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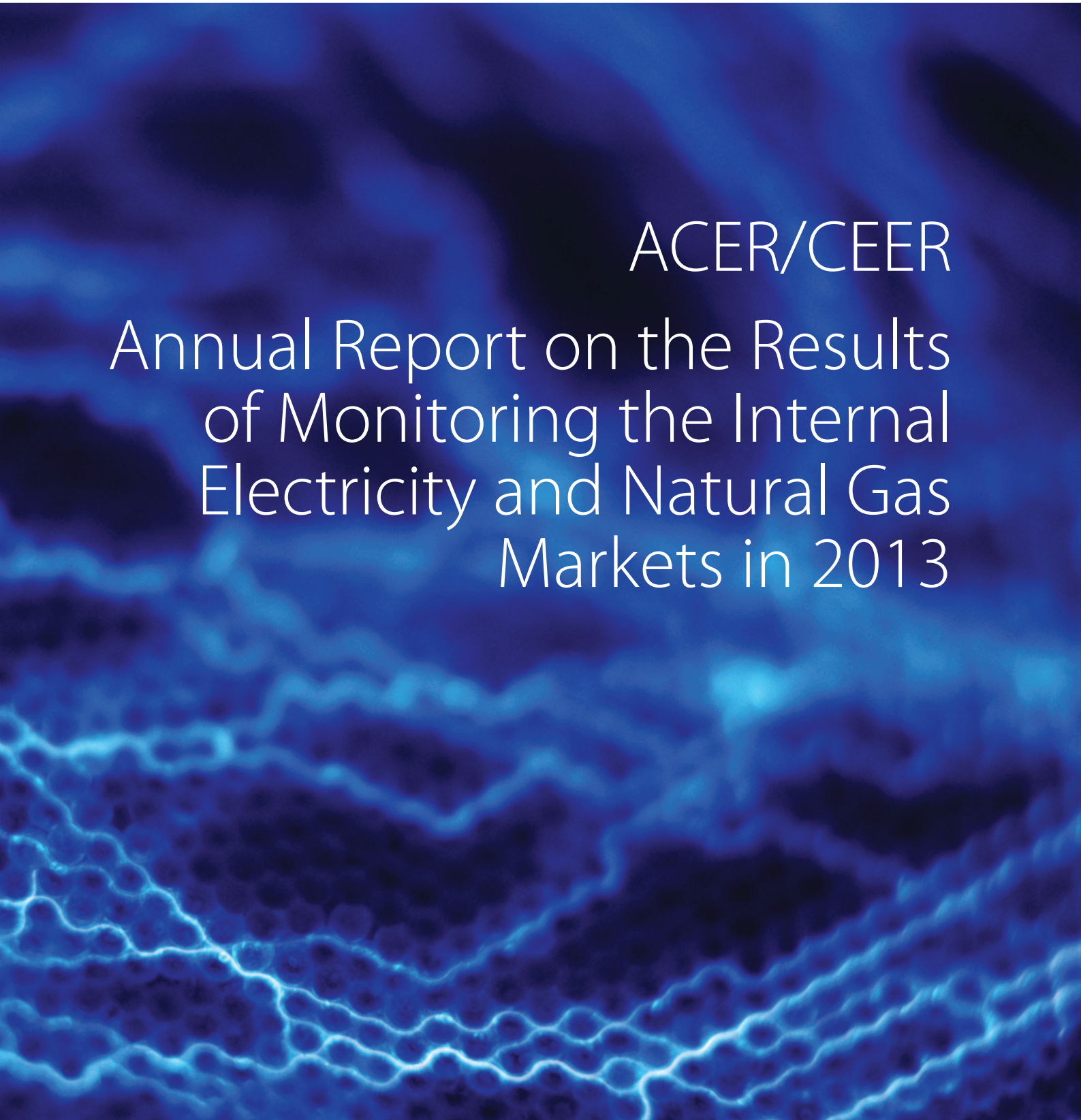

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Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2013

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October 2014

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Foreword by the Chair of ACER's Board of Regulators and CEER, and by the Director of ACER

We are pleased to present the third joint annual Market Monitoring Report by the Agency for the Cooperation of Energy Regulators ("the Agency") and the Council of European Energy Regulators (CEER). By producing a joint Report, we aim to provide a comprehensive assessment of developments in the electricity and gas sector and on the progress towards the implementation of the Third Energy Legislative Package (3rd Package) and the completion of the internal energy market (IEM). The European Commission President designate's announcement that he will promote a major initiative – the Energy Union – confirms the continuing importance of EU energy policy and of the integration of EU energy markets in the coming years. The data and conclusions presented in this Report are also meant to inform and contribute to this initiative.

This Report covers the same areas as last year – retail electricity and natural gas prices, access to the networks including access of electricity produced from renewable energy sources, and compliance with the consumer rights laid down in Directive 2009/72/EC and Directive 2009/73/EC – expanding the analysis and again focusing on the remaining barriers to the completion of a well-functioning internal electricity and gas markets.

By the end of 2013, the Agency has delivered the framework guidelines in all the eight areas (four in electricity and four in gas) identified by the European Commission as key for supporting the integration of the IEM. So far, 12 of the 14 related Network Codes have been recommended for adoption and three of them have actually been adopted. The Agency and national regulatory authorities for energy have been working in supporting the finalisation of the remaining Network Codes and in promoting their rapid implementation, in many cases, on a voluntary basis, even before their provisions become legally binding. The aim is to ensure that EU energy consumers can reap the benefits of a well-functioning IEM, in terms of more choice and better prices, as soon as possible. In this context, this Report assesses how close the electricity and gas sectors are in the achievement of these goals and where further regulatory action is needed to remove any remaining barriers.

Our findings show that, despite the continuing economic stagnation and decreasing wholesale energy prices in many jurisdictions, EU electricity and gas retail prices have maintained an upward trend, often driven by the dynamics of non-contestable charges, even though this trend in 2013 was less pronounced than in previous years. Looking back at the period since 2008, the report shows that there has been little responsiveness between wholesale and retail prices, as well as increasing mark-ups in several Member States.

With a few notable exceptions, there seems to be a vicious circle in the retail energy market of many Member States, where competition between different suppliers is still weak with often little product and price differentiation. This gives little incentives to electricity and gas household consumers to participate actively in the market by exercising choice among available suppliers, as well as price and product offerings. This is in

turn used as a justification for maintaining retail price regulation, which itself hampers competition. This vicious circle needs urgently to be broken by, on the one hand, facilitating consumer switching behaviour and awareness and improving the comparability and comparison of different suppliers' offers; on the other hand, by removing the barriers to entry into retail markets and phasing out price regulation as soon as possible.

At wholesale level, while the electricity market integration progressed with observed improved use of cross-border capacity, this has not always resulted in an increase in price convergence, which actually decreased in the Central-West Europe region during 2013. The rapid implementation of the Electricity Target Model (ETM) in all timeframes, the removal of barriers to the IEM in Member States, further harmonisation of energy policies at Member State level, the integration of renewables in the market and the development of flexibility (including demand-side flexibility) are the main challenges ahead of us in the electricity sector. In gas, price convergence is improving and cross-border capacity contracting is becoming more short-term oriented, especially where liquid hubs operate, even though substantial differences still exist between contractual and actual utilisation values in a significant number of interconnection points. The challenge is to promote the liquidity of gas trading and ensure that all unused capacities, whether or not strategically acquired, can be easily returned to the market so that other shippers can use them if short-term trading opportunities arise.

The data used for compiling this Report have been collected and provided by national regulatory authorities for energy (NRAs), the European Commission and the European Networks of Transmission System Operators (ENTSOs) for electricity and gas. We are grateful to all for their contribution. Our most sincere appreciation also goes to our colleagues in the market monitoring team at the Agency for their sustained effort in continuously monitoring market developments and in producing this Report.

The Agency is committed to continue monitoring progress towards the completion of a well-functioning internal energy markets. The Agency is also looking into whether the Electricity and Gas Target Models – common visions for the internal electricity and gas markets – need to be enhanced to address the new challenges that these sectors will face beyond 2014. A specific initiative *Energy Regulation: A Bridge to 2025* was launched by the Agency, in cooperation with CEER, late in 2013 and has recently resulted in the Agency issuing its Recommendation on the regulatory response to the future challenges emerging from developments in the internal energy market.

Working nationally, regionally and at European level with policy makers, notably with the European Commission and the European Parliament, and the industry, energy regulators remain committed to putting the legal, regulatory and operational framework in place that will deliver an internal market in energy for the benefit of Europe's consumers.

Lord Mogg
Chair of ACER's Board of Regulators and CEER

Alberto Pototschnig
ACER Director

Executive Summary

Introduction

Structure of the report

This is the third annual Market Monitoring Report (MMR) by the Agency for the Cooperation of Energy Regulators ('the Agency') and the Council of European Energy Regulators (CEER), covering the developments in EU electricity and gas markets in 2013. Expanding on the analysis performed last year, this report again focuses on retail markets and consumer issues, on the main developments in gas and electricity wholesale market integration and on network access issues. It also provides an analysis of the remaining barriers to further market integration.

The report is divided into four chapters: (i) the electricity and gas retail market; (ii) the electricity wholesale market; (iii) the gas wholesale market; and (iv) consumer protection and empowerment. Both wholesale chapters report on network access issues.

Retail electricity and gas markets

In order to assess the state of play in retail markets in 2013, the Agency and CEER expanded the analysis and the breadth and depth of the data collected for this purpose, compared to 2011 and 2012. The report focuses on the evolution of retail prices by component and on other relevant factors, including market concentration, wholesale retail mark-ups, entry and exit activity, and consumer switching behaviour.

Retail prices

Despite continued low economic growth in 2013, energy retail prices rose for both households and industrial consumers in the majority of EU Member States (MSs), although the increase was lower compared to 2012, in particular for gas. From 2012 to 2013, European post-tax electricity prices increased on average by 4.4% (+4.6% in 2012) for households and by 2.0% (+5.2% in 2012) for industrial consumers. Post-tax gas prices for household consumers rose by 2.7% (+10% in 2012) and decreased for industrial consumers by 1.2% (+11% in 2012).

In most countries, household energy prices are greatly influenced by non-contestable charges (i.e. taxation and network charges), which usually make up more than half of the total energy bill. Large disparities in pre-tax electricity and gas prices for both households and industrial consumers persist across Europe, reflecting the heterogeneity of national energy policies. For example, Danish and Swedish household consumers pay on average more than three times the price of Romanian and Bulgarian households for their electricity and gas.

Taxation and network charges

Since 2008, and particularly over the last few years, these non-contestable charges have significantly increased in many countries, especially as a result of costs related to support schemes for renewable energy sources (RES). At the same time, electricity wholesale prices have decreased, mainly under the pressure of subsidised RES. For some countries, such as Austria, Germany,

Ireland and Slovenia, the 2013 increase in RES charges was almost completely offset by a decrease in the energy component due to falling electricity wholesale prices. As a consequence of this mechanism, retail price competition is weakened by the decreasing contestability of end-user prices.

Competition in retail markets

The energy component of the post-tax price, i.e. the contestable part, depends to a great extent on the level of competition in the market. The monitoring results show that the moderately concentrated electricity retail markets of Denmark, Finland, Germany, Great Britain, Italy, Norway, the Netherlands and Norway perform relatively well, judged on the basis of key competition performance indicators (e.g. choice of suppliers and offers; switching rates; entry-exit activity; consumers' experiences; mark-up etc.). The same is true for the British, Czech, Dutch, German, Slovenian and Spanish gas retail markets, although in gas retail markets are often more concentrated than in electricity. Retail competition performance indicators show no or weak signs of competition in MSs with highly concentrated markets at the national level: in electricity in Bulgaria, Cyprus, Hungary, Latvia, Lithuania, Malta and Romania; in gas in Bulgaria, Croatia, Hungary, Latvia, Luxembourg and Poland.

Consumer choice and switching behaviour

The majority of electricity and gas household consumers do not participate actively in the market by exercising choice among available suppliers, as well as among different price and product offerings. As a result of this non-participation, the proportion of electricity and gas household consumers supplied by another supplier than the incumbent is still very low in the majority but a few countries: Great Britain, Belgium and Portugal (both markets), Norway and the Czech Republic in electricity, and Germany, Spain and Ireland in gas markets.

The monitoring results for 2013 confirm the 2012 findings regarding the positive correlation in gas between saving potentials from switching and switching rates across Europe. In electricity, no clear pattern has been detected. Non-quantifiable aspects of consumer behaviour might act as a barrier to retail entry in some MSs, such as consumer loyalty, inertia and risk aversion.

Electricity and gas consumers in liberalised (i.e. non-price regulated) countries can choose from among several offers provided by different suppliers on the market. According to a data sample based on offers in the capital cities, the electricity and gas markets of Germany, Great Britain, Denmark and the Netherlands are the relative best performers in relation to the number of offers and suppliers providing diversified products for electricity and gas consumers, such as the type of energy pricing, green offers, additional free services and/or dual fuel offers.

Consumers in countries with more choice and higher switching rates also tend to be more satisfied, which is shown in the results of a consumer survey undertaken in 2013 for DG SANCO Scoreboard. For instance, consumers in Belgium, Germany, Finland, Luxembourg, Slovakia and Slovenia have the most positive experience of the electricity and gas markets in their respective countries (i.e. they are the best scoring countries in the following four ele-

ments: 'expectations', 'choice', 'comparability' and 'ease of switching'). Bulgaria, Croatia, Hungary, and Romania are at the bottom of the ranking. The high difference between the scores on different elements is a clear indication that the performance in these markets is highly country-dependent and thus open to improvement at a national level.

Despite the general proliferation of different products (e.g. many suppliers are offering green, fixed, dual-fuel etc.), which appeal to consumers, it is also evident that suppliers in some countries are innovating very little, if at all (e.g. electricity and gas suppliers in Bulgaria, Greece, Latvia and Romania; electricity suppliers in Cyprus and Malta; and gas suppliers in Croatia, Finland and Poland). This is arguably linked to the dominance of the incumbent electricity or gas suppliers which, in the absence of competitive pressure, do not have strong incentives to differentiate their products.

Barriers to entering retail energy markets

To improve consumer switching behaviour and awareness, national regulatory authorities (NRAs) should be actively involved in ensuring the prerequisites for switching, such as transparent and reliable online price comparison tools and transparent energy invoices. Furthermore, NRAs should proactively advocate the establishment of switching procedures and make consumers aware of switching options.

Consumer choice and consumer engagement in general can be facilitated by having reliable web comparison tools in place (allowing comprehensive and easy ways to compare suppliers), adopting standardised fact sheets for each retail offer, publishing easily comparable unit prices in terms of standing charges and variable rates for standard consumption profiles, and promoting systems/platforms fostering collective switching. These measures do not interfere with the ability of suppliers to set prices.

In a dedicated study commissioned by the Agency, retail suppliers were interviewed about the barriers to entering retail energy markets at the EU level. The key perceived barriers are the lack of harmonisation of MSs regulatory frameworks, the persistence of retail price regulation, high uncertainty concerning future regulatory developments and low liquidity of wholesale markets, particularly in less developed markets. The interviewees also identified low margins and tough competition as an issue in specific, more developed markets.

Although regulated end-user prices for households still exist in 15 out of 29 countries in electricity and in 15 out of 26 countries in gas, the trend towards their removal continued during 2013. Two (Estonia and Greece) MSs removed price regulation for electricity in 2013. In Italy, electricity and gas standard offer prices for households are set based on wholesale prices and standard margins. The Agency notes that plans are in place for the further removal of price regulation in a number of other MSs during 2014.

In a number of MSs, public authorities set energy retail prices with greater attention to political considerations than to underlying supply costs. In some

MSs, regulated prices are set below cost levels, which hampers the development of a competitive retail market. In other MSs, the public authority (usually the NRA) sets end-user prices with reference to wholesale prices (for instance, Italy and Portugal).

Regulated prices should be set at levels which avoid stifling the development of a competitive retail market. They must be consistent with the provisions of the 3rd Package, and should be removed where a sufficient level of retail competition is achieved.

As indicated in last year's MMR, in order to promote market entry further, MSs should follow best practice by: (i) allowing free opting in and out of regulated prices; (ii) setting the regulated price at least equal to or above cost; and by (iii) updating the regulated price to reflect the sourcing cost as much and as frequently as possible. In this way, they could facilitate the development of retail competition.

Consumer protection and empowerment

Supplier of last resort and disconnection for non-payment

While the MMR 2012 assessed the level of compliance with provisions for consumer rights in the 3rd Package, the MMR 2013 closely explores the underlying mechanisms of how EU law has been transposed into national legislation and how final household consumers are protected in practice. A series of indicators measure how consumers currently benefit from protection under the respective provisions from the 3rd Package in each country. In several cases, they indicate examples of best practice, where MSs have gone beyond the legal requirements.

EU provisions concerning supplier of last resort (SoLR) and restrictions to disconnections from the grid have been widely implemented in national legislation. While SoLR mechanisms have been established in almost all countries, there are considerable differences in their functions across MSs. The most prevalent application of SoLR is for the provision of supply in cases where a customer's original supplier fails (e.g. bankruptcy or license revocation). However, roughly half of countries also foresee a SoLR to support economically weaker consumers (e.g. those that no energy supplier is willing to contract with), as well as inactive consumers, although this is labelled as default supply in some countries.

As for disconnections resulting from non-payment, the percentage of customers disconnected in 2013 was generally low (ranging from estimates of less than 1%, with one notable exception at 6.7%, Portugal). For the MSs examined, no systematic difference was detected between electricity and gas disconnection rates. However, despite a monitoring duty in the 3rd Package for disconnection rates, roughly half of NRAs (14 MSs) were able to provide information on 2013 disconnection rates.

Prior to effecting the disconnection, in most MSs a legal minimum period applies to the disconnection process. This period varies considerably across

MSs, ranging from ten to 200 days. However, considerably less information is available on the actual duration of the disconnection processes, as energy service providers exercise some liberty in deciding whether or not to disconnect their customers in the first place. Here, NRAs have less information about the practicalities of disconnections, which may also vary within countries because of different company policies. Nevertheless, the available figures indicate that the actual duration of a typical disconnection process due to non-payment may be considerably longer than legally required (e.g. in Great Britain, the legislation specifies 28 days for the disconnection process; however, in practice it takes 80 days).

Vulnerable consumers

Regarding the protection of vulnerable consumers and the application of adequate safeguards, the majority of MSs have defined the concept of vulnerable customers. However, MSs take different approaches to protecting these groups of consumers, in some cases through social or other protection mechanisms rather than an explicit concept of vulnerable energy customers. Therefore, the report takes a closer look at specific protection mechanisms in order to grasp the kind of support available to these consumers. The most frequent measures taken to protect vulnerable consumers are restrictions on disconnection due to non-payment. This mechanism is in place in 16 out of 23 MSs (electricity) and 11 out of 21 MSs (gas).

Other common means to support vulnerable consumers are special energy prices (also known as social tariffs) and earmarked social benefits to cover energy costs. Support mechanisms such as a certain amount of free energy or exemptions from specific cost components of energy are rare. While national suppliers may offer some types of repayment plan (i.e. deferred payment), a consumer's right to deferred payment is not widespread across MSs. It is important to note that the definition of vulnerability can differ between MSs, resulting in different percentages of vulnerable customers across Europe. While some MSs (Ireland, Lithuania, Portugal and Slovenia) report shares below 2%, others (Greece, Malta and Romania) indicate over 10% of household consumers as vulnerable. However, comparisons between countries are limited due to the vast differences in the definition of the concept of vulnerable customers, national differences in the social security system, varying benefits in the energy sector and/or state of national economies at the time.

Consumer protection

Consumer protection also extends to the availability of adequate and accurate information regarding prices. In 17 MSs, there are legal requirements regarding advance notification of price changes. Meanwhile, in almost all countries, there are legal requirements to provide consumers with information about changes to other components of the energy costs (e.g. network tariffs, taxes, etc.). The specific advance notice period required varies between 15 and 90 days for different MSs. In 13 out of 17 MSs with the legal requirement, one month is required.

Regarding non-price related information, consumers' bills contain supplier details, payment modalities and consumption data in almost all countries. In most countries, information on the right to dispute settlement and contact de-

tails for the distribution system operator (DSO) are available on the bill. It is less common to find the best practice, which is information on how to switch suppliers and the duration of the contract. Consumers also have a right to independent information via a single point of contact, which MSs are required to establish. Almost all of the respondent countries indicate that they have such a service in place; this may be shared by several authorities (e.g. NRA, ombudsman and government).

Supplier switching, metering and billing

The possibility for consumers to exercise their right to switch supplier can place competitive pressure on suppliers to deliver the best services at the best prices. In most MSs, supplier switching is performed, as required by law, within three weeks. While some MSs have yet to implement this provision in law and/or practice, four are working towards a faster process: electricity supplier switching should be performed in one working day in France, five in Ireland and Portugal, and ten in Denmark. EU legislation also requires the settlement (final) bill following a switch to be provided within six weeks. In most countries, this provision has been implemented and is applied in practice, although six MSs (Bulgaria, the Czech Republic, France, Hungary, Lithuania and Slovakia) have a shorter period.

Smart meters can facilitate supplier switching and enable more frequent information on consumption and billing; their roll-out is being undertaken progressively in many MSs. In Finland, Italy and Sweden, the roll-out for electricity smart meters has been completed, while Denmark, Slovenia and Spain have a significant share of smart meters already installed. For the moment, in the gas sector, Denmark, Great Britain, Italy and the Netherlands have begun a roll-out for a small share of consumers. In MSs where smart meters are not in place, most consumers receive information on their actual consumption on an annual basis.

Complaints and dispute resolution

All regulators collect data on complaints, as the number and reasons for reported complaints can help detect market dysfunctions and assess the degree of consumer satisfaction. A minority of NRAs provided data on the number of household consumer complaints received by suppliers and/or the DSOs. This suggests that the requirement of the 3rd Package regarding the monitoring of complaints by NRAs are implemented differently across MSs. Reported figures fall in a range between one and six per 1,000 inhabitants in countries where data is available. However, exceptions raise some questions regarding the comprehensiveness and/or the robustness of this reporting, as well as the definitions and methodology applied in collecting the data. All NRAs reported that there is an alternative dispute resolution (ADR) scheme in their country. However, only a few were able to report figures for the number of ADR cases, which shows that there is scope to improve systematic reporting on this issue.

Some countries still have no statutory complaint handling standards, while the legally allowed processing time for suppliers/DSOs to deal with complaints is between one and two months for both electricity and gas. However, in some countries the processing time is shorter, such as nine to 15 days, or longer, such as up to four months. The time required for the ADR body to settle a dis-

pute varies from country to country between one and six months.

Conclusions and recommendations

Overall, the monitoring results presented in the consumer protection and empowerment chapter show that many of the national legal provisions (de jure) are applied in practice (de facto) on a similar basis (with a practical approach outperforming the legal requirement in some cases).

Some MSs perform better than the requirements of some provisions for consumer rights in the 3rd Package. For instance, four MSs perform better as regards the maximum duration of a supplier switch.

However, there remains significant room for improvement in: i) the monitoring of the number and the practicalities of disconnection due to non-payment; ii) the systematic collecting of data on consumer complaints (e.g. ADR); iii) the implementation of statutory standards for handling complaints (such as a shorter response time); iv) the information provided in bills about supplier switching options; and v) the frequency of informing consumers on their actual consumption.

Wholesale electricity market integration and network access

Price convergence and market integration

In 2013, market coupling continued to be an important driver of wholesale electricity price convergence. For instance, the Czech, Hungarian and Slovakian prices significantly converged following the extension of market coupling from the Czech Republic and Slovakia to Hungary in September 2012.

There remains significant scope for further wholesale electricity price convergence across the EU. In 2013, the Central-West Europe (CWE) region recorded the most significant decrease in price convergence (down by 32% compared with 2012). This is explained by other important factors, for example, RES penetration and cheap coal in the international markets drove German prices down more than elsewhere in the region, due to the relatively high proportion of RES and coal-fired generation in Germany.

The market coupling of Great Britain with the CWE, Nordic and the Baltic regions through the North-West European (NWE) Price Coupling initiative, launched on 4 February 2014, is expected to improve price convergence across all these regions in the coming years.

Use of interconnector capacity

In 2013, the efficient use of interconnectors continued to increase, due to market coupling, reaching a level of efficiency of 77% in the day-ahead timeframe. The areas for greatest further potential improvement in efficiency are on the Swiss borders, on the border between Great Britain and Ireland, and within the Central-East Europe (CEE) region, due to the lack of market coupling, among other factors.

The combined analysis of available intraday cross-border capacity and intraday price differentials shows that the available capacity in the intraday timeframe was frequently underutilised in 2013 (more than 40% of the times, the

capacity remained unused in the economic direction). The analysis of existing intraday congestion management methods in Europe shows that the implementation of the intraday Target Model will contribute to both improving efficiency in the use of intraday cross-border capacity and to accommodating the increasing amount of RES. Moreover, in 2013, the exchange of balancing services across EU borders was still incipient. The analysis shows that substantial benefits (in the order of several hundred million euros per year) could be achieved from the exchange of balancing services, which confirms the idea that Europe should urgently pursue the further harmonisation and integration of balancing markets.

Forward markets

In Europe, two forward market designs have emerged in order to provide market participants with hedging opportunities against short-term (e.g. day-ahead) price uncertainties. The first design, which was implemented in the Nordic and Baltic countries and on the internal borders of Italy, relies mainly on the market and on a variety of contracts linked to a hub price, which represents some sort of average day-ahead price within this group of zones (multi-zone hub). The second design, which is implemented in nearly all MSs in continental Europe, gives an additional and specific role to transmission system operators (TSOs) which are responsible for calculating long-term capacities and auctioning transmission rights (TRs). This design includes a set of hedging contracts for each bidding zone which are linked to the day-ahead clearing price of this bidding zone (single-zone hub). Systematic differences have been observed between the marginal price of Physical TRs (PTRs) and day-ahead price spreads. For instance, between 2011 and 2013, negative risk premiums (i.e. the differential between the price of transmission rights and realised delivery date spot prices) exceeded one euro per MWh on two-thirds of the assessed borders. These differences may be due to several reasons (including the level of competition in the different auctions, the likelihood of periods of curtailments and firmness regimes, the amount of capacity offered by TSOs and the design of secondary capacity markets).

Unscheduled flows and the IEM

Unscheduled flows (UFs), which consist of loop flows (LFs) and unscheduled transit flows (UTFs), remain a challenge for the further integration of the internal energy market (IEM). Such flows are particularly pronounced in the CEE, CWE and Central-South European (CSE) regions. Their persistence reduces tradable cross-border capacity and the associated social welfare. Welfare losses due to unscheduled flows show an increasing trend since 2011 and reached nearly half a billion euros in 2013. Moreover, the high volatility and limited predictability of LFs and UTFs are a challenge for the operation of the network.

The impact of UTFs can be mitigated with further coordination between TSOs in capacity calculation and allocation (implementation of flow-based methods), while the impact of LFs can be mitigated by improving the bidding-zone configuration and also investments in transmission infrastructure in the mid- and long-term, respectively.

Therefore, appropriate monitoring of LFs and associated externalities, along with the implementation of adequate remedial actions, is urgently needed.

There is insufficient transparency with regard to the level of LFs and UTFs and with regard to the number and costs of remedial actions applied by TSOs to remedy the negative effects of these flows.

The recently adopted 'Transparency Regulation' should help improve the situation, especially with respect to the costs incurred and the actions undertaken by TSOs. It is important that the relevant parties make available all the information listed in the above-mentioned Regulation through the Transparency Platform of the European Network of TSOs for Electricity (ENTSO-E), which will become operational by February 2015.

Integrating intermittent generation into EU power systems

The increasing penetration of intermittent RES poses a challenge to TSOs in terms of balancing supply and demand. This is because the output generated by such energy sources is difficult to predict and is unrelated to conventional electricity demand patterns.

In view of the increasing share of RES-based generation, TSOs will have to draw on additional (flexible) resources to be able to balance systems instantly in an efficient way. The most economically efficient way to pursue the deployment of sufficiently flexible resources in the system is to create a well-functioning energy market that attracts existing resources through efficient pricing. If the value of flexibility is adequately reflected in market prices, it will send appropriate market signals to stimulate the right power stations to remain active in the market, and to stimulate the right amount of investment in both new generation (if needed) and networks.

Implementation of the ETM

Therefore, the full implementation of the ETM for cross-border trade, in particular in the intraday and balancing timeframes, remains a priority in order to ensure that prices reflect the costs of flexibility. Moreover, flexibility in wholesale electricity markets (including RES balancing) requires efficient and well-integrated gas markets, which depends on, *inter alia*, balancing regimes, flexibility tools (such as storage and line-pack), nomination and re-nomination lead times, the bundling of capacity products at border points, transparent and consistent cross-border transportation tariffs and well-functioning secondary capacity markets and platforms.

Demand-side flexibility in electricity and gas

Demand-side participation in energy markets can also contribute to more flexibility in the system. A study commissioned by the Agency assessed the state of play and the potential benefits of demand-side flexibility (DSF). It distinguishes between implicit DSF, i.e. flexibility that is implicitly valued, e.g. when consumers choose to change their consumption in response to time-based price signals, and explicit DSF, i.e. flexibility that is explicitly rewarded in the market, e.g. when customers are requested to change their demand in response to a system operator signal. In electricity, the study estimates the potential benefits of implicit DSF to be 0.4 billion euros per year for the EU. The financial benefits of explicit DSF are more uncertain and are expected to range from 3 billion euros per year to 5 billion euros per year for the EU in 2030. In gas, the potential for implicit DSF is more limited than in electricity,

while explicit DSF may be useful for increasing system reliability in demand or supply emergencies and reducing the cost of managing network congestion.

Currently, implicit DSF (in the form of time-based retail prices) is available to 92% of electricity consumers. Implicit DSF is less common for gas (only available to residential consumers in 10% of MSs). The availability of explicit DSF is lower than in the case of implicit DSF. In electricity, a significant number of MSs stated that they are currently developing plans for demand-side participation in the wholesale or balancing markets (e.g. participation in the balancing markets is possible or planned to be introduced in 55%, respectively 40%, of MSs), although not always on an equal basis with generation. In gas, the most common forms of explicit DSF are reductions and interruptions called directly by the DSO or TSO, which are available in 50% of the MSs.

Overall, the presented inefficiencies illustrate the urgent need to finalise the implementation of the Electricity Target Model (ETM). In particular, there remains significant scope for improvement in: i) the use of existing cross-border capacity in the different timeframes (i.e. long-term (LT), day-ahead (DA), intraday (ID) and balancing market (BM)); ii) TSOs coordination on capacity calculations and allocation; iii) configuration of bidding zones; and iv) facilitating demand-side participation.

Gas market integration and network access

Demand and price trends

EU-26 natural gas consumption totalled roughly 5,000 TWh in 2013, a decrease of 1.2% compared to 2012. A significant proportion of this reduction was observed in gas demand from electricity producers, mainly as a consequence of the rise of coal as the fuel of choice and the increasing penetration of RES for electricity production.

During 2013, the supply of Russian gas to the EU increased significantly. The main driver of this development was the increased willingness of Gazprom to renegotiate the pricing of its supplies, which is arguably due to excess production capacity and increased competition, such as the development of organised EU markets, the expansion of interconnection infrastructure and the potential threat from LNG and unconventional gas production. Other drivers, although less important, include the need to replenish EU gas storage stocks after the low stock levels reached at the end of the 2012/2013 winter and the significant rise in German gas demand, as Germany is the MS with highest gas consumption in the EU, with Russian gas being the key source. Russian exports were also supported by a disruption of Norwegian flows during the summer and by a decline in LNG imports.

Several Central and Eastern European countries are striving to diversify their gas sources in order to reduce their dependence on Russian gas, and have been looking to Western Europe's spot markets as alternative sources. Larger counter-flows from Germany and Austria to the Czech Republic, Poland and Slovakia were observed. These commercial counter-flows are expected to increase in the future, given the profitable price spreads and the on-going

procedures, driven concerns over security of supply, to enable or enlarge bi-directional capacity. Flows from Hungary and Poland to the Ukraine were also registered, as in 2013 the Ukraine was faced with high-priced Russian gas and was seeking alternative supplies from Central European hubs.

Cross-border capacity contracting is becoming more short-term oriented due to developments in the commodity market enabled by new rules on capacity allocation and congestion management, where these are implemented, especially in those MSs featuring more liquid hubs. However, substantial differences still exist between contractual and actual utilisation values in a significant number of European Interconnection Points (IPs). Although peak capacity utilisation values more closely follow contractual ones, the challenge is to ensure that all unused capacities, whether or not strategically acquired, can be easily returned to the market so that other shippers can use them if short-term trading opportunities arise.

Diversifying gas sources

Several hubs are developing robust price references against which supply contracts can be indexed or on which hedging strategies can be based. Hub supply sourcing is also increasing in several Central European countries. Shippers in these MSs are increasingly relying on recently established hubs, as well as on the more liquid adjacent ones, for supply and arbitrage activities. This is having a positive effect on competition in the region, despite overall price responsiveness being subdued by the persistence of long-term contracts. In order to further increase arbitrage possibilities, as well as from a security of supply perspective, there is a need to focus on more reverse-flow capacity possibilities.

Wholesale market integration

The monitoring results show that progress continues to be made towards wholesale gas market integration. Price convergence between MSs – an important measure of the extent of market integration – has increased, principally as a result of increased price competition, leading to more long-term contract renegotiations. Although prices at the main NWE hubs remained relatively stable compared to 2012, downward pressure on import gas prices was partially exerted in some markets as a result of increased competition following the development of new trading hubs and the delivery of new interconnection capacity.

Welfare losses

Higher price convergence has reduced the overall EU-26 gross welfare losses – measured as the price deviation of each EU MS versus the baseline reference price of the Title Transfer Facility (TTF) in the Netherlands – in comparison to 2012. Nevertheless, significant theoretical welfare gains could still be achieved through the optimisation of physically unused cross-border capacities. The analysis indicates that potential gains between 0.5 and 2 billion euros could be obtained by optimising the use of physical capacity in those cross-border IPs connecting price zones with significant wholesale price differences.

Gas storage utilisation

The winter-summer gas price spread, a major driver of gas storage utilisation, shows, with the exception of the 2012/13 winter, a decreasing trend over recent years. If the general trend in favour of lower winter-summer spreads continues, it is likely that gas storage utilisation rates will remain relatively

low. However, if higher winter-summer spreads develop, as in the winter of 2012/13, it is likely that storage utilisation will respond, as happened in that period. The uncertainty around long-term winter-summer spreads could reduce the incentive to invest in new or existing gas storage facilities. Given the long investment lead times for delivering new gas storage capacity, investors may not be able to anticipate an unexpected increase in gas storage demand. Therefore, the monitoring of aggregate EU gas storage capacity trends for security of supply reasons is appropriate.

Market integration and GTM

Despite significant advances, barriers to full market integration remain, including: lack of liquidity in many wholesale markets (ten MSs rely on a single country of origin for more than 75% of their supply); lack of transparency in wholesale price formation; the lack of adequate gas transportation infrastructure and the presence of long-term commitments for gas supply. These barriers and their implications were identified in the 2012 MMR, and they remained in 2013, albeit more or less pronounced in different regions.

The Gas Target Model(s) (GTM) and the proposed provisions in the various framework guidelines and network codes (FGs/NCs) focus on improving internal market integration and functionality. Some of the measures recommended, and in some cases already implemented, include the definition of appropriate market features; the offering of cross-border bundled capacity from/to virtual trading points supported by trading platforms; the setting of harmonised entry-exit tariff structures; the establishment of coordinated capacity allocation and congestion management mechanisms; the introduction of market-based balancing instruments and the potential merging of market zones to enlarge liquidity.

The bundled allocation of IPs capacity, the synchronised implementation of CMP mechanisms, the implementation of balancing provisions and the implementation of interoperability arrangements are advancing in the majority of MSs.

Consistent with its mandate to promote cross-border trade and EU market integration, the Agency is working on implementing the key principles of the Gas Target Model through its framework guidelines and the resulting binding Network Codes on Capacity Allocation Mechanisms, Balancing, Harmonised Gas Transmission Tariff Structures, and Interoperability. The Comitology Guidelines on Congestion Management Procedures (CMP) are now in force. These provisions, along with the full transposition of the 3rd Package, must ensure that European consumers benefit from an integrated internal gas market.

Conclusions

This report presents the main developments in the EU energy sector in 2013. It identifies those areas where additional measures (and monitoring) are needed in order to ensure that EU electricity and gas consumers benefit from fully integrated markets. The report demonstrates the welfare losses from imperfectly integrated and fragmented energy markets – in the order of several billion euros per annum – in both the electricity and gas sectors. The report also shows the large disparities in MSs' national energy policies. This may reduce the contribution of the Network Codes to the market integration and harmonisation process and the trust of stakeholders in EU energy markets.

Particular areas for further action remain:

1. Transposition — Full transposition and implementation by all MSs of the 3rd Package is essential. The European Commission should continue to monitor this closely.

2. Consumer rights — Regulators must continue to promote the implementation of consumer provisions in the 3rd Package, benefiting from CEER's recommendations and advice, along with the Agency's continuous monitoring activities.

3. Market rules and practical implementation — The EU-wide network codes and Commission guidelines envisaged in the 3rd Package and their rapid and preferably early implementation are imperative for fostering the market integration process. The Agency will continue to work with the ENTSOs, the European Commission, NRAs and market players to deliver a full set of binding market and network rules applicable across the EU, and to accelerate their implementation. Wholesale energy markets will be monitored to detect manipulation and abusive practices, which should be sanctioned.

At the same time the EU Infrastructure Package is encouraging the development of adequate cross-border transmission infrastructure to facilitate wider market integration, and REMIT provisions are intended to promote transparency in wholesale markets price formation and to detect and deter abusive behaviour.

Some measures require concerted action by several actors for the benefit of European consumers. The Agency and CEER will continue to support and promote the development of competitive, sustainable and secure electricity and gas markets in the public interest. Both the Agency and CEER remain committed to continuing an open dialogue with all parties and to working with European institutions and MSs in order to deliver and apply the rules necessary to achieve Europe's energy goals in an efficient way.

1 Introduction

1 The 3rd Package aims to make energy markets work effectively and to create a single EU gas and electricity market. While significant progress has been made, the objective of full market integration has not yet been achieved and many barriers to the internal energy market (IEM) persist. For instance, at the wholesale level, pan-European technical rules (network codes developed on the basis of framework guidelines) must deliver further improvements in terms of efficient use of the network and network security. Suppliers and users should have easier access to infrastructure and take advantage of lower transaction costs for cross-border trade.

2 The Agency for the Cooperation of Energy Regulators ('the Agency') is tasked[1] with tracking the progress of the integration process and the performance of energy markets. To this purpose, the Agency prepares an annual MMR in close cooperation with the European Commission, national regulatory authorities, Bureau Européen des Unions de Consommateurs (BEUC) and other relevant organisations.

3 The objective of this MMR is to assess the functioning of the IEM and to show how energy markets can work more efficiently for the benefit of European energy consumers. The MMR provides an in-depth year-on-year analysis of remaining barriers to the well-functioning of the IEM and recommends how to remove them. Pursuant to Article 11 of the Agency's founding Regulation[2], it concentrates on retail prices (including compliance with consumer rights as mentioned in the 3rd Package), network access (including grid access for renewable energy sources) and barriers to the IEM. This 3rd edition of the MMR has been prepared jointly by the Agency and by the Council of European Energy Regulators (CEER). In addition to analysis undertaken specifically for this report, information from other documents produced by the Agency and by national regulatory authorities (NRAs) has been used[3].

4 It is worth noting that this MMR is based on publicly available information and on information provided by NRAs, ENTSO-E and ENTSOG on a voluntary basis, as the reporting requirements contained in the above-mentioned Article 11 are not complemented with data collection powers for the Agency.

1 The legal basis for this is Article 11 of Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing the Agency for the Cooperation of Energy Regulators, OJ L 211/1, 14/8/2009.

2 See footnote 1.

3 Norway applies most of the EU energy legislation, including legislation on the internal energy market, and is included in the data reported in several sections of this report. Switzerland has been reported in some parts of the wholesale sections on the basis of a voluntary commitment of their NRA. Consequently, the terms 'countries'/'EU Member States (MSs)' and 'Europe'/'EU-28'/'EU' are used interchangeably throughout this report.

2 Retail electricity and gas markets

2.1 Introduction

5 This 3rd edition of the MMR reports on retail markets in a different way compared to the previous two editions. First, the structure is different, as gas and electricity are reported in a single chapter. Second, on substance, in addition to developments, the chapter addresses certain retail issues in more depth (e.g. how and to what extent consumers are benefitting from the IEM). To address these questions, the chapter analyses price and non-price indicators; in addition, it contains an in-depth analysis of some specific and recurring issues identified as the main barriers to efficient retail market functioning, such as consumer behaviour, end-user price regulation and barriers to cross-border entry into retail energy markets.

6 In Section 2.2, this chapter presents the main trends in energy (i.e. electricity and gas) prices and demand in 2013. Section 2.3 assesses the level of competition in retail energy markets, including indicators on market structure, competition performance and consumer behaviour. The focus of Section 2.4 is on barriers to retail market entry, including cross-border entry and retail price regulation. This section also summarises the key findings of two reports commissioned by the Agency on the (potential) benefits of demand-side flexibility and the views of suppliers on barriers to retail competition. Section 2.5 ends this chapter with conclusions.

2.2 Main trends and benefits of retail market integration

2.2.1 Final consumer demand

7 In 2013, against a background of low economic growth, electricity demand in Europe remained virtually unchanged for the third consecutive year (0.2%, -0.1% and -0.2% year-on-year variations in 2011, 2012 and 2013, respectively) as shown in Figure 1. The EU-28's electricity demand by final consumers[4] was 2,966 TWh.

8 The demand for natural gas[5] reached 4,964 TWh in 2013. Compared to the year before, natural gas demand fell by 1.2% per cent, continuing the trend of a falling year-on-year gas demand in Europe (-10.5% in 2011 and -2.2% in 2012). Since most of the natural gas supplied in Europe is consumed by the industrial and commercial sector and for power generation[6], the reduced rate of demand contraction could be interpreted as a sign of industrial economic recovery. However, it is also relevant to consider that colder than average temperatures in Northern Europe during February and March 2013 contributed to higher than expected household demand during this period.

9 In 2013, EU-28 GDP grew by one per cent compared to 2012, which is the lowest year-on-year increase since 2009[7]. This has affected the demand for electricity and natural gas in Europe.

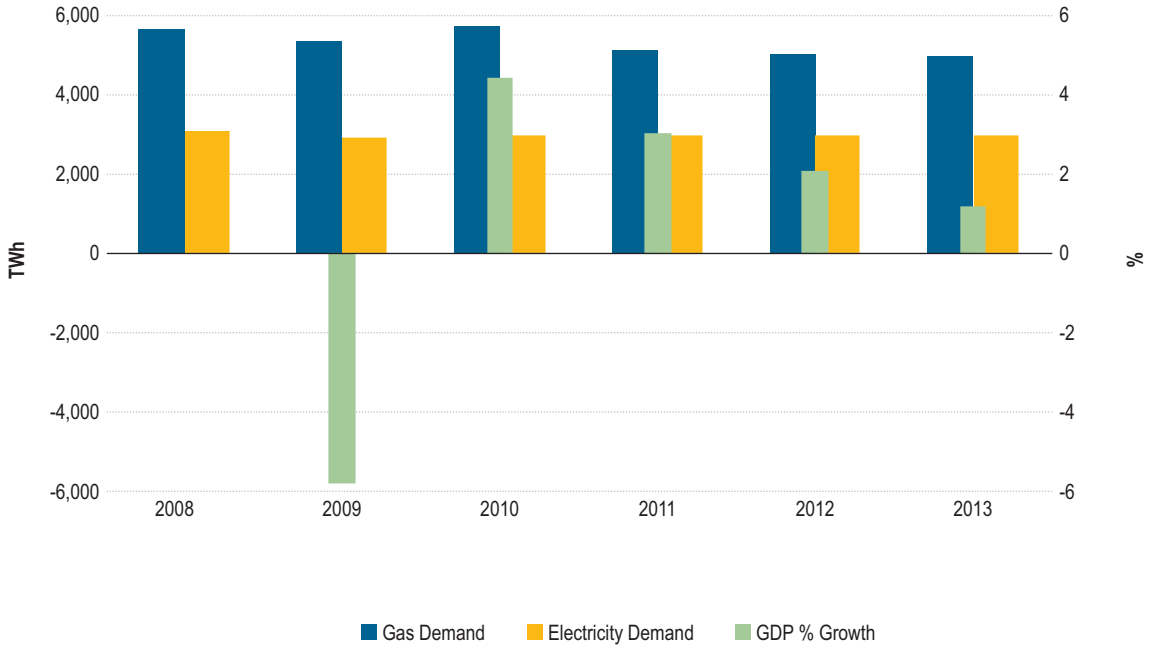
4 Based on the Eurostat supply category of 'electricity available for the internal market', i.e. the amount of electricity to be sold and supplied to the domestic market, including all losses that occur during transportation and distribution, and the amount of electricity consumed in the energy sector for commercial needs.

5 Gross inland annual consumption data used for the years of 2008–2012. For 2013, the Eurostat monthly supply data category of 'gross inland consumption' as of 19 May 2013 is presented. In this category, supply is equal to the sum of production, net imports and stock change. Eurostat data are provisional for some countries.

6 In 2012, 2,049.8 TWh of gas were consumed by the residential and commercial sector, followed by industry (1,575 TWh) and power generation (1,241 TWh). Eurogas, Statistical Report 2013, http://www.eurogas.org/statistics/.

7 In 2013, European public debt increased by three per cent compared to 2012, which is the lowest increase since 2009 (by 13%, 12%, 6%, 5% and 3% for the year 2012-2013).

Figure 1: Electricity and gas demand in the EU-28 in relation to GDP – 2008–2013 (TWh) GDP year-on-year change (%)



Source: Eurostat (10/7/2014) and ACER calculations

Note: Electricity availability for the internal market and Gross inland gas consumption.

10 However, the European electricity and gas market trends presented above are not consistent across all MSs. Consumption dynamics in different MSs have varied. This is partly dependent on the economic situation in specific MSs, which has affected industrial and household gas and electricity consumption. However, other reasons, such as the trend towards cheap coal as the fuel of choice for power generation as opposed to gas, the increasing penetration of RES, energy efficiency improvements and the weather all affected electricity and gas demand in 2013 (see the Wholesale chapter section 4.2).

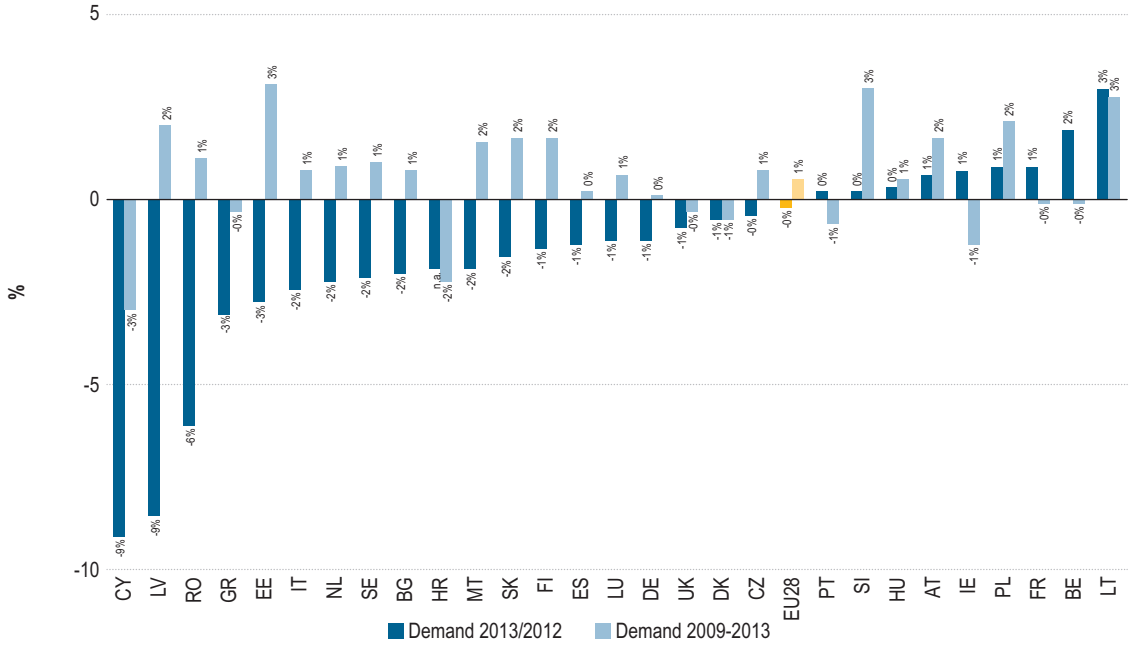
11 As Figure 2 demonstrates, for a large majority of European countries, electricity demand fell compared to 2012. This contrasts with the 2009–2012[8] period, during which almost all MSs witnessed modest demand growth.

12 Cyprus, Estonia, Greece, Latvia and Romania exhibited the sharpest drop in electricity demand by end consumers in 2013 compared to the previous year. In Cyprus and in Greece, the decline in electricity demand from 2012 to 2013 represents a continuation of the 2009–2012 trend in decreasing year-on-year demand, coinciding with the fall in both countries' GDP (-6.9% and -5.8%, respectively). In Latvia, electricity demand was affected (-8.6% compared to 2012) by the closure of one of Latvia's largest energy-intensive businesses in the metal industry, whilst in Estonia the demand reduction was probably affected by the unusually mild end of the year.

8 Measured by the Compound Average Growth Rate (CAGR). CAGR is calculated by taking the n^{th} root of the percentage of the year-on-year demand growth rate for the period analysed, where n is the number of years in the period being considered (in this case, the cubic root).

13 Compared to 2012, the demand for electricity in 2013 increased in eight MSs, the greatest increase being in Lithuania (3.0%). All countries in which there was an increase in electricity demand also experienced a rise in GDP in 2013 compared to 2012, with the exception of Ireland, which showed no year-on-year GDP change.

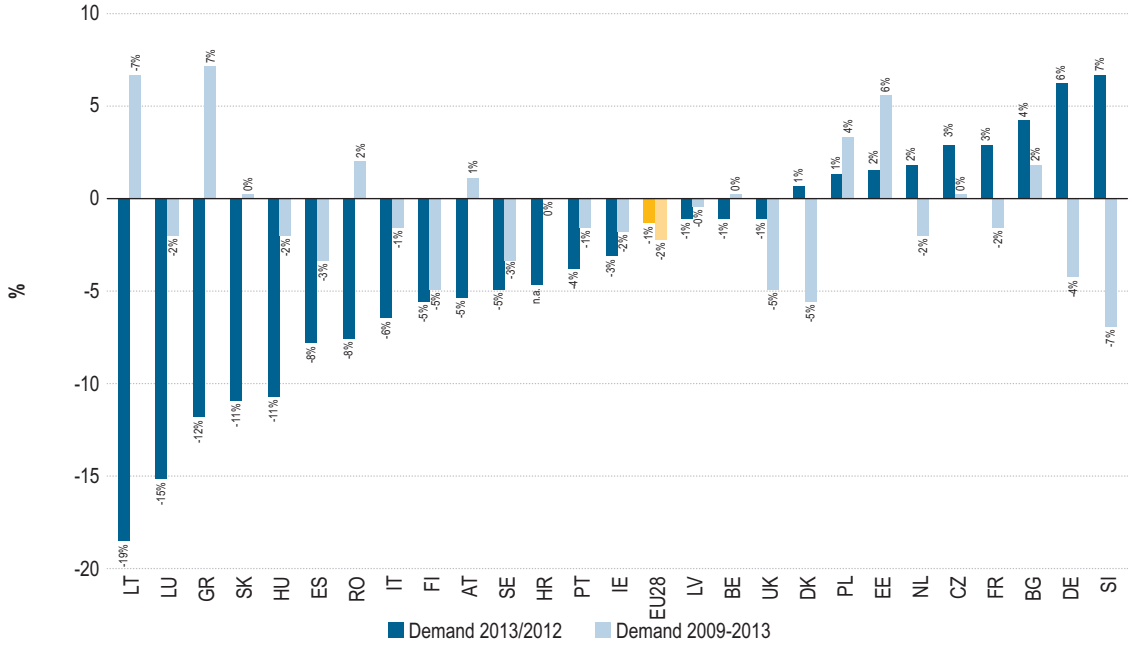
Figure 2: The change in electricity demand in Europe – 2012–2013 and 2009–2012 (%)



Source: Eurostat (10/7/2014) and ACER calculations

Note: Electricity available for the internal market. The information is based on Eurostat estimates for electricity demand, although it represents the supply of electricity to end users in the EU. Data for Portugal were revised based on information provided by ERSE (3/7/2014). According to CREG and RAE, Belgian and Greek electricity demand in 2013 declined by 1.3% and 2.2% respectively compared to 2012. According to ANRE, compound electricity demand growth from 2009 to 2012 was 1.7%, i.e. higher than presented.

Figure 3: The change in gas demand in Europe – 2012–2013 and 2009–2012 (%)



Source: Eurostat (10/7/2014) and ACER calculations

Note: Gross inland consumption. The information presents the sum of production, net imports and stock change. Eurostat data are provisional for some countries.

14 In 11 out of the 26[9] MSs where gas is supplied, demand for natural gas in 2013 fell by more than 5% compared to 2012 (see Figure 3). This decline was most pronounced in Lithuania, Luxembourg, Greece, Slovakia and Hungary.

15 In Lithuania, in 2013, gas demand decreased compared to 2012 due to an increase in the consumption of bio-fuel and use of alternative-fuel boilers by household and non-household consumers. Gas demand in Lithuania was further affected by reduced electricity production quotas[10].

16 In Greece, the decline in gas consumption correlates with the fall in GDP (-5.8%). In Luxembourg, the decline in gas demand was mainly due to the reduced activity of a combined-cycle gas turbine plant[11].

17 In Germany and Slovenia, the gas demand growth in 2012-2013 was not only the highest, but also represents a change in the trend of the 2009–2012 gas demand growth. In Germany, the 6.4% growth in gas demand was due to increased industrial output and a colder winter[12]. In Slovenia, the 6.9% increase in gas demand corresponds to the increased output of thermal electricity power plants[13].

9 No gas supply in Cyprus and Malta.

10 Electricity production quotas in Lithuania are supported through the Public Service Obligation (PSO) component which is included in electricity tariffs. Part of the PSO funding is devoted to supporting electricity production at the Lietuvos elektrinė power plant, which is needed to support the security of electricity supply and reserves for the functioning of the system. In 2013, the quota for electricity production by Lietuvos elektrinė was reduced from 1.53 TWh in 2012 to 0.9 TWh. The PSO funding also supports electricity production in the efficient combined-cycle power plants. The quota for efficient combined cycle power plants was reduced from 0.93 TWh in 2012 to 0.8 TWh in 2013. As a result of this, 2013 gas consumption fell by almost 100 million cubic metres compared to 2012.

11 In total, a reduction of apprximately 2 TWh for all electricity producers and cogenerations. Source: ILR, Luxembourg.

12 According to DWD, the German meteorological service, the temperature was 0.7 °C lower in 2012/2013 winter compared to 2011/2012.

13 Source: Slovenian Statistical Office, http://www.stat.si/novica_prikazi.aspx?id=6024

18 Estonia's two-percent year-on-year gas demand growth in 2013 is relatively low compared to previous years, mostly due to the partial operation and then indefinite closure of the main fertiliser factory (AS Nitrofert)[14].

19 Despite the high 8.1% GDP growth in 2013 compared to 2012, Romania experienced a decline in electricity and gas demand in 2013. The rise in Romanian GDP was mainly due to the non-energy-intensive automobile, textile and food industry. Furthermore, the rising Romanian prices and the anticipation of their continued rise are making household consumers increasingly aware of the savings to be made from limiting consumption and increasing energy efficiency. At the same time, similar to other countries, rising prices are steering industry towards energy-efficient investments that, in turn, have affected demand.

20 The stagnating 2013 electricity consumption and the declining gas consumption were further affected by an increase in electricity and gas prices for the most representative household and industrial consumer bands, as shown in Section 2.2.2.

2.2.2 Retail prices

21 This section presents a review of recent developments in energy retail prices in MSs across segments (i.e. households and industrial consumers) and between consumption levels.

2.2.2.1 Price differences between MSs and segments

22 In 2013, the post-tax total prices (POTP)[15] for the electricity and gas supplied across Europe continue to vary greatly. Compared to the year before, EU-28 prices of electricity and gas for household consumers increased on average by 4.4% and 2.7%, respectively. In 2013, prices for electricity industrial consumers increased by 2.0% compared to 2012, while prices for gas industrial consumers decreased by 1.2%.

23 Average EU-28 electricity and gas unit POTPs are almost double for selected household consumer bands[16] (20.01 euro cents/kWh for electricity and 6.54 euro cents/kWh for gas) compared to prices paid by industrial consumers (11.73 euro cents/kWh for electricity and 3.75 euro cents/kWh for gas). This is in line with the overall EU-28 final price levels observed for all household and industrial price bands[17], displaying, with few exceptions, higher household and lower industrial prices (see paragraph (56)).

14 Source: Konkurentsiamet, the Estonian NRA.

15 The post-tax total price is defined as the sum of the commodity price, regulated transmission and distribution charges, and retail components (billing, metering, customer services and a fair margin on such services) plus VAT, levies (as applicable: local, national, environmental) and any surcharges (as applicable).

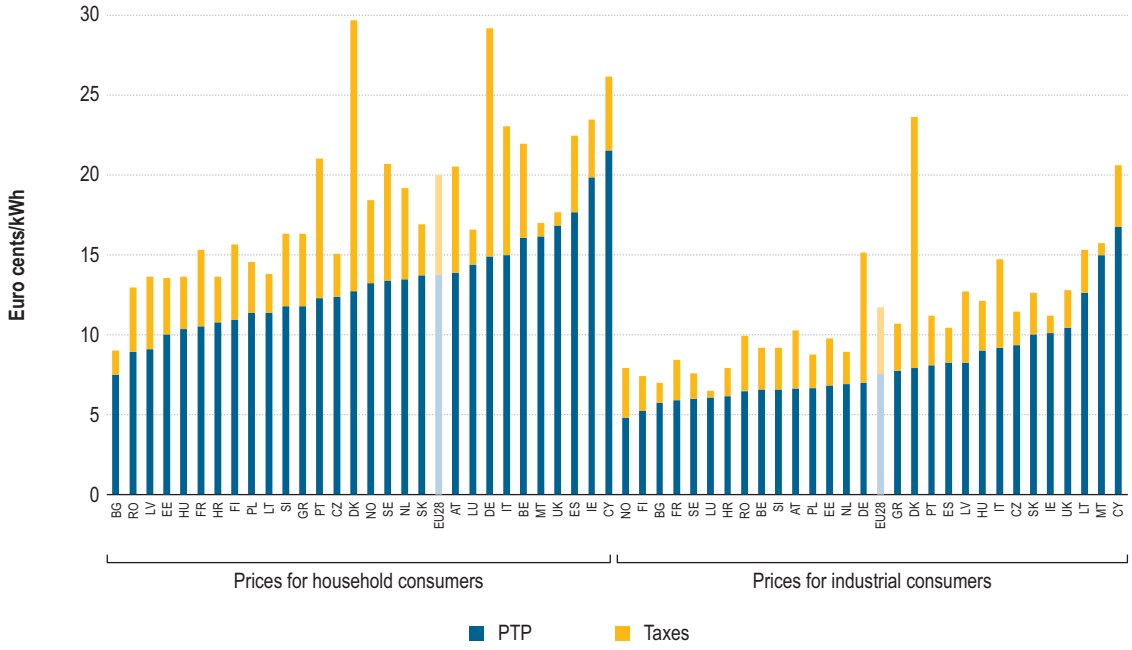
16 The Eurostat yearly consumption bands referred to in this report are DC: 2,500-5,000 kWh (electricity households), D2: 20 GJ-200 GJ (gas households), IE: 20,000 MWh-70,000 MWh (electricity industrial consumers) and I5: 1,000,000 GJ-4,000,000 GJ (gas industrial consumers). While the analysis in this year's report shows prices for all consumer bands (see Figure i and Figure ii in Annex 1), the focus of the price break-down of electricity and gas industrial prices has changed. Based on stakeholder feedback, the prices reported for industrial consumers are those of a higher consumption band compared to the two previous MMRs. For some, however, (for example Portugal, Malta, Cyprus) the higher IE and I5 industrial consumer bands reported on this year are even more atypical than previously reported.

17 Electricity household consumers: DA: consumption < 1,000 kWh; DB: 1,000 kWh < consumption < 2,500 kWh; DC: 2,500 kWh < consumption < 5,000 kWh; DD: 5,000 kWh < consumption < 15,000 kWh; DE: consumption > 15,000 kWh. Electricity industrial consumers: IA: Consumption < 20 MWh; IB: 20 MWh < consumption < 500 MWh; IC: 500 MWh < consumption < 2,000 MWh; ID: 2,000 MWh < consumption < 20,000 MWh; IE: 20,000 MWh < consumption < 70,000 MWh; IF: 70,000 MWh < consumption < 150,000 MWh; IG: consumption > 150,000 MWh. Gas household consumers: D1: consumption < 20 GJ; D2: 20 GJ < consumption < 200 GJ; D3: consumption > 200 GJ. Gas industrial consumers: I1: consumption < 1,000 GJ; I2: 1,000 GJ < consumption < 10,000 GJ; I3: 10,000 GJ < consumption < 100,000 GJ; I4: 100,000 GJ < consumption < 1,000,000 GJ; I5: 1,000,000 GJ < consumption < 4,000,000 GJ; I6: consumption > 4,000,000 GJ.

24 The lower POTP price levels for industry compared to households – which most likely result from higher volumes of consumption, the possibility of large industrial consumers to negotiate lower energy prices, but also from lower non-contestable charges applied to industrial consumers – tend also to reflect the more developed role of liberalisation in the industrial segment[18], which was in general deregulated earlier. This has enabled and enhanced market dynamics, resulting in – among other things – lower prices.

25 Household electricity prices in Denmark (29.68 euro cents/kWh), the MS with the highest household electricity prices, are more than three times higher than in Bulgaria (9.03 euro cents/kWh), the country with the lowest household electricity prices. Industrial electricity prices, too, are the highest in Denmark (23.65 euro cents/kWh), again more than three times higher than the lowest price paid by electricity industrial consumers in Luxembourg (6.52 euro cents/kWh) (Figure 4).

Figure 4: Electricity POTP and PTP[19] for households and industry – Europe – 2013 (euro cents/kWh)



Source: Eurostat (10/7/2014) and ACER calculations

Note: Consumption bands: DC: 2,500-5,000 kWh (households) and IE: 20,000 MWh-70,000 MWh (industry). Within each group, MSs are ranked according to PTP.

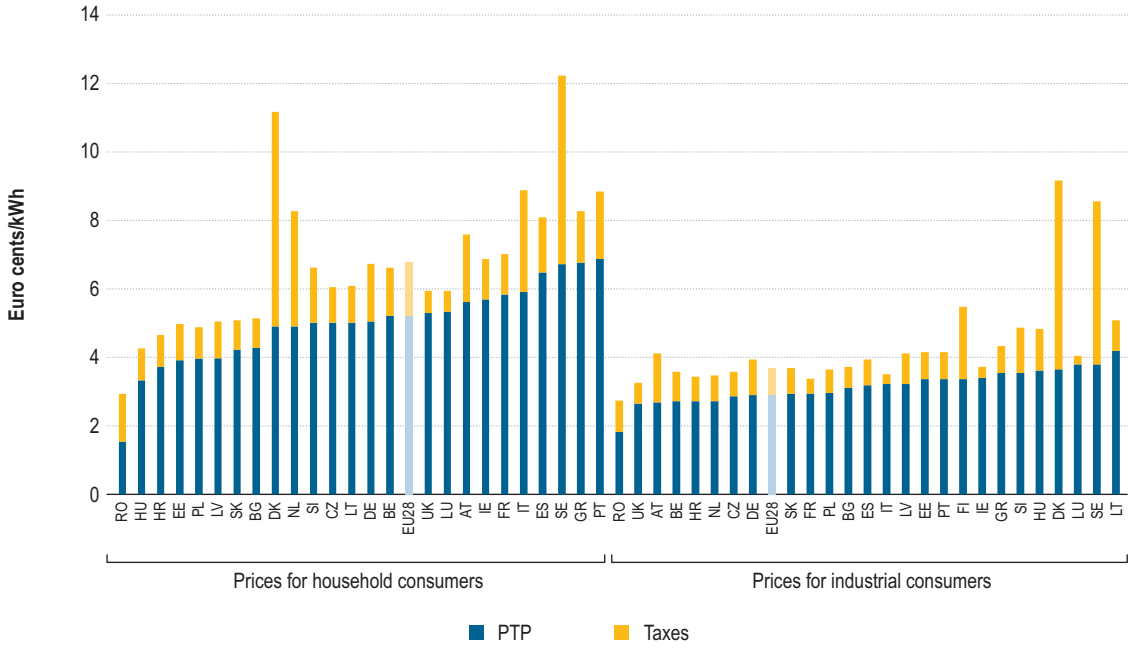
26 Household gas prices are lowest in Romania and Hungary[20] (2.96 and 4.26 euro cents/kWh respectively). Swedish and Danish industrial gas consumers, incurring considerable higher taxes and charges compared to other European countries, pay the highest gas prices in Europe (8.59 and 9.32 euro cents/kWh, respectively).

18 In the electricity industrial consumer segment, prices are higher in countries with price regulation (12.36 euro cents/kWh) than in liberalised countries (10.86 euro cents/kWh). In the latter, retail industrial electricity prices tend to be closely linked to the wholesale price. On the other hand, prices for gas industrial consumers are lower (3.53 euro cents/kWh) in countries with price regulation compared to liberalised countries (4.28 euro cents/kWh).

19 The pre-tax total price (PTP) is defined as the sum of the commodity price, regulated transmission and distribution charges, and retail components (billing, metering, customer services and a fair margin on such services).

20 Prices in Romania and Hungary have very low and negative mark-ups (See Section 2.3.2), indicating lower retail energy components compared to the relatively high wholesale energy price.

Figure 5: Gas POTP and PTP for households and industry – EU-28 – 2013 (euro cents/kWh)



Source: Eurostat (10/7/2014) and ACER calculations

Note: Consumption bands: D2: 20 GJ-200GJ (households) and I5: 1,000,000 GJ-4,000,000 GJ (industry). Within each group, MSs are ranked according to PTP. Gas prices for Finnish households are not available. Due to the unavailability of data, prices for lower consumption band I4 (from 100,000 GJ to 1,000,000 GJ) are displayed for Denmark, Ireland, Lithuania, Luxembourg and Slovenia.

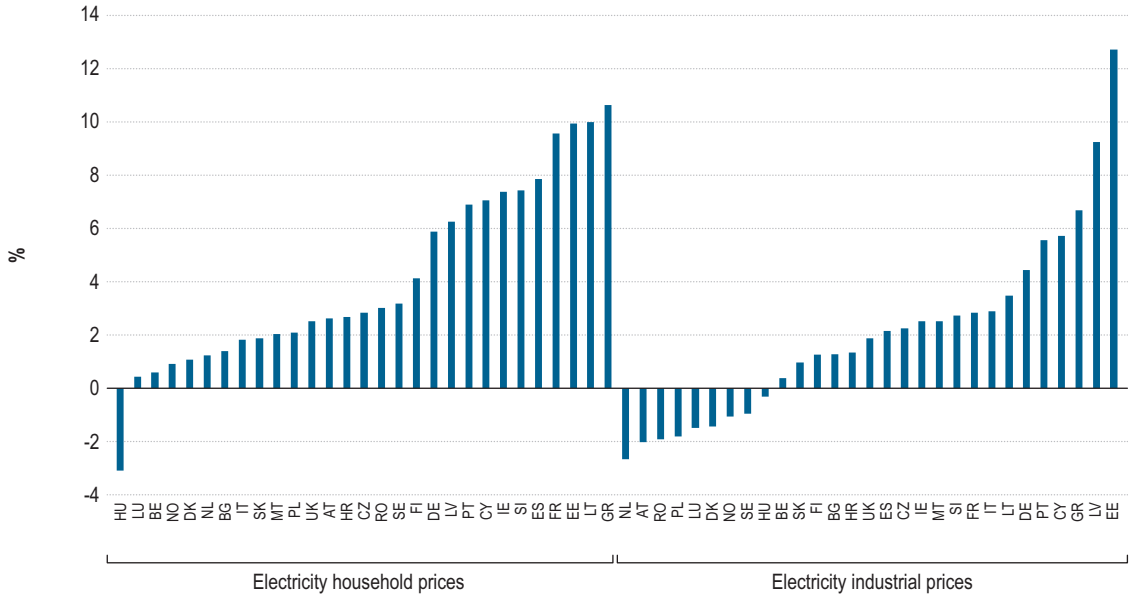
27 Differences across the EU-28 persist even at the Pre-Tax Price (PTP) level. The electricity PTP for households is highest in Cyprus (21.52 euro cents/kWh), which is almost three times higher than the Bulgarian PTP (7.53 euro cents/kWh). The electricity PTP for industrial consumers was highest in Cyprus (16.77 euro cents/kWh), whilst the Norwegian industrial electricity consumers paid more than three times less (4.85 euro cents/kWh).

28 As with the PTP comparison for gas consumers, the highest gas PTP was paid by Portuguese household consumers (6.90 euro cents/kWh), more than four times higher than the PTP paid by Romanian consumers (1.56 euro cents/kWh). Lithuanian gas industrial consumers (band I4) pay the highest PTP (4.20 euro cent/kWh) compared to 1.83 euro cents/kWh paid by industrial gas consumers in Romania, the country with the lowest industrial gas PTP price.

Changes in prices between 2008 and 2013

29 Figure 6 shows that prices for the selected electricity bands have increased significantly since 2008 in a large majority of European countries. The 2008–2013 compound annual growth rate (CAGR) for POTP household and industrial consumers shows an average increase of 4.2% and 2.0%, respectively.

Figure 6: The POTP compounded annual growth rate (CAGR) of household and industrial electricity prices – Europe – 2008–2013 (%)



Source: Eurostat (21/7/2014) and ACER calculations

Note: Consumption bands: DC: 2,500-5,000 kWh (households) and IE: 20,000 MWh-70,000 MWh (industry). Due to the unavailability of data, household price changes for France relate to the 2012–2013 period only, for Ireland to 2011–2013, for Cyprus to 2010–2013, and for Greece to the 2009-2013 period. Industrial price changes for France relate to the 2012–2013 period only, for Cyprus and Lithuania to 2010-2013, and for Ireland, Greece and Luxembourg to the 2009–2013 period. Price data for the I4 consumption band is presented for Lithuania.

30 Hungary was the only country in which household prices recorded negative growth in the period observed (CAGR of -2.6%). This was due to two government interventions that lowered the household regulated price by more than 20% in total. The regulated household price was initially reduced by 10% in January 2013. The system use, universal supply energy price and the renewable component[21] were affected. The second reduction, of a further 11.1% of the total price, took place in November 2013. In this instance, in addition to a reduction in the system use and universal supply price, some of the taxes and levies (coal industry support, electric industry pensioners' support and district heating support) were reallocated to non-residential consumers, reducing the final price even further[22].

31 Last year's report showed that the price of electricity for household consumers was highest in Cyprus (28.45 euro cents/kWh)[23]. In 2013, the price dropped to 26.21 euro cents/kWh due to an intervention of the Cypriot National Regulatory Authority (CERA) that reduced electricity prices by approximately 8% by December 2013. In addition to this, the power plants which in were destroyed in June 2011 by an explosion at the Mari Naval Base became operational again in July 2013, increasing electricity generation and driving the average electricity price down[24].

21 The renewable charge was reallocated in a way that is subsequently only covered by consumers who are not entitled to universal supply (connection capacity exceeding 3 x 63 ampere).

22 See the increase observed in the non-contestable part of the final electricity price for industrial consumers as a result of this in Figure 7.

23 Prior to 2012, the Cypriot electricity household prices had grown fast i.e. with a compound average annual 2008–2012 growth rate of 10.5%.

24 Source: CERA.

32 An analysis of the 2008–2013 POTP component growth in countries where final electricity household prices increased the most reveals that the final price growth was primarily driven by its non-contestable component (i.e. network charges, taxes and levies and VAT[25]), as opposed to the energy component (see Figure 7)[26]. The growth in the non-contestable component was most pronounced in Spain (15.3%), Greece (13.8%) and in Lithuania (12.7%). In Ireland, Portugal and Estonia, the non-contestable components grew by more than 10% in the period observed, pushing the final electricity price up more than in other countries (see Figure 7). These differences in the growth of non-contestable charges reflect the differences in national energy policies across the EU.

33 Estonia had the highest annual average 2008–2013 POTP growth in household prices. In addition to the increasing non-contestable charges, this is primarily due to the below-cost level of the energy component in the pre-2013 regulated price, which increased significantly after the removal of household price regulation in January 2013 (for more, see Case Study 5 in the Section 2.4.2 on End-user price regulation). Compared to 2012, the energy component of the incumbent's standard offer in Tallinn increased by 58% in 2013[27].

34 In Luxembourg, the Netherlands, Belgium, Italy, Denmark and Norway, among others, the relatively modest final electricity household price increases show energy component decreases and a low energy component price increase in the case of Luxembourg, as well as lower (i.e. less than 5%) increases in the non-contestable part (Figure 7).

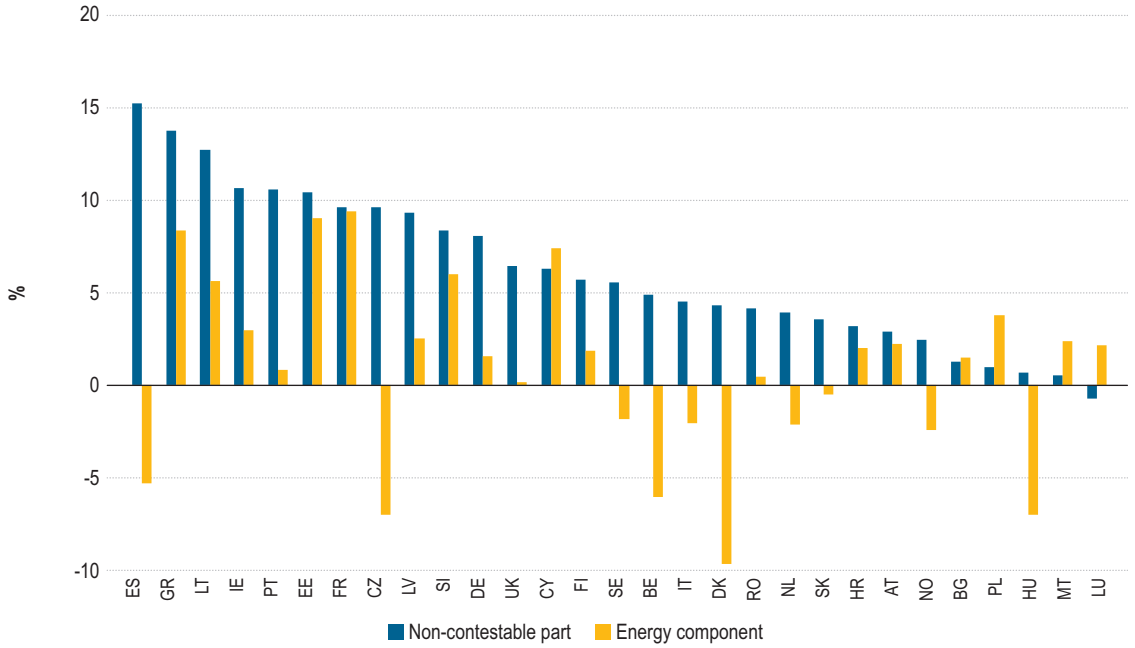
35 Given the decline in wholesale electricity prices (see Section 3.2.1) in certain countries (for example, Germany, Ireland and the United Kingdom), some decrease in the retail energy component is to be expected (see Section 2.3.2). In these Member States in particular, the effect of the increasing non-contestable charges has been exacerbated by the failure of suppliers to pass on the savings resulting from reductions in wholesale prices to end consumers (see Section 2.3.2).

25 In countries in which the energy component price growth equals the non-contestable component growth, the growth in non-contestable components is most likely due to an increase in VAT as a variable tax on other components (energy, network and taxes and levies). However, in most countries, the VAT rate has not changed significantly during the period observed with some exceptions: Slovenia (from 20% to 22% in 2013), the Netherlands (19% to 21% in 2012), Spain (the first increase in 2010 from 16% to 18%, followed by another increase in 2012 from 18% to 21%), Ireland (from 21% to 23% in 2012) and Hungary (from 25% to 27% in 2012).

26 Estonia is an exception.

27 For 2013 data on offers, see Figure 9.

Figure 7: The compounded annual growth rate (CAGR) of the electricity energy component and the non-contestable part of POTPs for households – Europe – 2008–2013 (%)



Source: Eurostat (21/7/2014) and ACER calculations

Note: Consumption band: DC: 2,500-5,000 kWh (households). Due to the unavailability of data, price changes for France relate to the 2012–2013 period only, for Ireland to 2011–2013, for Cyprus to 2010–2013, and for Greece to the 2009–2013 period. The energy component pricing data for Ireland, Italy, Lithuania, Portugal, Spain and the United Kingdom were corrected for some costs which are not purely energy-related (e.g. network losses, capacity payments, etc.) and which were originally included in the energy component.

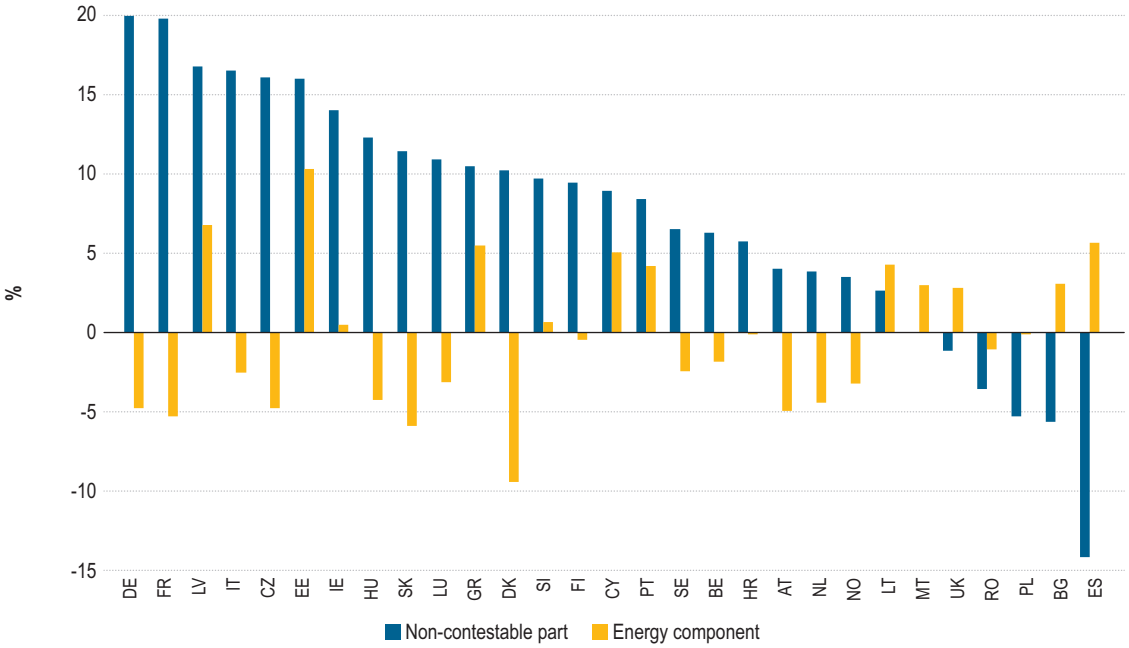
36 The final 2008–2013 electricity price growth for industrial customers reveals the greatest diversity of all price changes (from a 2.7% decrease in average price growth in the Netherlands to a 12.7% increase in Estonia, due to the removal of price regulation in 2013, Figure 8). In those countries with the highest POTP growth in the period observed, namely Latvia and Greece, the price growth for industrial customers – as with household prices – was primarily driven by the growth in its non-contestable part (16.8% and 10.6% compared to the 6.8% and 5.5% growth in the energy component respectively)[28].

37 In Germany, the 20% increase in the non-contestable part of the POTP (compared to a 4.8% decrease in the energy component for industrial consumers) is most likely due to the RES charges. The same may be true of countries in which industrial consumers pay RES charges per kWh consumed, such as Greece, Croatia, Estonia and Portugal etc. (see Table A 3 in Annex 3), as opposed to countries in which large industrial consumers are at least partially exempted from covering RES charges (Norway, Poland and the United Kingdom).

38 In Austria, the Netherlands, Norway and Romania the energy component of the final price of electricity to industrial consumers decreased, and the non-contestable charges either decreased or remained broadly the same in 2013. These decreasing industrial electricity prices can be interpreted as a result of the trickle-down effect of a lowering in wholesale prices (see Section 3).

28 VAT and other recoverable taxes are included in non-contestable charges; however, being refundable, they are not incurred by the industry.

Figure 8: Compound annual growth rate (CAGR) of the electricity energy component and the non-contestable part of POTPs for industrial consumers – Europe – 2008–2013 (%)



Source: Eurostat (21/7/2014) and ACER calculations

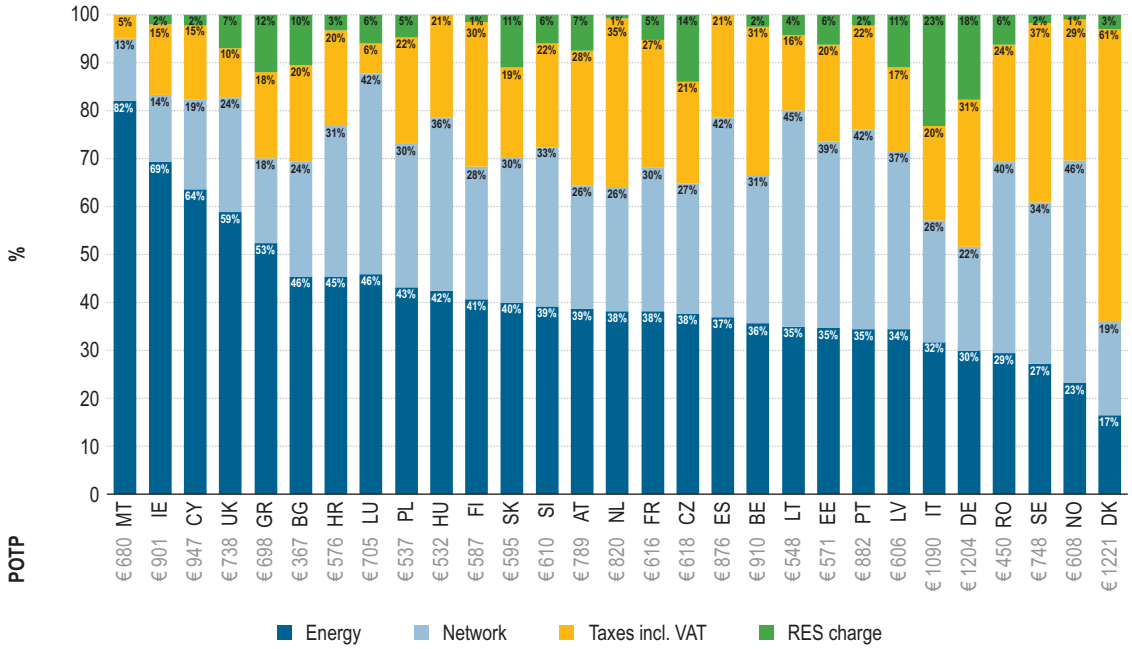
Note: Consumption band: IE: 20,000 MWh-70,000 MWh (industry). Due to the unavailability of data, price changes for France relate to the 2012–2013 period only, for Cyprus and Lithuania to 2010–2013, and for Ireland, Greece and Luxembourg to the 2009–2013 period. Price data for the I4 consumption band is presented for Lithuania.

39 In order to better understand price differences and the evolution of prices, the Agency continued to analyse the POTP break-down of standard electricity offers across the European capital cities as of December 2013.

40 Figure 9 shows that in all European countries except Cyprus, Greece, Ireland, Malta and the United Kingdom, non-contestable charges comprised most of the final price. Of these, network charges comprise the largest share in Norway[29] and Lithuania (46% and 45%), whilst in Denmark taxes and levies account for 61% of the final bill.

29 The incumbent standard offer in Oslo includes a network charge, which is a national weighted average network charge as opposed to the local distributor's network charge. The reason for this is that Hafslund Nett AS (the distributor in Oslo) applies a much lower (non-representative) network charge of 159 euros for the specific consumption of 4,000 kWh annually. The Norwegian average in 2013 remained approximately the same as in 2012 at 282 euros.

Figure 9: POTP electricity break-down – incumbents' standard offers for households in capital cities – November–December 2013 (%)



Source: ACER Retail Database[30] and information from NRAs (2013)

Notes: For some countries, the final price shown for the consumption of 4,000 kWh per household annually is not the most representative. For example, in Italy, the average consumption and the connection capacity are significantly lower (2,700 kWh annually and 3kW); in Romania, average consumption is approximately 1,500 kWh, in Lithuania 1,900 kWh annually. On the other hand, in Norway, Sweden and Finland, average demand is significantly higher than the average profile from the ACER Retail Database (over 16,000 kWh, 9,200 and 9,000 kWh, respectively). In the case of Denmark, the break-down refers to the average variable price in Copenhagen. In the case of the Swedish and Norwegian spot-based offers, the RES charge is estimated. In Malta, a charge for the support of the RES is not included in the electricity tariff, as the support for RES is financed through national taxes in the national budget. In Spain, RES support is included in the network tariff set by the government and has been estimated to amount to 18% of the final bill (The Spanish Ministry for Finance[31]); however, the cost allocation to the specific components for this item is not known to the NRA. In Romania, 2013 was the first full year for which the RES charge was explicitly recorded on the electricity bill. In the Netherlands, an explicit RES charge has only appeared on the electricity bill since 1 January 2013. For Portugal, RES includes a combined heat and power (CHP) charge.

41 The 2013 electricity break-down analysis shows that in those capital cities where the price of electricity increased the most compared to 2012, the increase was driven by the RES[32] charges covering investments in renewable sources of energy[33]: Romania (14% increase); Greece (10%); Lithuania (9%). Estonia is the exception, since it experienced an increase in the final bill of 22% due to an increase in the energy component of 58%[34]. In Romania, the RES charge appeared separately on the bill during the whole year for the first time in 2013, accounting for 6% of the price paid by household consumers. In the capital cities of Greece and Lithuania, the RES charges increased by 119% and 44% compared to 2012.

30 ACER retail database is based on information from price comparison tools, NRAs and suppliers. It refers to offers for annual consumption of 4,000 kWh of electricity and 15,000 kWh of gas, which has been calculated as the average consumption for European household consumers based on Eurostat data. National consumption profiles might differ from the consumption pattern used. Fixed-, variable-, mixed-price and spot-based offers are included in the comparison.

31 Source: http://www.lamoncloa.gob.es/docs/refc/pdf/refc20130712e_1.pdf.

32 For more, please see the EC's empirical evidence regarding the impact of RES penetration on retail prices (http://ec.europa.eu/economy_finance/publications/european_economy/2014/pdf/ee1_en.pdf).

33 RES charges, together with network charges and taxes and levies form part of the non-contestable components in the Eurostat data as presented in Figure 9.

34 Due to the already-mentioned removal of the regulated price, this was set beneath the market price in January 2013.

42 Although the 2013 RES charges increased significantly in the capital cities of Slovenia (by 72%)[35], Ireland (by 57%), Germany (by 47%) and Austria[36] (by 64%), their increase is offset by the decrease in the energy component (by -12%, -8%, -17% and by -3%, respectively), due to falling electricity wholesale prices (see Section 3 on the level of wholesale electricity prices).

43 Compared to 2012, the 2013 network charges for the distribution and transmission of electricity did not change significantly across the capital cities of Europe. The only exceptions were Denmark, Germany and Lithuania, where network charges increased by 22%, 18% and 15%, respectively.

44 In Germany, the total increase in the network charge in Berlin was based on a rise in the revenue cap for 2013 due to the grid-expansion on both the DSO and TSO levels. Similarly, the increase in the Copenhagen supplier's network charge was due to a shortfall in revenue from previous years[37].

45 Compared to 2012, the final price of electricity dropped the most for consumers in the capital cities of Cyprus (-17%), Hungary (-21%), Italy (-9%) and Belgium (-5%) (see Figure A 7 in Annex 4). As already mentioned, the price reduction in Cyprus and Hungary was the result of government intervention through household regulated prices; in Rome and Brussels, however, this was mainly due to the decrease in the energy component (-30% and -12% compared to the energy component of 2012). In Italy, RES charges comprising 23% of the final bill increased significantly (by 17% compared to 2012), reducing the net effect of the lower energy component on the final bill.

46 In Norway and Sweden, where offers tracking the wholesale price (i.e. the spot-based offers) are common, the change in the final bill was consistent with wholesale price trends and, consequently, the retail energy component change. In Norway, compared to December 2012, the final retail price based on offers from December 2013 decreased by 5% due to a 16% decrease in the energy component[38], whilst in Sweden the final price increased by 7% due to a 21% increase in the energy component. While it is true that for the months of November and December, the average wholesale price was lower in 2013 than in 2012, this was not true for the year as a whole.

47 From 2008 to 2013, gas prices for European household and industrial consumers grew on average by 4%.

48 Croatia experienced the highest price growth in gas for both household and industrial consumers (11.1% and 11.5%, respectively). In Hungary, which applies price regulation to household gas consumers, the annual year-on-year price growth was negative. This is due to government interventions in the pricing structure. Romania, too, exhibited a negative 2008–2013 compounded POTP annual growth rate. Prior to 2012, falling regulated gas prices were affected by falling consumption, generat-

35 This is the result of the increase in the RES tax (*prispevek za obnovljive vire energije [OVE]*) in February 2013. In addition to this, VAT was raised in July by two percentage points.

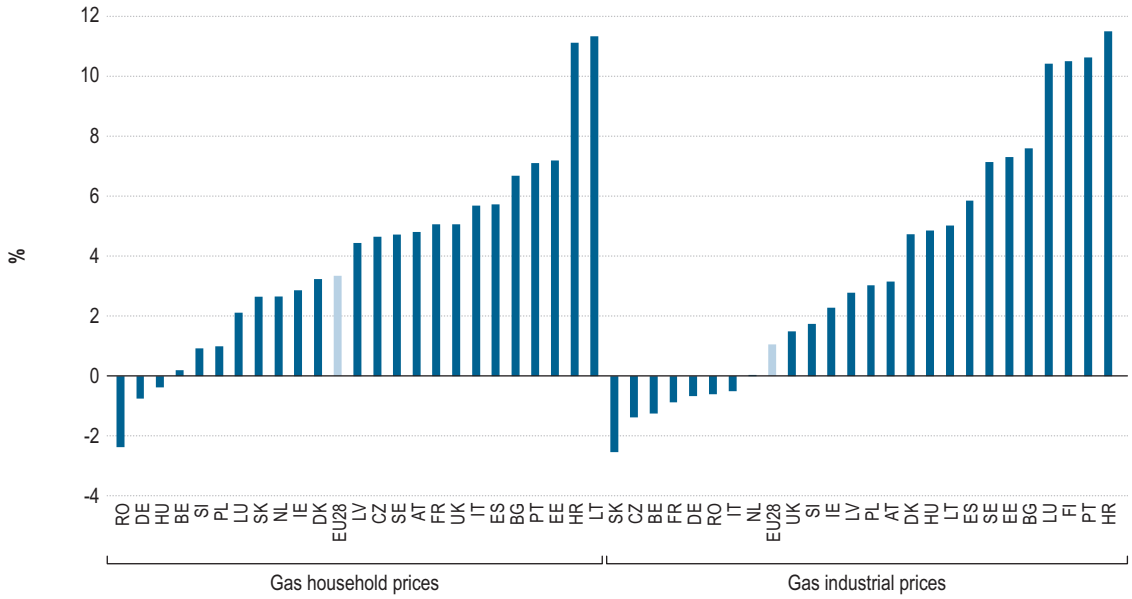
36 Since mid-2012, the RES charges have been covered through the network charge and are explicitly shown on the bill. Prior to that, however, suppliers passed on the RES-related charges to consumers i.e. included them in the energy component, which was not always explicitly shown.

37 Namely, companies are free to change tariffs every year; however, if an increase in the network charge is ten per cent or higher, it must be announced. The Danish regulator (DERA) manages the network charge regulation by revenue caps. The network charges can increase or decrease every year according to changes in the factors which affect the calculation of the revenue caps. A shortfall or cover from former years also plays a major part in the calculation of allowed revenue and thereby in the calculation of the network charge. Source: DERA.

38 This comparison is based on offers available to consumers at the end of the years 2013 and 2012 and may not be representative of the annual price changes. In Norway, for example, the December 2012 wholesale price was 42.56 euros/MWh compared to the December 2013 price of 32.46 euros/MWh. Norwegian average annual wholesale prices showed an opposite trend, with the average 2012 wholesale price of 29.56 euros/MWh increasing to 37.56 euros/MWh in 2013. See Section 3 on wholesale electricity prices. Source: Nord Pool Spot.

ing a reduction in (more expensive) gas imports and changing the 'domestic-import' gas mix. In 2013, however, gas prices for households and industrial consumers overall increased by 8.7% and 10.0%, respectively. This was an expected outcome of the roadmap for phasing out regulated prices, which began in 2012.

Figure 10: POTP compound annual growth rate (CAGR) of gas household and industrial prices – EU-28 – 2008–2013 (%)



Source: Eurostat (21/7/2014) and ACER calculations

Note: Consumption bands: D2: 20 GJ-200 GJ (households) and I5: 1,000,000 GJ-4,000,000 GJ (industry). Within each group, MSs are ranked according to PTP. Household prices are not available for Greece and Finland. For Austria, due to the unavailability of the 2008 prices, 2009–2013 price growth is shown. In the case of Croatia, Denmark, Ireland, Lithuania and Slovenia, industrial gas prices for the lower band (I4: 100,000 GJ – 1,000,000 GJ) are shown.

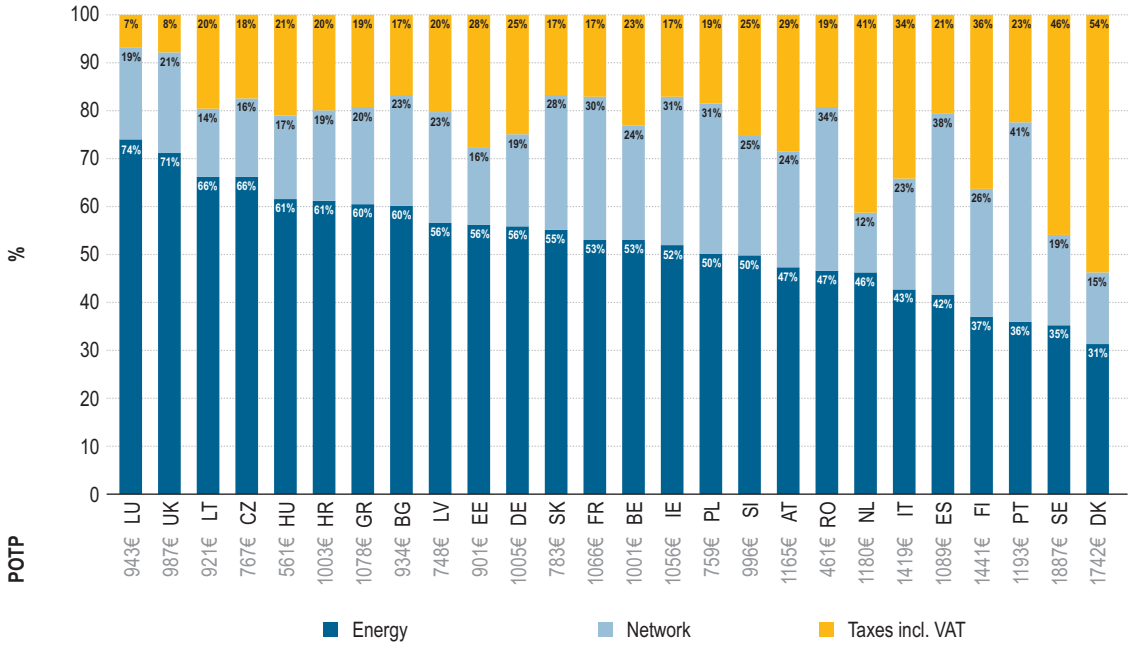
49 Due to data limitations[39], a growth driver analysis similar to the one shown in Figure 7 and Figure 8 for electricity could not be performed. It is expected, however, that in countries where network charges, taxes and levies account for a significant share of the final price of the gas supplied (i.e. in Denmark, Sweden, Portugal, Finland, Spain etc. as shown in Figure 11), price growth can be attributed at least to some extent to the non-contestable part of final gas prices. In Denmark and Sweden, taxes and levies and network charges alone comprise 69% and 65% of the respective final prices. In Lisbon[40], network charges account for 41% of the final price, the highest in Europe.

50 In other 17 MSs (Figure 11), the energy component is still the most relevant component of the end-user price, accounting for more than 70% of the final price in Luxembourg and the United Kingdom.

39 The Eurostat prices do not provide a break-down of prices into the energy, network and taxes and levies components for the period observed.

40 This is due to the municipality-related taxes in Lisbon. As such, the remainder of Portugal differs.

Figure 11: POTP gas break-down – incumbents' standard offers for households in capital cities – November-December 2013 (%)



Source: ACER Retail Database and information from NRAs (2013)

Notes: The break-down refers to the average of all offers for the consumption of 15,000 kWh annually in the capital cities of the Netherlands and Germany. The natural gas prices for Sweden refer to a very limited area of the country. For some countries, the average consumption to which the offers refer is non-representative (for example, Portugal, where the typical consumer consumes from 220 to 500 m³ a year).

51 The analysis of the 2013 gas household offers compared to the year before shows that the final price decreased or remained the same in 15 out of 25[41] MSs, in a majority of them due to a decrease in the energy component. The final price for gas supplied to households decreased most in Hungary (by -22%), due to government intervention in the regulated price (see paragraph 0, the re-negotiated wholesale price and the removal of the security stocking fee from the household bill since 1st January 2013, and in Belgium (-16%), following the decrease in the energy component by 25%. The energy reduction in the component was significant in Finland (-18%), Poland (-17%), Germany (-16%) and Luxembourg (-10%). It is to be noted that these decreases are assessed on the incumbent standard offers. These particular offers may have decreased due to competitive pressure from other market participants. The underlying reasons for some of these price decreases relate to re-negotiated import prices for natural gas (See section 4.3.2 for more detail).

52 The energy component also decreased in France (by -7%), Austria (by -3%) and in Slovenia (by -2%); however, this decrease was offset by increases in network charges by 15% in France and 9% in Austria. In Slovenia, the 10% increase in taxes and charges was due to the increase in VAT[42].

41 Croatia was not reported on in 2012.

42 The RES charge which increased for electricity consumers in 2013 was newly introduced for gas consumers on 1 June 2014.

53 Compared to 2012, the final bill for natural gas consumption increased most in the capital cities of Portugal (by 5%), Romania (by 10%), the United Kingdom (by 8%) and Denmark (by 7%). While in Romania and Denmark the main driver of final price growth was network charges (by 12% and by 7%, respectively), the energy component increase of 10% pushed up the final price in the United Kingdom[43].

54 In Lisbon, the increase in the final price of gas supplied in 2013 compared to 2012 was primarily driven by an increase in the TOS[44] tax of 26% in the same period and by the increase in the energy component due to higher wholesale prices (6.5%)[45]. Network charges also increased (by 3% compared to the year before), due to a decrease in gas consumption, which caused an increase in the distribution network cost per unit and, consequently, the increase in network charges.

55 In sum, retail prices in Europe have continued to increase overall, and for households more than for industrial consumers. The non-contestable charges tend to increase in particular in MSs, where this part of bills is already high. Increased network charges and subsidies for renewables are responsible for this.

2.2.2.2 Price differences between segments and consumption bands

56 On average, EU-28 prices across all bands for electricity and gas supplied to households (21.81 euro cents/kWh for electricity and 7.54 euro cents/kWh for gas) are higher than those supplied to industry (15.20 euro cents/kWh for electricity and 4.82 euro cents/kWh for gas) (see Figure A 5 and Figure A 6 in Annex 4 for specific price levels per band in MSs) due to the relatively larger volumes of electricity and gas supplied to industrial consumers compared to households. There are exceptions, however.

57 In Latvia, household electricity consumers pay 13.29 euro cents/kWh compared to 13.94 euro cents/kWh paid by industrial consumers. In Romania and Bulgaria, the difference between the average price of electricity supplied to households compared to a unit supplied to industrial consumers is less than one euro cent/kWh (9.09 and 12.98 euro cents/kWh for households compared to 8.61 and 12.31 euro cents/kWh for industrial consumers, respectively). As shown in Section 2.3.2, the respective countries' interventions in household regulated prices affect their mark-ups, which are negative.

58 Gas household consumers pay less per kWh of natural gas supplied than industrial consumers in Romania (2.94 compared to 3.06 euro cents/kWh)[46], Hungary (4.38 compared to 5.26 euro cents/kWh) and in Croatia (4.68 compared to 4.88 euro cents/kWh). In Estonia and Poland, the difference between the average price of gas supplied to households compared to a unit supplied to industrial consumers is relatively small (5.33 and 5.31 euro cents/kWh for households compared to 4.29 and 4.27 euro cents/kWh for industrial consumers, respectively).

43 The energy component increased in Bulgaria (by 5%), Sweden (by 4%) and Ireland (by 1%). In all countries the energy component of the final gas price decreased compared to 2012.

44 TOS – Taxa de ocupação de subsolo, charged by municipalities. The 2012-2013 increase in TOS refers to Lisbon only.

45 In addition to the increasing wholesale gas price, the retail energy component increases are due to the increases in transitory tariff. For historical reasons, transitory end-use tariffs are additive in global terms, but not by consumption level or by last-resort supplier. ERSE is progressively working on consumption level and last-resort supplier convergence, cautioning about significant tariff effects for consumers. As the standard consumer (4th consumption level in Lisbon) has a tariff below the additive tariff, ERSE applied higher increases than the national average in 2013, which is shown in the energy component.

46 In accordance with the roadmap for phasing out regulated prices, household prices are expected to increase by 2-3% per quarter by the end of 2014.

59 In addition to the observed differences in the average level of household prices compared to the level of industrial prices, lower consumption bands typically pay higher final POTP prices (Figure 12). Since the final price is affected by the price of energy and the capacity size of connection, which is expected to be progressive with increasing consumption, it can be argued that, in households too (as with industry), the level of electricity consumed (i.e. the 'volume' effect) plays a major role in determining the final price of energy across the EU. This effect is most pronounced in Ireland, where the end price per unit of electricity supplied (64.14 euro cents/kWh) to households consuming less than 1,000 kWh per year (DA) is more than double the price (29.87 euro cents/kWh) for households in the DB consumption band (consuming from 1,000 to 2,500 kWh annually).

60 Fixed standing charges are levied regardless of the amount of electricity consumed[47]. As the consumption levels fall, these standing charges form a higher proportion of the costs, and result in higher average unit costs per kWh consumed within each band. In addition to the fixed standing charge, there is typically also a unit rate based on consumption[48] per kWh. In Ireland, there is a specific licence condition on electricity and gas suppliers prohibiting them from incentivising increased volume through tariffs[49].

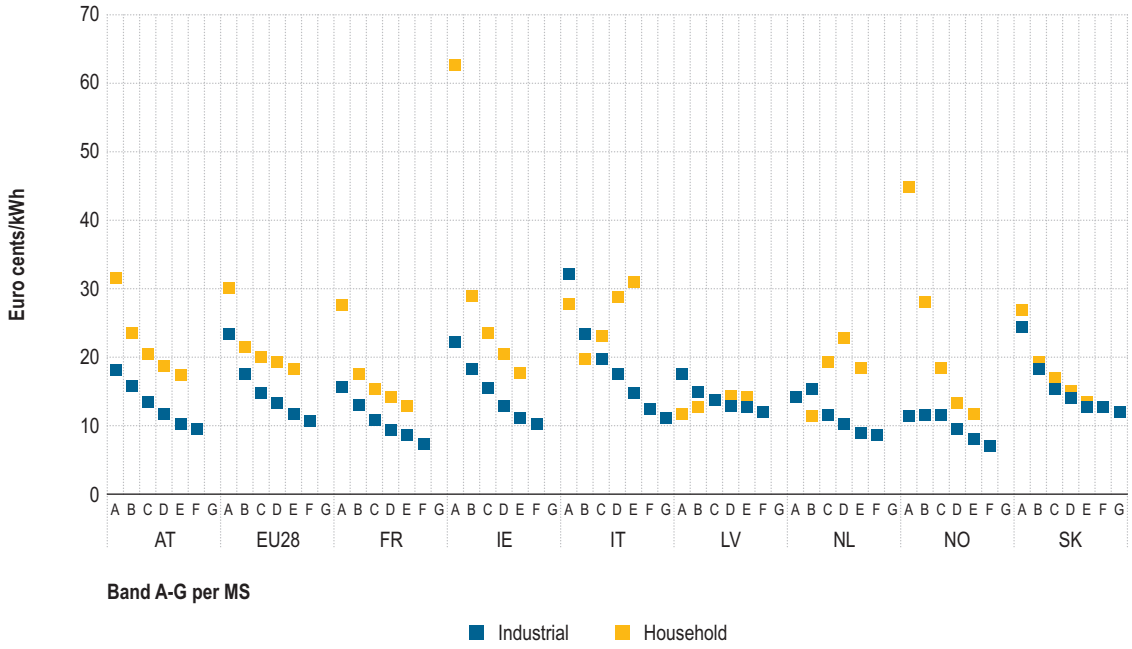
61 A typical Norwegian household consuming on average 16,000 kWh annually (consumption band DE) pays 11.65 euro cents/kWh for the electricity supplied, i.e. significantly less than a household consuming on average 4,000 kWh annually (18.43 euro cents/kWh). Neither the fixed part of the household network charges, which is the same for all household consumers, nor the variable, consumption-dependent network charges, are generally capacity dependent, even though individual DSOs are allowed to differentiate the network charge based on capacity for household customers if they wish; however, not many do.

47 In Ireland for example, standing charges (and the PSO levy) are a flat rate per day/month and are the same for all consumption levels for domestic consumers, who all have a connection with a maximum import capacity of 29KVA. Band DA represents households that consume less than 1,000 kWh per annum, and accounts for just 1.3% of all electricity sold to households in Ireland. Typical consumers in this band in Ireland are possibly holiday homes that have consumption for a number of weeks per year, but incur full annual standing charges. Domestic distribution network charges are divided into two, urban and rural. A distinction is made to reflect the higher cost of installing and maintaining the distribution network in rural areas.

48 In France, these charges are also capacity-related.

49 Source CER: 'The licensee shall ensure that their tariffs for the supply of natural gas/electricity do not create incentives that may unnecessarily increase the volume of distributed or transmitted energy.'

Figure 12: Electricity prices for households and industry per band in a selection of countries – 2013 (euro cents/kWh)



Source: Eurostat (21/7/2014) and ACER calculations

Note: Electricity household consumers: DA: consumption < 1,000 kWh; DB: 1,000 kWh < consumption < 2,500 kWh; DC: 2,500 kWh < consumption < 5,000 kWh; DD: 5,000 kWh < consumption < 15,000 kWh; DE: consumption > 15,000 kWh. Electricity industrial consumers: IA: Consumption < 20 MWh; IB: 20MWh < consumption < 500 MWh; IC: 500 MWh < consumption < 2,000 MWh; ID: 2,000 MWh < consumption < 20,000 MWh; IE: 20,000 MWh < consumption < 70,000 MWh; IF: 70,000 MWh < consumption < 150,000 MWh; IG: consumption > 150,000 MWh. Results for other MSs and for gas are shown in Figure A 6 in Annex 4.

62 In Italy, Latvia and the Netherlands, however, connection capacity charges have a detrimental effect on the final electricity price formation: with the exception of some bands, electricity prices are lower for consumers with a lower connection, i.e. for those that consume less. Higher consumption, which necessitates a stronger connection capacity, is reflected in the network charges, increasing the price[50].

63 The 'volume' effect on the final gas price for household and industrial consumers appears to prevail across the EU-28, as final prices tend to drop considerably with increased consumption levels. Household price regulation appears to influence final price setting or the structure of the tariff in Bulgaria, Romania and Denmark, where no significant differences in the final gas prices can be observed for households consuming the least (i.e. less than 20 GJ annually; consumption band D1) and those within the highest household consumption band, D3 (i.e. consuming more than 200 GJ annually). In Hungary, Latvia, Luxembourg and Slovenia, the price of gas supplied to households in the middle- and high-consumption bands, D2 and D3, does not differ significantly, although their average level is lower than the price for gas supplied to small household consumers.

50 In reality, however, in both countries, higher consumption does not always mean a larger connection capacity and higher prices accompanying increased consumption. In the Netherlands, almost three million households supplied by Liander (the largest Dutch distribution system operator) have a small (3*25A) connection, while 17,000 have a larger (3*80A) connection. The average household consumption of Liander customers in 2012 was 3,331 kWh annually. Source: ACM.

2.2.3 Offers available to consumers

64 The data presented in this section[51], which were collected from a range of price comparison tools across Europe, show a trend of existing suppliers diversifying their offers through competition parameters that are not exclusively price related[52] to attract new customers and retain existing ones. To varying degrees, the price comparison tools systematically display the following characteristics of offers[53]:

- the type of 'fuel' (electricity only, gas only, or dual-fuel offers);
- types of energy pricing (fixed, variable, spot-plus etc.);
- payment and billing possibilities[54] (direct debit, paper and e-billing);
- energy source (fossil versus renewable);
- the inclusion of additional services provided by the supplier to attract consumers, either against payment or gratis (meter reading, e-billing, insurance services, maintenance, supermarket points, gifts etc.); and
- other (customer post-switch satisfaction ratings).

65 Electricity and gas consumers in Amsterdam, Berlin, Copenhagen, Helsinki and Stockholm are free to choose from among the highest number of supplier offers, with on average 330 offers available from an average of 65 suppliers (see Table 1). Capital cities of countries applying regulated prices to almost all household consumers (Athens, Bucharest, Riga, Sofia, Vilnius) tend to show lower numbers of suppliers and offers[55], whilst countries in which regulated prices exist together with a relatively strong non-regulated market (Brussels, Madrid, etc.) tend to appear in the middle of the chart.

66 Although the number of offers available to energy consumers varies greatly from one capital to another, there are on average 70 electricity and 55 gas offers (from an average 23 and 15 suppliers, respectively) per capital city available to consumers through price comparison tools. In addition to this, significant (i.e. of more than 50 euros per year) price differences exist between the lowest and highest[56] electricity offers and between the lowest and highest gas offers in the majority of countries, especially in Brussels for electricity offers, and in the capital cities of Luxembourg, Germany, Sweden[57] and the UK for gas offers[58].

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51 In total, almost 2,500 direct-debit, single-unit-rate offers for the selected electricity and gas consumption profiles of 4,000 kWh and 15,000 kW respectively in European capital cities were screened. Twenty European countries were analysed for electricity offers with regard to type of energy pricing, dual-fuel and green offers and free additional services (Bulgaria, Cyprus, Greece, Lithuania, Latvia, Malta and Romania are not included, as only one offer was obtained from their respective regulator, while in the case of the Czech Republic, Greece, Hungary and Slovakia, none of the categories was identifiable from the downloaded offers). In the case of gas offers, the analysis of all four categories was completed for 13 European countries (Estonia, Poland, Finland, Lithuania, Latvia, Bulgaria, Greece, Croatia and Romania are not included, as only one offer was obtained from the respective NRA or – in the case of Poland, from the supplier's website – while in the case of Austria, Sweden, Slovenia and Slovakia, none of the categories was identifiable from the downloaded offers).

52 'Softer' non-price elements (for example, a supplier's brand name, location, type of ownership, whether foreign/home, private/public etc.) also affect consumer choice. However, these cannot be analysed in detail, since the screening of price comparison tools reveals limited results with regard to the 'psychological' aspects of the choice and popularity of the offer.

53 For an exhaustive list of the price comparison sites, see Annex 7.

54 Direct debit refers to a method of payment whereby a fixed or variable amount is taken from a bank account each month, quarter or year. Standard paper billing includes payment of the bill for the energy consumed or, if using a prepayment meter, for a set amount.

55 This is either due to the fact that no price comparison tools exist or because only a regulated price was provided by NRAs.

56 The highest and lowest 10% percentiles were excluded.

57 Offers downloaded for Sweden refer to a very limited area of Sweden – the Gothenburg area.

58 See Section 2.3.1 on price competition.

67 Table 1 presents the types of offer available and the number of suppliers providing them in each capital city. Product diversification varies among the European capitals, with the capitals of Denmark, France, Germany, Great Britain[59], the Netherlands, Spain and Sweden exhibiting several diversified products for electricity and/or gas consumers in addition to differently priced offers.

59 The United Kingdom in the case of gas offers.

Table 1: Electricity, gas and dual-fuel offers available to household consumers in capital cities – December 2013

Country	Electricity						Gas				
	Number of offers (suppliers)	Fixed offers (number of suppliers)	Spot-based offers (number of suppliers)	Dual fuel offers (number of suppliers)	Green offers (number of suppliers)	Free products or services (number of suppliers)	Number of offers (suppliers)	Fixed offers (number of suppliers)	Dual fuel offers (number of suppliers)	Green offers (number of suppliers)	Free products or services (number of suppliers)
AT	40 (25)	5(5)	0	0	23 (16)	5 (4)	15 (11)	0	0	0	0
BE	16 (6)	13 (5)	0	0	9 (4)	0	12 (5)	5 (2)	12 (5)	0	0
BG	1 (1)	0	0	0	0	0	1 (1)	1 (1)	0	0	0
HR	7 (5)	3 (1)	0	0	0	0	1 (1)	1 (1)	0	0	0
CY	1 (1)	0	0	0	0	0	0	0	0	0	0
CZ	61 (32)	4 (3)	0	0	0	0	24 (18)	9 (8)	2 (2)	0	0
DK	124 (23)	61 (17)	6 (4)	0	34 (9)	25 (23)	42 (10)	29 (10)	13 (9)	0	0
EE	14 (7)	0	0	0	4 (2)	0	1 (1)	0	1 (1)	0	0
FI	204 (43)	110 (35)	16 (14)	0	63 (20)	5 (2)	1 (1)	0	0	0	0
FR	29 (11)	10 (5)	0	7 (2)	10 (9)	1 (1)	19 (7)	13 (5)	0	0	1 (1)
DE	376 (146)	264 (103)	0	0	201 (107)	0	278 (97)	215 (91)	0	43 (15)	0
UK	59 (22)	32 (13)	0	39 (15)	8 (6)	15 (6)	88 (21)	48 (18)	61 (18)	0	29 (7)
GR	4 (4)	1 (1)	0	0	0	0	1 (1)	0	0	0	0
HU	4 (4)	4 (4)	0	0	0	0	4 (4)	2 (2)	0	0	0
IE	10 (3)	3 (1)	0	0	0	1 (1)	19 (4)	1 (1)	12 (3)	0	0
IT	30 (12)	23 (9)	0	1 (1)	6 (5)	6 (4)	27 (9)	22 (8)	5 (2)	0	1 (1)
LV	1 (1)	0	0	0	0	0	1 (1)	0	0	0	0
LT	1 (1)	0	0	0	0	0	1 (1)	1 (1)	1 (1)	0	0
LU	16 (5)	2 (1)	0	0	16 (5)	0	6 (3)	0	0	4 (2)	0
MT	1 (1)	0	0	0	0	0	0	0	0	0	0
NL	71 (25)	41 (13)	0	0	50 (20)	0	165 (22)	106 (20)	107 (22)	40 (9)	0
NI	22 (4)	12 (1)	0	0	0	0	0	0	0	0	0
NO	100 (35)	30 (22)	30 (21)	0	0	0	0	0	0	0	0
PL	77 (21)	29 (5)	0	0	0	1 (1)	1 (1)	0	0	0	0
PT	17 (5)	2(2)	0	6 (2)	1 (1)	7(1)	15 (4)	3 (2)	6 (2)	0	5 (1)
RO	1 (1)	0	0	0	0	0	1 (1)	0	0	0	0
SK	19 (19)	0	0	0	0	0	20 (13)	0	0	0	0
SI	36 (7)	22 (6)	0	0	5 (4)	5 (3)	27 (14)	0	0	0	0
ES	32 (19)	2 (1)	0	0	15 (7)	0	90 (6)	1(1)	45 (6)	0	7 (3)
SE	368 (91)	211(78)	89 (66)	0	206 (65)	0	16 (6)	0	0	0	0

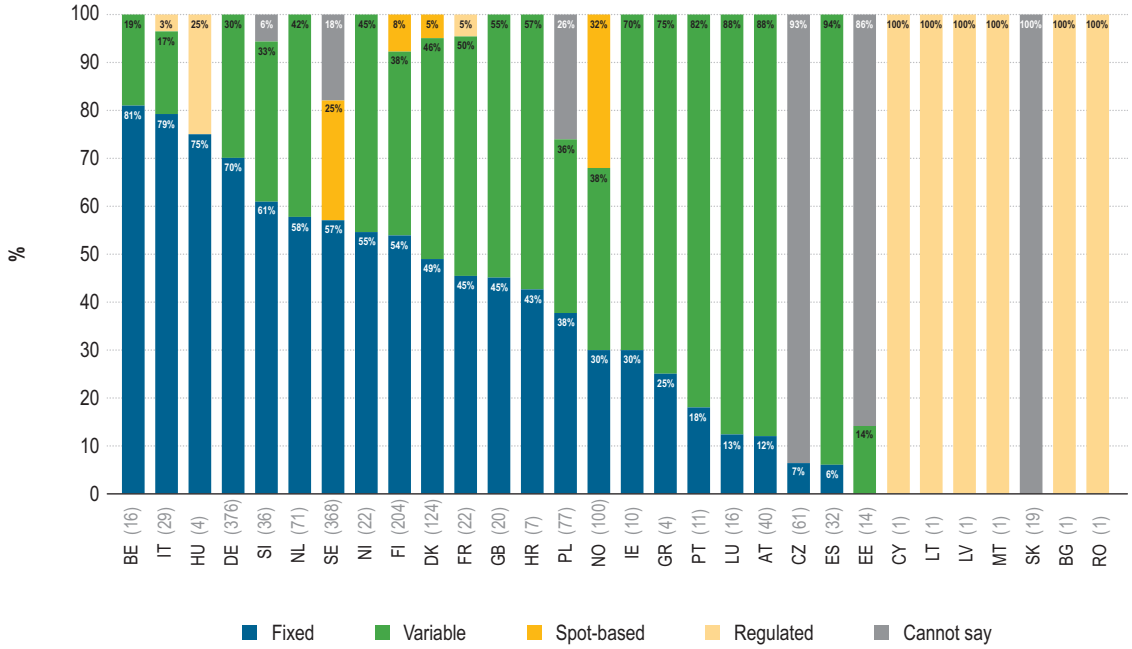
Source: ACER Database (November-December 2013) and ACER calculations

Notes: The data refer to capital cities, except for the Swedish natural gas offers, where the data refer to a very limited area of Sweden with an existing natural gas network – the Gothenburg area. The number in bracket refers to the number of suppliers offering electricity and/or gas of a certain type. Variable offers are not presented, as they tend to be offered as a default option. Fixed and spot-plus offers, however, exhibit signs of product differentiation from the supplier point of view. Only one electricity offer was obtained from the regulators of Bulgaria, Cyprus, Lithuania, Latvia, Malta and Romania. Although several electricity offers exist on the price comparison tools of the capital cities of the Czech Republic and Slovakia, none of the categories was identifiable from the downloaded offers. For Estonia, data concerning the type of offers is limited. For the gas offers of the Austrian, Swedish, Slovakian and Slovenian sites, none of the categories was identifiable. In the case of Sweden, the number of electricity offers included in the analysis reflect the offers of the most representative types on the price comparison tool offered by the Swedish suppliers, although the number of all offers is estimated to be higher than 600. The 16 gas offers from November-December 2013 included in the ACER database were collected through the suppliers' websites; however, as of September 2014, 24 gas offers were available to consumers in the same area. The number of dual-fuel offers in Amsterdam and Madrid offered to electricity consumers is estimated to be similar to the number of dual-fuel offers to gas consumers, i.e. higher than presented in the Table. For Athens, whilst four offers have been included in the analysis, there are five suppliers in total, offering six offers to electricity consumers. Loyalty cards and maintenance services are common in Madrid; however, offers containing these services do not appear in the Table, as they are usually offered against a fee. For Malta, Northern Ireland, Cyprus and Norway, information on gas offers was not collected. In Belgium, the United Kingdom and in Italy, dual-fuel offers to gas consumers labelled as green offer only green electricity. The numbers are highlighted in red for visibility. Dual-fuel offers do not appear in the price comparison tool included in this analysis; hence the number of dual-fuel offers shown is 0. According to E-Control, however, dual-fuel offers are offered by at least two suppliers.

2.2.3.1 Type of energy pricing as a differentiating element

68 One of the key, and the most consistently visible, aspects of offer diversification from the price comparison tools across Europe is the type of pricing of the commodity (i.e. fixed, spot-based, variable or regulated) in an analysed offer, hereinafter the 'type of energy pricing'[60].

Figure 13: Type of energy pricing of electricity-only offers in capital cities as percentage of all offers – November-December 2013



Source: ACER Database (November-December 2013) and ACER calculations

Notes: The number next to the country code refers to the number of offers in the database. The above chart includes offers whose type of energy pricing could not be determined due to a lack of information on the price comparison tools (the capital cities of Slovakia, the Czech Republic, Estonia, Greece, Poland, Sweden and Slovenia). In Sweden, these types of offer relates to offers of suppliers of last resort, which are estimated to be mostly variable. The capital cities of Bulgaria, Cyprus, Hungary, Latvia, Lithuania, Malta and Romania show regulated prices only. The offer relating to the regulated price in Paris is variable. In Lisbon, some offers can be updated according to the changed network charges or according to the consumer price index. In Athens, the incumbent offer is fixed, whereas alternative suppliers include pool marginal price indexation, displaying variable offers therefore. One supplier offers a 'package' price i.e. a fixed price for consumption up to a certain level.

69 Fixed-price electricity offers prevail in Europe. In total, there are 851 electricity-only offers with a fixed-price contract and 666 variable-price offers, including spot-based offers. Fixed-priced offers are the most frequently listed on the price comparison tools for the capital cities of Portugal, Belgium, Italy, Hungary[61] and Germany[62].

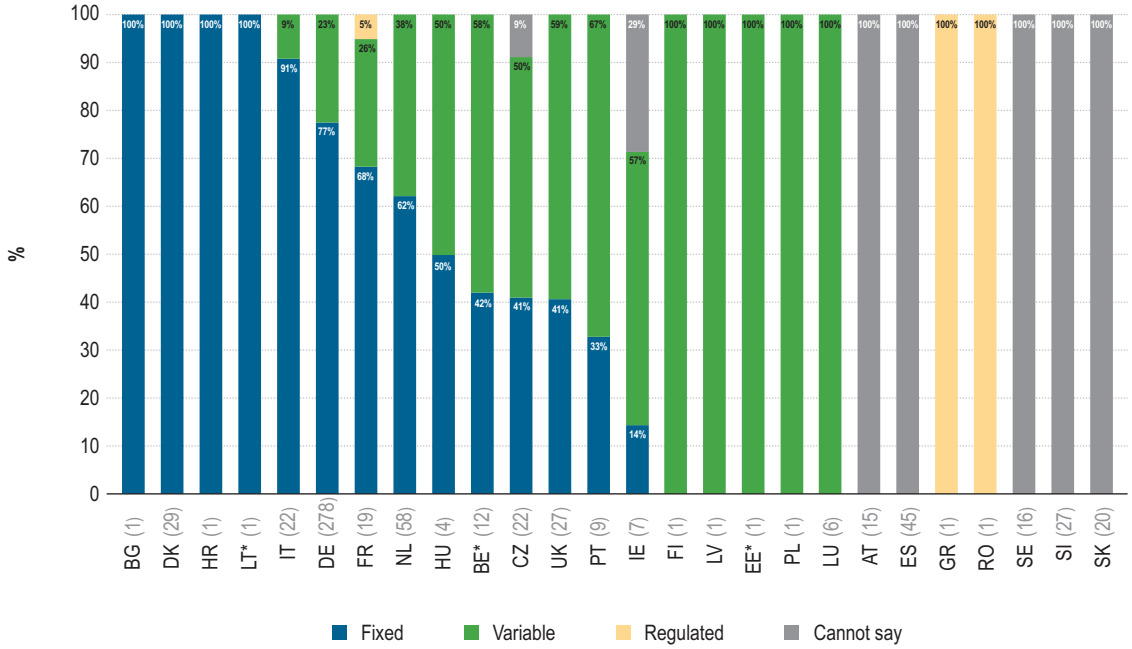
60 Fixed offers are offers that provide a fixed price of a commodity for a definite period of time, regardless of changes in the market price. Price comparison tools tend to show offers as fixed for a period longer than 12 months (the Nordic electricity market sometimes lists offers as fixed, even if the period is six months only). Variable offers are based on a commodity price that varies according to the market price for that commodity. In electricity, there exists a sub-type of variable-priced offers which is called 'spot-based' (or sometimes 'spot-plus'). This sub-type of variable offers, which seems to appear only in the Nordic electricity market, is shown separately in our analysis as 'spot-based offers'. The price of a spot-based offer is composed of the wholesale price of electricity plus a supplier margin.

61 Only 4 offers are included in the tool for Hungary.

62 Although the number of fixed offers is high in Germany, in reality the recently increasing charges (for example, the RES charge) are considered to be a unilaterally introduced change in the contractual arrangement by the supplier on the basis of which the consumer may terminate the contract. The legal basis for this is Section 41(3) of the Energy Industry Act: http://www.gesetze-im-internet.de/enwg_2005/__41.html.

70 Variable-price offers prevail in the capital cities of Croatia, Ireland, Luxembourg, Norway and Spain. Spot-based offers appear only in the capital cities of the Nordic countries[63]. In Norway, approximately one third of all offers in the capital city are spot-based offers, and more than half of the customers in Norway have an electricity contract that follows the spot price directly. On 1 January 2013, there were 900 customers in the Oslo area with an incumbent fixed-price contract, whilst more than 91,000 customers took the incumbent spot-based offer.

Figure 14: Type of energy pricing of gas-only offers in capital cities – November–December 2013



Source: ACER Database (November-December 2013) and ACER calculations

Notes: The number next to the country code refers to the number of offers in the database. In Austria, Luxembourg, Slovakia, Slovenia, Spain and Sweden, the type of offer could not be determined from the price comparison tool, while this is partly true for the offers in Ireland and the Czech Republic. For Sweden, the distribution of 24 offers per type of energy pricing as of September 2014 shows the following gas offer types: 54% fixed, 25% variable and 21% unknown. The same distribution is assessed to have applied in 2013. One offer of an unknown type of pricing each relates to the regulated price in France, Greece and in Romania was obtained from the regulator. In Lisbon, one offer of an unknown type is a transitory price, which may vary quarterly. In the case of Belgium, Estonia and Lithuania, all offers obtained are gas dual-fuel offers (*).

71 Similarly to electricity offers, gas offers tend to be of a fixed-price character[64]. Of the 468 gas-only offers, 339 were fixed-price contracts and 136 were variable-price contracts. Taking into account only those capital cities for which more than one gas offer was obtained, fixed gas-only contracts seem to prevail in the capital cities of Denmark, France, Germany, Italy and the Netherlands. In Brussels, Dublin and London, more variable- than fixed-price contracts are offered to gas consumers.

63 The reasons for this could be related to earlier liberalisation, a liquid day-ahead market and consumer trust in wholesale price formation.

64 Relates only to offers from the price comparison tools where the type of energy pricing of offers is available. It does not include regulated prices.

2.2.3.2 Other elements of offer diversification

72 Among the most frequently displayed differentiators of offers in price comparison tools are: (a) green sources of energy; (b) additional free services offered to consumers; and (c) the option to choose a dual-fuel offer.

a) Green sources of energy

73 The percentage of offers labelled as 'green offers'[65] across the EU is high.

74 In a majority of capital cities where price comparison tools exist, electricity consumers can choose at least one green offer[66]. In the capital cities of Austria, Belgium, Germany, Luxembourg, the Netherlands and Sweden, more than half of the electricity offers are green (see Table 1). In Luxembourg, all electricity offers are 100% sourced from green electricity production and four out of six gas offers are green, which is the highest percentage of all European countries with green gas offers.

75 Gas green offers are available in only three out of 17 countries where price comparison tools exist. In addition to Luxembourg, green gas offers are available only in Berlin and Amsterdam. Less than 1% of gas in the EU is produced from landfills, so green gas offers cannot be as common as in electricity. In Brussels, Rome and in London, gas dual-fuel offers are labelled as green; however, they offer only green electricity, not gas.

b) Additional free services offered to consumers

76 A large majority of offers provided through the price comparison tools of the different countries are commodity-only offers, either single- or dual-fuel. In several countries, however, in addition to the commodity, information exists on suppliers offering additional free tangible and intangible services that are substantial enough to attract consumers to a specific offer. Such services typically include:

- Electricity or gas offers with free intangible 'teasers' (i.e. supermarket points or similar, air miles, gifts in kind); and
- Electricity or gas offers with free tangible services such as insurance, boiler maintenance, home insulation, etc.

77 In the capital cities of Portugal, Denmark, Great Britain and Italy, more than 20% of all electricity offers include additional services, while in Vienna and Ljubljana offers with complimentary services represent more than 10% of all offers. The additional free services appear to be offered as teasers for consumers, in most countries, however, the offered price of energy through contracts including free services tends to be higher than the average price of energy offered through offers without free additional services[67].

65 Although several interpretations exist as to the percentage of energy sourced from renewable resources, an offer is defined as 'green' if 100% of the electricity production comes from green sources or – in the absence of information on the percentage of electricity production from green sources – if it is labelled as such by the price comparison tool. Against expectations, there is no significant correlation with the green offer and the so-called green energy price premium charged for green offers. Green electricity offers are significantly different only in Brussels, while in other capital cities where such an analysis could be performed, they not only appear to be only slightly more expensive than the non-green offers (Copenhagen, Paris, Rome, Ljubljana), but even cheaper (Berlin). For more details, see Section 2.3.2 on non-price competition.

66 Due to the limited information available for countries with regulated prices, and in some cases due to a lack of information on price comparison tools, it is impossible to draw conclusions on the number of green offers available in countries where RES charges are particularly high, such as Bulgaria, the Czech Republic, Greece, Portugal and others.

67 Therefore, it could be claimed that the 'free' additional services were not free. Based on ACER database of offers.

78 The type of free additional services offered to electricity consumers varies. In the capital cities of Great Britain, Ireland, Italy and Slovenia, additional supermarket loyalty-card points are granted to new customers. In Madrid, loyalty points are common, and maintenance is guaranteed to consumers on some offers, but at additional cost, while in Vienna and Copenhagen, free services include discounts on specific products or services for new consumers. In Helsinki, several offers provide a chance to win a product of a high monetary value. In Lisbon, additional free services relate to discounts offered to consumers shopping at selected retailers.

79 Compared to the electricity offers, gas offers less frequently include free additional services. In London, 29 out of 88 gas offers include free additional services such as supermarket loyalty cards, gift vouchers, charity donations and interest rewards on credit balances. In Madrid, 7 out of 90 gas offers include repair services, while various discounts are offered to consumers in Lisbon. One gas offer in Rome includes reward points as an additional free product to gas.

c) Dual-fuel offers[68]

80 Dual-fuel offers prevail in countries with a traditionally higher consumption of gas[69]. In London, more than 50% of all offers available to electricity and gas consumers are dual-fuel offers. In the capital cities of the Netherlands, Spain and Ireland, almost half[70] of all offers on the market are dual-fuel offers. In Brussels, all offers for the supply of gas are dual-fuel offers.

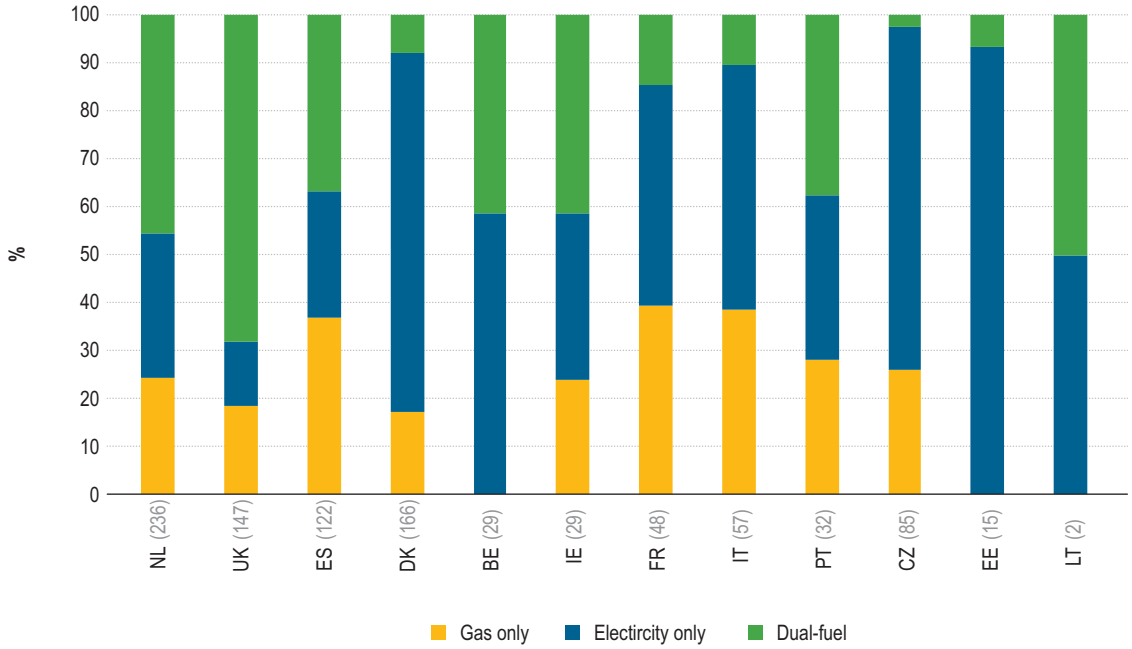
81 Gas dual-fuel offers are lower in price than single-fuel offers. While in London, for example, a dual-fuel offer for gas is on average 6% cheaper than the single gas offer, this is not the case for electricity dual-fuel offers, which seem to be slightly more expensive than single electricity offers in London. For further details on the price differences of single- vs. dual-fuel offers, see Section 2.3.2 on non-price elements.

68 Dual-fuel offers include offers for the supply of electricity and gas of a specific profile. A dual-fuel offer may be offered to a consumer of electricity for electricity and gas (an electricity dual-fuel offer), or to a gas consumer for the supply of gas and electricity (a gas dual-fuel offer).

69 The information is based on offers from price comparison tools which may sometimes not show dual-fuel offers.

70 In the Netherlands and Spain, the number of dual-fuel offers to electricity consumers is estimated to be higher than captured in the analysis shown. In the Netherlands, in particular, approximately 80% of all households are supplied through dual-fuel contracts. Although dual-fuel offers do not appear in the Austrian price comparison tool – according to E-Control – at least two suppliers offer them in Austria.

Figure 15: Share of dual-fuel offers in the total number of offers for a selection of countries where dual-fuel offers exist – 2013 (%)



Source: ACER Database (November-December 2013) and ACER calculations

Notes: The number of dual-fuel offers in the Netherlands and Spain offered to electricity consumers is estimated to be similar to the number of dual-fuel offers to gas consumers, i.e. higher than captured in the analysis.

82 The commodity price in an offer is only one element determining price. Other elements also tend to be widely apparent across the European price comparison tools. When it comes to displaying the differentiating elements of an offer that is designed to attract consumers to buy the commodity from a specific supplier, there seems to be a) more 'offer diversification' for electricity consumers and b) a difference in the level of this diversification for some countries compared to others. A large majority of capital cities including the capitals of the Netherlands, the UK, Denmark, Italy and Spain can overall claim to provide more diversified offers to consumers with regard to different types of energy pricing, type of fuel, source of energy or additional services. The capital cities of Ireland, France, Germany and Norway also show some diversity in terms of the price elements of offers that are not exclusively price related. In other markets, the diversity of offers is either limited, non-existent or cannot be assessed. The impact of consumer choice data on consumer switching and competition is assessed in what follows.

2.3 The level of competition in retail electricity and gas markets

83 This section provides a review of the level of retail competition across Europe. It first assesses supply side competition levels by analysing both price and non-price competition factors, and then turns to the demand side to evaluate consumer switching behaviour. The analysis aims to evaluate the impact of competition levels on retail price formation, and particularly why the energy component of the final consumer price still varies significantly from country to country.

84 To address these questions, the section explores the evolution of a range of market competition indicators between 2008 and 2013. The indicators assessed are: market concentration levels, market entry/exit levels, mark-ups, the relationship between wholesale and retail energy component prices, price dispersion, switching activity and consumer experiences. The interrelations of these indicators are also analysed.

85 The reasoning behind the selection of these indicators is that the higher the number of competing suppliers in a market (assessed from concentration and market entry indicators), the smaller retail margins should be (mark-up indicators). In the presence of competitive and liquid wholesale markets – and assuming no barriers to entering markets – retail prices are expected to have a closer relationship with wholesale market prices (assessed through the evolution of wholesale and retail price indicators). Price dispersion levels may provide a measure of the level of price competition among suppliers and on the maturity of the market. Additionally, switching rate indicators will serve to indicate which competitive phase a market is in and how consumers respond to competition[71].

2.3.1 Market structure

86 Different types of competition may arise as a result of different market structures. This sub-section considers some of the issues related to the structure of electricity and gas retail markets by looking at how concentrated markets are at national level, entry and exit activity and at the degree of market consolidation at the European level.

Market concentration

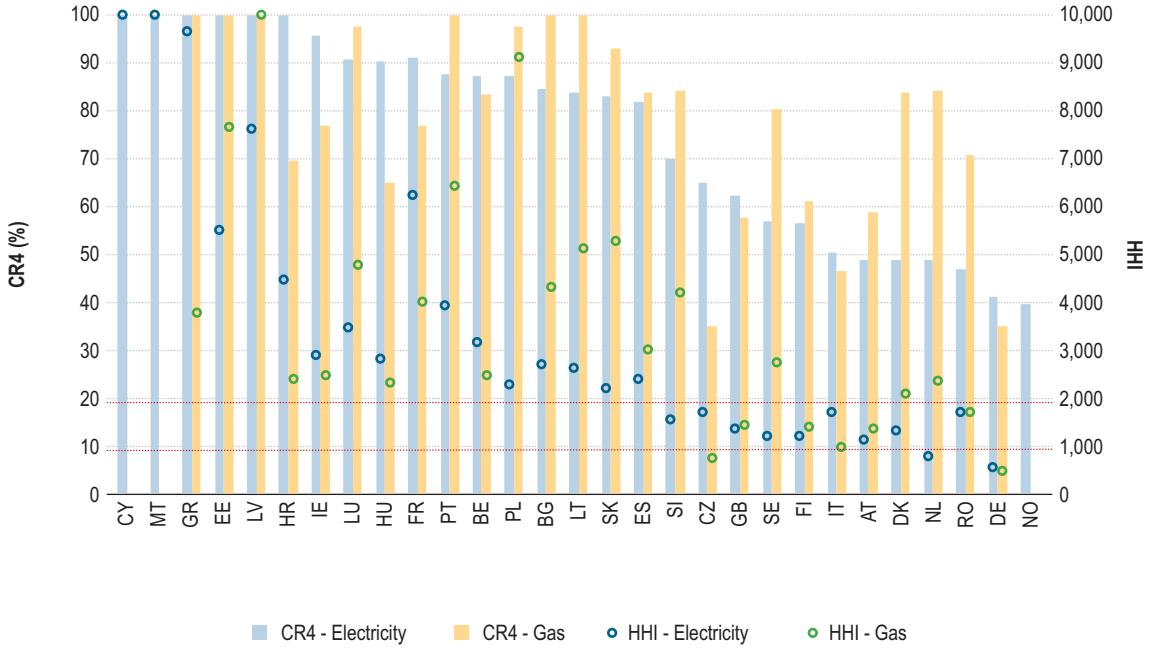
87 The level of concentration is an important indicator of a market structure. In general, a high number of suppliers and low market concentration indices are seen as indicators of competitive markets. Figure 16 illustrates the level of concentration of European retail markets at the national level[72] in 2013, expressed both as the sum of the market shares of the four largest suppliers in a market (i.e. the CR4) and using the Herfindahl–Hirschman Index[73] (HHI). CR4 and HHI are the most commonly used measures of market concentration.

71 Higher values of entry and switching suggest a more competitive market phase; meanwhile more stabilised values may indicate that the competition is stable or that entry and that competition barriers may exist.

72 The multiple numbers of suppliers reported in this section at national level may disguise the fact that at the regional or at distribution level in an MS, consumers may have more, but also a very limited number of, suppliers to choose from, or in some cases have no choice at all. However, for the purpose of this report it is not necessary to define the relevant geographical and product market.

73 The HHI is calculated by adding the sum of the squares of the market shares of the firms in a particular market. The HHI can range from 0 to 10,000, where 0 indicates very low concentration and 10,000 indicates the presence of a complete monopoly. Horizontal red lines show HHI of 1,000 and 2,000 as per the European Commission's guidelines; a market can be regarded as concentrated if its HHI is above the 1,000 level, and highly concentrated if it is above 2,000.

Figure 16: Market concentration in retail electricity and gas markets – 2013 (% and HHI)



Source: Datamonitor's data (2014) and ACER calculations

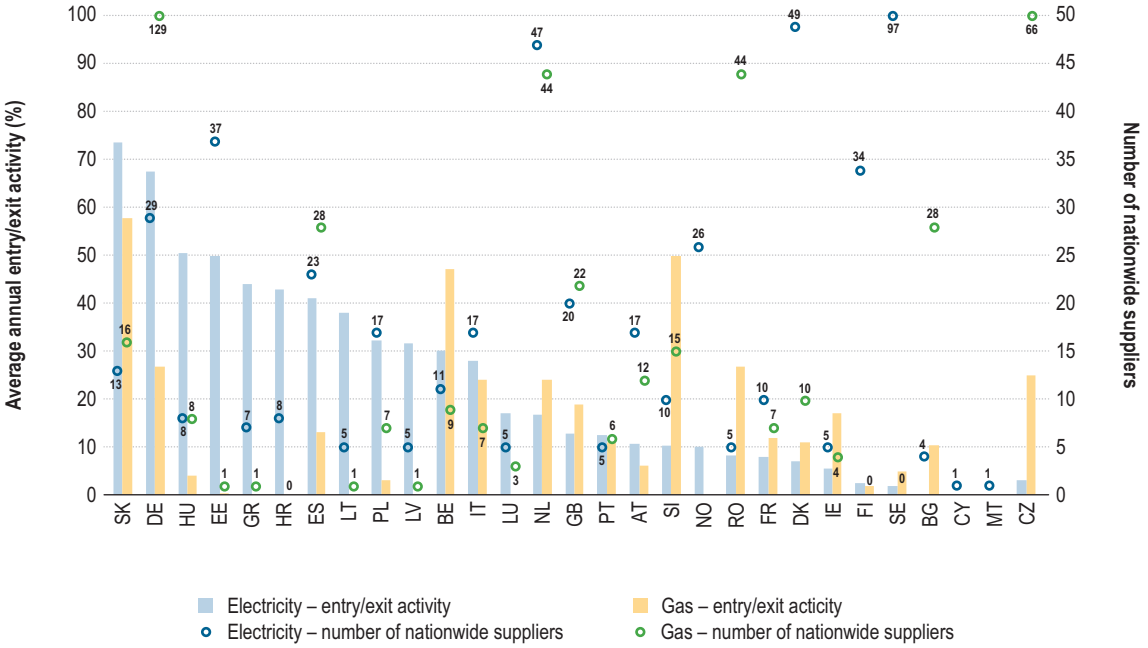
Note: According to the Dutch regulator ACM, CR4 data for the Netherlands is different: i.e. electricity: 85.8%, gas: 83.8%.

88 The figure clearly shows the persistence of very high concentration indices at the national level. The cumulative market shares of the four largest suppliers are more than 75%, and HHI is above the 2,000 level in many countries. The high level of concentration indicates that retail competition in many countries is still not well developed, a factor often used by national authorities to justify retail price regulation.

Entry and exit activity

89 Figure 17 shows the entry and exit activity and the number of nationwide electricity and gas suppliers in the various countries at the end of 2013, and therefore provides further insight into the structure of the market.

Figure 17: Entry/exit activity in the household retail market (5-year average – 2009–2013) and number of nationwide household suppliers in 2013 (% and number of suppliers)



Source: CEER National Indicators Database (2014)

Notes: Darker shades of blue and yellow bars indicate that the number of active nationwide suppliers is decreasing. To make the graph clearer, the right-hand scale (number of nationwide suppliers) is limited to 50.

90 Entry and exit activity has been assessed as the percentage of net new suppliers in the market in a given year in comparison with the total number of existing suppliers. For each year, absolute values[74] have been used to calculate the indicator on a five-year average basis.

91 The data show that over the last few years, several countries registered significant entry/exit activity into household markets (e.g. Slovakia, Germany, Hungary, Estonia and Greece in the electricity household market, and Slovakia, Slovenia, Belgium and the Czech Republic in the gas household market). In a number of MSs (e.g. Bulgaria, Cyprus, Estonia and Malta in the electricity household market, and Poland, Luxembourg, Lithuania, Latvia and Greece in the gas household market), no significant entry occurred. The existence of price regulation seems to be a cause of lower market entry and may be exacerbating rather than facilitating competition.

92 The entry and exit activity in the Greek electricity market appears very high, but this is mainly due to the fact that the number of suppliers halved in 2012 (from 12 to 6) due to the market suspension of four retail electricity suppliers for incurring overdue debts to the system and market operators, and the withdrawal of two suppliers from the retail market.

93 Sweden and Denmark have the most nationwide electricity suppliers (97 and 49 respectively), while Germany and the Czech Republic have the most nationwide gas suppliers (129 and 66 respectively).

74 Absolute values were used to avoid the smoothing (netting) effect that the use of the net entry variable could create. For example, if in one country the increase in the number of suppliers in two years was 50% a year and the decrease in the number of suppliers in the two following years was 50% a year, then the average change over a 4-year period would be 0%, which is an incorrect estimate. Averaging absolute variations reflects the entry/exit dynamics of the market much more closely (in this particular case, the average would be 50%). To highlight which countries saw their number of suppliers decrease in 2013, such countries are coloured in a darker shade of the same colour.

Case Study 1: The Swedish retail market with four bidding zones

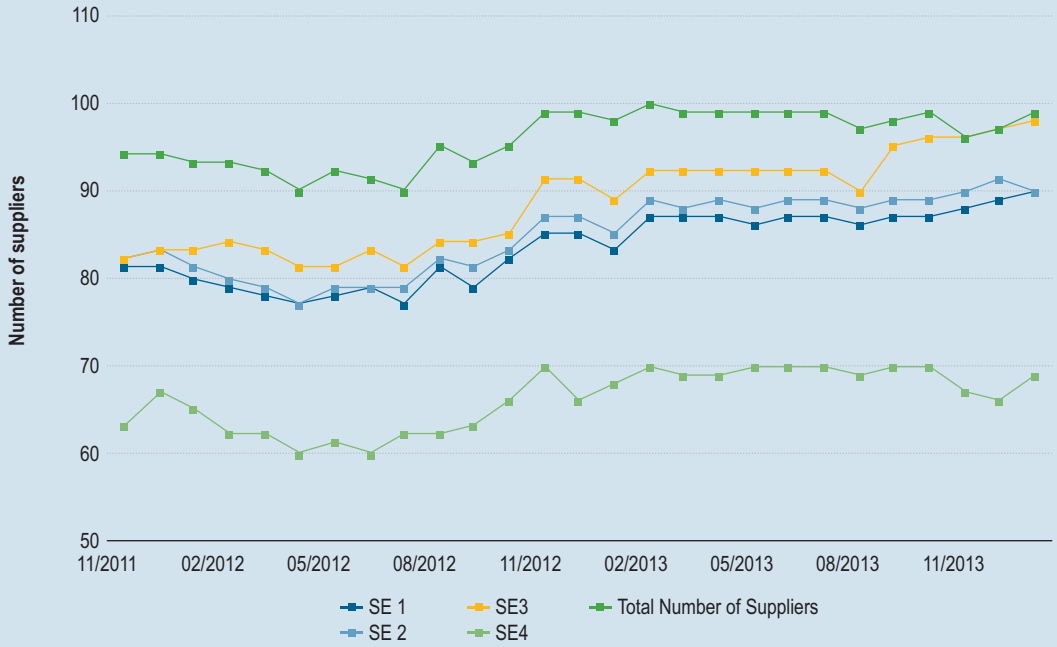
On 1 November 2011, the Swedish electricity market was subdivided into four bidding zones as the result of an assessment by the European Commission, which had raised competition concerns . Before the change, there was a discussion on whether or not this would affect the number of suppliers and thereby competition in the Swedish retail market[75].

Number of suppliers in the Swedish retail market

Before the introduction of bidding zones in Sweden, there were 120 active suppliers. Figure i shows that this number has not changed since the division of the Swedish wholesale market into four zones, with approximately the same number of suppliers reporting prices and contracts at least once on the price comparison tool 'Elpriskollen.se'.

It is worth mentioning that several of the small suppliers have a relatively small number of customers concentrated in their own distribution network. The Swedish NRA, Ei, estimates that several of these suppliers have a very large market share within their network.

Figure i: Number of suppliers per bidding area – November 2011–2013

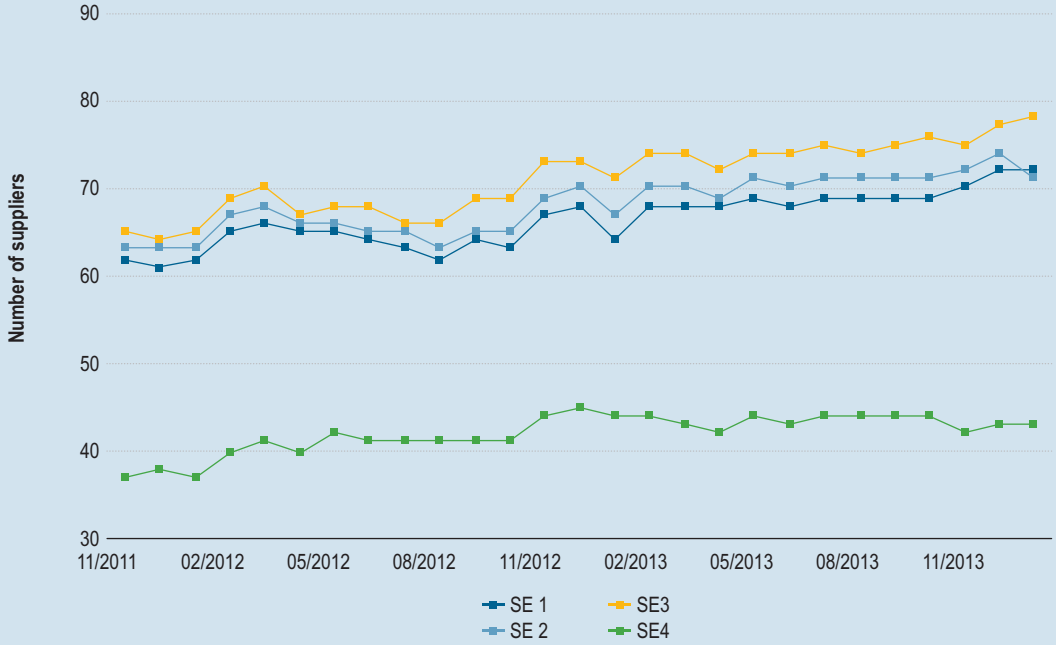


Source: Elpriskollen.se, a consumer website operated by Ei (2014)

Since November 2011, compared to the other three zones, zone SE4 (i.e. South Sweden) had relatively fewer suppliers (around 60). Among them, even fewer (approximately 65% of all suppliers) offer fixed-price annual contracts compared to suppliers in the other three zones (approximately 75-80%) (see Figure ii). Unlike fixed contracts, the number of suppliers offering spot-based contracts is fairly evenly distributed between the four bidding areas.

75 Case No COMP/M.39351 (14.04.2010). See: http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_39351.

Figure ii: Number of suppliers offering fixed 1-year contracts – November 2011– 2013



Source: Elpriskollen.se, a consumer website operated by Ei (2014)

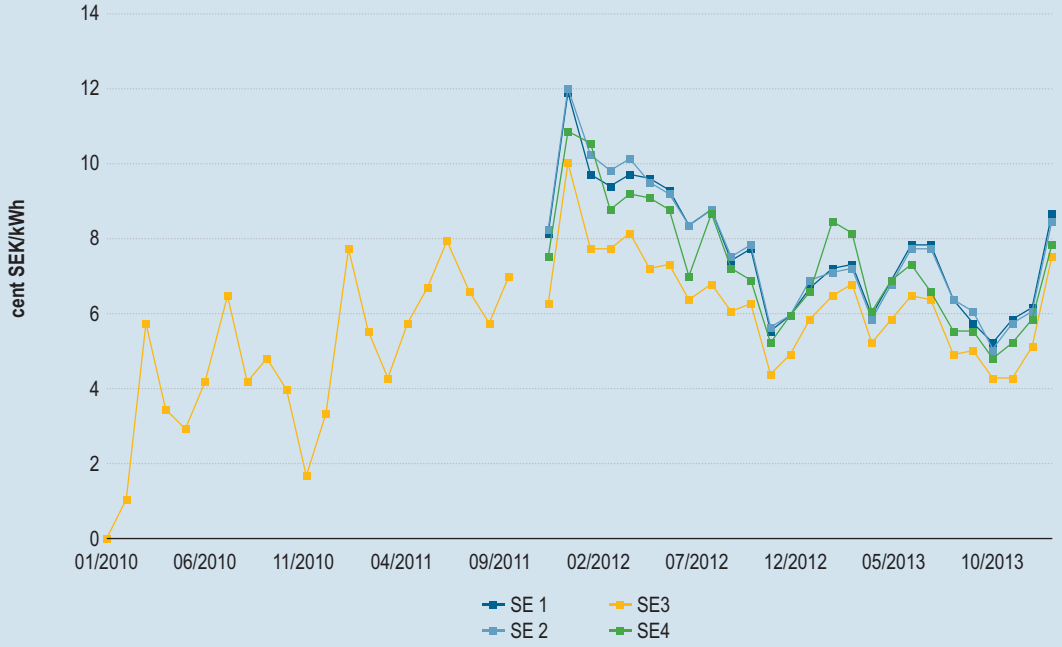
The key reason for fewer suppliers being active in bidding zone SE4 and for them offering fewer fixed contracts is that this zone is associated with greater hedging risk. The zonal prices that are charged to consumers in fixed-price contracts may deviate from the system price in the Nordic Market. and suppliers normally need to hedge these risks in the financial market. The costs of hedging are relatively higher in zone SE4 compared to other bidding areas due to congestion between SE4 and the neighbouring areas.

To further assess competition, for the years since 2010, a year before the market reform, Ei calculated the average margins for the four most common contracts. Electricity supply margins, or mark-ups as they sometimes are called, are defined as the difference between the supplier's sale prices and purchase prices – the applied methodology is more detailed compared to the methodology applied in section 2.3.2. The remaining margin should cover the costs of administration, marketing and customer service. The profit is also included in the electric supply margin[76].

The average margins (with an annual consumption of 20,000 kWh) on one-year fixed-price contracts shown in Figure iii increased from 0.05 SEK/kWh to 0.07 SEK/kWh just after the reform was implemented. However, a gradual decrease towards pre-reform levels has occurred since the peak values of 2012.

76 The margins on fixed-price contracts are calculated with prices collected from Elpriskollen.se. From this price, Ei deducted the calculated cost of purchase of electricity futures (system price + relevant EPAD contract), tax, certificates, monthly profile, daily profile, hourly profile, power reserve fee, balance power fee, grid fee, financing costs, trade costs and volume risk. To estimate the margins on spot-based contracts, comparative prices from Elpriskollen.se were deducted with the reconciliation price in the specified bidding area, electricity tax, RECs cost, power reserve fee, balance power fee, basic charge and financing cost.

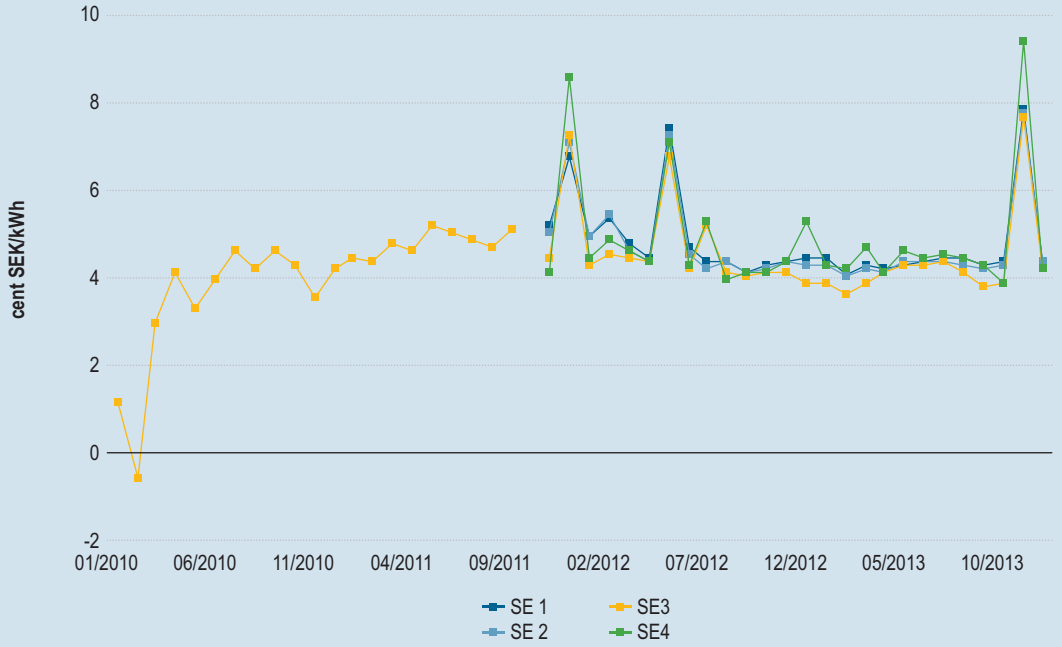
Figure iii: Average margins on fixed 1-year contracts – November 2011–2013



Source: Elpriskollen.se, a consumer website operated by Ei (2014)

The average margins on spot-based contracts shown in figure v increased slightly from 0.04 SEK/kWh to 0.05 SEK/kWh. As with other types of contracts, a tendency towards stabilisation and decreasing margins can be observed from 2012 onwards, although with another peak in late 2013.

Figure iv: Average margins on spot-based contracts – November 2011–2013



Source: Elpriskollen.se, a consumer website operated by Ei (2014)

Minor differences in margins between suppliers in different bidding areas

A caveat regarding the assessment is the limited data available prior to the introduction of the bidding zones, which was decided on May 24 2010. For the one-year contracts signed from October 2010, the market was already informed that the reform would start in November 2011 and that fixed-price contracts would be affected by the new bidding areas.

In conclusion, there is no clear evidence that retail competition in Sweden decreased following the introduction of bidding zones in 2011. Both the number of retailers and the margins are roughly the same as prior to the reform. Furthermore, all retailers that Ei interviewed emphasised that the reform had not hampered retail competition.

Market consolidation on European level[77]

94 Energy market liberalisation initially led to a high level of mergers and acquisitions in the European electricity and gas markets. DG Competition's information on merger cases in electricity and gas markets[78] shows that these have involved companies in the same market (i.e. electricity/gas companies merging or acquiring other electricity/gas companies), but also companies in different markets (i.e. electricity companies merging with gas companies) and companies that are present at a different level of the supply chain (i.e. electricity/gas producers and suppliers).

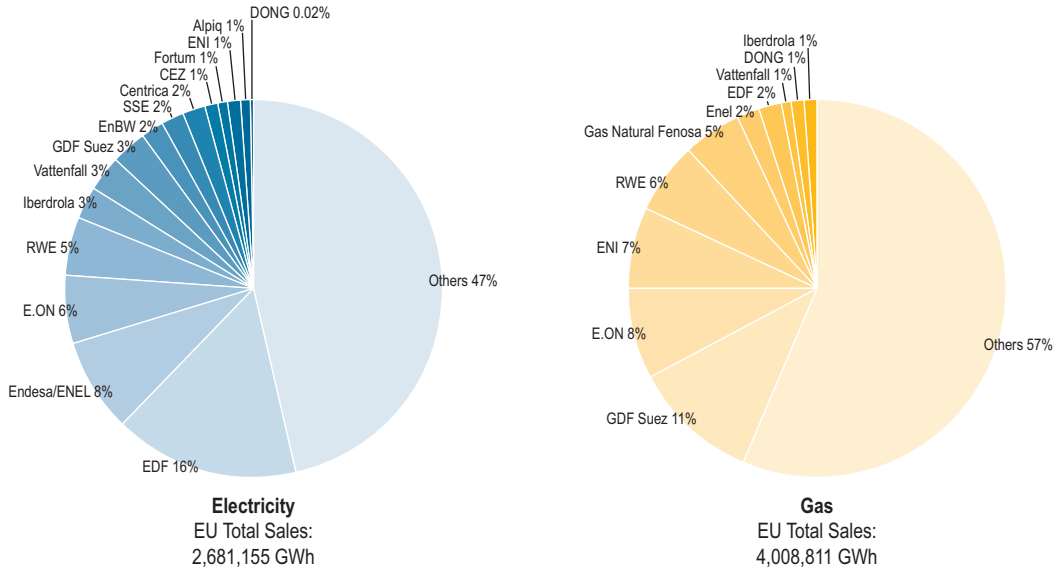
95 This process has led to the emergence of 'major European suppliers' that are active in both electricity and gas markets (even if this may not always be the case for all countries in which they operate) and which have captured a considerable share of the overall European gas and/or electricity markets.

96 Figure 18 below shows the market shares of the largest European electricity/gas suppliers at the end of 2013 calculated by the volume of retail electricity and gas sales. The four largest electricity suppliers (EDF, ENEL/Endesa, E.ON and RWE) accounted for about 35% of all volumes of electricity sold in EU. In gas, the four largest suppliers (GDF Suez, E.ON, ENI and RWE) have a market share of 31%.

77 The scope of this sub-section is not to provide a detailed analysis of the effect of market consolidation on retail electricity and gas markets, but to point out the developments and the 'state of play' in 2013.

78 See: http://ec.europa.eu/competition/elojade/isef/index.cfm.

Figure 18 European share of the major electricity and gas suppliers (including national and local players) – 2013 (GWh/year and %)



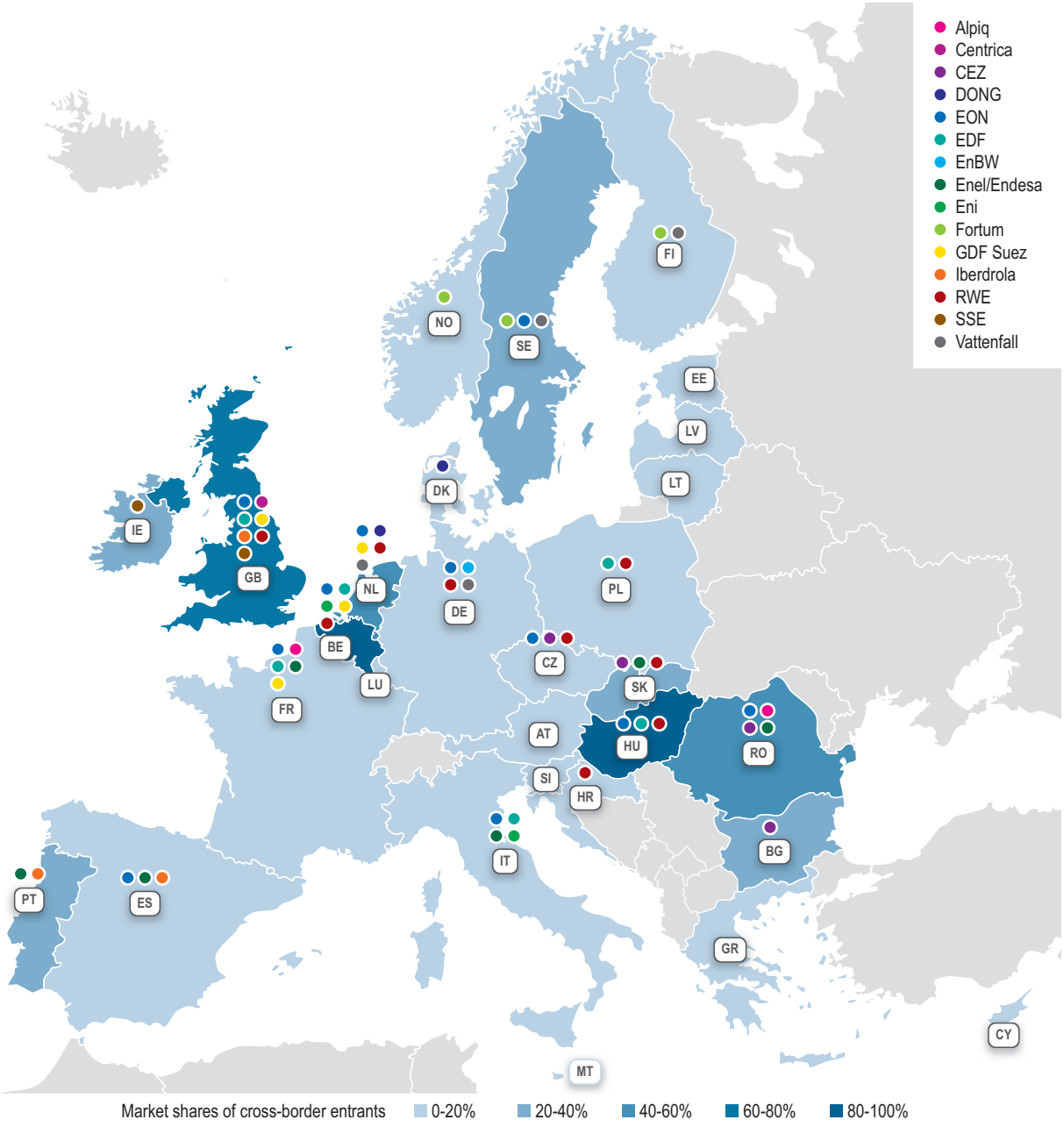
Source: Datamonitor's data (2014) ACER calculations

Notes: EU Total sales represent the total volumes of electricity and gas sold by retailers in the EU 28. These figures are slightly different from Eurostat's demand data, presented in Section 2.2.1, which is based on total consumption including energy purchased by consumers directly on the wholesale markets.

97 Figure 19 shows the presence of the major electricity suppliers (see Annex 3 for gas) and the approximate market shares of cross-border entrants in national markets in different countries in Europe in 2013. Suppliers in France, Germany and other Western European countries have participated in the privatisation of the energy sector in Central and Eastern Europe and are now heavily present in these markets. German energy companies were not only active in the privatisation process in the referred region, but also entered markets in other Western European countries (e.g. France, Great Britain, Italy, Spain etc.). The Belgian, Hungarian and British retail markets have been particularly attractive for major market players from other EU countries. Their market shares in the Belgian and Hungarian markets are above 80%, while four of the six largest suppliers in Great Britain are now owned by foreign companies.

98 These major players entered markets not only through the acquisition of existing companies, but also used the opportunities of market liberalisation to enter new markets and established their subsidiary firms in several European countries by expanding organically (e.g. EDF and RWE in Poland, E.On in Belgium and RWE in Croatia).

Figure 19: Presence of major European electricity suppliers in Europe and market shares of cross-border entrants in national markets – 2013



Source: Datamonitor's data (2014) and ACER calculations

99 Not surprisingly, countries with higher market concentration levels (i.e. countries on the left-hand side in Figure 16) show lower cross-border entry activity and fewer foreign players. Removing barriers to cross-border entry in these countries may be one way to increase the number of suppliers, which will in turn lead to lower market concentration.

2.3.2 Competition performance

100 This sub-section first explores price competition factors, such as suppliers' margins, wholesale-retail price relationships and price diversification levels, and later assesses other competition elements such as product differentiation.

Mark-up

101 Household electricity and gas suppliers' margins on final POTP prices are a good indicator of the level of retail price competition in a market. High margins tend to indicate low competition levels, as competition would be expected to drive prices down. Over time, high margins would be expected to attract new market entrants. Where this is not the case, barriers to entering the markets are likely to be found.

102 However, any comparison of the mark-up values across different countries should be cautious, as they are likely to differ for a number of reasons, such as:

- different operating costs of running retail electricity and gas companies in different countries (i.e. suppliers' operating costs include activities like marketing, billing customers, metering, staff salaries and bad debt costs);
- differences in volatility in wholesale prices and different hedging strategies employed to 'smooth' retail prices (e.g. forward and spot contracts of varying maturity to manage this market risk);
- long-term bilateral agreements between generation and supply companies, which are often part of the same vertically integrated group;
- various methods of allocating costs and profits across different business units held within the same energy group;
- different national levels of consumption; and
- different sizes of national retail markets.

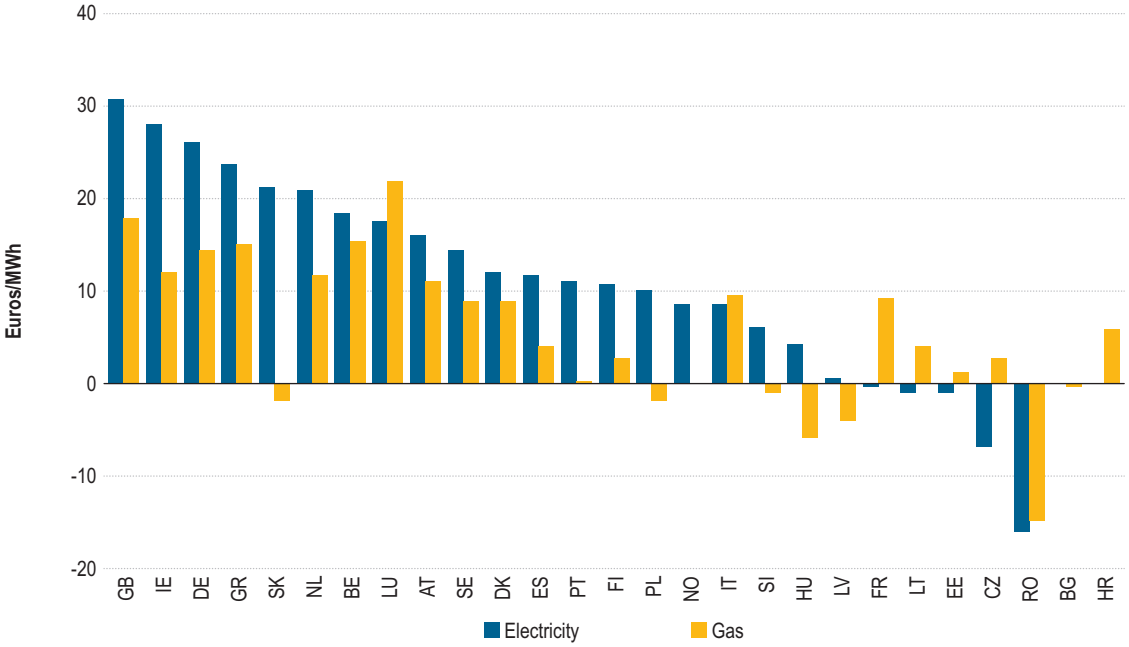
103 The analysis presented in this section uses the difference between the retail energy (commodity) component and the wholesale energy cost (i.e. the mark-up). This is a proxy for the gross margin from which suppliers need to pay, among other costs, operating costs and taxes.

104 When calculating mark-ups in individual countries, different approaches based on data availability have been taken to reflect the retail energy component for electricity and gas markets[79]. Annex 1 details the methodology used for the calculation. The wholesale energy costs incurred by suppliers when buying energy were calculated by taking into consideration the wholesale market price and suppliers' procurement and hedging strategies, which may differ from country to country.

105 Figure 20 shows the estimated average electricity mark-ups over the 2008–2013 period and estimated average gas mark-ups over the period 2012–2013. Values seem to vary widely, even among countries within the same region where the wholesale price is similar or the same, as in the case of the Nordic Region, which has a single power exchange.

79 The electricity energy price component is taken from Eurostat's energy prices break-down data using nationwide data. In gas, due to the lack of Eurostat data, the energy component price has been assessed from ACER's database on retail offers. Only offers in capital cities are taken into account. The energy component used corresponds to the capital incumbent's most common offer.

Figure 20: Average annual electricity (2008–2013) and gas (2012–2013) mark-ups – (euros/MWh)



Source: ACER Database, Eurostat and European power exchanges data (2014) and ACER calculations

106 As indicated above, mark-up differences can be partially explained by suppliers' different operating costs and/or expenditures incurred in acquiring and retaining consumers. These may be higher in countries such as Great Britain, Ireland and the Netherlands, where switching rates are relatively high and where suppliers face significant competition and therefore spend additional money on sales, marketing and customer services. Arguably, due to the high proportion of consumers on dual-fuel offers in these countries, costs to serve them could be lower due to service synergies and economies of scale.

107 Furthermore, the level of mark-up will depend, *inter alia*, on the consumption level. For example, the electricity mark-up in Sweden measured in euros/consumer would be almost as high as the one in Great Britain, while in the above chart Swedish mark-ups measured in euros/MWh rank relatively lower. The fact that in Sweden the average annual consumption per household consumer is much higher than the European average (i.e. approximately 9,000 kWh versus 4,000 kWh) may explain this situation.

108 In some countries with regulated prices, mark-ups have been assessed as negative, as the retail prices energy components seem to be set at levels below wholesale energy costs. This seems to be the case in Latvia and Romania[80] in electricity, and in Slovakia, Hungary, Latvia, Romania and Bulgaria in the gas market[81]. This is potentially creating a dysfunctional market in these countries, not only because negative mark-ups mean that consumers are not facing the true cost of providing energy (and thus are not receiving price signals regarding consumption), but also because this makes these markets highly unattractive for competing energy suppliers, as negative mark-ups constitute

80 Retail electricity and gas mark-ups in Romania are calculated from official sources (i.e. Eurostat data on retail, OPCOM, the Romanian PX, on wholesale prices for electricity and long-term import contracts for gas). In electricity, regulated tariffs for non-households were removed, starting on 1 January 2014, and the energy component in the final price is based on wholesale market prices. If the gas wholesale price (which is regulated by ANRE) were used in the calculation, the gas mark-up in Romania would be positive.

81 Gas results correspond to the average mark-up values in 2012–2013. In 2013, Bulgaria shows a positive mark-up.

absolute barriers to entry. Such actions by regulators or governments significantly increase regulatory risks, eventually to the detriment of consumers.

109 France also shows a slightly negative mark-up in the electricity market. In France, since July 2011, suppliers can source their electricity by using a special mechanism, ARENH (*'Accès régulé à l'électricité nucléaire historique'* or 'Regulated Access to Incumbent Nuclear Electricity'), which is a right that entitles suppliers to purchase electricity from EDF at a regulated price in volumes determined by the French energy regulator, CRE[82]. Thus, part of their sourcing costs does not depend on the market price, but on the ARENH price if it is below the market price (this part of the sourcing costs may vary between 70 and 90%, depending on consumers' profiles). The ARENH price was 40 euros/MWh between July 2011 and December 2011, and increased to 42 euros/MWh thereafter (the price was the same at the end of 2013). This price is set in such a way as to be representative of the historical cost of a MWh produced by French nuclear power plants and fixed by the government independently of market price considerations. This explains the slightly negative value. If the wholesale sourcing cost of a supplier for a residential consumer is based on 85% ARENH sourcing and 15% of market day-ahead sourcing, this value would be different.

110 As previously mentioned, a high mark-up value should trigger price-competition. This is observed in Figure 30 which presents the annual savings that can be made by consumers by switching from the incumbent standard offer to the lowest price offer in the market. According to these data, the largest savings are available in countries which, according to Figure 20, feature higher mark-ups (e.g. Germany, Great Britain, Netherlands, Ireland or Belgium). This indicates that price-competition elements are active in those markets. Theory would predict that these two facts would lead to higher switching rates, but as will be analysed in the next section, it is not straightforward to demonstrate this based on the available data.

111 Market entry and exit activity is another factor that seems to be influenced by mark-up levels. MSs with persistently high mark-ups generally have higher entry/exit activity as well, as higher profits attract new market entrants (e.g. Germany, the Netherlands, Great Britain). This would be expected to lead to more competition, lower prices, and the less competitive players being forced to exit. Conversely, markets where the incumbent supplier consistently fails to earn high profits are generally consistent with lower entry/exit activity. These indicators are also affected by the level of maturity of competition, and as previously mentioned, by the presence of regulated tariffs, which in the case of negative mark-ups, would clearly reduce the attractiveness of the market to new entrants.

112 In mature markets, when the 'competition phase' has stabilised, a significant entry/exit activity may lead to lower levels of mark-up (e.g. the Czech Republic and Spain in gas household market). However, the situation in the electricity household market is slightly different from gas, as there is not much evidence to show a positive relationship between the level of entry/exit activity and the level of mark-up for electricity suppliers in following years.

113 In countries where no significant entry occurred (e.g. Bulgaria, Cyprus, Estonia, Malta in electricity household market and Poland, Luxembourg, Lithuania, Latvia and Greece in gas) regulated prices and the initial low or negative mark-up has led to low entry/exit activity in most cases. The exceptions are Luxembourg in the electricity market and Greece in the gas market. Luxembourg does not

82 In order to exercise their ARENH rights, suppliers are required to sign a standard agreement with EDF to provide a contractual framework for the sales concerned. CRE is tasked with managing this system and calculating the rights, which it notifies to the contracting parties.

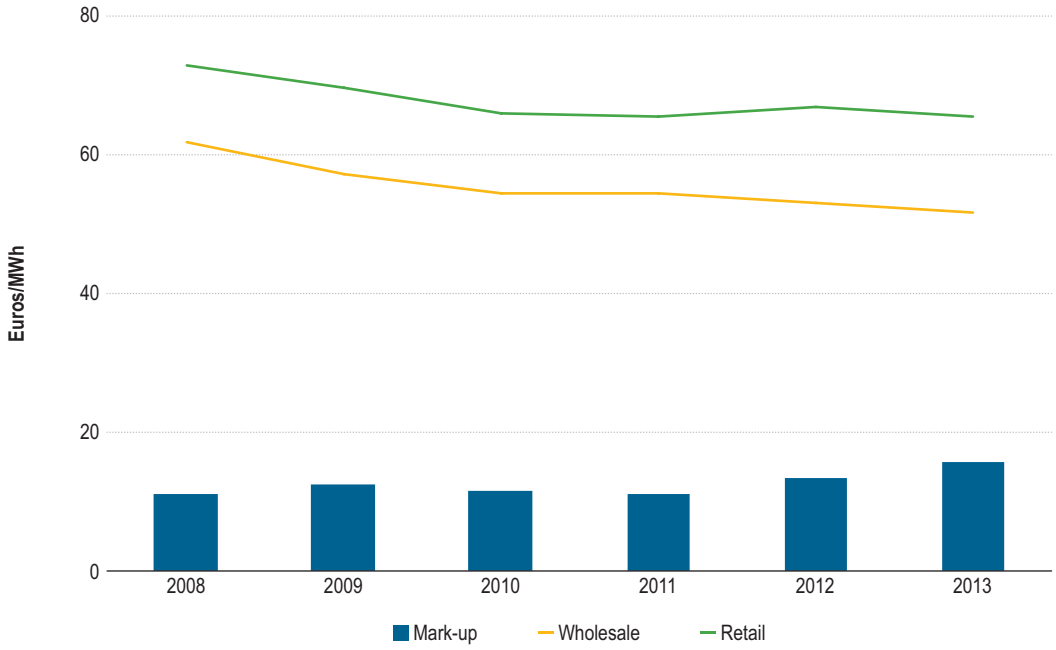
regulate retail prices and has high mark-ups, but the entry in the electricity market is still very low and no entry has occurred in the gas market. The small size of the market, in a business featuring economies of scale, is likely to influence entry/exit activity.

The relationship between retail and wholesale electricity[83] prices

114 The degree of alignment between retail and wholesale prices over time can be a proxy for the efficiency of retail suppliers[84]. Figure 21 shows the responsiveness of the energy component of retail prices to changes in the wholesale price and the evolution of the mark-up over the 2008–2013 period at the European level[85].

115 The data shows that electricity wholesale prices decreased over the 2008–2010 period and remained relatively flat through the rest of the period (i.e. until the end 2013). This wholesale price reduction was followed by a decrease in the energy component of retail electricity prices over the same period. The trend changed in 2010, when retail prices started to increase while wholesale prices remained broadly unchanged. This, in turn, led to an increase in the mark-up over the 2011–2013 period.

Figure 21: Relationship between the energy component of retail electricity price and the wholesale electricity price and mark-up in Europe – 2008–2013 (euros/MWh)



Source: Eurostat, NRAs and European power exchanges data (2014) and ACER calculations

116 The degree of connection between the energy component of retail prices and the wholesale electricity prices differs widely among countries, as the data in Annex 2 confirms.

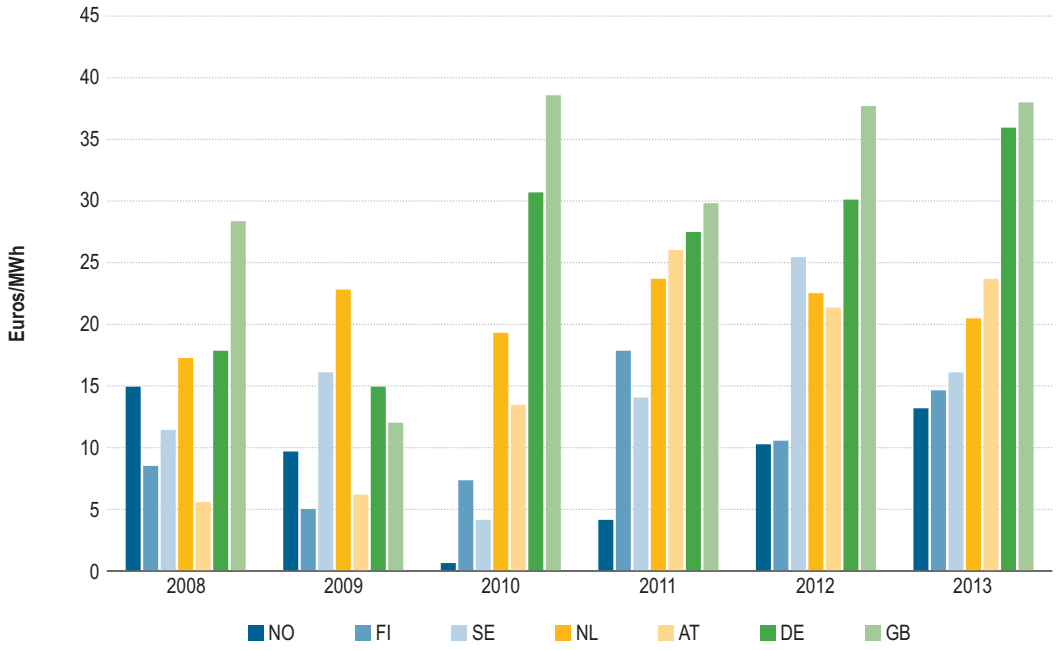
83 Due to the lack of data on gas, this analysis was performed only for electricity (i.e. the data on the energy component for gas over time is not available from Eurostat's energy prices breakdown data, while the Agency's database on retail offers provides this data for two years only).

84 In the electricity market, these overall costs will include a range of variables, including generation, transmission and distribution, as well as operating costs for the supply business (e.g. metering, meter reading, billing, customer service and marketing).

85 See Annex 1 for the methodology applied.

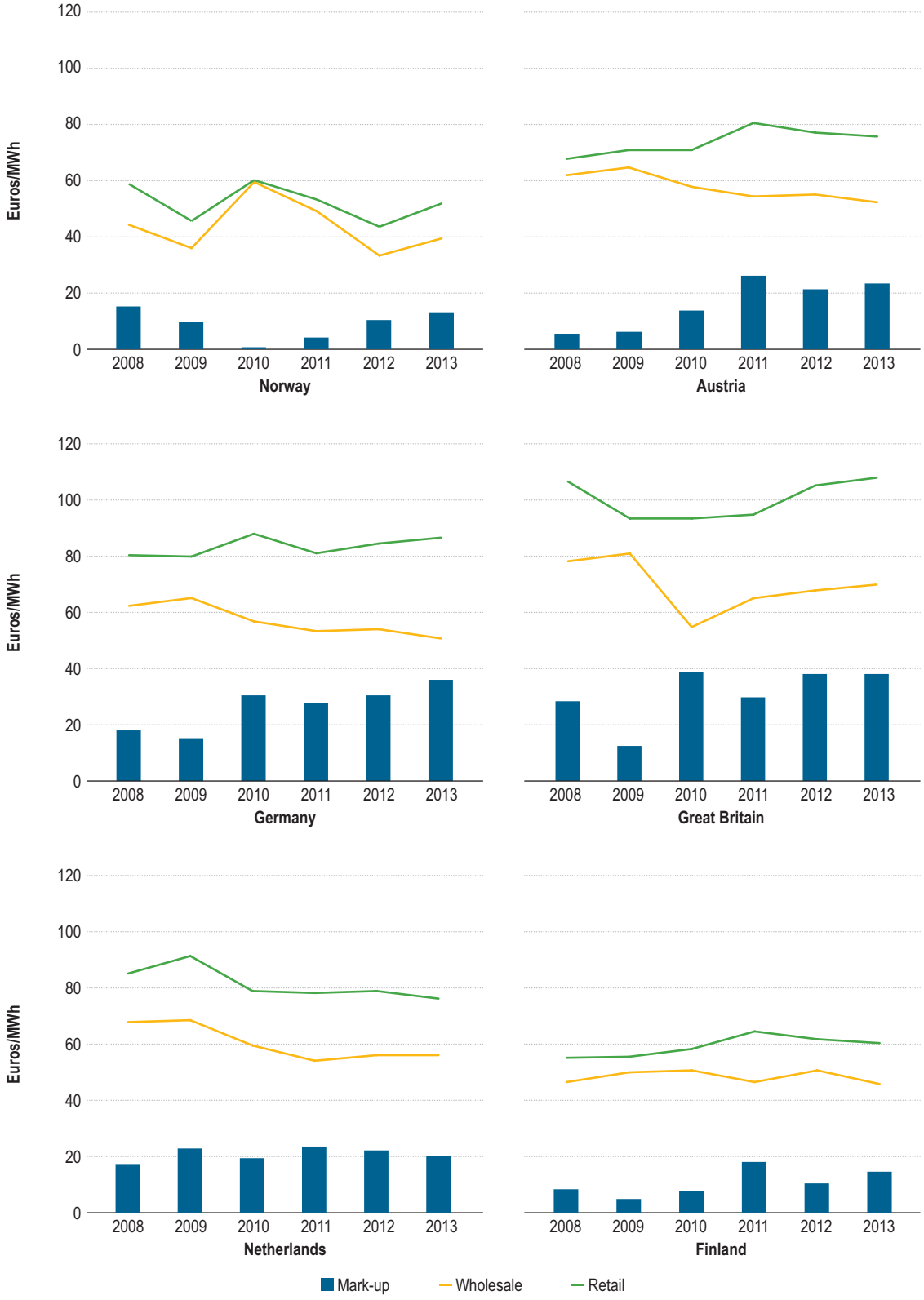
117 Figure 22 below also provides details for a selection of countries which do not apply price regulation, have relatively low market concentration, and perform relatively well based on other indicators presented in this report (i.e. choice of suppliers and offers, switching rates, entry/exit activity, consumer experience etc.). The data shows that even in those countries where the link between retail and wholesale prices was initially expected to be more solid, mark-ups have increased constantly over the observed period. In this respect, changes in retail prices have often not been responsive to changes in the wholesale electricity price. Norway, which has a dynamic retail market and also presents a relatively low mark-up, constitutes the best 'benchmark'. The retail electricity price in Norway is linked to the day-ahead wholesale market, and any changes in the wholesale price (i.e. upwards or downwards changes) are quickly passed on to consumers. Furthermore, it makes the price formation process more transparent.

Figure 22: Electricity mark-up in a selection of countries – 2008–2013 (euros/MWh)



Source: Eurostat, NRAs and European power exchanges data (2014) and ACER calculations

Figure 23: Relationship between the energy component of the retail electricity price and wholesale electricity price and mark-up in a selection of countries – 2008–2013 (euros/MWh)



Source: NRAs and European power exchanges data (2014) and ACER calculations

118 In general terms, the energy component of retail and wholesale prices seem to correlate better in two groups of countries, but for different reasons. On one side, prices correlate well in those more competitive countries where the final energy retail electricity price is closely reliant on the wholesale market spot price (e.g. Norway, Sweden and Finland). This good correlation trend is also observed in certain countries featuring retail regulated prices (e.g. Denmark, Lithuania and Poland) where the reason seems to be that the energy component of final consumer retail prices is significantly more reliant on long-term wholesale contracts, whose prices are usually more stable in time.

119 Conversely, other countries, such as Austria[86] and Germany, featured increasing mark-ups during the observed period. These countries presented relatively stable energy components in retail prices that did not reflect the observed decrease in wholesale prices[87]. Great Britain also showed a weak relationship between retail and wholesale prices and an increasing mark-up; meanwhile, the Netherlands showed a better correlation between the two price components, but also a relatively high mark-up, albeit slightly decreasing from 2011.

120 In some of these countries, mark-ups seem to be higher than the values that could in principle be expected, posing questions about the extent of real price competition in these markets. Given the particularities of each country, the analysis of the relationship between wholesale and retail prices for electricity and gas markets merits further in-depth studies by NRAs. Variables that may impact the relationship with wholesale prices are the particular characteristics of the retail price contracts (i.e. duration, fixed or variable prices and price indexation mechanisms).

The price dispersion of the energy component of retail offers

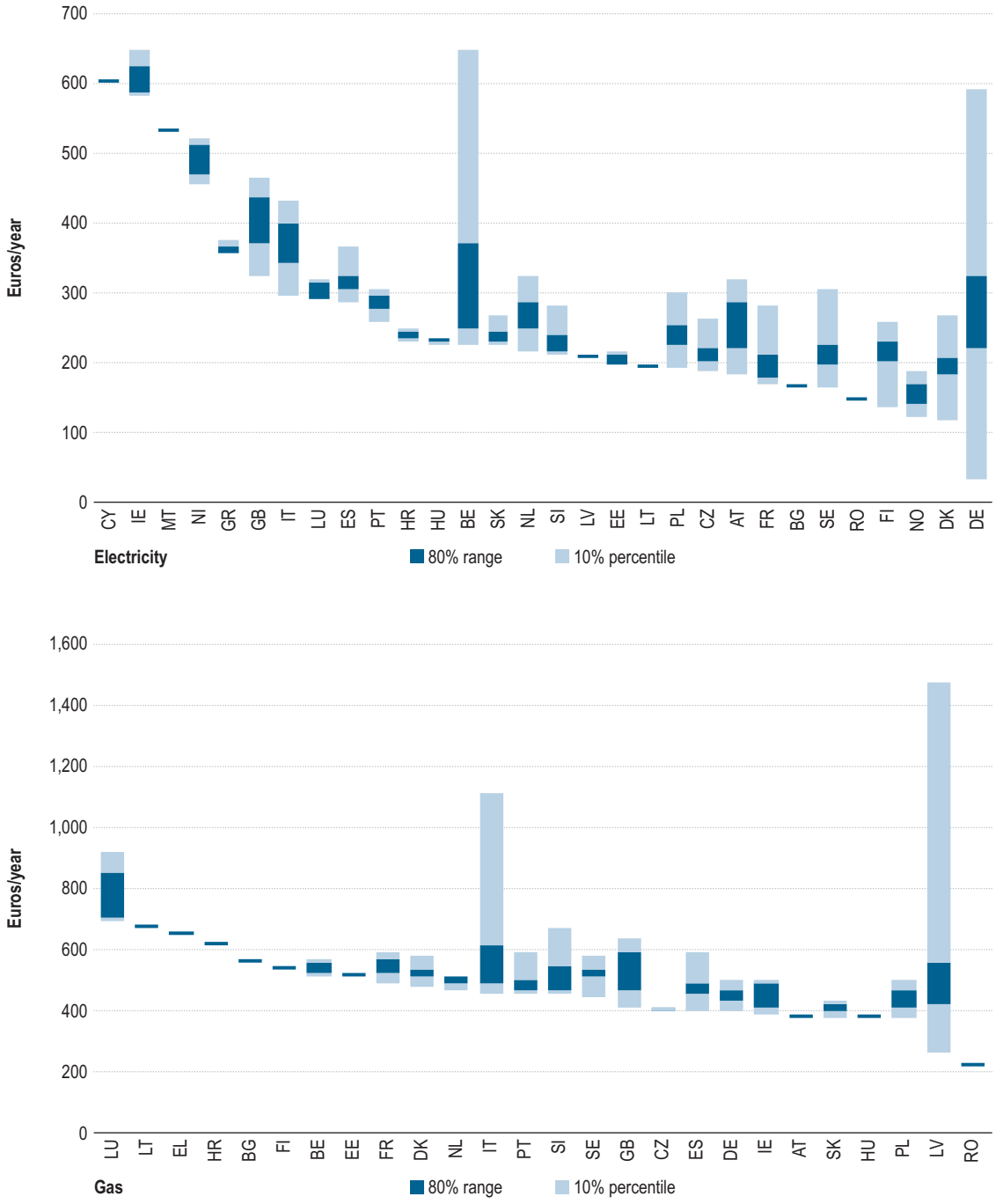
121 As was the case last year, the Agency examined the price dispersion of the energy component of all retail offers in European capital cities in 2013. The comparison of this individual price component provides a valid representation of the actual level of price competition among the different suppliers, as the other retail price components – i.e. network charges and taxes – are generally equivalent/proportional for all similar retail offers.

122 Figure 24 shows in blue the range of the energy component price dispersion of 80% of offers in the capital city, and in grey the prices of the offers distributed to the remaining 10% and 90%.

86 Incoherencies between the development of electricity end-user prices and that of wholesale prices between 2008 and 2012 caused E-Control to instigate a market inquiry pursuant to section 21(2) Energie-Control-Gesetz (E-Control Act) in conjunction with section 34 E-Control Act and section 10 Elektrizitätswirtschafts- und -organisationgesetz (Electricity Act) 2010.

87 See the EC DG COMP Energy prices and costs report indicating this trend http://ec.europa.eu/energy/doc/2030/20140122_swd_prices.pdf.

Figure 24: Dispersion in the energy component of retail prices for households in capitals – December 2013 (euros/year, ranked)



Source: ACER Database (November–December 2013) and ACER calculations

123 The comparison of the dispersion of the energy components in the retail offers in Europe shows bigger differences in electricity than in gas. The individual demand/supply features of national electricity markets, mainly driven by their diverse generation portfolios and costs, sustain more significant wholesale price differences among countries, which are translated into more varying energy component price ranges.

124 In electricity, in the capital cities of those countries where liberalisation is more mature, and which therefore maintain more offers available and with more varying characteristics (e.g. Belgium, Germany, Great Britain, or Sweden), price diversification is greater, albeit with a very different value for the energy component (e.g. much higher in capital cities of Belgium and Great Britain than in Sweden). In countries applying regulated prices and countries with a share of the market where regulated and liberalised prices co-exist, price dispersion is lower and clustered around the regulated price. While price dispersion may indicate the extent of competitive activity in the market, countries' individual data must be carefully interpreted and not viewed in isolation from other indicators. Large price divergences may also reflect inefficiencies in price formation mechanisms, e.g. lack of information or difficulties comparing prices by consumers and consumer inertia.

125 In gas, a comparison of energy component prices primarily shows that their levels are relatively similar, as matching price ranges can be found in several EU MSs, with the more notable exceptions of certain regulated MSs whose prices rank below the EU average, arguably triggered by the fact that they feature negative mark-ups. These findings are aligned with the conclusions of the wholesale price chapter (see Section 4.2.1), showing the increasing gas wholesale price convergence that was registered among EU MSs.

126 An individual MSs analysis indicates that in the majority of countries, the energy component of retail offers in gas is not widely dispersed. In the large majority of EU MSs, the energy component of 80% of capital city available offers seems not to vary by more than 50 euros/year. The more notable exceptions would be Austria, Germany, Great Britain and Italy, where price diversification seems to be stronger, but also with a different value for the energy component. This fact is possibly supported by the greater number of offers available in those MSs' capital cities, and on the more extended offer of additional services or varying characteristics that may affect final prices.

127 On the contrary, in those MSs applying only regulated gas prices – or in those others offering them and also with a certain share of the market under liberalised market prices (e.g. France, Spain and Belgium) – the price dispersion of the energy component is reduced. In those MSs, the energy component of the regulated tariff seems to set a focal point on which the large majority of offers converge, and price-competition seems more reduced.

Product differentiation

128 Levels of competition in retail markets are not exclusively related to price elements. As the maturity of the market increases, the scope of pure price competition is arguably reduced. In those more mature markets, suppliers develop product diversification strategies and utilise other competition elements to attract and retain consumers or increase their margins. This sub-section discusses the main topics regarding suppliers' product differentiation and non-price competition elements in retail energy markets. These findings are closely connected with the data presented in Section 2.3.3.

129 In a market of undifferentiated products, consumers will be unwilling to pay more for the products of different firms compared to the cheapest offer. However, if differentiated products are offered, firms may be able to charge a higher price. In a fully liberalised energy retail market, the more successful a supplier is in differentiating its products, the more insulated its demand will be from the actions of other suppliers. In this way, an innovative supplier which differentiates its product can carve out its own market and exert market power and thus increase profits.

130 The scope for substantive product differentiation in the energy retail market is debatable. However, over the last few years, retail energy markets have witnessed increased evidence of product innovation offered by both well-established suppliers and by smaller niche players. As discussed, the innovation in retail products may include characteristics such as contract duration, price preservation periods, dual-fuel offers, additional service provision or renewable/green features. These innovative products offer more choice to consumers in an industry that was once considered to be completely homogeneous.

131 Overall product diversification strategies are increasing not only for new entrants, but also for incumbent suppliers, who are adjusting their schemes in order to enhance consumer loyalty, market shares and margins.

132 As the findings in Section 2.2.3 indicated, fixed-price offers prevail in the majority of European countries. These offers give consumers the advantage of protecting themselves from price increases, which allows for easier budgeting. The availability of forward wholesale products allows suppliers to hedge their supply costs and support the offering of fixed retail-prices[88]. Other consumers prefer variable price offers, as these usually present a slightly lower initial price than fixed ones.

133 Many suppliers also recognise the importance for some consumers of 'green issues', and design their products accordingly. Some suppliers even distinguish between different categories of green consumer, and offer them products with different levels of greenness. These products are usually more expensive, as in some cases suppliers need to compensate for the higher supply costs of only sourcing renewable energy. But in certain cases, where green supply costs are competitive, they can result in higher net margins. Entirely green products may be requested by consumers who are happy to pay a premium for such products, while other less green products may appeal to consumers who are environmentally aware, but not ready to pay a (higher) price for energy.

134 Another product diversification strategy is linked to the presence of dual-fuel products (i.e. bundled products combining the supply of electricity and gas with an overall discount). Dual-fuel products usually represent additional savings for consumers, as well as lower costs for suppliers as a result of lower marketing and billing costs. Dual-fuel products also enhance the ability of electricity companies to enter gas markets and vice versa, possibly at the expense of new entrants, who will face increased operational complexity and may feel forced to enter both the electricity and gas markets simultaneously in order to be able to propose attractive commercial offers.

135 In addition, suppliers are also offering free or price-competitive merchandise and/or services associated with the contracting of electricity or gas products. As suppliers are conceivably capable of negotiating better prices than individual consumers, as a result of economies of scale, the offer of these products/services may attract price-responsive consumers who would pay higher prices if independently contracting the associated products. In other cases, and following good marketing strategies, these plans can attract certain consumers willing to obtain products or services that perhaps they did not initially consider they needed. In order to make an informed choice, it is very important that customers receive clear and accurate information on the cost of all associated product or services when buying an energy package. The contracting of these plans may result in higher overall margins for suppliers once the cost of the provided product/service is discounted[89].

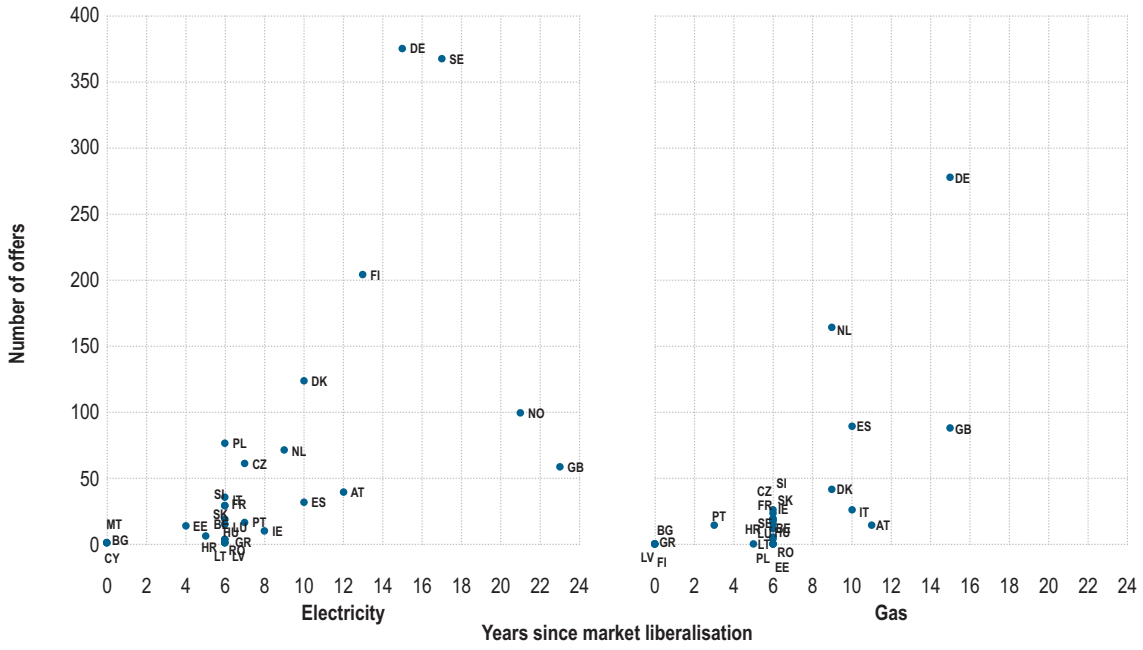
88 Where liquid wholesale markets are not available, suppliers are more dependent on their individual long-term supply contract prices, which arguably translate into more stable retail prices.

89 See: BEUC (2013), Consumer rights in electricity and gas markets – BEUC position paper, December 2013: https:// www.beuc.eu/publications/x2013_083_mst_consumer_rights_in_electricity_and_gas_markets.pdf.

136 Despite the general proliferation of product diversification, it is also evident that suppliers in the capital cities of some countries are innovating very little, if at all (e.g. electricity and gas suppliers in the capitals of Bulgaria, Greece, Latvia and Romania; electricity suppliers in capital cities of Cyprus and Malta; and gas suppliers in capital cities of Croatia, Finland and Poland). This is arguably linked to the dominance of the incumbent electricity or gas supplier which, in the absence of competitive pressure, has no incentive to innovate.

137 Figure 25 provides further evidence that market liberalisation encourages innovation. For electricity, it shows that in countries where market liberalisation occurred earlier, the number of offers is greater, although the capitals of Norway and Great Britain seem outliers. A similar, though less convincing pattern was observed for gas, with Italy and Austria being outliers.

Figure 25: Number of offers in capital cities in 2013 and years since market liberalisation



Source: ACER retail database and ERGEG (2014) and ACER calculations

138 In some countries (e.g. Great Britain and Ireland [90]), electricity and gas suppliers are also expanding their business areas and moving towards becoming 'energy service providers'. Most suppliers offer home insulation, boiler insurance and smart metering products and services. Another emerging market is that of micro-generation. Most suppliers offer products and services in this area, including installations of technologies such as Photovoltaics (PV), wind, solar thermal, biomass and heat pumps.

139 Boiler installation and other types of home improvement, such as insulation and boiler maintenance, are also offered by many suppliers. Some suppliers also offer plumbing, drainage and electrical insurance, and in some cases, in Great Britain, a 'landlord service', which includes inspections and the completion of Gas Safety Records. A limited number of suppliers also offer phone and/or broadband services. In this respect, innovation may result in the bundling of offered products and/or services.

90 Information on the additional non-free product and services provided by suppliers is not available from the ACER's Database; the only way to obtain this information is to search suppliers' websites in all MSs. The Agency did not have the time/resources to do this for all countries and therefore provided this information only for Great Britain. The initial research shows that situation in the Republic of Ireland is similar.

140 Research[91] from the telecom sector suggests that consumers who have a package are less likely to switch supplier than consumers who buy stand-alone products, as consumers may be able to benefit from savings when choosing the same supplier for several services. Furthermore, as bundling strategies seem to reduce the comparability of services offered, consumers seem to be less keen to consider switching supplier, because they think it will be too difficult to compare services offered by different suppliers. Similarly, consumers who have packages appear to be less likely to consider switching, because they think it will be relatively time consuming.

2.3.3 Consumer behaviour

141 This subsection aims to assess how price and non-price competition performance – appraised with the indicators presented above – affect consumer behaviour. To do so, the section assesses: (i) electricity and gas market switching rates; (ii) whether consumers are active in the market; (iii) the reasons consumers choose to switch or not; (iv) whether consumers are satisfied with electricity and gas services; and (v) whether consumers are able to compare suppliers' prices easily. These factors affect the scope and mechanisms that suppliers can use when competing in a given market.

Switching activity

142 The ability to choose between alternative suppliers and the ability to negotiate products' conditions are key features of any competitive market. Household consumers are generally offered standard contractual terms and conditions by suppliers. Therefore, they are unable to negotiate on an individual basis as industrial consumers may be able to do.

143 In previous MMRs, the Agency expressed concerns about the low switching rates registered in many countries. The rate at which consumers switch[92] indicates customer participation in the market, making it an important variable to understand in assessing market functioning.

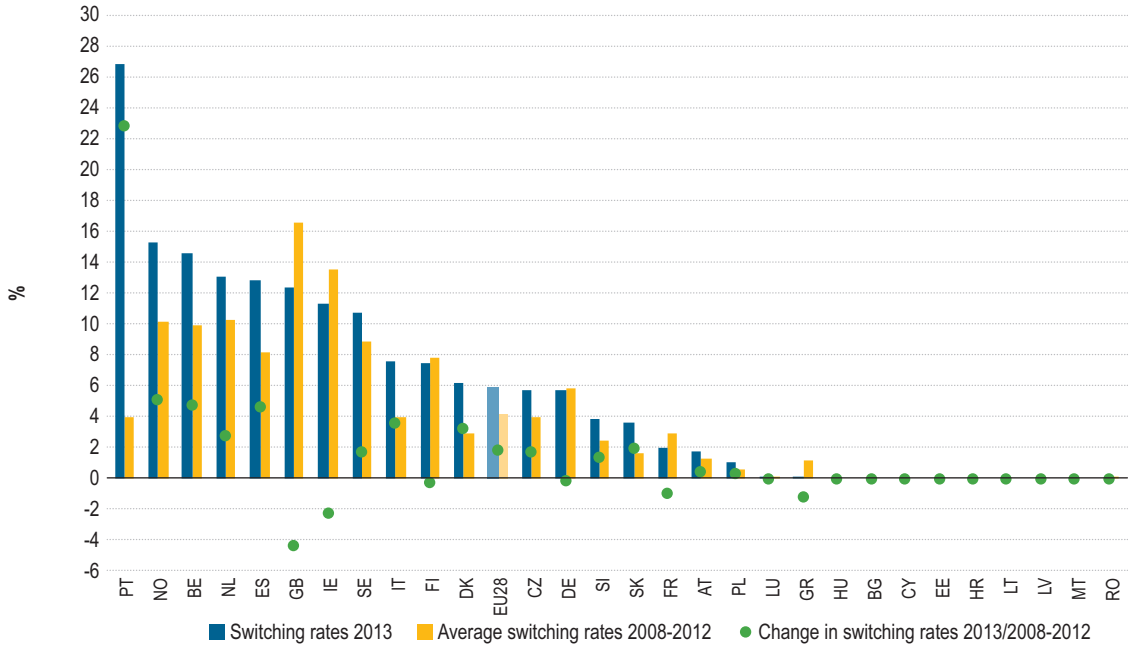
144 In 2013, Great Britain, Ireland, Norway and the Netherlands continued to have higher switching rates than the majority of other countries in the electricity market, all situated above 10% (Figure 26). In 2013 Portugal and Spain recorded a high increase in their switching rates compared to the average values over the 2008–2013 period (an increase of 22.9% and 4%, respectively) and joined the group of countries with switching rates above 10%[93]. Although electricity switching rates remain low in many countries, the overall trend is upward.

91 See: Ofcom (2010), The Communications Report 2010: UK, August 2010: http://www.ofcom.org.uk/static/cmr-10/UKCM-1.52.html.

92 Unless stated otherwise, throughout this report a consumer switch refers to the action wherby a consumer acts and changes his/her supplier and where the meter point associated with a household consumer is re-registered with a different supplier.

93 Switching rates for Spain and Portugal also include switching values within the same group, but different company suppliers (i.e. switching from the regulated tariff offered by an independent company to liberalised market tariff offered by a different company within the same group).

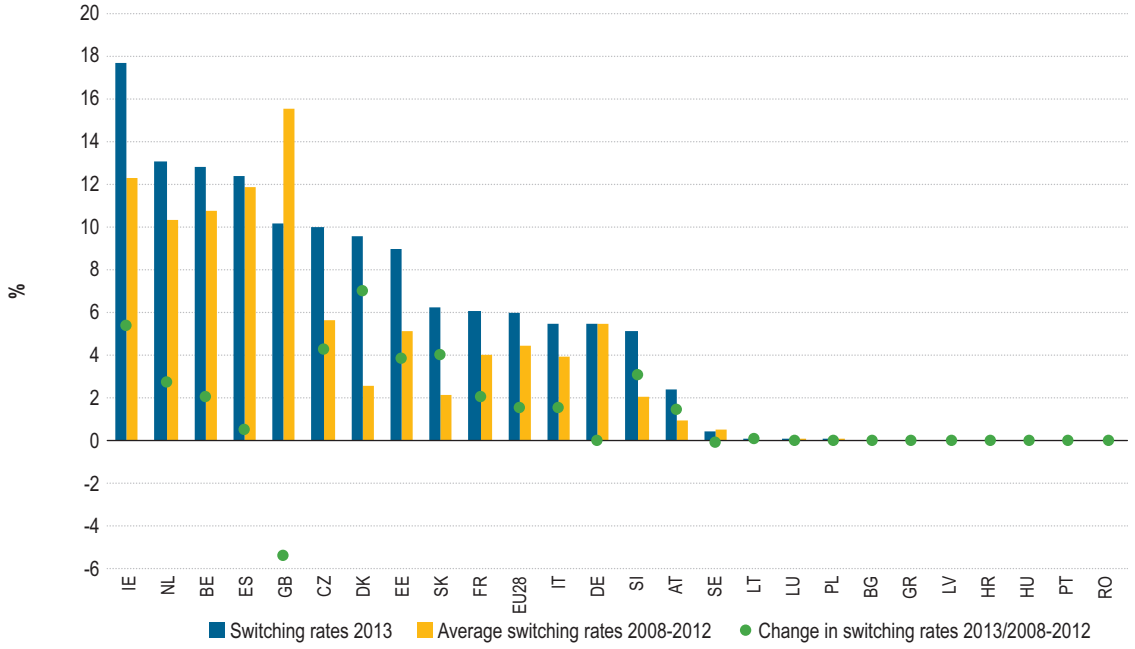
Figure 26: Switching rates for electricity household consumers in Europe – 2008–2012 and 2013 (% and ranked according to switching rates in 2013)



Source: CEER National Indicators Database (2014) and ACER calculations

145 The overall picture regarding gas switching rates (see Figure 27) is similar to that for electricity: switching rates are increasing, but few countries have switching rates above 10%. Nevertheless, the average switching rates across Europe are slightly higher for gas than electricity. The highest increase in gas switching rates in 2013 was recorded (again) in Spain, Slovakia and Slovenia.

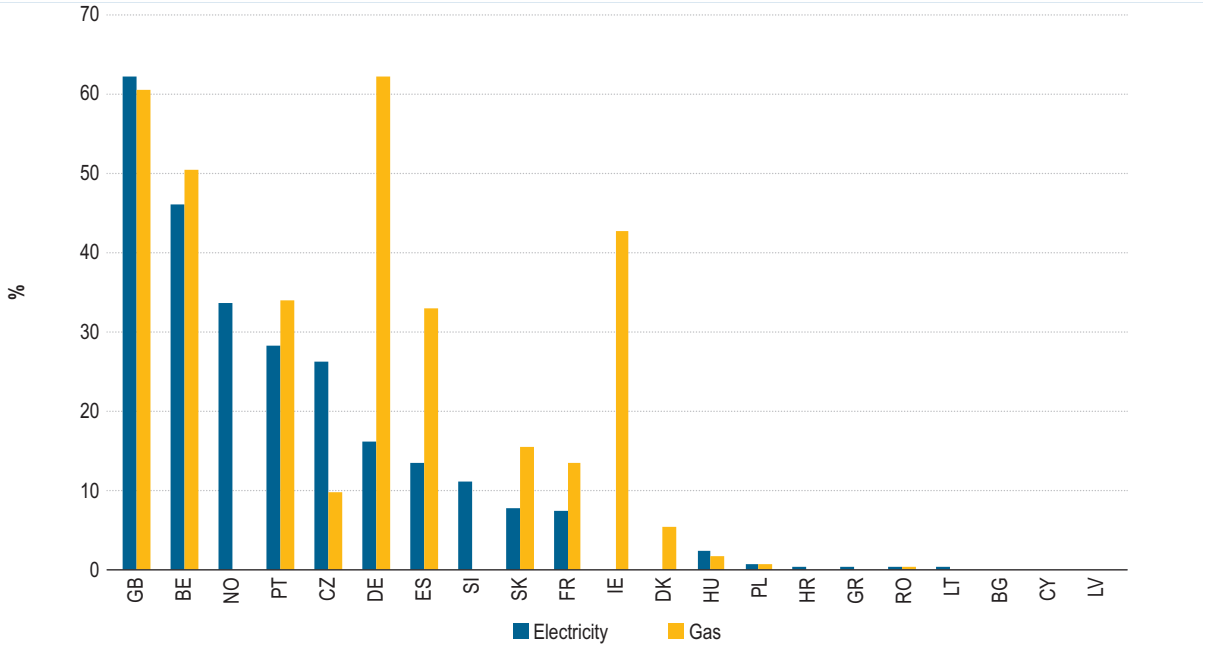
Figure 27: Switching rates for gas household consumers in Europe – 2008–2012 and 2013 (% and ranked according to switching rates in 2013)



Source: CEER National Indicators Database (2014) and ACER calculations

146 Although the overall European switching trend is upward in both gas and electricity markets, Figure 28 shows that the proportion of consumers who have a contract with an alternative supplier to the incumbent is still very low in the majority of countries (the exceptions being Great Britain, Belgium and Portugal in both markets, Norway and the Czech Republic in electricity and Germany, Spain and Ireland in gas markets). This indicator is relevant, as the proportion of consumers with an alternative supplier to the incumbent is indicative of the fraction of consumers who have switched at least once[94].

Figure 28: Proportion of electricity and gas consumers with a different supplier than their incumbent supplier – December 2013 (%)



Source: CEER National Indicators Database (2014) and ACER calculations

Notes: For Belgium, the electricity figure is based on data for Flanders only (representing around 58% of the overall electricity market – based on the number of access points), while the gas figure is based on data for Flanders and Wallonia (representing 86% of the overall gas market – based on the number of access points).

Switching behaviour

147 While the switching rates data presented above may indicate the extent of competitive activity in the market, countries' individual data must be carefully interpreted and not viewed in isolation from other indicators. This sub-section aims to explore the reasons and the interactions triggering switching behaviour in different countries.

Market liberalisation

148 Switching rates are usually higher during the early stages of market opening, largely triggered by more significant price-competition (e.g. the Slovenian gas market in 2012[95]). They are also high in competitive markets, where consumers are both price and non-price responsive (e.g. Great Britain

94 Conversely, figures on the proportion of consumers still with their incumbent supplier are indicative of the proportion of consumers who have never switched, although they may also include those consumers who may have switched away from the incumbent and subsequently switched back to it (i.e. switched more than once).

95 See: MMR 2012 case study 7 on gas switching rates in Slovenia: http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER%20Market%20Monitoring%20Report%202013.pdf.