problems for downstream markets. Hence, illiquid wholesale markets seem to be a relatively high barrier to entry into retail energy markets.

Likert Scale:

Figure 26: Low liquidity of wholesale markets (gas)

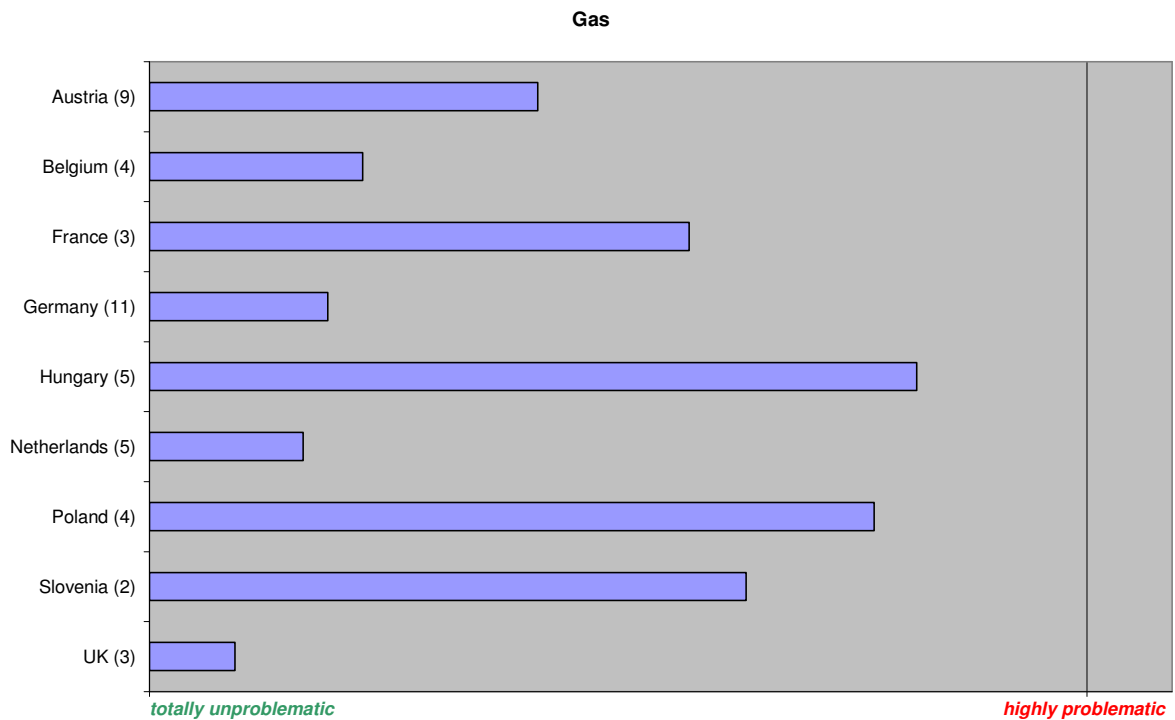
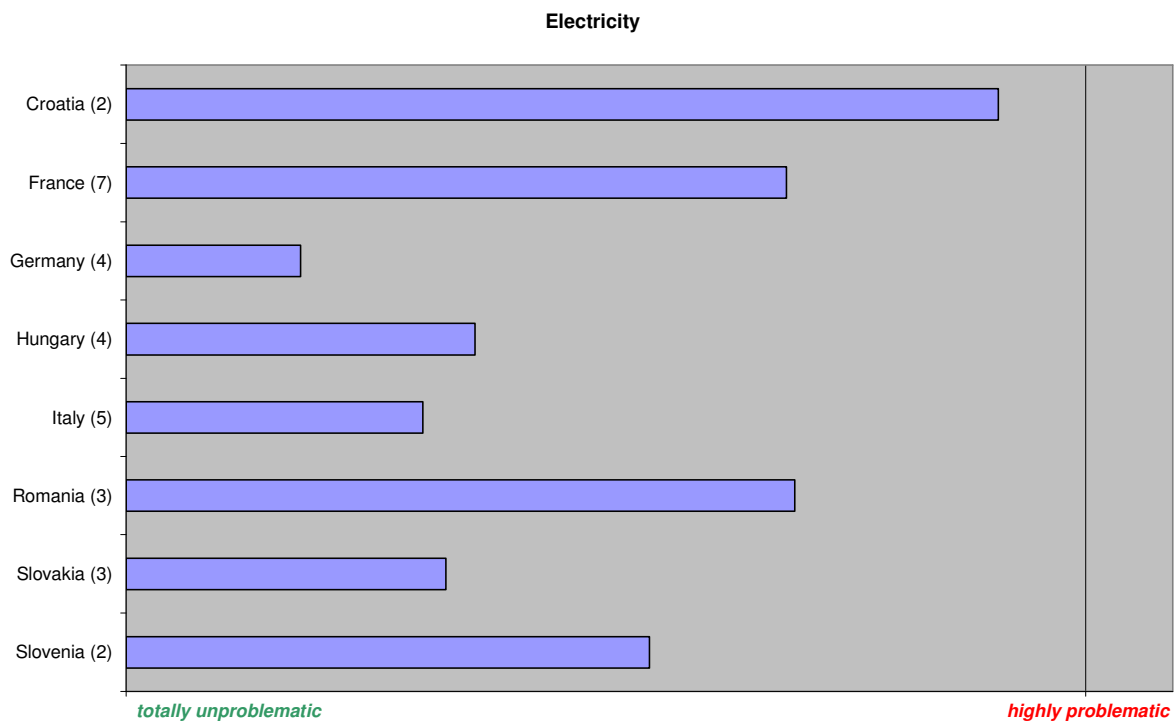


Figure 27: Low liquidity of wholesale markets (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- Eastern Europe (7): Dominant incumbents along the value chain; far distance connection to liquid markets; underdeveloped entry/exit model with VTP.
- Croatia (1): Entry-Exit system was just implemented without a gas exchange. Therefore gas wholesale trading remains bilateral trading. Regulated prices for households and liberalised prices for industry make it difficult to enter the market. In addition the public service obligation of gas procurement states that until 2017 the function of gas household supplier remains with the fully integrated electricity incumbent.
- France (1): No market in TIGF zone (south); there are still three market zones with only limited interconnection capacities – for which reason liquidity is very limited.
- Poland (3): Underdeveloped exchange (just started); storage obligations and diversification law prevent trading and access from abroad (see also MMR 2012); lack of availability of entry capacities as incumbent booked spare capacities; development of exchange trade very difficult as incumbent has a market share of about 97% and trades are still based more on bilateral contracts; additional capacities were booked by incumbent for long term.

Other countries and additional information - Electricity

- Eastern Europe (1): Dominant incumbents along the value chain; far distance connection to liquid markets.
- Bulgaria (2): Dominant incumbents along the value chain.

- Croatia (3): No short term liquidity due to missing OTC market; completely missing wholesale reference price; no unbundling of production and wholesale; no access of third parties to production; underdeveloped energy exchange.
- France (3): High costs for access to EPEX spot market; highly concentrated up- and downstream markets (nuclear production is reserved to EDF; hydro production is not open; CCGTs are not sufficiently remunerated by lack of capacity remuneration).
- Italy (1): Different bidding zones.
- Romania (3): Monopoly in state-owned OTC market; non-transparent products; small market.
- Slovenia (2): Dominant incumbents along the value chain; no future products are traded.

Interpretation and background information

Clearly, a liquid wholesale market is important for each new supplier of retail customers. The retail companies need a liquid wholesale market that is not dominated by a market player either horizontally or vertically in the upstream market as we found it very often in less advanced markets. Alternatively, they might get access on cross border markets and have the opportunities to transport the energy into the retail markets. For example in France it is proposed that new entrants should share generation capacities of new nuclear power plants in order to become competitive to the incumbents. Alternatively liquidity especially in wholesale markets may be increased by capacity markets as it incentivises the establishment of new power plants.

Finally market coupling may increase liquidity at least in spot and balancing markets. For example, the option of the Gas Target Model (trading regions) for merging wholesale markets of neighbouring countries while leaving the DSO level unchanged and subject to solely national design sounds promising.

6.2 Complex access to grid

Question: Are there potential problems associated with access to grid for entrants in certain member states?

Rationale: Complex access to grid and lack of transport capacity is a crucial barrier to trade and can prevent entry into retail energy markets.

Likert Scale:

Figure 28: Complex access to grid (gas)

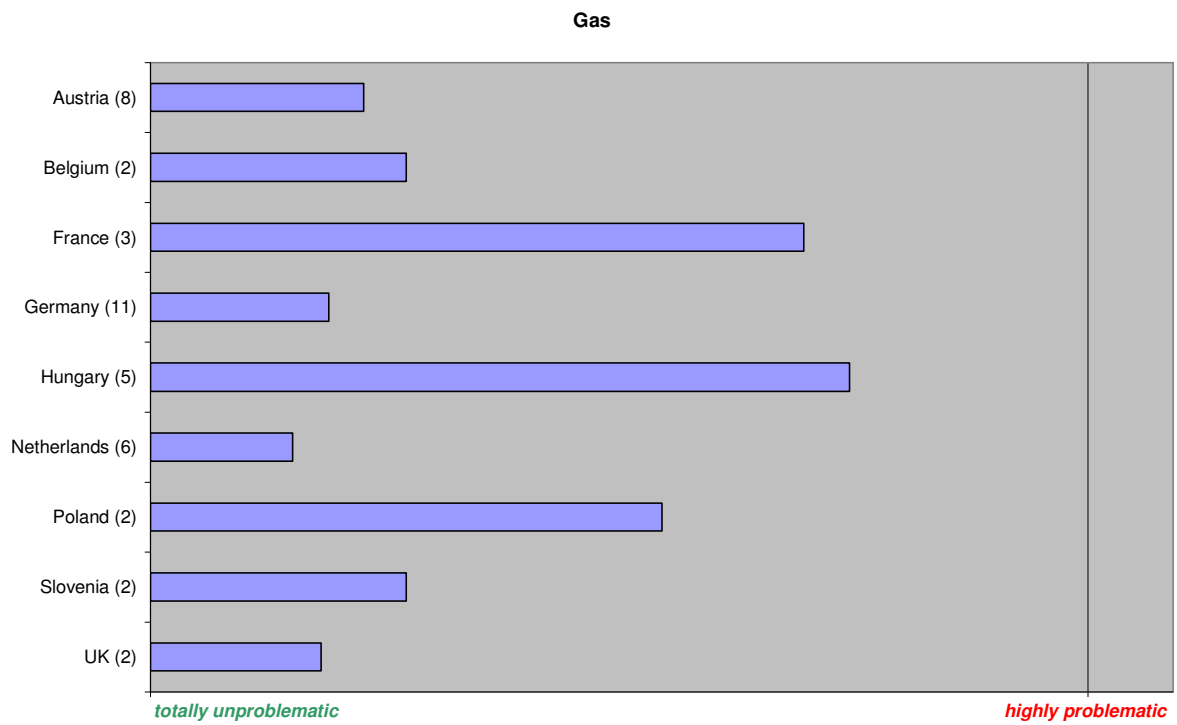
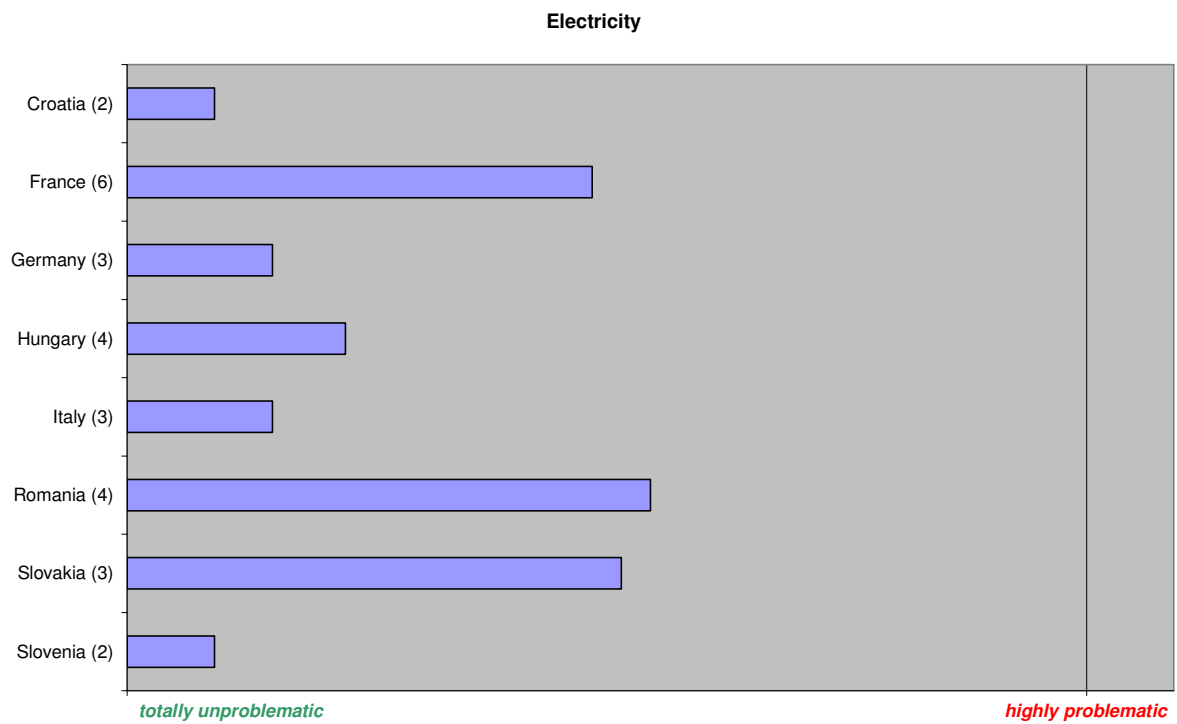


Figure 29: Complex access to grid (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- General (1): Problems with TSOs who do not use PRISMA; high complexity in countries with not existent entry-/exit models; contracts not available in English (especially problematic for Eastern Europe).
- Croatia (1): Specific contracts with all DSOs are required.
- France (2): Underdeveloped network regulation; lack of transport capacities for north-south connection, while in south zone, wholesale price is indexed on north-south capacity;
- Italy (1): Underdeveloped network regulation
- Hungary (2): Lack of clear rules and transparency for cross-border access. (HAG capacity is administratively allocated)
- Poland (2): Long and complex network code which is frequently changed; blocked capacities.

Other countries and additional information - Electricity

- General (1): High bank guarantees and IT requirements.
- Croatia (1): Language barriers; obligation to establish a local legal entity.
- France (2): High network tariffs (subsidy for incumbent); no regulatory control on the governance of ErDF (French DSO)
- Poland (1): Language barriers; relatively high bureaucracy and reporting obligations (monthly and annual reporting).
- Romania (2): Cross-border limitations.

Interpretation and background information

The received answers mainly correspond to the ones about "Complex licensing procedure" and the corresponding interpretation can be used here, too.

Additionally, it would be helpful if the number of required contracts would be standardised and reduced to a minimum. Capacity should be requested via central platforms such as PRISMA (for Gas).

Since, this point is a crucial barrier to trade; a closer look to those countries with high problem intensities (France, Hungary, Poland, Romania and Slovakia) might be useful.

6.3 Barriers due to balancing or assets required

Question: Are there barriers to entry into retail energy market caused by balancing or needed assets?

Rationale: As already mentioned, a well-functioning wholesale energy market is crucial for the proper function of a retail energy market. Since, problems on upstream markets often result in problems for downstream markets. These also included problems due to balancing or needed assets.

Likert Scale:

Figure 30: Barriers due to balancing or needed assets (gas)

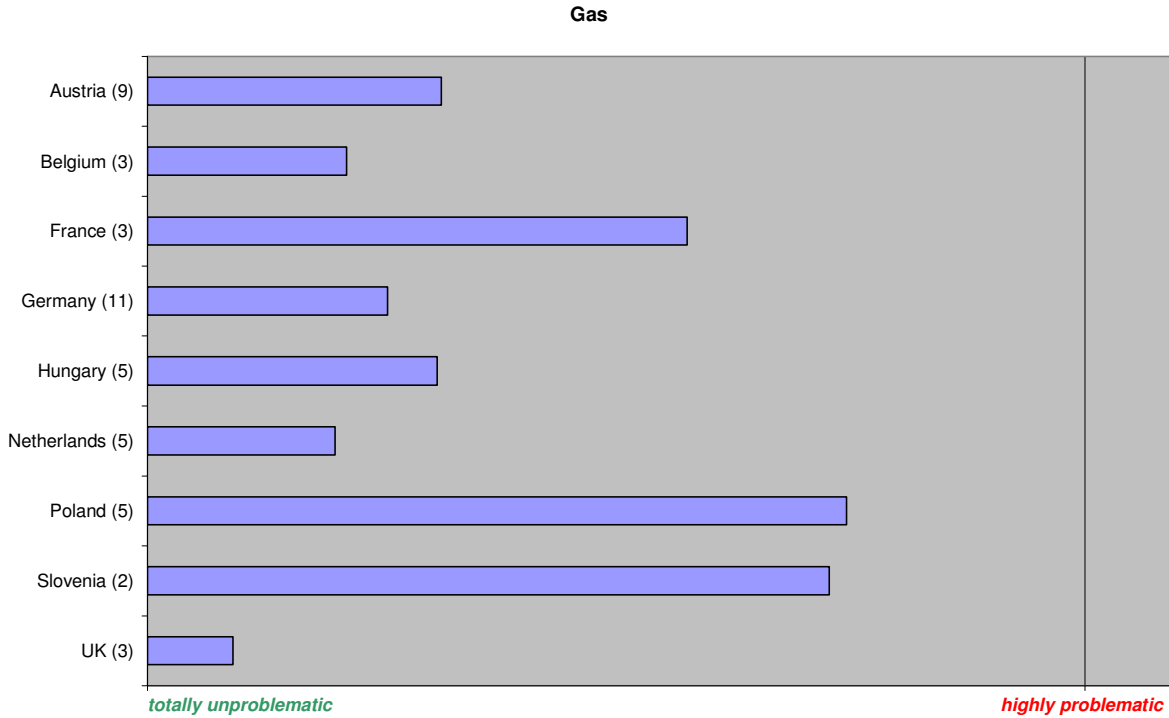
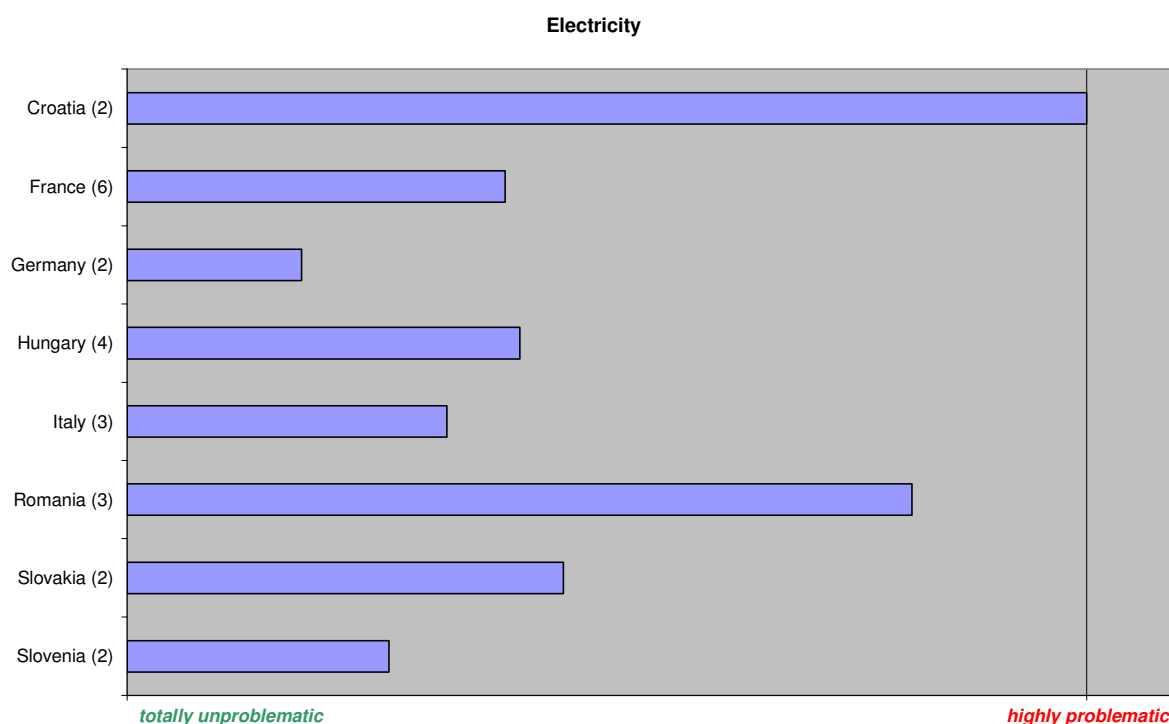


Figure 31: Barriers due to balancing or needed assets (electricity)



Qualitative enumeration of countries with barriers

Other countries and additional information - Gas

- Austria (1): Relatively high balancing penalties.
- France (2): Storage obligations.
- Germany (1): Poor data quality caused by a huge number of DSOs.
- Hungary (2): Allocation of provisional data within allocation process in order to steer entry nominations often of poor quality.
- Italy (1): Allocation of provisional data within allocation process in order to steer entry nominations often of poor quality.
- Poland (2): Balancing data is ex-post available only (especially on TSO and DSO level); no active balancing possible for shippers; storage obligations to assure supply, however, no spare storage or entry capacities to fulfil this obligation.
- Slovenia (1): Balancing price calculation is on old oil to gas formula and does not reflect actual market prices (very expensive).

Other countries and additional information - Electricity

- Belgium (1): Price matrix and expansion effect in favour of big suppliers; strategic reserve without amortisation for small suppliers

- Croatia (3): Obligation to establish a local legal entity in order to benefit from balancing regime; relatively expensive balancing costs (price calculation on liquid Hungarian and Slovak power exchange), and they do not reflect actual costs. Rules on balancing price settings are not clear. Methodology gives preference to last resort suppliers, and seems to be discriminatory.
- France (4): Price matrix and expansion effect in favour of big suppliers; financial constraint for small suppliers due to needed cash; due to closeness of production it is difficult to get balanced; RTE is unable to anticipate the tension in the electricity system; the suppliers must annually bear the total unbalance
- Hungary (1): Strong penalisation of balancing quantity <2% (disadvantage for small suppliers)
- Romania (2): Lack of availability of short term data for balancing; underdeveloped balancing regime;

Interpretation and background information

The following issues seems to be particularly important for retail energy supplier (as mentioned by the interviewees) and are already described in more detail in MMR 2012 and KEMA 2013 ("Study on Entry-Exit Regimes in Gas"¹⁰):

- Differences in balancing services: There exists a wide range of balancing services and products across the member states. This lack of harmonisation results in lower transparency and could prevent market entry.
- Separate imbalance settlement at DSO level: If the quantities delivered at the DSO level are not part of the balancing system, imbalances will be calculated twice for each network user. Once at DSO and once at TSO level. Suppliers which are actually in balance throughout the entire system would be obligated to pay imbalance fees twice, e.g. if they are short on the one level and long on the other (TSO or DSO). Shippers which supply customers on DSO level have significant higher risks of imbalance settlements, if they cannot balance on the entire system. This is indeed a barrier to entry.
- Exclusion of certain network users from common balancing agreements: E.g. different tolerances on a daily or hourly basis or the application of different Within Day Obligations (WDOs) can be justified by the need to facilitate network access for specific customer groups. But it is also possible that certain network users are fully excluded from common balancing agreements by these differences. This can actually prevent market entry and expansion.
- Absence of market base balancing: It is very important to implement market based mechanisms to improve cross-border trading and regional integration. However, in the absence of market base balancing, potential entrants can be faced with high and sometimes unpredictable charges - sufficient to prevent market entries.

¹⁰ http://ec.europa.eu/energy/gas_electricity/studies/doc/gas/201307-entry-exit-regimes-in-gas-parta.pdf

7 Additional Problems and suggested solutions

7.1 Additional Problems

Question I: Are there countries within the EU with a particularly high degree of barriers to entry into retail energy markets?

Rationale I: In addition to the specific barriers we asked for general opinions about problems associated with entry into EU retail energy markets. This can be interpreted as a general overview for a comparison of certain member states.

Likert Scale:

Figure 32: General opinion about degree of barrier to entry in certain member states (gas)

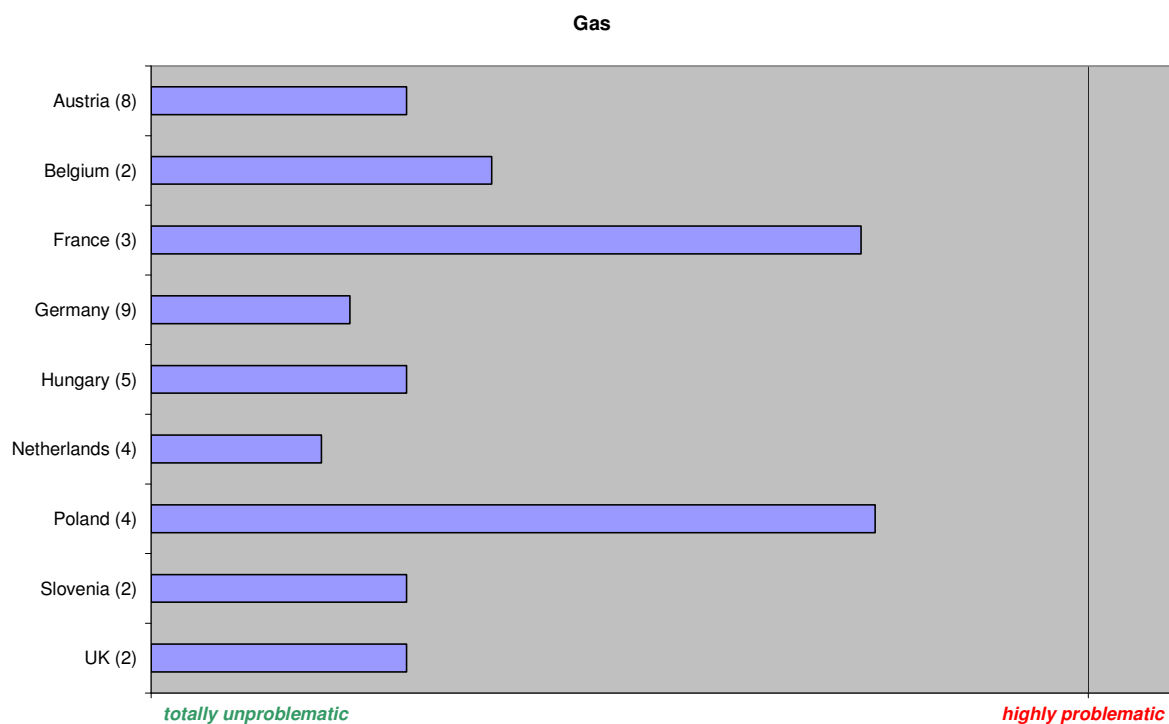
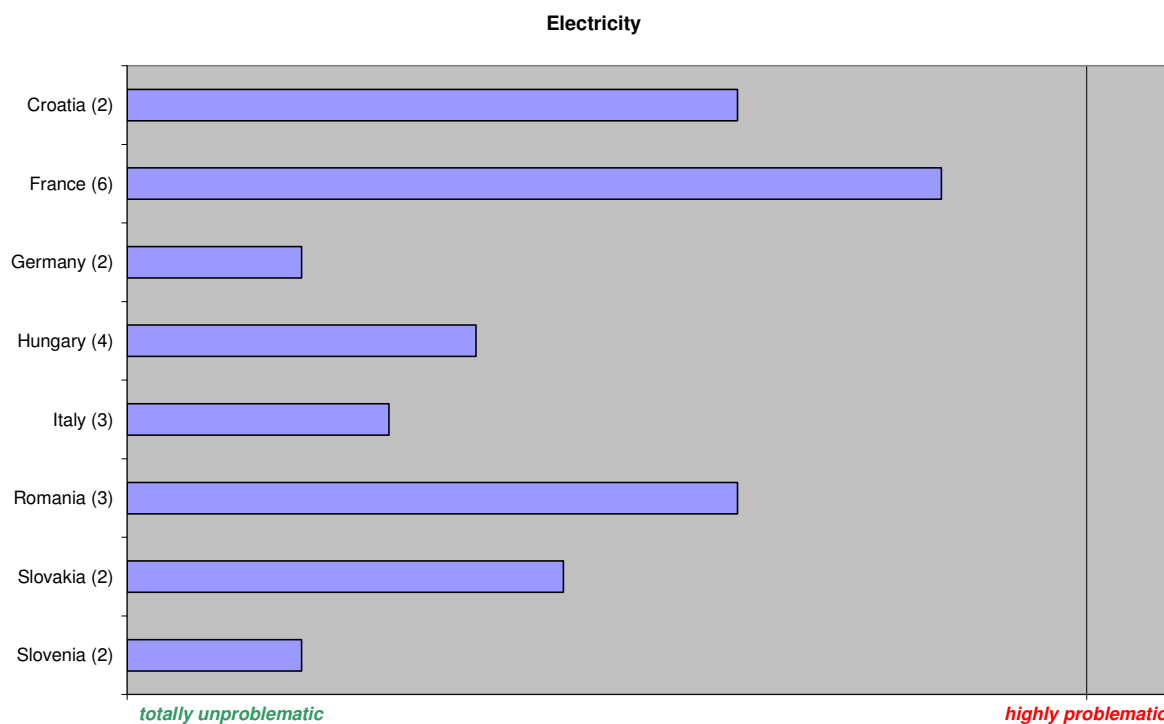


Figure 33: General opinion about degree of barrier to entry in certain member states (electricity)



Question II: Are there additional problems which can prevent entry into the retail energy markets in certain member states?

Rationale II: In order to give the interviewees the opportunity to mention additional problems we provide this free-text question.

- In essence, the most of the earlier mentioned problems were confirmed. In particular, barriers due to:
 - language issues (entry costs; complex licensing procedures; poor access to information for entrants),
 - political driven regulation (retail price regulation; high uncertainty concerning future regulatory developments),
 - squeezed margin due to retail price regulation (retail price regulation),
 - illiquid markets (low liquidity of wholesale markets),
 - reporting obligations (entry costs; complex licensing procedures), and
 - limited access to cross-border capacities (complex access to grid),

were mentioned by most of the interviewees.

- Based on this and given our market knowledge, the highest barriers to entry into retail energy markets seems to be the lack of harmonisation (as mentioned below), retail price regulation,

high uncertainty concerning future regulatory developments and low liquidity of wholesale markets.

- In addition, it was frequently mentioned that the lack of harmonisation in:
 - contracts (e.g. between supplier and DSOs),
 - market communication,
 - supplier switching processes,
 - legal frameworks (often lacking implementation of EU framework),
 - balancing rules requirements,
 - security of supply and storage obligations, and
 - required market data

across the EU can prevent entry into retail energy markets. This seems to be one of the key issues.

- A specific point in the French electricity market is the ARENH¹¹ wholesale regulation mechanism. We received several suggestions about this point and therefore will provide an overview in the following section. The ARENH mechanism is subject to several defects in its principle and in its application:
 - Suppliers on the profiled market segment need the ARENH mechanism to be maintained and improved. It is vital that they have access to nuclear production on the long run (existing nuclear plants are competitive and ARENH prices must be price signals to consumers, for instance when one wants to load electric vehicles during nuclear production periods instead of peak production periods). In particular, it is emphasised that:
 - The initial principle of ARENH was to create equivalent conditions between incumbent and new entrants; and ARENH must be improved to meet this principle more accurately;
 - ARENH provides the prospect to protect suppliers against the volatility of wholesale prices until 2025;
 - Suppliers on the LICS market segment tend to highlight the shortcomings in the current implementation of ARENH:
 - ARENH has become a reference price, preventing suppliers to benefit from better market conditions; in addition, this reference price tends to attract the price paid by final consumers, which squeezes margins;

¹¹ ARENH: Regulated Access to Incumbent Nuclear Electricity
https://clients.rte-france.com/lang/an/clients_producteurs/services_clients/dispositif_arenh.jsp

- The evolution of ARENH price is uncertain and will always be subject to political decisions (including retroactive decisions, generating a risk for suppliers);
- The equivalent conditions between EDF and other suppliers (especially bank guarantees and strategic information related to the evolution of ARENH price) will be difficult to reach under this mechanism;
- ARENH strengthens the dependency of suppliers towards incumbent and contributes to the illiquidity of wholesale market.

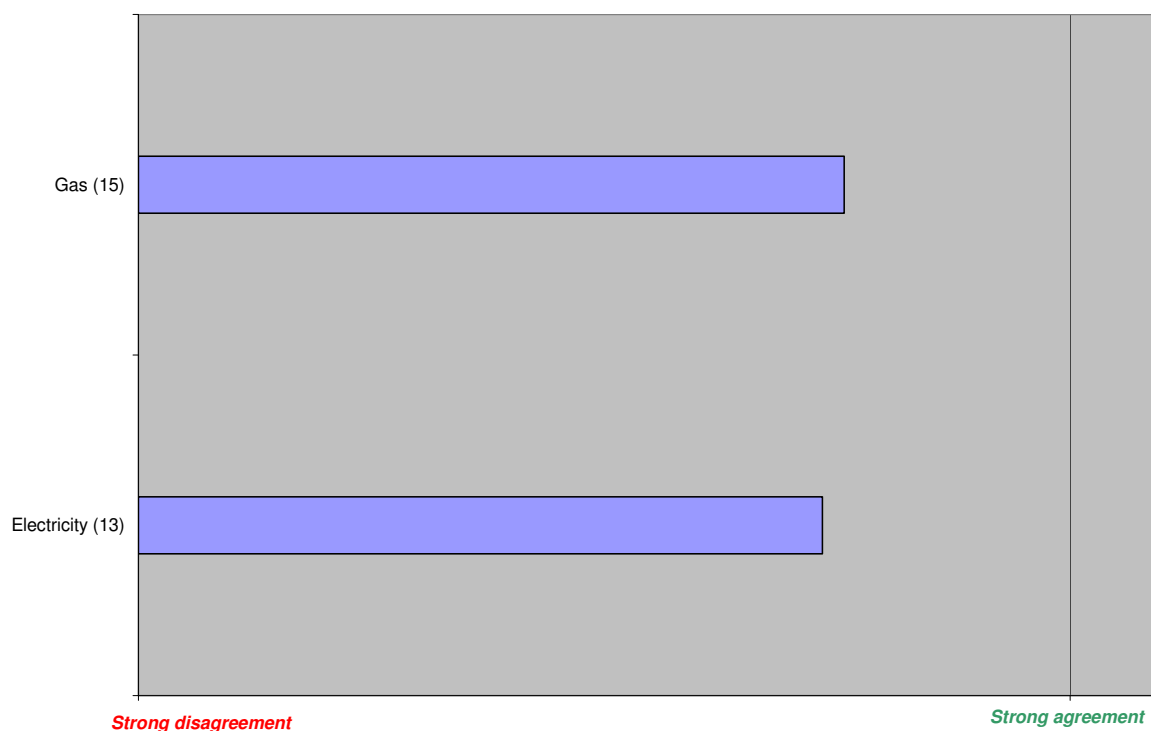
7.2 Overcoming the barriers

Question I: To what extent do you agree with the statement that EU retail energy market designs should be harmonised in order to reduce entry barriers?

Rationale I: Harmonisation is one of the key issues which can be influenced by ACER and the NRAs. Hence, the answers represent the extent to which the interviewees would welcome such interventions. In general, the respondent consent to this statement was about 73% for retail gas and 62% for retail electricity markets.

Likert Scale:

Figure 34: Average extent of agreement to the statement that EU retail market designs should be harmonised



Question II: Do you have any suggestions how the problems, which can prevent entry into retail energy markets in the member states, can be removed or at least reduced?

- First of all, it seems to be very important that market designs of EU retail energy markets be harmonised in order to reduce barriers to entry and expansion. Given the fact, that this was frequently mentioned by the interviewees on the one hand, and that ACER and NRAs have the opportunity to establish improvements on the other hand, make this suggestion one of the key issues.

Areas of harmonisation should be:

- market entries and exits,
 - the involved legal frameworks,
 - licensing procedures,
 - reporting obligations, and
 - supplier processes.
- For this purpose it is very important to define general principles (e.g. licensing procedures). It is also important that all relevant documents are available in English and the data exchange is standardised.
 - In addition, common requirements of the switching procedure for customers should be defined in a simple and transparent way.
 - Another important issue is a strong commitment to privatisation of energy suppliers, unbundling and price liberalisation in order to prevent political influences on retail energy markets that are often running contrary to economic facts. This was also frequently mentioned by the interviewees and can indeed be influenced by ACER and NRAs.
 - Following the interviewees, a stable regulatory environment will clearly facilitate market entries into retail energy markets. Once again, this is a point, which can be actively improved by ACER and NRAs.
 - Various interviewees desire a stronger monitoring of the NRAs and the transparency of their decisions by ACER.
 - Additionally, it was mentioned that larger market areas and virtual balancing zones as well as a reduction in storage obligations could help to overcome the barriers to entry for retail gas markets. For electricity markets an establishment of power exchanges and forward trading would facilitate entry into Eastern Europe (especially in Bulgaria, Croatia and Romania). Further market coupling could help to overcome the barriers concerning illiquid markets, also.
 - Conversion of low and high caloric gas on TSO level and no responsibility for gas quality on an EU intern supplier level would also help.

- Liquidity should be increased due to obligatory stock jobbing and expansion of transport capacities on interconnectors.
- Implementation of network codes leading to a comparable wholesale market design and a market opening in some states currently lacking behind.
- Of course and as far as possible, already existing standards (such as EASEE-Gas) shall be the basis for this harmonisation. But the member states need an opportunity for particular arrangements to handle local circumstances (e.g. different market structures of transit countries and countries with high absolute consumption). Therefore, the final design of the retail markets shall be a task of the NRAs, but the harmonised principles must be considered and ACER shall make supervision.
- There were also some statements associated with an improvement of ARENH in France:
 - ARENH price should be known when volumes are reserved, without the possibility to change it during the period;
 - The evolution of ARENH prices should be known sufficiently in advance (in order to allow ARENH-based long term contracts);
 - The reservation of ARENH volumes should allow more flexibility;
 - Bank guarantees for ARENH should be replaced by a rating process by credit agencies;
 - ARENH price should be limited to accounting production costs (in order to avoid an unfair subsidy of EDF by suppliers);
 - ARENH price should assume an amortisation of nuclear investments by 2025 but should cover the whole period when EDF benefits from these investments;
 - ARENH could be complemented by drawing rights on new nuclear power plants (NOME laws allows the involvement of non-incumbent in new nuclear production capacities);
 - The relationships between EDF retail and EDF production could be subject to regulatory changes.

APPENDIX

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- C. List of Abbreviations

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Figure 34: Average extent of agreement to the statement that EU retail market designs should be harmonised

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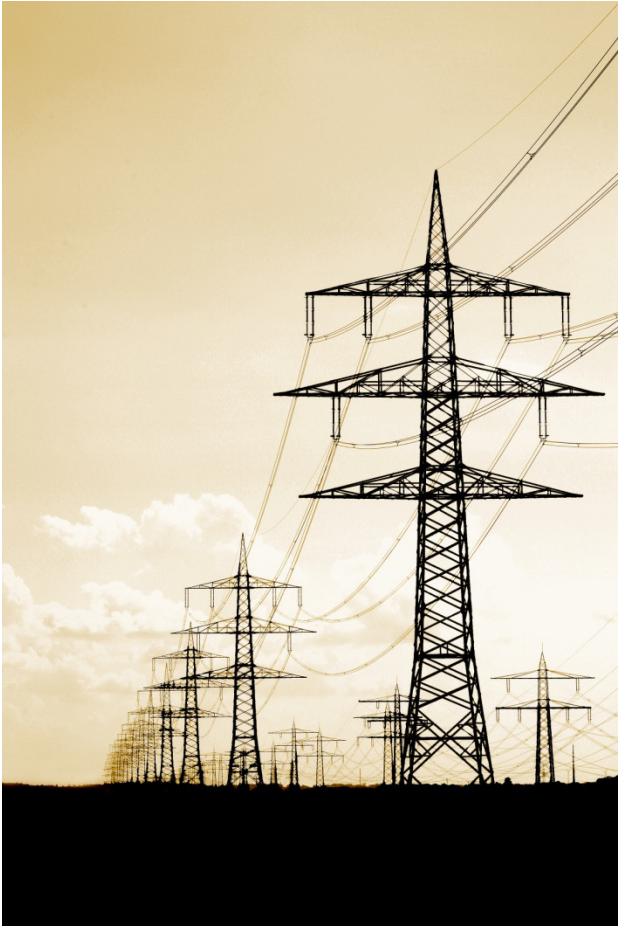
Table 1: Overview of interviewees

3

C. List of Abbreviations

ACER	Agency for the Cooperation of Energy Regulators
ARENH	Regulated Access to Incumbent Nuclear Electricity
CCGT	Combined Cycle Gas Turbine
DGCCRF	Direction Générale de la Concurrence, de la Consommation et de la Répression des Fraudes
DSO	Distribution System Operator
EDF	Électricité de France SA
ErDF	Électricité réseau Distribution France
EU	European Union
GDF	Gaz de France
GrDF	Gaz réseau Distribution France
HAG	Hungaria-Austria-Gasleitung
IEG	Industries Electriques et Gazières
LICS	Large Industrial Customers segment
MMR	Market Monitoring Report
MVM	Magyar Villamos Művek
NIE	Identification Number
NOME	Nouvelle Organisation du Marché de l'Electricité
NRA	National Regulatory Authorities
OTC	Over the Counter
PRISMA	Platform for European gas capacity booking
RES	Renewable Energy Sources
SME	Small- and Medium-sized Enterprises
TIGF	Transport et Infrastructures Gaz. France
TPA	Third Party Access
TSO	Transmission System Operator
TURPE	Tarif d'Utilisation des Réseaux Publics d'Electricité
VTP	Virtual Trading Point
WDO	Within Day Obligations

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