ERGEG 2010 Status Review of the Liberalisation and Implementation of the Energy Regulatory Framework

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INFORMATION PAGE

Abstract

On 13 December 2010, ERGEG published its Status Review of the Liberalisation and Implementation of the Energy Regulatory Framework (C10-URB-34-04). The present report draws conclusions primarily from the National Reports of the national energy regulators and from several additional, also external sources in order to build an assessment of the development of the European energy market. The Status Review refers to the situation in 2009 and tracks the development of national electricity and gas markets and the progress towards a single EU energy market.

Target Audience

Member States, European Institutions, energy suppliers, traders, electricity and gas customers, electricity and gas industry, consumer representative groups, network operators, academics and other interested parties.

Related Documents

CEER/ERGEG documents

- ERGEG Status Reviews of the Liberalisation and Implementation of Regulatory Framework, 2006-2009, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/NATIONAL_REPORTS/National%20Reporting%202009
- Implementation of EC Good Practice Guidance for Billing. ERGEG Status Review, Ref: E10-CEM-36-03, 8 September 2010, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Customers/Tab1/E10-CEM-36-03_EC%20billing%20guidance_8-Sept-2010.pdf
- ERGEG Status Review of End-User Price Regulation as of 1 January 2010, 8 September 2010, Ref: E10-CEM-34-03,http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Customers/Tab1/E10-CEM-34-03_price%20regulation_8-Sept-2010.pdf
- ERGEG Customer Information Handbook. A review of good practices, Ref: E06-CPR-04-03, 6 December 2006, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Customers/2006/E06-CPR-04-03_Customer_Info_Handbook.pdf

- ERGEG Status Review on Regulatory Aspects of Smart Metering (Electricity and Gas) as of May 2009, Ref: E09-RMF-17-03, 19 October 2009, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Customers/Tab/E09-RMF-17-03_SmartMetering-SR_19-Oct-09.pdf
- ERGEG GGP on Customer Compliant Handling, Reporting and Classification, Ref: E10-CEM-33-05, 10 June 2010, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Guidelines%20of%20Good%20Practice/Other/E10-CEM-33-05_GGP-ComplaintHandling_10-Jun-2010.pdf

External documents

- Regulation (EU) No 994/2010 of the European Parliament and of the Council of 20 October 2010 concerning measures to safeguard security of supply and repealing Council Directive 2004/67/EC.
- Communication from the European Commission: Energy infrastructure priorities for 2020 and beyond – A Blueprint for an integrated European energy network, 17 November 2010.
- European Commission Report on progress in creating the internal gas and electricity market, COM(2010)84 final, http://ec.europa.eu/energy/gas_electricity/doc/2010/com_2010_0084_f_en.pdf

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1 Executive Summary

1.1 Introduction

Article 23 Electricity Directive 2003/54/EC and Article 25 Gas Directive 2003/55/EC require that national energy regulatory authorities (NRAs) publish an annual report on the outcome of their monitoring activities related to the functioning of the electricity and gas markets in their country.

Through ERGEG, the content of these National Reports is coordinated with the European Commission (Commission). The National Reports of all EU countries and Norway[1] and the overall ERGEG assessment reports, for each year since 2005, can be found on the ERGEG website[2].

In addition, national energy regulators also provide the European Commission with raw data for its annual benchmarking report on the opening of the electricity and gas markets. Although committed to providing harmonised and comprehensive information, national energy regulatory authorities have diverse data collection powers. Therefore, not all data could be collected for all Member States.

The Commission's 3rd Package concerning the internal electricity and gas markets, which entered into force on 3 September 2009, provides for additional reporting duties for national energy regulators. However, these new reporting duties are not yet relevant for this ERGEG Status Review, which relates to developments in 2009.

The present 2010 ERGEG Status Review of the Liberalisation and Implementation of the Energy Regulatory Framework draws conclusions primarily from the National Reports of the national energy regulators and from several additional, also external sources in order to build an assessment of the development of the European energy market. The report identifies general developments and tendencies, without prejudice to possible exceptions in individual cases.

The report refers to the situation in 2009 and tracks the development of national electricity and gas markets and the progress towards a single EU energy market. In terms of remedies, the provisions of the 3rd Package go a long way in addressing the problems identified in this Status Review.

[1] In this text, "European Union" and "EU" generally refer to "EU+Norway" in order to simplify reading. This has to be borne in mind when comparing presented numbers with other sources.
[2] http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/NATIONAL_REPORTS/National%20Reporting%202009

1.2 Key findings

In late 2008 and during 2009, the world was hit by the financial and economic crisis. The crisis put pressure on planned investments – due to possible financing difficulties and uncertainties affecting the supply side – and resulted in a fall in demand, which is more pronounced for gas than for electricity. However, it also created new opportunities for competition, since more gas became available at lower prices at liquid hubs.

Although reduced gas and electricity consumption had an impact on end-user prices, the fall witnessed in wholesale energy costs was not entirely passed on to final customers.

The work of national regulatory authorities in 2009 generally put a stronger focus on the whole range of consumer issues, from consumer protection on the one hand to empowering customers, including smart meters, on the other.

Better cooperation between power exchanges and the trend of increasing energy trade are promising signs for better functioning markets. However, this positive evolution did not yet produce more competitive markets. The degree of market concentration did not change very much as compared to 2008.

In electricity, the European Union has adequate resources to cover peak demand. Still, major new investment in transportation and storage infrastructure will be necessary to connect highly concentrated and often intermittent production and demand in the European Union.

In natural gas, the situation is less comforting. Many Member States still depend heavily on pipeline imports, which led the European Union to diversifying transportation routes. The market share of LNG, which is a more flexible source of supply than pipeline gas, increased to reach some 20% in 2009. At the same time, decreasing indigenous gas production and expected growth of pipeline import dependence prompted the European Union to pass a regulation to safeguard security of gas supply.

Generally, the national reports relating to 2009 showed some positive developments, especially on wholesale markets and at power exchanges. **The 3rd Package will contribute to creating an even more competitive market.**

However, the evolution towards a real competitive retail market is still slow, cutting off consumers from the benefits of increased efficiency on wholesale markets. Unbundling of network companies is still insufficient. **NRAs appreciate that the 3rd Package increases their powers and tasks. Nevertheless, in the context of budget austerity, there is a risk that regulators will not have adequate financial and human resources not only to fulfil their current tasks but particularly to take on their new tasks, which have to be transposed by March 2011.** ERGEG hopes that this situation can be avoided. Full and quick implementation of the 3rd Package is needed in order to progress in market liberalisation and market integration.

1.3 Wholesale markets

Gas wholesale

The most obvious impact of the economic crisis in 2009 was the **significant slump in gas consumption** (some 7% in 2009 against 2008). Oil price movements directly impacted on gas wholesale prices, which is due to the link between oil and gas prices in many long-term gas supply agreements.

Hub prices were substantially lower than the oil-linked prices in long-term contracts not only due to the economic crisis, but also because of increased LNG upstream capacity and the overwhelming success of unconventional gas in the United States, even in times of reduced demand. The oversupply of LNG put pressure on price-setting mechanisms. The price spread between short term LNG and long-term pipeline imports became more significant in 2009.

For most markets, which are still national, concentration slightly decreased in 2009, partly due to short term trading.

Several positive initiatives towards better market integration were reported upon, mainly in regard to more transparency and better allocation of capacity. Still, many of the initiatives lack speed due to their voluntary character. Stricter, common requirements will be necessary for them to achieve their goals.

Electricity wholesale

In 2009, generation capacity increased by some 3.5%. Generation and consumption dropped by some 4.0% and 2.8%, respectively. The relation between production and consumption remained roughly in balance in 2009.

Similarly to gas wholesale markets, **market concentration in electricity wholesale markets still remains high on a national basis**. Ten countries (out of 28) reported an increase in market concentration from the previous year (measured as the market share of the three biggest generators in terms of capacity) while eleven countries reported a decrease and seven reported no change.

Increased market coupling and market integration should result in greater convergence of prices. **The significant decrease in differences between Nord Pool Spot and EEX/EPEX Spot between 2008 and 2009 marks a positive development.** The prices of coal, gas and CO_2 allowances fell drastically, which also affected electricity prices.

Trading in the EU/EEA spot markets (day-ahead) evidently **increased slightly year on year**: the volume of electricity traded at power exchange spot markets (day-ahead) rose by 14 TWh or 1.3%. The same holds for electricity volumes traded on the futures markets at power exchanges. Finally, the number of active participants remained stable.

Network interconnection capacity slightly increased in 2009 (2.5%).

Supervision of wholesale markets

Besides enabling non-discriminatory network access, the supervision of energy trading is a key factor to foster market integrity and a level playing field. The European Commission is now taking up the proposals of energy and financial regulators on how best to ensure market integrity in energy trading. Legislative proposals which aim at protecting energy trading from market manipulation and insider dealing are under consideration. Energy regulators have stressed that one important part of such a regime would be transparency of fundamental data, i.e. all the information that is price relevant. Given the existing links between the energy markets and those of other commodities like coal, CO_2 and oil, access to such related information and transparency of fundamentals in these markets is also relevant.

Besides the prevention of market manipulation and insider dealing, energy trading also needs better protection from VAT fraudsters. NRAs support the process of identifying effective means to prevent VAT frauds without creating unnecessary barriers to trading in the market.

1.4 Retail markets

Contrary to the previous year, in most Member States households were able to benefit from **a significant decrease on their gas bill** (some 10% down from H2 2008). For industrial customers price decreases were even greater (some 24% on H2 2008).

In half of the countries, electricity prices for households rose due to an increase in at least two or three price components, while they decreased in the other half of the countries. Industrial prices for electricity also went up in half of the countries.

This evident difference between gas and electricity retail markets may be due inter alia to different procurement and pricing strategies in the two markets.

The number of households with **regulated electricity prices almost remained at 2008 levels,** making still up more than half of European households at around 57%. **A similar conclusion can be drawn for regulated end-user prices in the gas sector,** where they are applied in 16 Member States for households and in 13 for non-household consumers.

Concerning regulated end-user prices the European Court of Justice (Case C 265/08 – 20 April 2010) stated that the Directives of the 2nd Package did not preclude national legislation which permits the determination of 'reference prices' after 1 July 2007, provided that such intervention: (a) pursues the general economic interest of maintaining the price of supply to final consumers at a reasonable level, taking into due account the objectives of liberalisation and the necessary protection of final consumers; (b) is necessary to achieve such an objective in the general economic interest and, consequently, for a period that is necessarily limited in time, and (c) is clearly defined, transparent, non-discriminatory, verifiable and guarantees equal access for energy companies to consumers.

In 2009 the **electricity and gas retail markets remained highly concentrated** with little evidence of new entry of independent suppliers in the majority of Member States.

Higher switching rates were observed in six Member States for the entire gas retail market, whereas in five Member States the switching rates were unchanged at zero and in three countries a decrease was recorded. Looking at households only, switching rates increased in nine but remained stable in ten Member States. For non-households the switching rates stayed at zero in five Member States and increased in the rest of the Member States (four) that reported for both years. It is interesting to note that Estonia, where price regulation was removed in 2009, recorded an increased switching rate for households.

In electricity higher switching rates for the entire retail market were observed in nine Member States. In four countries they stayed the same and in three countries they decreased. **In the household segment switching rates increased in ten countries** while in another ten countries no switching at all took place. The switching rates of non-household customers rose in six countries, declined in five countries and stayed at zero in three countries. As a general remark, there seems to be a positive correlation between low switching rates of households and price regulation.

It is clear that **there is still a lot of work to be done to develop market structures with a free choice of suppliers in retail markets and to encourage and support switching**.

1.5 Consumer protection and Public Service Obligations (PSOs)

The financial and economic crisis reinforced NRAs' commitment to consumer protection. The number of **customers with social tariffs** reached around 6.7 million in the electricity market and 800.000 in the gas market, **a threefold increase on the previous year.**

In 2009 in many countries **new initiatives to reinforce customer information** (better understanding of offers, prices and rights) were proposed by regulators, including dedicated web portals and handbooks. In view of the implementation of the 3rd Package it is obvious that the role of NRAs in this area will be strengthened (e.g. price comparison system, clearinghouse to promote switching, consumer complaints).

Around 2/3 of NRAs have or share with other institutions responsibilities in the field of customer complaints.

Only **two countries completed the roll-out of smart electricity meters in 2009**. Four more countries decided to expand roll-out and in eleven other countries, it is under discussion. **As far as gas is concerned, only Italy** has a planned roll-out, while in four other countries the roll-out is under discussion. **The diversity of approaches to smart meters and a lack of shared definitions and key concepts even at national level may represent an obstacle to future developments.**

At the request of the 2nd London Forum, ERGEG has drafted a Status Review on the implementation of the EC Good Practice Guidance for Billing[3]. In most countries the quality of billing is ensured by way of legal requirements. Nevertheless, the Status Review unveiled that the situation is still unsatisfactory: customer understanding of bills is quite limited; bills only deliver the most basic information; annual billing is still very common; and in the majority of countries customers receive combined bills (energy and network charges).

1.6 Security of supply and infrastructure

Electricity

The overall increase of capacity in power generation was around 3.5%, which is slightly more than in 2008. Except for two countries, all Member States had surplus generation so that they were able to cover their peak load demands.

Several new electricity infrastructure projects were initiated, some of which benefitted from financial support under the European Energy Programme for Recovery (EEPR) launched by the European Commission. Nevertheless, as already pointed out in the previous review report, **more investment in interconnections between Member States is needed** to address the growing share of generation from intermittent renewable energy sources.

Gas

Data from the national reports shows that production capacity has again fallen since the previous year, this time by 5%. Due to the economic crisis both production and imports of gas have also declined by 9.83% and 11.95%, respectively.

Despite reduced gas demand, Europe remains exposed to the risk of major pipeline import cuts. The chance of gas supply disruptions highlights the importance of flexibility and the **need for more investment in storage, LNG, technical equipment to reverse flows and interconnections** between Member States and outside of the EU. Although a number of gas infrastructure developments benefited from financial support granted under the EEPR in 2009, the existing infrastructure is still not sufficient to meet future forecast demand increases and therefore needs further enhancement.

[3] Implementation of EC Good Practice Guidance for Billing. ERGEG Status Review, Ref: E10-CEM-36-03, 8 September 2010, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Customers/Tab1/E10-CEM-36-03_EC%20billing%20guidance_8-Sept-2010.pdf

1.7 Regulation and unbundling

Regulation and effective unbundling are key elements for well-functioning and competitive energy markets. 3rd Package provisions oblige Member States to ensure the independence of NRAs and to safeguard that they can exercise their powers in an impartial and transparent manner. Several regulators have indicated that austerity measures might directly or indirectly hinder their ability to carry out their duties.

Insufficient unbundling remains an obstacle to genuine market integration and infrastructure development. Indeed, despite progress, many distribution companies that are part of a vertically integrated company cannot act completely independently. They don't have an independent communication strategy and this affects negatively the development of the market. Depending on market design, active communication policy by the DSO might be necessary as well. As highlighted in the last ERGEG report, DSOs have to play a role as market facilitators[4].

[4] ERGEG 2009 Status Review of the Liberalisation and Implementation of the Energy Regulatory Framework, Ref: C09-URB-24-03, 10 December 2009, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/NATIONAL_REPORTS/National%20Reporting%202009/C09-URB-24-03_ReviewReport2009_10-Dec-09.pdf

2 Gas wholesale markets

Key points

- LNG increased its market share in Europe due to rapid development of unconventional gas volumes in North America.
- European production and import equally shouldered volume risks.
- Short term trading contributed to lower market concentration in several Member States.
- Liquidity on spot markets is higher than before the crisis; liquidity for futures contracts is limited.
- Concentration decreased in many Member States.

2.1 Introduction

Last year's report already tried to gauge the consequences that could spring from oversupplied markets in north-western Europe, more liquid short term trading and possible developments at trading venues in Europe. Figures collected by European energy regulators mostly confirm the optimistic expectations, but it seems premature to make a final statement about whether the development has actually increased liquidity in the long-term or whether it was just a short term phenomenon.

2.2 Wholesale markets

Consumption of natural gas in 2009 came down by some 7% (or 393 TWh) from 2008 levels. The reduced demand was partly offset by a reduction of European production; Great Britain and the Netherlands reduced their output by 116 and 64 TWh, respectively. Overall production in the EU fell by some 220 TWh. This translates into an EU contribution of about 44% to covering volume risk.

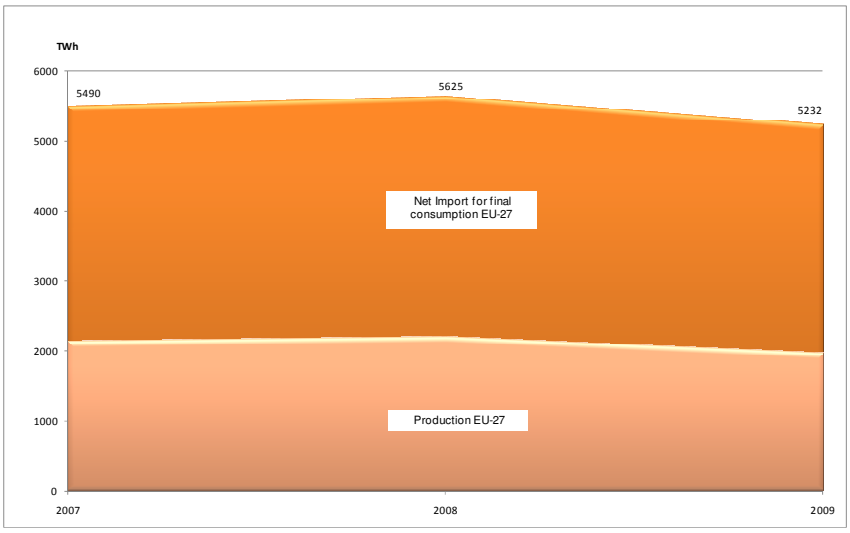

Figure 1: Demand and production of natural gas (2007-2009)

In terms of import sources, oversupply on the US market caused by major nonconventional gas volumes was partly responsible for increasing the LNG market share in the EU to some 20% (2007: 13%); LNG volumes were up by 89 TWh even in times of reduced demand. As argued already in the last report, the price spread between short term LNG and long-term pipeline import gas favoured the former. For instance, French spreads changed from € 1 per MWh in 2008 to € -7 per MWh in 2009 (PEG Nord D/A vs. long-term Waidhaus pipeline gas prices). This represents a spread of more than 50% and is of course unsustainable in the long run.

Pipeline congestions resulted in quite untypical price zones on the continent, with oversupply from LNG volumes redirected to Europe causing lower prices in north-western Europe than in those regions which are primarily supplied via oil indexed contracts from Russia. Reportedly this has led to adaptations of some of these long-term contracts: more flexibility and short term price signals have been included in price formulas.

2.3 Concentration

In many markets concentration slightly decreased, partly due to cross-border activities. Even so, markets remained national.

The Herfindahl-Hirschman Index, HHI, shows market concentration as the sum of squared shares of individual companies. This means that the index varies from close to zero (but cannot be exactly zero) to 10,000 (if there is only one company). The decrease of the HHI in 2009 may also be due to the increased share of short term gas volumes in total supply on the EU wholesale market. It is striking, however, that concentration in Germany increased in spite of more trading in 2009. To give a general impression, it is noted that exchange-based spot trading increased in the north-western region (France, Germany, the Netherlands and Great Britain), tripling the less liquid markets but still increasing by some 40% even at the NBP OCM, i.e. at the intra-day market.

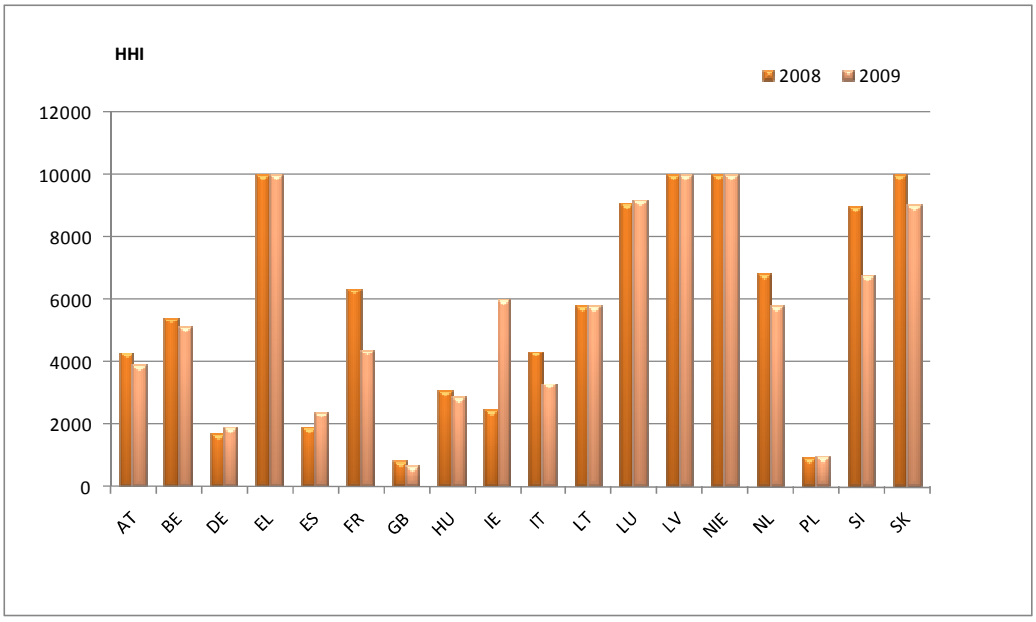

Figure 2: Concentration of national gas wholesale markets

2.4 Market integration

2009 saw a number of positive developments towards better market integration. Several Member States took steps to enlarge trading areas by merging balancing zones:

France: merger between east, north and west;
Germany: reduction of the number of trading zones from ten to six.

This should foster more liquid wholesale markets, which is one of the pre-requisites for a future price-based congestion management system, for instance market coupling.

In terms of better capacity management several projects have succeeded in improving the situation.

France: a variety of projects, e.g. the French-Belgian Capsquare (Fluxys-GRTF), the Spanish-French common commercialisation of the interconnector at Larrau (ENAGAS-TIGF);
Austria: international trade has been facilitated by signing Operational Balancing Agreements and Interconnection Point Agreements for the interconnection between Austria and Slovakia; comparable agreements are envisaged for the border between Austria and Italy as reported by Austria.

In the ERGEG North-West gas region more than 80% of storage capacity (level, inflow and outflow) is already published on a daily basis. This should enhance market transparency and facilitate cross-border market integration.

All these initiatives aim to increase transparency of fundamental data, optimise usage of transport capacity and facilitate cross-border trade. Still, many of them are developing too slowly due to their voluntary character. For a harmonised system enabling smooth hub-to-hub trade and making best use of existing transport capacity, more stringent and common requirements are necessary.

2.5 Conclusions

Preliminary figures for 2010 seem to suggest that at least liquidity on the spot markets has further increased since 2009. However, this is seen to be mainly based on the double effect of the economic crisis – and therefore reduced demand – and the “shale gas revolution”, which dramatically increased available short term gas internationally. As a consequence more LNG was shipped to the EU, increasing the LNG market share in physical delivery.

Increasing LNG volumes at the same time meant that imports and indigenous production had to step back; they were more or less equally hit by the recession.

The rise in liquidity on spot markets did not reach futures markets. This suggests that hedging is done via oil products on many markets, implying that oil indexation has still a vital role to play in risk management.

Concentration on wholesale markets decreased in many countries, possibly due to more short term trade. Initiatives of market integration, mainly targeting more transparency and better allocation of capacity, witnessed some progress. Whether this will have more pronounced long-term effects remains to be seen.

3 Electricity wholesale markets

Key points

- Generation capacity increased steadily in the countries surveyed (3.5% up from 2008 levels). There was a year-on-year decrease in electricity consumption of about 2.8%. Production and consumption were roughly in balance in 2009. Network interconnection capacity saw a 2.5% increase on 2008.
- Market coupling/splitting spread to more regions. The differences in wholesale electricity spot prices between power exchanges decreased significantly.
- Despite progress in market integration, market concentration remained high on a national basis. The average percentage market share of the three biggest generators by capacity showed a minor decrease from about 76.0% to 75.4%. The number of generators in each country with more than 5% ownership was unchanged, with a total of 96.
- Trading at power exchanges, both physical power trading and trading on futures markets, showed a steady upwards trend. The number of participants at the power exchanges largely remained at 2008 levels, with the exception of the Nordic power exchange, where there was a significant increase.

3.1 The European electricity market – capacity, generation and consumption

Generation capacity in the EU increased by some 28 GW (approximately 3.5%) in 2009 (Figure 3).

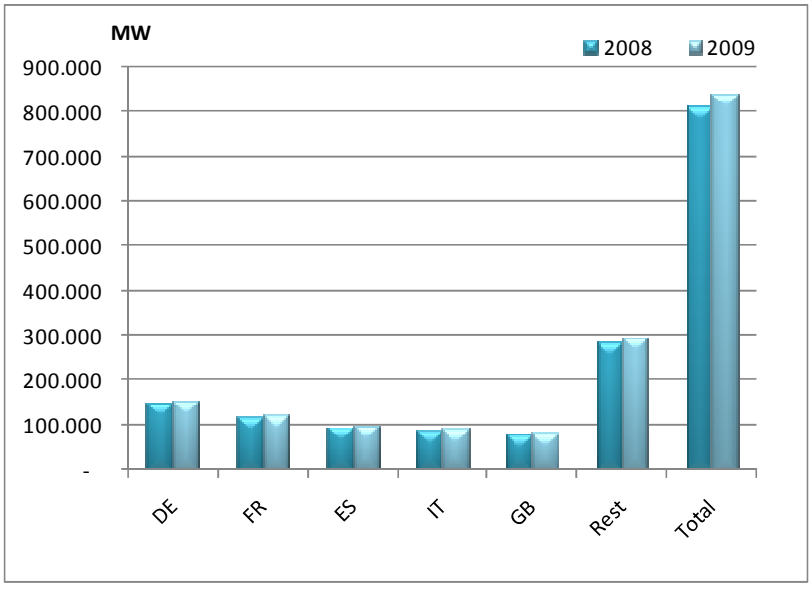

Figure 3: Generation capacity in 2008 and 2009

Figure 4 shows electricity generation and consumption in 2009. Both of them decreased as compared to last year, by 4.0% and 2.8%, respectively. Total consumption in the EU was about 3,160 TWh, with consumption falling short of production by only 12.0 TWh.

Several regulators indicated that the decrease in consumption was caused by the severe economic downturn in Europe, with some countries like Ireland experiencing deep recession.

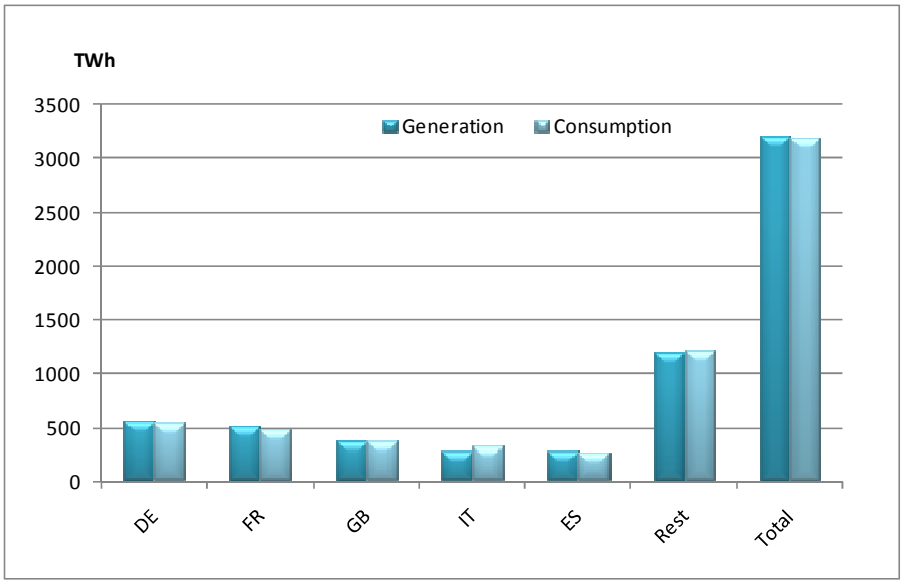

Figure 4: Generation and consumption of electricity in 2009

3.2 Wholesale electricity prices

Increased market coupling and market integration should result in greater convergence of prices. By way of example:

Sweden: "In 2009, a common electricity price prevailed throughout Scandinavia for 26% of the time, which is three times higher than in 2008."
Denmark: "In 2008 and 2009 the Nord Pool area has generally the lowest prices, based on cheaper generating methods (hydro in Sweden, Norway and Finland and nuclear in Sweden and Finland). Continental Europe which is more dependent on thermal based methods of generation has the highest prices in this figure. Denmark swings somewhere in the middle of those prices, reflecting its geographical situation and the mix of marginally cheap wind generation as well as more expensive thermal generation. One can see a sharp decline of all (system and spot) prices from the end of 2008. This is basically caused by the worldwide economic downturn and reduced demand for electricity."
Spain: "Price convergence in the Iberian wholesale market (MIBEL) has increased. During 75% of the time, day-ahead spot prices in Spain have been equal to those in Portugal."

Figure 5 shows the price difference in wholesale electricity prices between two selected power exchanges – Nord Pool Spot and EEX/EPEX Spot. Prices converged between 2008 and 2009.

However, even though prices give important market information, the use of price correlation as an indicator for market integration must be cautious.

The German power price is driven inter alia by the fossil price drivers such as the price of coal, gas and CO_2 allowances. In the last quarter of 2008, the financial crises let these prices plummet to a new low, at which they stayed throughout 2009. This affected the German electricity prices. Additionally, the Nordic hydro balance was better in 2008 (a year with much precipitation in the Nordic region) and Nordic power prices were more affected by continental prices in 2009.

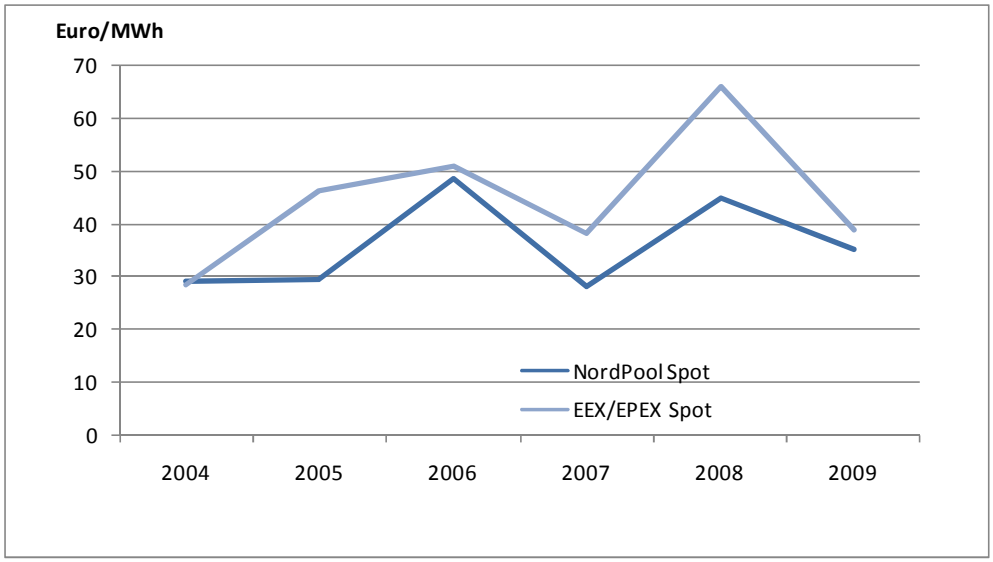

Figure 5: Price comparison between Power Exchange Nord Pool Spot
and Power Exchange EEX / EPEX Spot (Phelix Base Day-Ahead), 2004 - 2009 (annual average)

3.3 Market dominance

Well-developed competition contributes to the efficient use of resources and efficient price setting. Market dominance gives certain players the ability to influence prices and is therefore a sign of ineffective competition.

Ten out of 28 countries reported an increase in market concentration as compared to 2008 (as in the market share of the three biggest generators by capacity). However, eleven other countries reported a decrease and in seven countries the situation was unchanged. This translates into a

small overall decrease (less than 1%) in the average market share of the three biggest generators, from 76.0% to 75.4%. Together, the three biggest generators of each country hold 600.000 MW out of a total capacity of 840.000 MW. Only Great Britain and Austria could report a percentage below 50% (46% and 49.2%, respectively) for 2009.

The total number of generators with more than 5% percent ownership by capacity remained stable at 96. Even though this overall number did not change, it results from an increase in three countries (Belgium, Northern Ireland and The Netherlands), offset by a decrease in three other countries (Austria, UK and Norway). In 22 countries the situation was unchanged.

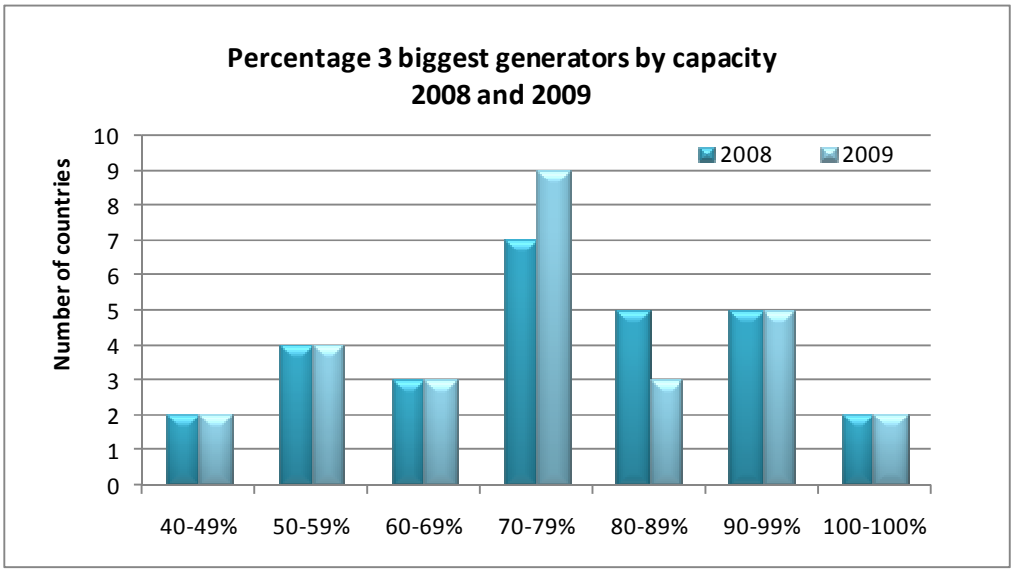

Figure 6: Concentration in generation capacity

Regarding the Herfindahl-Hirschman Index, 20 countries reported their HHI by capacity: eleven countries showed an HHI decrease (less market concentration), seven reported an increase (higher market concentration) and for two countries, the situation was unchanged. The average index for these 20 countries fell from 4208 in 2008 to 4177 in 2009, which means a small average decline in market concentration.

However, taking into account examples of market integration like the Nordic market or the German/Austrian wholesale market, the HHI should rather be calculated on a market, i.e. cross-country, basis.

3.4 Structural developments

Some relevant reports on the subject:

Belgium: "It is clear that Electrabel's dominant position weakened during 2009 although it continues to remain very strong. The production market's HHI is still above 6,000."
Italy: "The Enel Group's market share of net electricity production shrank from 31.4% in 2008 to 29.8% in 2009."

3.5 Market liquidity

Increased spot and futures trading at power exchanges contribute to more liquid and transparent wholesale markets. Liquid wholesale markets are central to efficient competition and competitive retail markets.

Trading on the EU/EEA spot markets (day-ahead) evidently increased between 2008 and 2009: the volume of electricity traded at power exchange spot markets (day-ahead) rose by 14 TWh or 1.3 %, this means that one third of total generation was traded on the spot market.

The electricity volumes traded on the futures markets at power exchanges increased significantly and the same applies to the OTC contract volumes cleared at power exchanges.

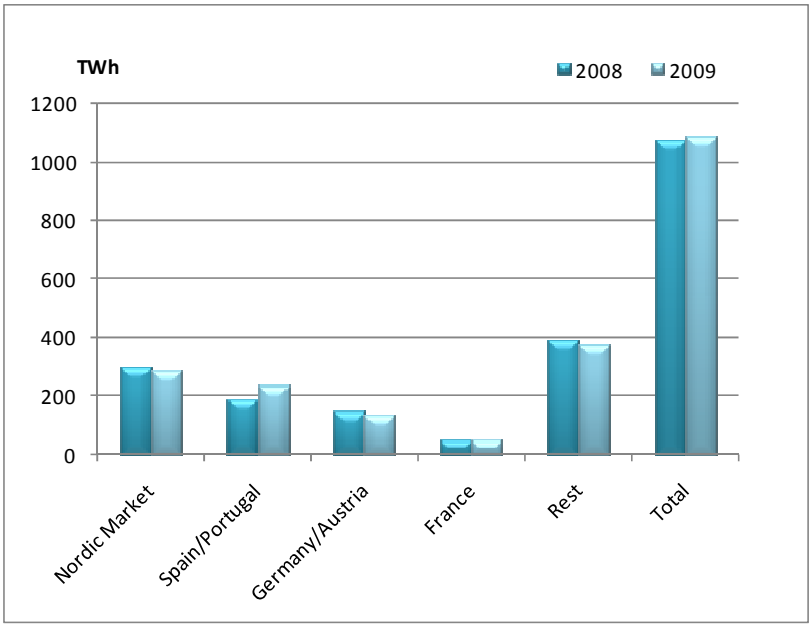

Figure 7: Electricity traded at power exchanges - spot (day-ahead), 2008 and 2009

In terms of a well-functioning market, it is not only volumes that are important measures of the activity at power exchanges; a significant number of actors/traders is important as well.

The number of participants active at power exchanges stayed approximately at the same level as in 2008, with the exception of the Nordic power exchange, where there was a significant increase. The highest numbers of companies active at a power exchange came from Germany, Sweden and Norway.

3.6 Market coupling and physical integration

Market coupling

Differences in trading regimes and in the calculation, allocation and management of available capacity are the primary obstacles to the efficient use of existing capacity. The goal in the EU is to have fully integrated markets with harmonised rules on capacity. In particular, the target model for the day-ahead timeframe is price coupling of day-ahead electricity markets.

The ERGEG Regional Initiatives tackle some of the key barriers the Internal Energy Market faces by increasing transparency, coordinating regional developments and harmonising capacity calculation and market rules. The benefits liberalisation is expected to bring for European customers will only unfold sufficiently if electricity markets go beyond national boundaries.

Implicit auctions and coordinated capacity allocation procedures may be the first steps towards market integration, allowing for more efficient use of existing infrastructure. The general term “implicit auction” describes the merging of energy trade and capacity allocation activities into a single operation, thereby integrating the participating markets.

Implicit auctions can take the form of market coupling or market splitting. Market coupling is a decentralised approach for markets with more than one power exchange (PX), requiring a minimum degree of market harmonisation. Market splitting is a centralised approach, requiring a single PX that operates in several countries and divides markets into different zones by introducing a price differential to modify the flow of power. By decreasing or increasing area prices, the electricity flow is altered until it matches the allocated grid capacity.

2009 saw some positive developments in this regard. Market coupling/splitting (initially implemented in the Nordic region) spread to other regions, which started to integrate day-ahead markets. Here are some relevant reports on the subject:

Belgium: “The Day-Ahead market coupling between Belgium (Belpex), the Netherlands (APX) and France (Powernext) remained successful in 2009. Belpex and Powernext were coupled for 67% of the time and Belpex and APX for 87% of the time. Belgium was only isolated from the other two markets for 2% of the time.”

The Czech Republic: "31 August 2009 saw the interconnection of the day-ahead markets in the Czech Republic and Slovakia, and trading based on the principle of implicit auctions was launched on that day. Taking this step, the Czech Republic and Slovakia have joined the group of the first countries with integrated markets in Europe."
France: "In 2009, CRE approved new sets of auction rules on French interconnections. The introduction of new mechanisms, such as the 'Use-It-Or-Sell-It', has improved congestion management at the French borders. Moreover, the implementation of common and harmonised rules in the Central-West region will facilitate trades in the region."
Norway: "Actions have been taken to harmonise and improve the Nordic principles and practices with respect to congestion management. Svenska Kraftnät has adopted a formal decision to subdivide the Swedish electricity market into four bidding areas from 1 November 2011. The decision is fully in line with the commitments offered to the European Commission, which were approved by decision of the Commission 14 April 2010 (see also section 3.2.1)."
Denmark: "Danish electricity and gas wholesale markets are being increasingly integrated with neighbouring markets. In November 2009 the EMCC (European Market Coupling Company) market coupling solution with implicit auctions for electricity cross-border trading between Denmark and Germany was launched. The EMCC market coupling solution has been quite successful coupling the Nordic region with Germany. After volume coupling was introduced only 0.3% of the flows have gone in the 'wrong direction' – i.e. from the high price to the low price area – compared to around 20% during past explicit auctions. In the neighbouring CWE region, a price coupling solution for implicit auctions between Germany, the Netherlands, Belgium, Luxembourg and France was launched as well. The CWE Market Coupling was launched on 9 November 2010 in parallel with an Interim Tight Volume Coupling between CWE and the Nordic region via EMCC."
The Netherlands: "In past years, Energiekamer has put substantial effort in the integration of the Dutch wholesale electricity market with the surrounding markets. One achievement is that through the measures that have been taken on the principle of netting and intraday trading on the borders with Germany and Belgium, the available day-ahead capacity for imports and exports has increased in 2009 with the size of the nominations of annual and monthly capacity in the opposite direction."
Ireland: "The SEM Committee, as part of their work plan for 2009, asked the Regulatory Authorities to review the issues surrounding interconnection between Ireland and Great Britain and to develop a strategy for further market integration with neighbouring markets as physical interconnection increases."

The future challenge will be to include markets for intraday trade and even for balancing services.

Physical integration

Network interconnection capacity slightly increased, by 2.5%. The reported data for 2009 shows total network interconnections of 95,000 MW, which corresponds to 11.5% of total generation capacity (840,000 MW).

3.7 Conclusions

Generation capacity is steadily increasing in the countries surveyed. There was a decrease in electricity consumption of about 2.8% from 2008 levels. Production and consumption were roughly in balance in 2009.

Network interconnection capacity saw a small 2.5% increase.

Market concentration remained high – there was increased concentration in several Member States, but reduced concentration in others.

Market coupling spread to more regions. For example, the EMCC market coupling solution with implicit auctions for electricity cross-border trading between Denmark and Germany was launched in November 2009. In addition, market coupling in the Central-West region (CWE) was launched on 9 November 2010 in parallel with interim tight volume coupling between CWE and the Nordic region via EMCC.

The differences in wholesale electricity spot prices between two selected power exchanges – Nord Pool Spot and EEX/EPEX Spot – fell sharply between 2008 and 2009.

Trading at power exchanges showed steady growth, both in terms of physical power trading and trading on futures markets. The number of companies active at power exchanges stayed approximately at the same level.

4 Gas retail markets

Key points
- Gas prices for final customers decreased.
- Gas prices vary widely between Member States.
- Most Member States' gas retail markets remain highly concentrated.
- The number of households supplied at regulated gas prices increased slightly.
- Switching rates of households increased in six and remained around zero in ten Member States.

4.1 Introduction

As already stated in last year's Status Review, after full market opening in July 2007 and the required full transposition of the Gas Directive (2003/55/EC), the gas markets in many Member States are still developing.

Cyprus and Malta do not have gas markets, Finland and Latvia have not opened their markets to competition as they have derogations from the Gas Directive. In 2009, the Greek gas market was 86% open (2008: 90%), in Hungary 48% (2008: 34%) and in Portugal 94% (2008: 43%).

The market notably saw declining retail prices for household and industrial consumers. This development is not necessarily the result of major competition in the retail market. It rather corresponds to the situation on European gas wholesale markets, where supply exceeded demand as a delayed consequence of the recession and the resulting decline in oil demand. Wholesalers were thus able to procure gas at lower prices which they obviously passed on to final customers.

4.2 Development of gas prices for final customers[5]

Contrary to the previous year, significant price decreases were observed for final customers in the second half of 2009.

Household prices decreased by 0.68 cent/kWh or 10.2% on average. The sharpest price decreases were reported in Italy (-26%), Latvia and Slovenia (both -24%) as well as Germany (-23%). France, Hungary, the Slovak Republic, Lithuania and Denmark reported slight rises.

As displayed in Figure 8, Romania, Bulgaria and Estonia were the Member States with the lowest gas prices for households, whereas the highest gas prices could be observed in Sweden, Denmark and the Netherlands. Romanian household gas prices were 6.99 cent/kWh lower than Swedish ones.

[5] Source: Eurostat, gas prices for H2 2008 cat D2 and I3, gas prices for H2 2009 cat D2 and I3.

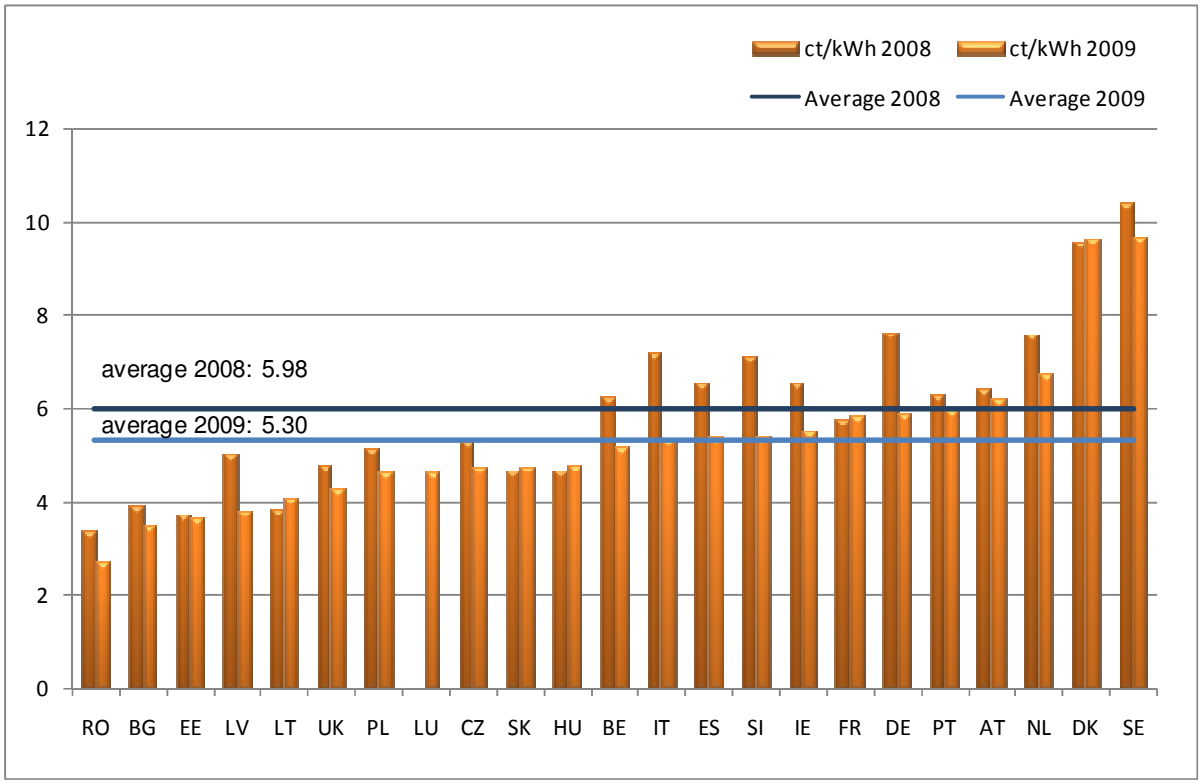

Figure 8: Development of gas prices for standard customers, H2 2008 and H2 2009

(Source: Eurostat category D2 data, includes all taxes)

For industrial customers, price decreases were even sharper: on average Member States saw a decrease of 1.09 cent/kWh or 24% compared to the second half of 2008. This development was led by Lithuania (-37%), the UK and Ireland (both -34%) as well as the Slovak Republic (-32%). The lowest decline was recorded in the Netherlands (-2%).

With 2.41 cent/kWh, the UK was the Member State with the lowest gas prices for large industrial customers, followed by Romania and Bulgaria. Denmark, Sweden and the Netherlands showed the highest price levels also in this sector. The price gap between gas prices in the UK and Denmark was 3.69 cent/kWh.

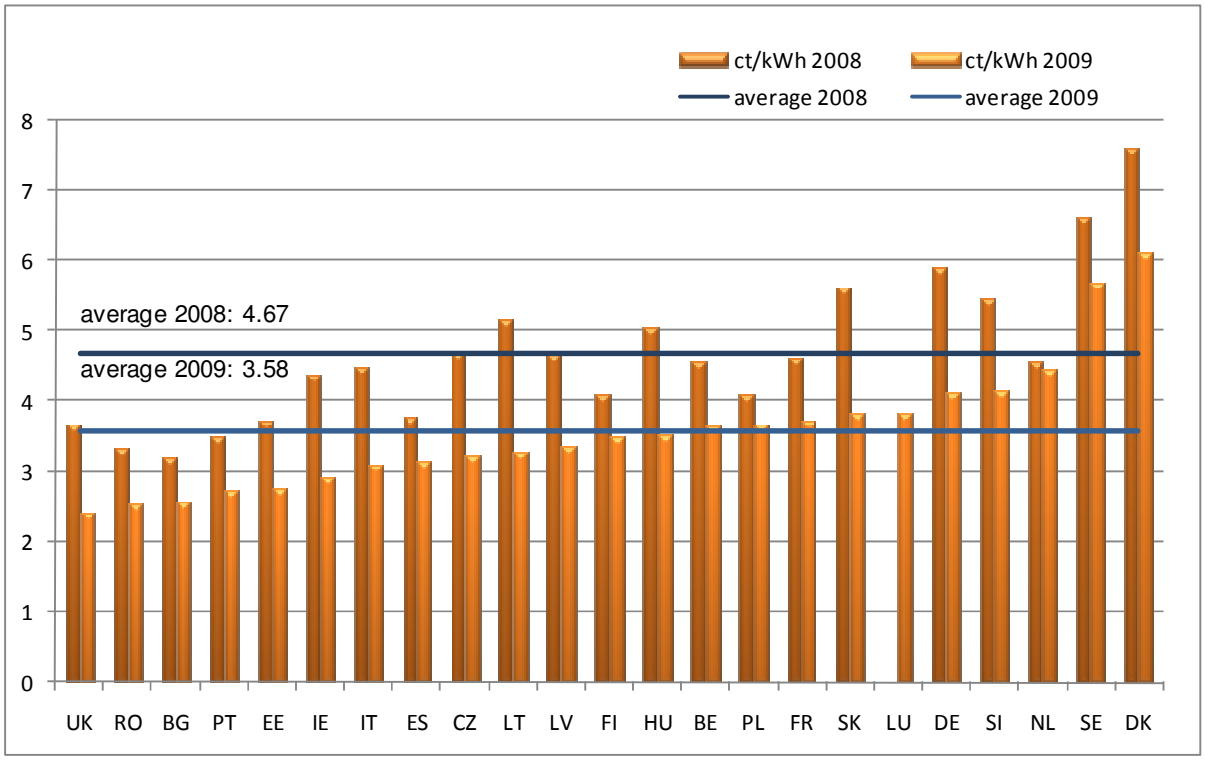

Figure 9: Development of gas prices for large industrial customers, H2 2008 and H2 2009

(Source: Eurostat category I3 data, includes all taxes)

4.3 Regulated end-user gas prices

Regulated end-user gas prices remained in place in 16 Member States for households and in 13 for non-household consumers. In Estonia price regulation was removed. The situation in the other Member States did not change compared to 2008. The three Member States that have regulated end-user prices for household consumers only are Italy, the Slovak Republic and Spain.

Where there are regulated end-user prices, the share of households supplied at regulated prices in 2009 (by consumption volume) was above 98%, with the exception of four countries (Spain: 47%, Italy: 95%, Northern Ireland: 94%, and France: 92%).

The share of households supplied at regulated end-user gas prices (about 55m households) in the total number of households supplied with gas in the analysed countries was around 55%. The share of households supplied at regulated prices by volume was similar (57%). Overall, the number of households with regulated gas prices increased by about 240,000 customers.

The share of non-household customers (by volume) supplied at regulated prices again varied widely in 2009, ranging from 4% to 100% in the countries that do regulate non-household prices.

The share of non-household consumers with regulated prices in the total consumption of non-household consumers was around 11%.

Price regulation for households remained in place in Member States at all places in the household price level range. Bulgaria and Romania, as the Member States with the lowest gas prices, apply price regulation for households, as well as Denmark and the Netherlands, where gas prices are very high in comparison. As the only Member State where price regulation was abolished in 2009, Estonia saw prices decrease during the second half of 2009 compared with the like period in 2008. Eight out of 18 Member States with price decreases for households regulate their gas prices. All five Member States where price increases were recorded apply price regulation.

In its decision of 20 April 2010, the European Court of Justice accepted maximum prices for gas as a public service obligation and has thus set a framework for assessing national measures in this respect. The approach gives authorities the possibility to fix prices for a limited period of time and under strict conditions, in an attempt to strike a balance between the objectives of a liberalised market and the necessity to protect consumers as pursued by the Gas Directive.

4.4 Market structure

The market share of the three largest suppliers in the entire retail market reflected high market concentration in most of the 22 Member States that provided data. In 13 Member States this figure was still 80% or above, reaching 100% in Greece, Lithuania, Latvia and Poland. However, there were also Member States that saw the market share of the three largest companies decrease in 2009, such as Germany, Spain, Hungary, Ireland, Italy, Luxembourg and Romania. Reporting 30.1%, Germany was the Member State with the lowest market share of the three largest suppliers.

The number of companies with at least 5% market share in the entire retail market for gas varied from one to eight suppliers. Comparing 2008 and 2009 data, six Member States saw this figure increase.

The most concentrated markets were those where the three largest companies had a large share and few companies had a market share of 5% or more. As shown in Figure 10, Greece, Latvia, Poland, the Slovak Republic and Estonia were the markets with the highest market concentration.

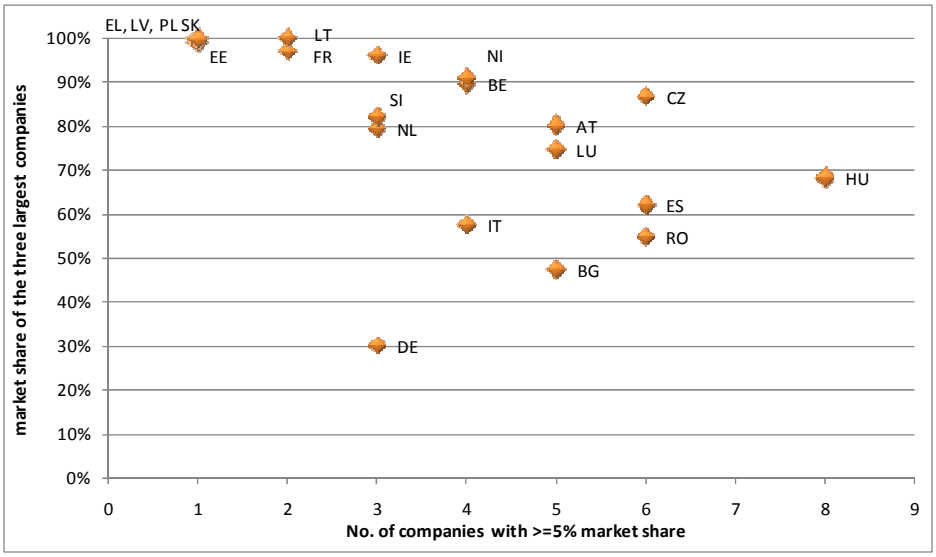

Figure 10: Market share of the three largest companies vs.

number of companies with 5% or more market share

4.5 Development of switching rates

As far as switching data in terms of eligible volume for the entire retail market in 2008 and 2009 are available, higher switching rates can be observed in six Member States. In five countries the switching rates stayed at zero and in three countries a decrease was recorded. Italy's switching rate decreased slightly but was still the highest (33.6%) of those countries that provided information in 2009, followed by Hungary (21.6%) and Denmark (14.4%).

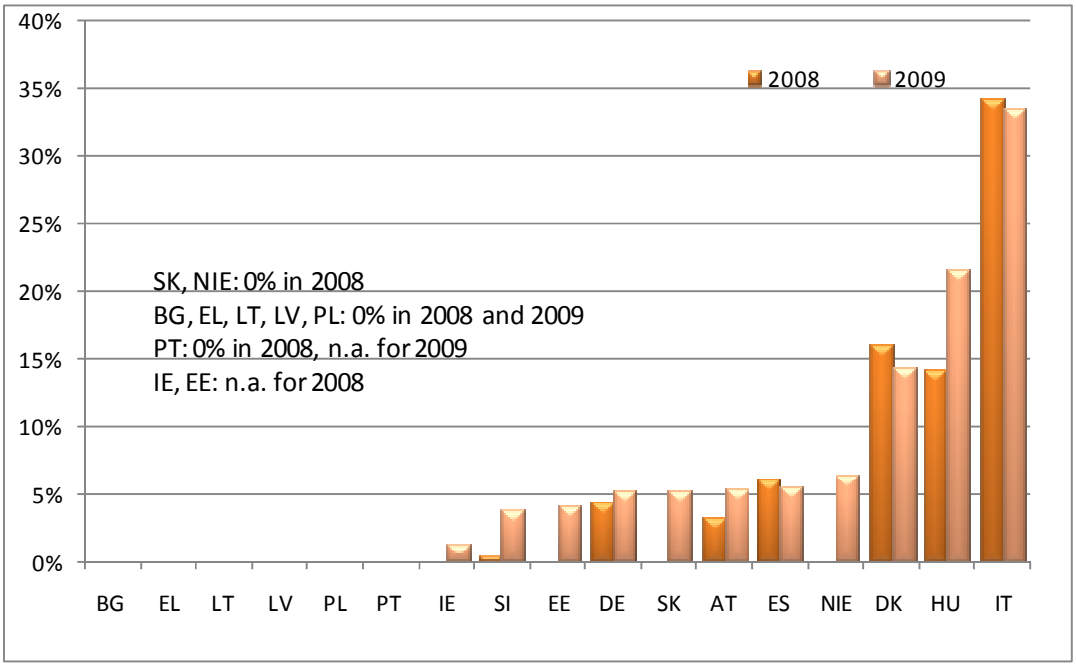

Figure 11: Development of annual switching rates in the whole retail market (by eligible volume)

The switching rates of non-household customers in 2009 (by eligible volume) stayed at zero in five Member States and increased in the rest of the Member States (four) that reported for both years. The highest percentage of switched volume was registered in Italy (45.3%), followed by Ireland (25.5%) and Spain (15%).

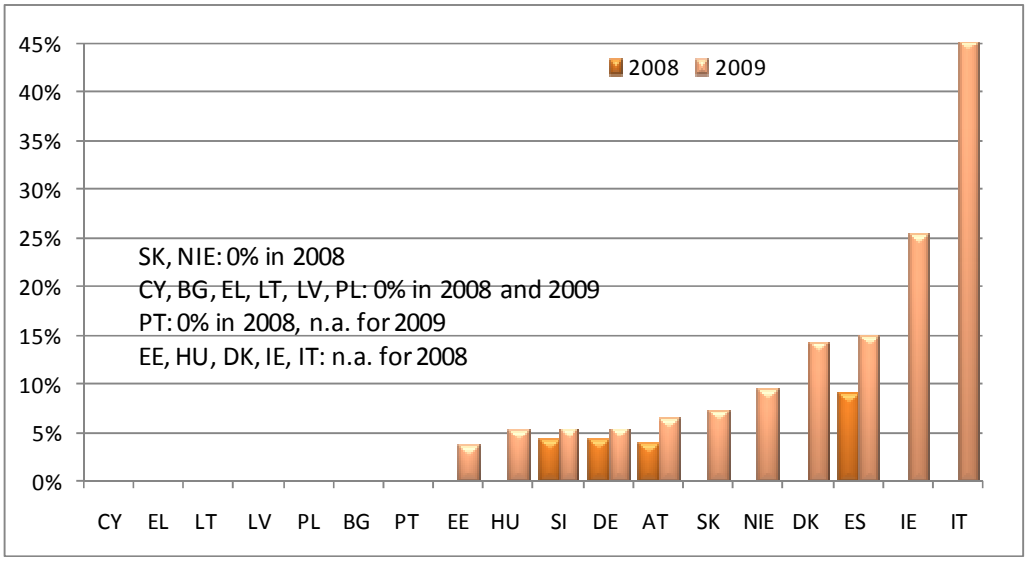

Figure 12: Development of annual switching rates for non-household customers (by eligible volume)

As far as households are concerned, in several Member States (ten out of 23) there was no or almost no switching (by number of eligible metering points). In nine Member States they were higher than in 2008, but still remained at a rather low level. Only four Member States recorded a switching rate above 5%, led by GB with the highest percentage by far (17.3%) even though it decreased slightly.

Most Member States with very low switching rates (in some cases zero) regulate their household gas prices. Estonia (where price regulation was removed) recorded an increase in the switching rate.

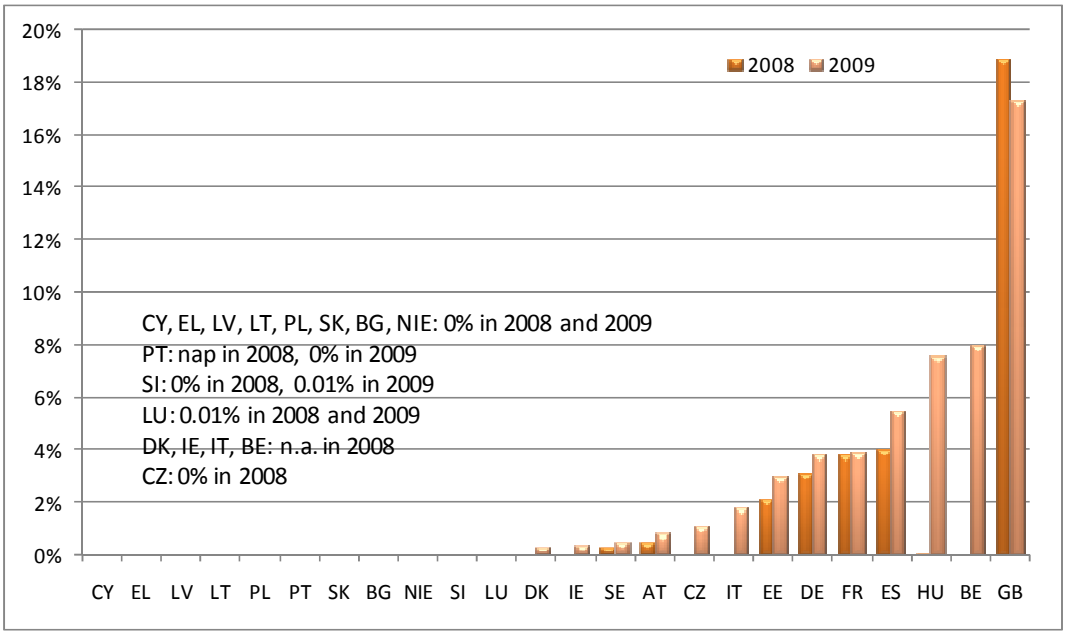

Figure 13: Development of annual switching rates for households (by number of eligible metering points)

4.6 Conclusions

The European gas retail market is still characterised by substantial disparities in the different Member States as far as price levels and switching rates are concerned, which indicates that the integration of the European gas market at retail level has not developed sufficiently so far.

Reports on increasing switching rates in six Member States are encouraging. However, there were still ten Member States with switching rates around zero and only four countries where more than 5% of household customers had switched supplier. Furthermore, most Member States' gas retail markets remained highly concentrated with little evidence of any new entries.

Another negative development regards price regulation: over half of the European household customers were still supplied at regulated gas prices in 2009. There was even a slight increase

compared to 2008. The European Court of Justice endorsed price fixing for natural gas supply as a public service obligation, but only under strict conditions. As long as the extent of price regulation remains at such high levels in Member States, competition on the gas retail market is impeded.

Additionally, switching has to be encouraged by giving customers more information and ensuring a reliable switching process.

5 Electricity retail markets

Key points

- Great disparities in price levels and developments for households and industrial customers continued.
- Overall prices for households rose in half of the countries due to an increase in at least two price components.
- Regulated prices still applied to a significant share of European households (57%); the number of households with regulated prices is nearly unchanged.
- Switching rates of households increased in ten countries but stayed at around zero in another ten countries.

5.1 Development of electricity prices for final customers[6]

As already pointed out in the last year's Status Review report, great disparities continue to characterise the electricity price levels of households and industrial customers. As for household prices, Denmark, Germany and Italy were again the countries with the highest price levels in the second half of 2009, while Bulgaria, Estonia and Lithuania showed the lowest electricity prices in this customer category. According to Eurostat, the total price for household consumers with an annual consumption between 2,500 and 5,000 kWh (consumer band Dc) ranged from 8.18 cent/kWh (Bulgaria) to 25.53 cent/kWh (Denmark) in the second half of 2009[7]; however, the different levels of purchasing power were not taken into account.

As regards industrial consumers, Cyprus, Slovakia and Italy ranked highest in price level, with the lowest prices in Bulgaria, Estonia and France. In the second half of 2009, the lowest price for industrial consumers with an annual consumption between 500 and 2,000 MWh (consumer band Ic) registered by Eurostat was 6.39 cent/kWh in Bulgaria and the highest was 14.94 cent/kWh in Cyprus.[8]

[6] Source: Eurostat, electricity prices for H2 2008 (data in focus 25/2009), electricity prices for H2 2009 (data in focus 22/2010).
[7] All tax included.
[8] VAT and all other recoverable tax excluded.

A year-on-year comparison of prices during the second half of 2009 indicates again very heterogeneous price developments. Percentage variations of the prices for households in the consumer band Dc ranged from minus 20% to plus 21%. The situation for the industrial consumer band Ic is comparable with increases of up to 12% and decreases as large as minus 20%.

An analysis of the development of price components for households shows that overall price increases were generally driven by rising prices in all three price components (energy and supply, network costs, taxes and levies). Similarly, in countries with price decreases, normally prices in two or even all three components were reduced. The energy and supply price component climbed up in twelve of 22 countries where disaggregated data were available for the second half of 2008 and the like period of 2009; this was also the case for network costs in 14 countries and taxes and levies in twelve countries.

Price variations for industrial consumers were mainly due to changes in the energy component, followed by variations in network costs. The taxes and levies component turned generally out to be just of minor influence on overall price developments. Price increases in the energy and supply component were registered in ten out of 21 countries, and network costs increased in twelve countries.

As a result, the overall price for households rose in 14 out of 27 countries and that for industrial customers in 14 out of 26 countries.

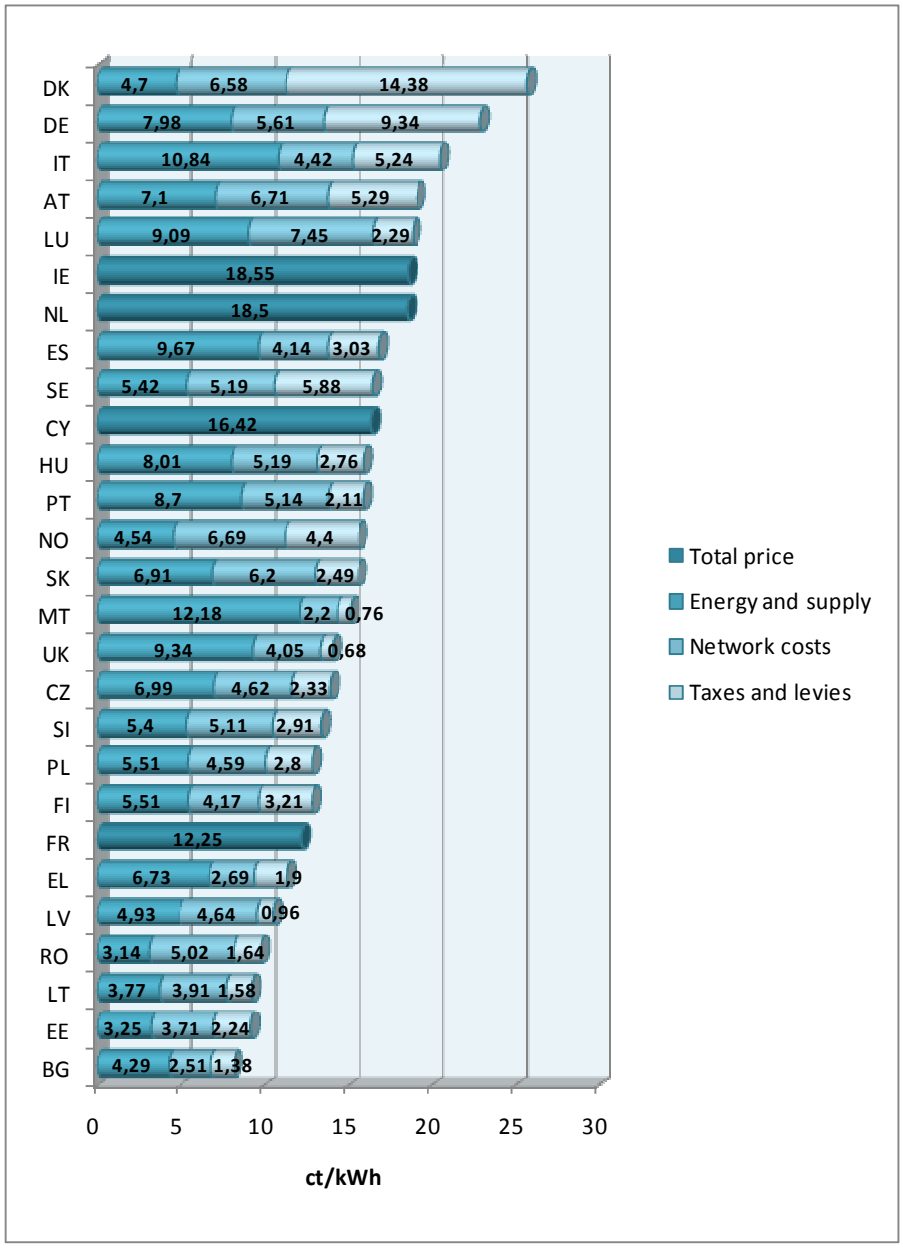

Figure 14: Composition of total electricity prices for households in H2 2009

(Consumer band Dc; 2,500 - 5,000 kWh/year; source: Eurostat[9])

[9] Eurostat category Dc may not be typical for some countries with very high electricity consumption per household, such as Norway.

Countries with price regulation for households were distributed over the entire range of household prices. However, starting with Bulgaria as the country with the lowest household prices, the next six countries with low prices (Estonia, Lithuania, Romania, Latvia, Greece and France) regulated their household prices as well. Regulated prices were in place in ten of 13 countries with price decreases for households and eight of 14 countries with increasing household prices in the second half of 2009.

5.2 Regulated electricity prices for end-users

Regulated end-user prices continued to exist in 19 countries for households; the situation was unchanged from 2008. Regulated prices for non-household consumers were still applied in 16 countries, but while Spain removed them, Slovakia introduced price regulation. The three countries that applied regulated electricity prices exclusively for household consumers were Latvia, Poland and Spain. These figures show that regulated end-user prices are still in place in a significant share of the analysed countries.

The recent ERGEG Status Review of End-User Price Regulation as of 1 January 2010[10] deals with the developments in the application of regulated end-user prices in greater detail. In electricity end-user price regulation was removed in a number of countries between July 2008 and January 2010. This was the case:

- in one country in the small business segment: Spain;
- in two countries in the medium-sized to large business segment: Spain and Lithuania; and
- in three countries in the energy-intensive industry segment: Greece, Romania and Spain.

Only one country, Slovakia, actually introduced end-user price regulation – in the small business segment.

Where price regulation applied, the share of households (by number or volume) supplied at regulated prices in 2009 was above 90%, with the exception of two countries. In 13 countries the share even reached 100%.

The share of households supplied at regulated electricity prices (about 139m households) in the total number of households (approximately 244m) was around 57%, with numbers virtually unchanged from 2008 (decreasing by about 300,000 customers). Measured by volume, the share was also around 57%.

The share of non-household customers (by volume) supplied at regulated prices again varied widely in 2009, ranging from four up to 100% in the countries that do regulate non-household prices. The share of non-household consumers with regulated prices in the total consumption of non-household consumers in the EU-27 plus Norway was around 17%.

[10] ERGEG Status Review of End-User Price Regulation as of 1 January 2010, 8 September 2010, Ref: E10-CEM-34-03,http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Customers/Tab1/E10-CEM-34-03_price%20regulation_8-Sept-2010.pdf

5.3 Market structure

The market share of the three largest suppliers in the retail market changed just slightly in a number of countries or did not change at all: in five countries it increased by up to six percentage points, in seven countries it decreased by up to four percentage points and in eleven countries, it remained unchanged.

The number of companies with at least 5% market share in the entire retail market for electricity varied from one to seven suppliers. Changes as compared to last year were only observed in a few countries: an increase by one company in two countries and a decrease by one company in three countries.

Seven countries can be identified as having the markets with the highest concentration in the whole retail market. In these countries, just one supplier had a market share of 96% to 100%. As in 2008, the lowest market share of the three largest suppliers was reported for Norway with 36%.

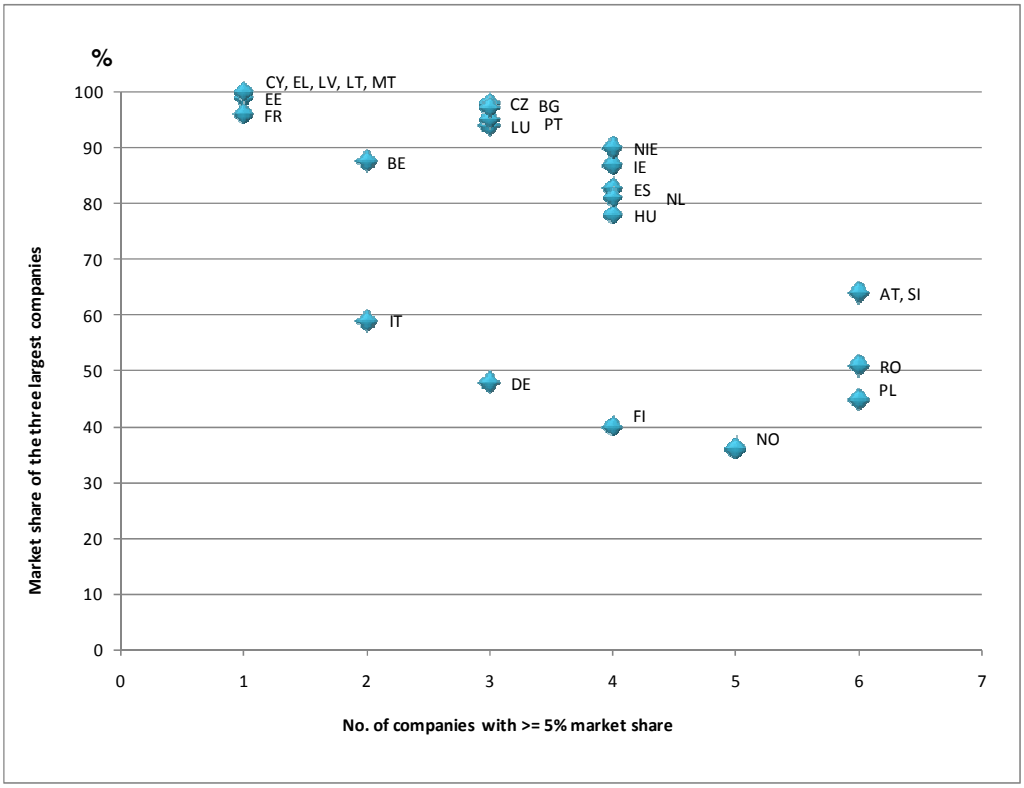

Figure 15: Plot of market share of the three largest companies vs.

number of companies with 5% or more market share in the whole retail market

The above-mentioned developments concerning the market share of the three largest suppliers and the number of suppliers with a market share of more than 5% confirm the findings of last year's Review Report, which revealed just minor variations.

The market share of the three largest suppliers for households (by number), a figure reported on in 2009 for the first time, was found to be 100% or very little below in nine countries. In another eight countries this share was between 80% and 98% and in just four countries it ranged from 32% to 76%.

5.4 Development of switching rates

As far as switching data in terms of eligible volume for the whole retail market in 2008 and 2009 are available, an increase in switching activity was observed in nine out of 16 countries. In four countries the switching rates remained unchanged and in three countries they decreased. The highest switching rate recorded in 2009 was 47%, in Portugal; this was made up of a switching rate among non-household customers of 77% and 2% in the household sector.

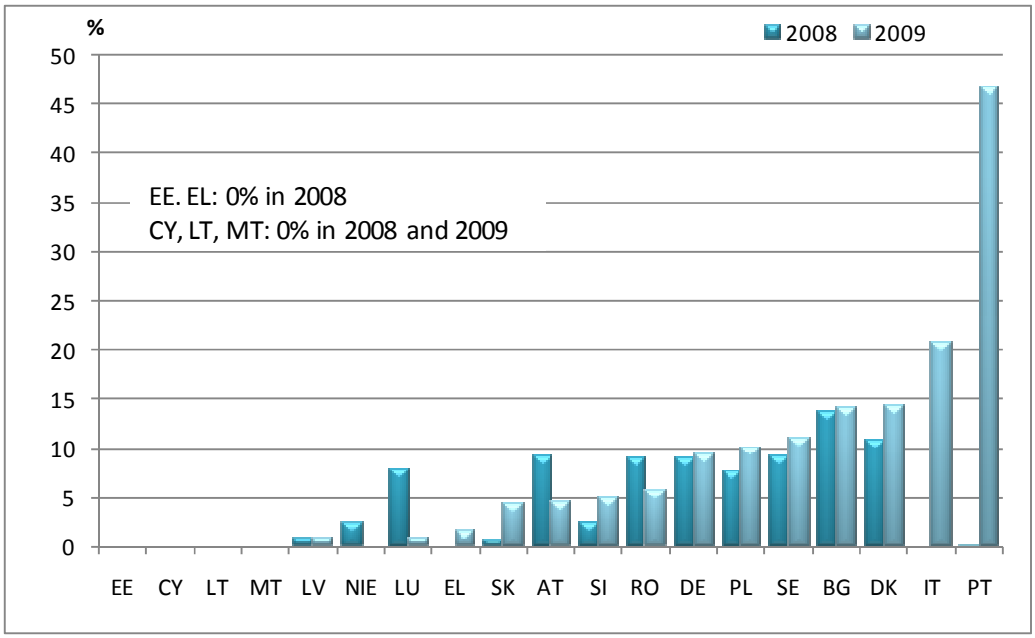

Figure 16: Development of annual switching rates in the whole retail market (by eligible volume)

Switching rates of non-household customers are available for 2008 and 2009 in fourteen countries. They rose in six countries, declined in another five countries and stayed at zero in three countries.

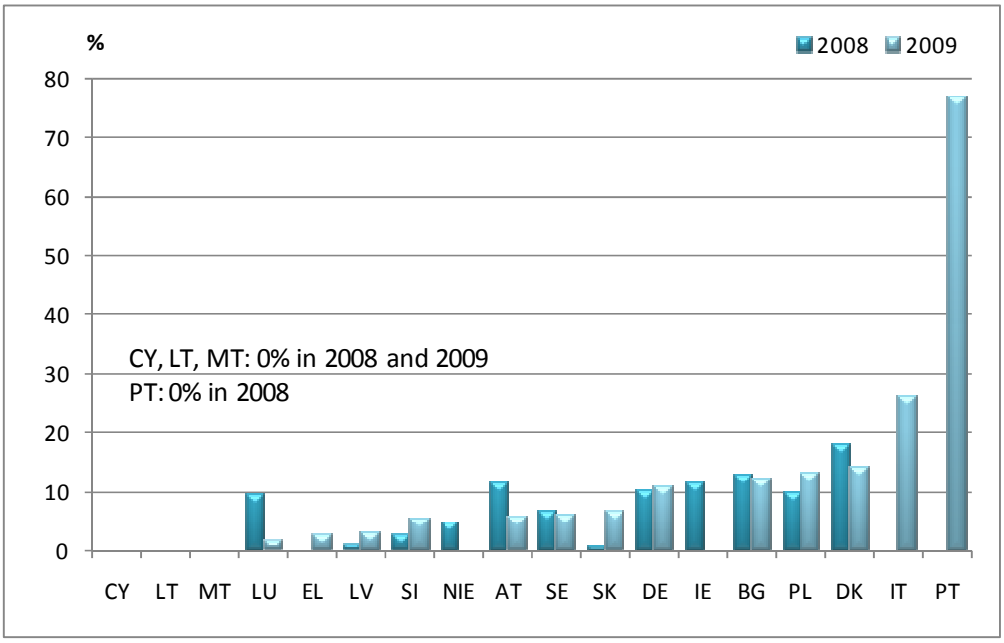

Figure 17: Development of annual switching rates for non-household customers (by eligible volume)

For households, switching rates climbed up in ten countries. However, in another ten countries no or almost no switching took place at all. The steepest increase, leading to the highest switching rate among households in 2009 at 20%, was recorded in Ireland – this figure soared up from 0.3% in 2008. Countries with no switching or low switching rates in the household sector mostly apply regulated prices. The majority of countries with higher switching rates have no price regulation, but the highest switching rate for households was found in Ireland, a country with regulated prices for households.

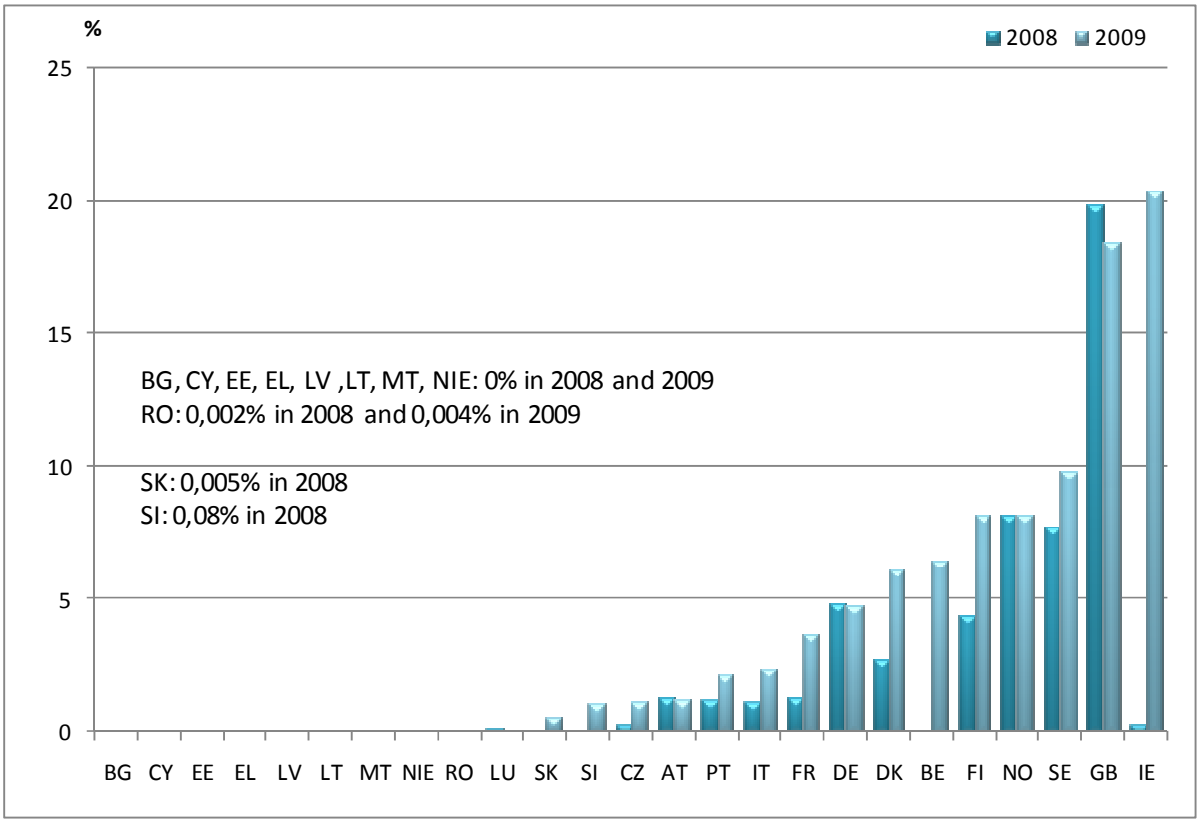

Figure 18: Development of annual switching rates for households (by number of eligible meter points)

5.5 Conclusions

The electricity retail sector showed some positive developments in several European countries. For households higher switching rates were observed in ten countries and lower electricity prices in 13 countries. On the other hand, there were ten countries with switching rates around zero and 14 countries with increasing electricity prices for household consumers.

The ongoing differences in the retail markets for electricity concerning prices and switching behaviour continue to underline the need to further improve European integration also at retail level.

The fact that more than half of the European household customers were still supplied at regulated electricity prices in 2009 again indicates for the great impact of price regulation. The number of households supplied at regulated prices remained nearly unchanged.

6 Consumer protection and Public Service Obligations (PSOs)

Key points

- The impact of the financial and economic crisis and concerns for security of supply shifted focus of NRAs' work even more strongly towards consumer protection and information in 2009.
- Progress was achieved in provisions for last resort/default suppliers, suppliers and vulnerable customers and initiatives to empower consumer's choices.
- ERGEG and the London Forum helped focus on areas requiring further improvements (complaints, dispute settlement and transparency in billing) and the harmonised implementation of the 3rd Package.

6.1 Background

The 2009 Review Report recorded a quite satisfying implementation of Annex A of the 2003 Directives and a significant increase in information and transparency of market conditions despite very different levels of competencies among NRAs in consumer protection. Also, there was evidence of individual areas which needed substantial improvement (i.e. transparency, dispute settlement and protection of vulnerable consumers).

The Commission Benchmarking Report published in 2010[11] confirmed with satisfaction that the work of national regulatory authorities is gradually shifting towards consumer protection, including smart meters, as "… *a welcome trend for the deployment of active participation by customers in the internal energy market and increased energy efficiency and large-scale integration of renewables, as well as additional energy services, increased market transparency and easier supplier switching*."

By reinforcing the competencies of NRAs in consumer protection issues (i.e. information obligations of suppliers towards consumers, complaint management, consumption data access, monitoring of retail markets, switching, end-user prices, disconnections, etc.) and defining specific obligations for Member States (i.e. an independent mechanism for dispute settlement, consumer rights checklist, single point of contact for consumer information), the 3rd Package promotes a higher level of consumer protection in the EU.

6.2 Evolution in 2009

Against this background, the financial and economic crisis further reinforced the NRAs' commitment to consumer protection. The disruption of supply in some eastern European countries accelerated the completion of procedures for the identification of last resort suppliers and/or default

[11] Report on progress in creating the internal gas and electricity market, COM(2010)84 final, http://ec.europa.eu/energy/gas_electricity/benchmarking_reports_en.htm

suppliers (i.e. in the Czech Republic) or an update to adapt to new market conditions (i.e. in Spain and Ireland), while in others procedures for vulnerable customers were implemented (in Italy in the gas sector, in Spain in electricity; Greece will follow suit in electricity by 2011). The number of customers with a social tariff regime reached around 6.7m in the electricity sector and 880,000 in the gas sector in 2009, which is about three times as many as last year.

New initiatives aimed at reinforcing customer information about the opportunities offered by the free market and providing a better understanding of the offers/prices proposed by suppliers together with dedicated web portals and handbooks were developed by regulators in many countries in 2009, building on existing initiatives launched in view of full market opening in 2007 (see 2009 EREG Review Report[12] and 2006 ERGEG Customer Information Handbook[13]). In particular, in France and Sweden a free-of-charge tariff calculator was made available, in Romania and Portugal new dedicated web portals for consumers went online, and in Denmark the price information portal and web calculator was re-launched for both electricity and gas. In Italy and Austria dedicated handbooks informing customers about their rights were published. In the UK the new "customer first initiative" helped both to review the role of Ofgem in customer protection and information as well as to assure that consumer views inform the policy of the regulator. This trend confirms the growing role of regulators as hubs for customer information and customer rights, and as market facilitators: national energy regulators, even if not directly in charge of some aspects of customer protection (i.e. complaints and complaint management are not managed by regulators or are a shared competence), are becoming the one-stop-shop providers of information for customers in liberalised markets.

In view of the implementation of the 3rd Package, which contains significant measures aimed at reinforcing the role of regulators in consumer protection issues, some NRAs in Europe reported on initiatives for the roll-out of smart metering and standards for handling consumer complaints (UK), the development and implementation of a checklist for energy consumers (Portugal), the first steps to set up a central register "DataHub" to make it easier for consumers to change their electricity supplier and thus promote and increase transparency and competition in the electricity market (Denmark).

The extension of competences of NRAs in consumer protection and information, required by the 3rd Package, stimulated steps towards the extension or consolidation of NRA competences in this area in 2009. For example in Spain, the law reinforced CNE's duties in guaranteeing transparency and efficient market functioning (i.e. to publish a list of suppliers on its website, to manage a price comparison system, to oversee switching and the activity of the Switching Office and to collaborate with it in dispute resolution).

[12] ERGEG 2009 Status Review of the Liberalisation and Implementation of the Energy Regulatory Framework, Ref: C09-URB-24-03, 10 December 2009, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/NATIONAL_REPORTS/National%20Reporting%202009/C09-URB-24-03_ReviewReport2009_10-Dec-09.pdf

[13] ERGEG Customer Information Handbook. A review of good practices, Ref: E06-CPR-04-03, 6 December 2006, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Customers/2006/E06-CPR-04-03_Customer_Info_Handbook.pdf

In 2009, in coordination with the London Forum, European energy regulators reviewed the state of play of the introduction of smart meters in Europe[14], developed GGPs on complaint handling[15] and dispute resolution on the basis of best practices already in place in nine countries and reviewed the implementation of EC good practice guidance for billing[16].

6.3 State of play of smart metering

The ERGEG Status Review on regulatory aspects of smart metering[17] provides an overview of the state of play regarding the introduction of smart meters in ERGEG member and observer countries and examines the issue from a regulatory perspective (meter value management; roll-out policy; access to data and privacy issues; and functional and technical aspects). In electricity, Italy and Sweden had completed their roll-out for 90% and 99% of customers, respectively. Four more countries decided on a large scale roll-out of smart meters, while in a further eleven countries a roll-out was under discussion. In some countries, roll-out is executed on a voluntary basis by DSOs, while in others it follows official legal provisions. In gas, there are fewer uptakes of smart metering; only Italy had planned roll-out, while four countries were discussing the possibility. Several countries decided that smart meters for gas were not currently economically justifiable.

The report illustrates the diversity of approaches to smart metering, visible in part from the lack of common definitions to key concepts, even at national level. A Commission multi-stakeholder task force was launched in November 2009 to advise on policy and regulatory issues at European level and to coordinate the first steps towards the implementation of smart grids under the provisions of the 3rd Package.

6.4 Complaints and alternative dispute handling

Costumer complaints are a duty, in most European countries, of service providers and third-party bodies that normally share competences (NRAs, competition and consumer affairs authority/ministry and ombudsman). Around two-thirds of CEER members providing data reported some activity in complaint handling in electricity. The overall number of complaints was stable between 2008 and 2009 (around 40,000 in electricity and 26,000 in gas). However, the great

[14] ERGEG Status Review on Regulatory Aspects of Smart Metering (Electricity and Gas) as of May 2009, Ref: E09-RMF-17-03, 19 October 2009, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Customers/Tab/E09-RMF-17-03_SmartMetering-SR_19-Oct-09.pdf
[15] ERGEG GGP on Customer Compliant Handling, Reporting and Classification, Ref: E10-CEM-33-05, 10 June 2010, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Guidelines%20of%20Good%20Practice/Other/E10-CEM-33-05_GGP-ComplaintHandling_10-Jun-2010.pdf
[16] Implementation of EC Good Practice Guidance for Billing. ERGEG Status Review, Ref: E10-CEM-36-03, 8 September 2010, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Customers/Tab1/E10-CEM-36-03_EC%20billing%20guidance_8-Sept-2010.pdf
[17] ERGEG Status Review on Regulatory Aspects of Smart Metering (Electricity and Gas) as of May 2009, Ref: E09-RMF-17-03, 19 October 2009.

difference in the number of complaints handled by individual NRAs points to very different levels of competencies or shared competencies in different countries.

Europe's energy regulators have differing dispute settlement roles and responsibilities at national level: in nine countries the regulator has currently no role, while in 18 EU countries the energy regulatory authority plays an important role either as the main body responsible for complaints and disputes or together with other authorities. A Commission multi-stakeholder working group on alternative dispute settlement is established towards end of 2010 to prepare for the implementation of the 3rd Package, particularly with a view to the establishment of independent mechanisms which customers can resort to for complaints and dispute settlement. ERGEG's position is that complaint bodies should be independent and not simply autonomous.

The ERGEG Guidelines of Good Practice (GGP) on Complaint Handling, Collecting and Classification[18] aim to provide Member States and national regulators with advice on how to translate consumer complaints provisions of the 3rd Package into operational rules: despite the different responsibility levels, various collection processes, handling procedures and classification methodologies, the GGP aim to provide a set of best practices for both service providers and third parties. A dedicated expert group, in which European energy regulators participate, was also set up by the European Commission in 2009 to develop a harmonised methodology for classifying and reporting on consumer complaints on a cross-sectoral basis across the EU.

Good practices already in place in some Member States (Austria, France, Italy, Poland, Romania, Spain, Sweden, the Netherlands and the UK) were of high relevance when drawing up the recommendations in the electricity and gas sectors, including a proposal for complaint classification, inspired by the European Commission's classification.

6.5 Transparency in billing: status report

In 2009, the European Commission worked with stakeholders on Good Practice Guidance for Billing. This document provides guidance for billing with recommendations for consumer-friendly energy bills, both in terms of the information provided and the form of communication and design/layout of the bills. Following a request from the 2nd London Forum, ERGEG drafted a Status Review on the implementation of the EC Good Practice Guidance for Billing[19] to reflect the situation in ERGEG member and observer countries. Even though the quality of billing is in most countries legally enshrined (often reinforced by a combination of legal requirements and self regulation by service providers), the Status Review still finds a generally unsatisfactory situation in Europe:

- often, customers' understanding of bills is quite limited;

[18] ERGEG GGP on Customer Compliant Handling, Reporting and Classification, Ref: E10-CEM-33-05, 10 June 2010.
[19] Implementation of EC Good Practice Guidance for Billing. ERGEG Status Review, Ref: E10-CEM-36-03, 8 September 2010.

- as far as the contents of bills are concerned, normally only the information essential to manage payment is provided to customers and in the majority of countries, there is no requirement to include information to enable customers to compare offers (such as consumption over twelve months, energy price(s) per kWh, etc.);
- regarding frequency, annual bills are still very common (in 14 countries they are used along with other frequencies, and in seven of these 14 countries they are used for more than 95% of customers);
- in the majority of countries customers receive combined bills (energy and network charges) and in some Member States, customers supplied by alternative suppliers receive two bills; this does not encourage correct information and further switching.

In commenting on these results, European energy regulators recognise that any obstacle and discrimination among suppliers by vertically integrated DSOs as regards billing practices must be avoided. Customers should be properly informed about actual electricity and gas consumption and costs frequently enough to enable them to regulate their electricity and gas consumption and make proper choices when choosing offers. Information on bills that allows for comparisons helps ensure that customers are treated fairly, get the best possible deal available and are empowered to exercise their right to choose on an open market. Even so, bills - and in particular paper bills - are not the only means to achieve this goal and a better insight into customers' opinions/understanding of their energy bills could help determine the relevant measures (either legal or voluntary) to improve the situation.

6.6 Conclusions

A satisfactory level of implementation of the dispositions of Annex A of the 2003 Directives was reported in the 2009 review report. The impact of the financial and economic crisis and concerns for security of supply contributed to shifting the focus of NRAs' work even more towards consumer protection and information in 2009. The completion of procedures for the identification of last resort suppliers and/or default suppliers and implementation of vulnerable customer protection was reported by many regulators: the number of customers with a social tariff regime reached around 6.7m in the electricity sector and 880,000 in the gas sector, a threefold increase on the previous year. New initiatives and/or extension of competences of NRAs aimed at empowering consumers' choices were reported (i.e. dedicated web sections, online price calculators and customer handbooks).

In view of the implementation of the 3rd Package, requirements regarding customer protection and information were developed by European energy regulators and coordinated with all stakeholders at the London Forum in areas were major improvements are expected (i.e. smart metering, complaint handling and transparency in billing).

New initiatives in smart metering were discussed or announced in 15 countries in electricity and in gas, but the diversity of approaches and a lack of shared definitions and key concepts even at national level may represent an obstacle to further developments. ERGEG pointed out differences of benefits and opportunities for electricity and gas meters, the need to define customer services

required by industry at national level and the need to further develop recommendations on regulatory aspects.

Roles and responsibilities of regulators regarding customer complaint handling and dispute settlement vary between Member States, but around two-thirds of NRAs have relevant responsibilities in these areas or share them with other institutions; best practices already developed by some NRAs allowed ERGEG to define harmonised practices on complaint handling and classification.

Even though the quality and transparency of billing in most countries is ensured by law (often reinforced by a combination of legal requirements and self regulation by service providers), the main results of the status review conducted by ERGEG still evidence an unsatisfactory situation in Europe.

7 Security of supply and infrastructure

Key points

Electricity

- Generation capacity still seems to be sufficient to meet peak load demand in most Member States. Indeed, generation and demand were well balanced.
- Net transfer capacity remains relatively low in the EU due to lack of interconnection between the Member States.
- More widespread generation from renewable sources poses a new challenge in securing stable supply and creates the need for new transportation infrastructure as well as backup production.

Gas

- The demand for gas declined in 2009, resulting in less imports than in 2008. However, this is likely to be a short term trend caused by the economic recession.
- Indigenous EU production capacity continued to decline, pointing to long-term dependency on imports.
- In a number of Member States the existing gas infrastructure – in particular, pipeline interconnections and storage capacity – is insufficient to address growth in gas demand.
- The EU remains exposed to pipeline import cuts.

7.1 Introduction

Overall electricity and gas consumption in the EU decreased in 2009. This decline is generally attributed to the global economic recession. In the long run, as the EU emerges from the recession, energy demand is expected to exhibit an upwards trend again. Therefore, with the indigenous European gas supplies decreasing and ambitious climate targets set, security of supply is an increasingly important issue for the EU.

The European Commission has taken measures to address this topic. In October 2010, responding to the Russia-Ukraine gas crisis, the European Council and Parliament adopted the Gas Security of Supply Regulation[20], which creates an improved legal framework for mitigating the consequences of potential disruptions of gas supplies and coordinating action between the Member States.

In July 2009, as a part of its economic stimulus for long-term strategic projects, the European Council and Parliament adopted Regulation 663/2009 establishing the European Energy Programme for Recovery (EEPR). The programme was endowed with € 2,365m to facilitate investment in key electricity and gas infrastructure projects across the EU. In April 2010, the Commission also published a report on the implementation of the EEPR[21].

In addition, the 3rd Package obliges ENTSO-E and ENTSOG to produce ten-year network development plans which to ensure that investment is directed to where it is most needed and thus contribute to the effective development of energy infrastructure.

Finally, the Commission is preparing an energy infrastructure package to further improve EU energy infrastructure, facilitate interconnection across the Member States and diversify transport routes[22]. ERGEG has welcomed the envisaged legislation and set out expectations that the energy infrastructure package will fill gaps left by the 3rd Package and address a number of measures to be taken to increase security of supply through well-functioning markets[23].

7.2 Electricity

Capacity in power generation

Maximum net generating capacity increased in most Member States in 2009. The overall increase in the EU-27 and Norway was 28 GW or around 3.5% (2008: 22.9 GW).

Most Member States managed to satisfy their peak load. As Figure 19 shows, all countries with the exception of Finland and Luxembourg had surplus generating capacity to meet their peak load demand.

[20] Regulation (EU) No 994/2010 of the European Parliament and of the Council of 20 October 2010 concerning measures to safeguard security of supply and repealing Council Directive 2004/67/EC.
[21] (COM (2010) 0191, 27/04/2010).
[22] Communication from the European Commission: Energy infrastructure priorities for 2020 and beyond – A Blueprint for an integrated European energy network, 17 November 2010.
[23] Press Release: European energy regulators welcome the Commission's communication on infrastructure, PR-10-09, 19 November 2010, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/PRESS_RELEASES

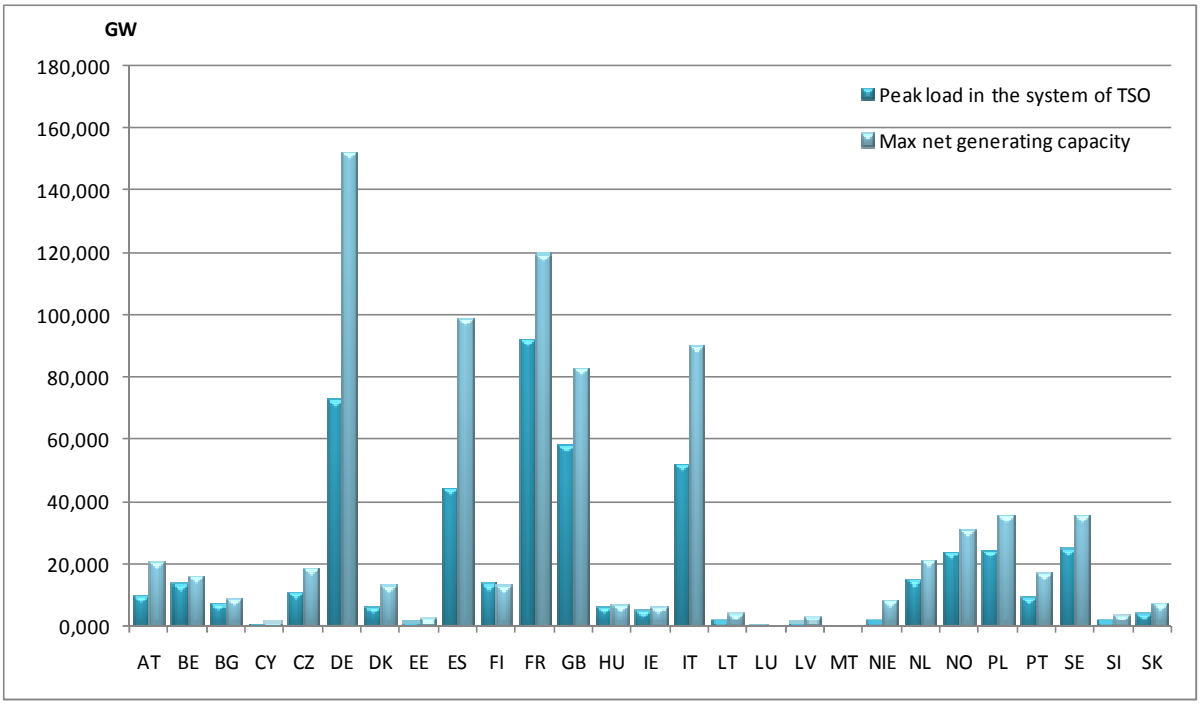

Figure 19: Peak load in the system of TSO vs. max net generating capacity, 2009 (ERGEG national reports database)

However, even though some countries had an immense surplus of generating capacity (e.g. Germany, Spain and Italy), it should be noted that total installed capacity does not reflect available capacity during peak times. A number of Member States reported installation of new renewable capacity, i.e. a high generation surplus should be viewed cautiously, bearing in mind the intermittent nature of most renewable energy sources.

In addition, ERGEG collected data on reliably available net generating capacity for the first time, a measure that takes into account unavailable capacity due to mothballing, maintenance and overhauls, outages and system services reserve. Although some countries did not have this data for 2009, the numbers provided suggest that the actual surplus capacity available in 2009 was much lower than what is shown in Figure 19 (compared to Figure 20). Nevertheless, only three countries (out of the 22 that responded) – Belgium, Finland and Luxembourg – did not have enough reliably available generating capacity to meet their peak load demands. Hence, overall generating capacity still seems to be sufficient in the EU.

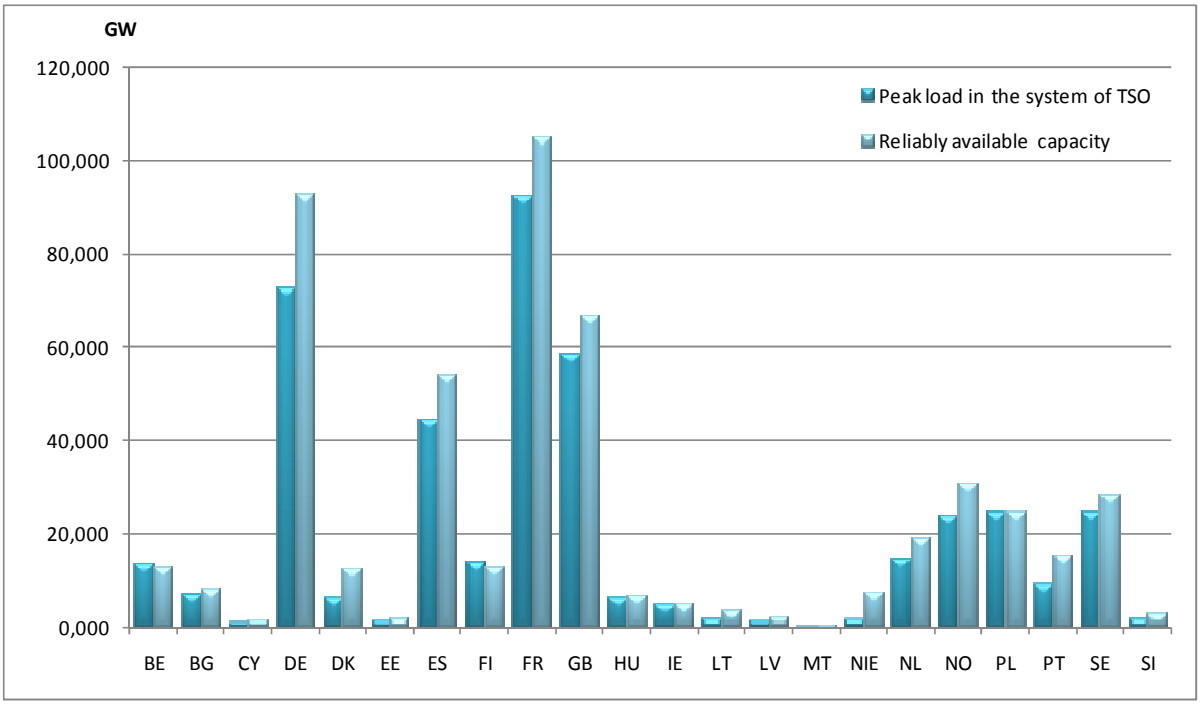

Figure 20: Peak load in the system of TSO vs. reliably available net generating capacity, 2009

(ERGEG national reports database)

Infrastructure capacity

Sufficient interconnection is crucial to the security of electricity supply. It cannot only provide additional generation capacity at peak load times but also help mitigate the risk of system imbalances due to intermittency of generation from renewable sources.

In 2009, there was no major change in the share of overall peak load demand that can be met by imports (calculated using net transfer capacity (NTC) value). As in 2008, the NTC could meet around 18.5% of overall peak load demand.

As Figure 21 indicates, Latvia, Lithuania and Luxembourg maintained the highest proportion of NTC *vis-à-vis* peak load demand (207%, 141% and 93% respectively). However, regarding the two Baltic States, the numbers do not represent the actual state of security of supply and market integration as neither of them has interconnections with other EU Member States. Their import capacity still relies on sources outside the European Economic Area.

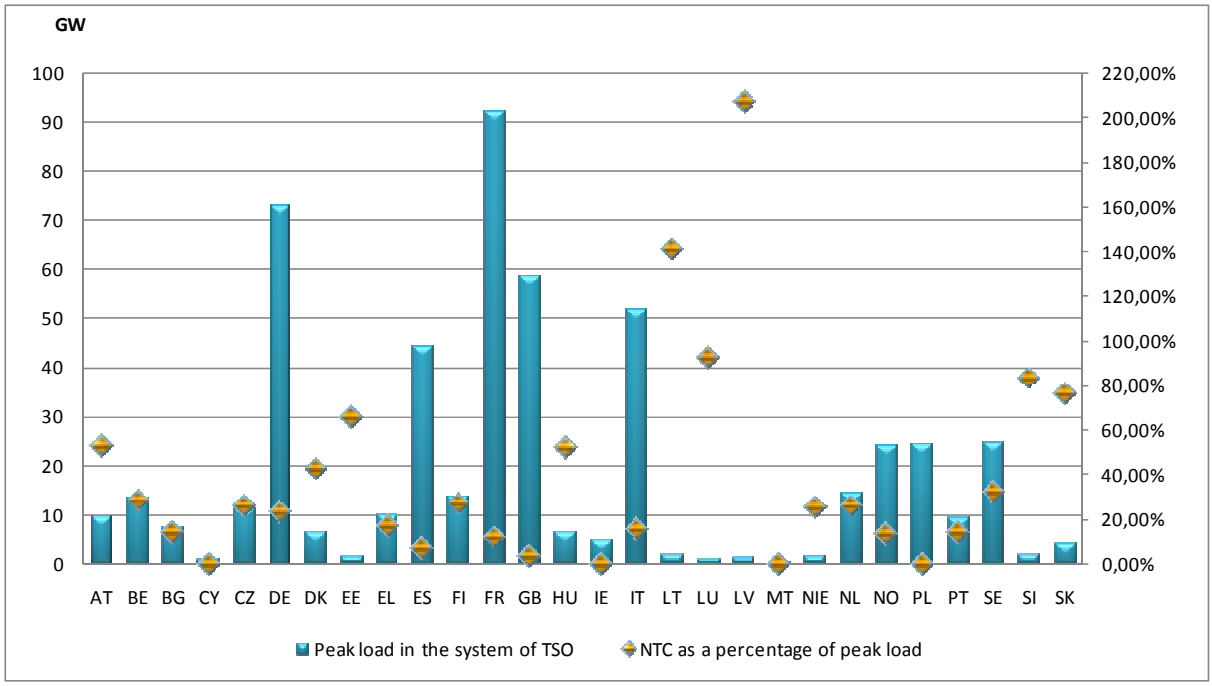

Figure 21: Electricity network interconnection, 2009 (Source: ERGEG national reports database)

In general, most countries had import capacities below 30% of their peak load demands, implying relatively low interconnection levels. Cyprus, Ireland, Malta and Poland reported zero NTC value.

Several countries, including Denmark, Hungary, and Norway, reported new cross-border infrastructure projects in 2009. However, as highlighted in the Commission report on the implementation of the EEPR, a number of projects have encountered obstacles such as lengthy authorisation procedures, lack of political support and financial constraints. Allegedly, EEPR was a timely instrument to secure investments and speed up construction in the light of the global economic recession.

Denmark reported that in order to increase security of supply, a project was started in 2009 to replace the existing sea cable between Denmark East and Germany. The reasons for this were several operational problems with the old cable. The new cable is expected to be operational by autumn 2010.

In Scandinavia, a new 25 km 420 kV OH line from Nea, Norway, eastwards to the border with Sweden was commissioned in October 2009. The new OH line removes a bottleneck by replacing the existing 300 kV OH line.

Hungary reported that the establishment of a 2x400 kV interconnection between Pécs (Hungary) and Ernestinovo (Croatia) is in process; works have been completed according to schedule, and the commissioning is expected for 2010.

In addition, improvements in domestic infrastructure (network, backup production) of Member States are also needed to accommodate increasing generation from renewable energy sources. In particular, offshore wind is demanding in terms of infrastructure needs, as it is often located far from main power demand centres.

7.3 Gas

Consumption

National reports data show that gas consumption in the EU-27 decreased by 6.86% as compared to 2008. This resulted in lower levels of production and imports. In 2009, the EU-27 produced 1983.06 TWh and imported 3151.83 TWh of gas through pipelines. These are declines by 9.83% in production and 11.95% in import. The drop in gas demand is associated with the economic recession.

The EU imported 3,152 TWh and exported 434 TWh of gas from and to countries outside the EU in 2009. Thus, 2,718 TWh of gas remained inside the EU for consumption. This constitutes 52.2% of total demand and highlights high dependency on imported gas from external sources. Though the proportion of total gas demand met by pipeline imports decreased from 55% in 2008 to 52.2% in 2009, in the long run, as production capacity declines and demand grows, it is likely that this ratio will grow unless measures to reduce gas consumption are taken or new gas fields are developed.

Production capacity

According to the data gathered from national reports, the EU's indigenous gas supplies continued declining. In 2009, the EU-27[24] gas production capacity decreased by another 5%.

Import capacity

Pipelines
Similar to previous year's Review Reports, the situation in connection with free pipeline import capacity was incoherent across Europe in 2009. Several countries, in particular Great Britain, Hungary, Lithuania, Northern Ireland, Luxembourg, Poland and Spain, had over 30% free capacities. Very low levels of free capacity were reported by Austria, Italy and the Netherlands, with Finland claiming to have zero free pipeline import capacity, which indicates the country's vulnerability to major increases in demand as its transport routes run at their physical limits.

[24] The Netherlands are excluded from the calculation as there were no data provided for 2008 and therefore no comparison could be made.

LNG
LNG imports could potentially play an important role in diversifying and securing European gas supplies. LNG import capacity accounted for 31.98% of overall gas import capacity in the EU-27. Spain had by far the greatest LNG import capacity, reaching 713 TWh a year. 20 Member States (15 of which are coastal states) reported zero LNG import capacity. This indicates a possibility for future utilisation of LNG imports in some Member States with sea access to enhance security of gas supply.

Storage capacity

As the Russia-Ukraine gas crisis has shown, countries lacking pipeline interconnections are very vulnerable to major gas supply disruptions. Hence, underground storage can be crucial to a country's security of supply in times of high demand or major pipeline supply disruptions. LNG storage, which normally has lower capacity than underground facilities, is also a useful flexibility tool to meeting unexpected demand.

The total working gas volume for underground storage across all Member States amounted to 68.7 bcm in 2009, up by 11.08% from 2008 levels. In terms of geographical distribution of technical storage capacity[25], more than half of the overall capacity (51%) is concentrated in the western part[26] of the EU. More investment in storage facilities could contribute to higher levels of security of supply in other areas.

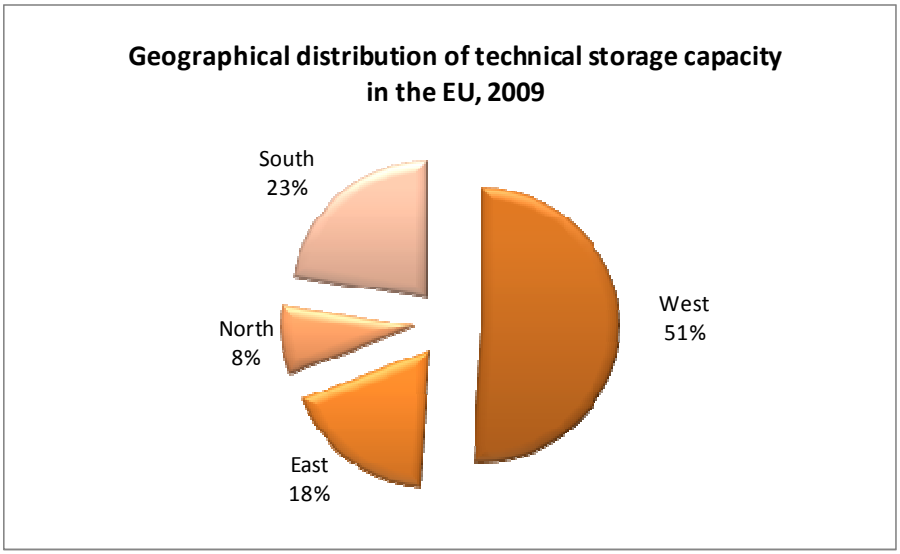

Figure 22: Geographical distribution of technical storage capacity in the EU, 2009[27]

[25] Includes both LNG and underground storage capacity (working gas volume is used for calculating underground storage capacity).
[26] Categorisation: *West* – Austria, Belgium, Germany, France, Liechtenstein, Netherlands; *East* - Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia; *North* – Denmark, Estonia, Finland, Ireland, Latvia, Lithuania, Sweden, United Kingdom.; *South* – Greece, Italy, Portugal, Slovenia, Spain.
[27] The data has been taken from ERGEG national reports database.

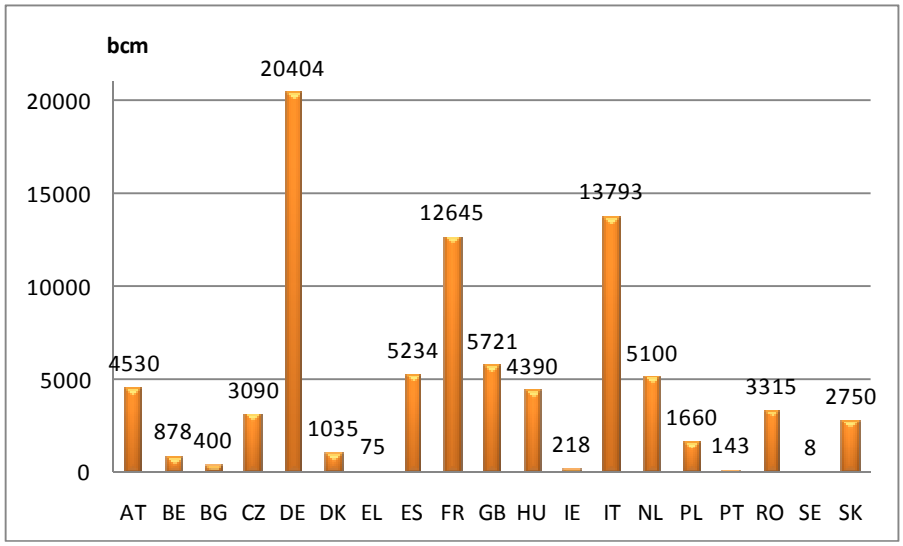

Figure 23: Technical storage capacity in the EU in 2009[28]

A number of Member States reported progress in developing new strategic storage facilities this year.

CRE, the French regulator, issued a favourable opinion on the exemption request for the Dunkerque LNG terminal, with an annual transport capacity between 10 and 13 bcm per year. The final investment decision will be taken in 2010. The terminal is expected to significantly contribute to security and diversification of supplies by increasing the capacity to import LNG.

Poland started developing a new LNG storage facility in Świnoujście, which is planned to be commissioned in 2014. In connection with this project, PGNiG SA signed a contract for 20 years for the supply of 1m t of LNG annually with Qatargas Operating Company.

In the Czech Republic major investments in underground storage are being planned. Under EEPR, a subsidy of € 35m will be nominated to RWE Gas Storage for developing additional 450m cm of storage capacity by 2012. MND Gas Storage also announced plans to expand the capacity of its existing storage facilities by an extra 500m cm.

[28] The data has been taken from ERGEG national reports database. Only countries that reported storage capacity are included. The graph refers to both underground (a proxy measure of working gas volume is used for calculating underground storage capacity) and LNG storage capacity.

Exposure to pipeline import cuts

Exposure to pipeline import cuts is a concept measuring a country's short term ability to maintain gas supplies stable in case of major pipeline import disruptions. It is calculated as the maximum amount of gas that a country can get from production, pipeline imports, LNG and underground storage withdrawal each day. Then the amount of maximum import capacity is subtracted from the total sum of maximum gas supply capacity to assess the vulnerability to pipeline import cuts. If the maximum available supply capacity excluding pipeline import capacity exceeds or equals peak demand, a country is regarded to be self-sufficient. This measure is expressed as a percentage of peak demand (100% or more would indicate short term self-sufficiency assuming that pipeline imports are cut). Even though the concept disregards the benefit of diversification of supply routes and sources, it is still a relevant way of measuring a country's self-sufficiency, as most Member States rely on one major route and source of supply.

As Figure 24 shows, only eight countries in the EU-27 are self-sufficient in their gas supply in the short term. The countries most vulnerable to pipeline import cuts remain Bulgaria, Estonia, Finland, Lithuania, Luxembourg, Northern Ireland and Slovenia. They have no domestic production and no national gas storage facilities.

Overall, most countries largely depend on imports and are very vulnerable to major pipeline supply disruptions.

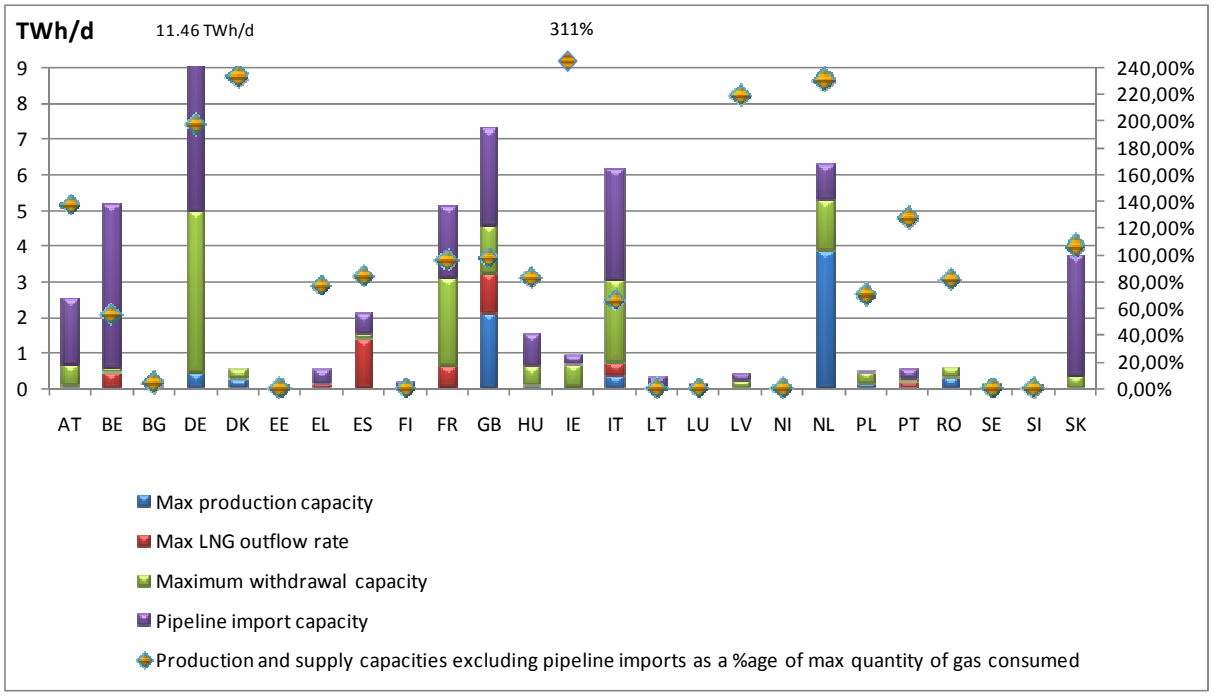

Figure 24: Exposure to gas pipeline import cuts (Source: ERGEG national reports database)[29]

[29] No data on peak load demand in Germany was available. The average daily consumption was used instead.

Interconnections between Member States

New developments in infrastructure are also crucial to security of supply and further market integration. The EEPR granted financial support to a number of gas interconnector and pipeline reverse flow projects, at sums of € 1.3bn and € 79.5m, respectively. Nevertheless, as on the electricity side, the Commission reported that new gas infrastructure projects have encountered a number of obstacles such as complex legal and regulatory frameworks, crossing existing infrastructure and managing protected areas. ERGEG believes that the Commission's energy infrastructure package should address these issues by introducing measures to enhance the cooperation among Member States and speed up the licensing process.

The national reports by Member States point out some progress regarding the development of new gas infrastructure:

ITGI Pipeline
In 2009, the IGI Poseidon project extended the ITGI pipeline connecting Greece and Turkey to Italy, to enable gas imports from the Caspian Sea. In November the Italian and Turkish authorities signed a joint declaration to confirm their commitment to support the initiative, with the Turkish government ensuring guaranteed transit conditions to safeguard competitiveness. An agreement with the Bulgarian Energy Holding to construct a Bulgarian link with a capacity of 3-5 bcm/year was also signed by IGI Poseidon in 2010 March. The same month, the European Commission approved funding of € 100m Euros (under EEPR) to the ITGI pipeline and another € 45m to the Bulgaria-Greece interconnection.

ERGEG believes that, in addition to sufficient physical interconnection, effective congestion management procedures are also key to security of supply. The Framework Guideline for Gas Capacity Allocation Mechanisms and the subsequent network code will introduce market-based mechanisms to ensure fair access to capacity. Proposals to improve congestion management procedures through comitology process should also contribute to reducing contractual congestion. Overall, these legal developments will result in better utilisation of the existing gas infrastructure.

Diversification of transportation routes

The major gas pipeline projects have reported significant progress in 2010:

The construction works of **Nord Stream**, a pipeline project aiming to connect Siberian gas to Europe via the Baltic Sea, started in April 2010. The first line with a transmission capacity of 27 bcm is due to be finished in 2011.

The loan due diligence process for investment in **Nabucco** has started in 2010. Three major public banks – the European Investment Bank, the European Bank for Reconstruction and Development and the International Finance Corporation – would contribute up to € 4bn to the Nabucco pipeline. The construction phase is due to start in 2011.

Other alternative pipeline projects connecting Azeri gas to Mediterranean countries, including the aforementioned ITGI pipeline, are under development:

The **Trans-Adriatic Pipeline** (TAP) project launched by E.On Ruhrgas, Statoil and EGL will bring gas from Azerbaijan via Turkey to Greece, Albania and Italy. It is planned to have a capacity of 10 bcm a year. The completion date is foreseen to be around 2016-17.

7.4 Prospects

As pointed out in last year's Status Review, the 3rd Package sets a strong legislative framework for mitigating future supply shortages in Europe. The Gas and Electricity Security of Supply Directives establish obligations to safeguard security of supply and work as proactive rather than reactive measures to maintain stable and reliable supplies to European consumers. The newly adopted Gas Security of Supply Regulation goes even further as it provides a framework for cooperation in case of major gas supply disruptions.

The European Commission is currently developing an energy infrastructure package to address the lack of energy infrastructure in the EU[30]. The package will define the key strategic projects within and outside the EU, to which financial assistance will be provided, thus complementing the 3rd Package in its aim to integrate the European market and enhancing the security of energy supply on the continent. The communication on infrastructure development priorities and the way forward is due to be published by the Commission in November 2010.

Overall, the existing and upcoming legislation should set a strong framework for enhancing the security of supply in the European Union. Nevertheless, as indigenous European gas supplies are declining and new ambitious 20-20-20 climate targets have been set, security of supply will continue to be a major issue in Europe in the foreseeable future.

7.5 Conclusions

Security of supply remains an important issue in most EU countries. Only a small number of countries maintain high levels of overall energy security.

In terms of electricity supply, the majority of Member States has sustained a sufficient level of security of supply. However, there is still a lack of interconnection across Europe. As the EU is moving towards a greener economy, the issue of intermittency related to generation from renewable sources arises. In order to mitigate the risk of unstable electricity supplies due to renewable generation, major improvements in national and pan-European infrastructure and market integration will be needed.

[30] Communication from the Commission on energy infrastructure priorities for 2020 and beyond – A Blueprint for an integrated European energy network, 17 November 2010.

As indigenous European gas supplies are declining, most Member States are becoming increasingly dependent on external sources of supply. The existing gas market infrastructure will need enhancement to meet an anticipated demand for higher amounts of imports from outside the EU. Storage capacity is also insufficient to address short term gas shortages. However, new pipeline and interconnection projects aiming at the diversification of transportation routes and supply sources have shown some promising progress. In addition, a number of Member States is developing new gas storage facilities. These measures, if fully implemented, should significantly improve security of supply.

8 Regulation and unbundling

Key points
- No real evolution regarding NRA competences.
- NRA independence has to be guaranteed in a context of economic crisis.
- Insufficient unbundling remains an obstacle for genuine market integration and infrastructure development.
- TSO collaboration carries on.
- DSOs have to play a role as market facilitators.

8.1 Background

Regulation and effective unbundling are key elements to an integrated European market. Despite some progress in 2009, national reports showed that there are still obstacles to this goal and further action will be needed to set up a competitive market.

The 3rd Package will improve this situation. Indeed, the new requirements significantly increase the powers and the level of independence of NRAs.

8.2 Competences of NRAs

In comparison to the preceding year, there were no substantial changes in the competences of NRAs. The competences linked to the customer protection were consolidated and sometimes extended. Several regulators guarantee the availability and accessibility of consumption data of final customers to suppliers.[31]

In **Spain**, the regulator has to publish and update the list of suppliers on its website, manage a price comparator, monitor the changes of suppliers and the activity of the Change Supplier Office.

[31] Czech Republic, Italy, Romania.

Regarding **market monitoring and powers relating to competition policy**, most regulators are not entitled to imposing measures to foster effective competition, e.g. to establish virtual power plants or gas release programmes unless these are, under specific and occasional circumstances, provided for by law.[32]

Moreover, from March 2011 the 3rd Package assigns NRAs extensive monitoring tasks regarding market functioning. While in 2009, only a few NRAs had this competence, in the future monitoring will be either done by NRAs or other authorities, who will have to forward their findings to the NRAs. All NRAs will be able to issue decisions that are binding for electricity and natural gas undertakings and carry out investigations. To accomplish these new tasks, efficient exchange of information between regulators and other authorities in charge of market monitoring is required.

Regarding the possibility for NRAs to approve congestion management rules, which are proposed by TSOs, there was no noticeable evolution as regulators have different competences regarding capacity allocation and congestion management mechanisms. This incoherence of powers between NRAs leads to insufficient regional and European cooperation. The 3rd Package addresses this regulatory gap by giving NRAs the power to establish the terms and conditions for access to cross-border infrastructure (including the procedures for the allocation of capacity and congestion management).

As regards the power to impose **effective sanctions**, the decision taken by the **British** regulator in 2009 is worth mentioning: in November 2009, the regulator confirmed the imposition of a £ 2m penalty on EDF Energy Networks for non-respect of its electricity distribution licence.[33]

In 2009, **political interference** in energy regulation remained a concern for regulators; some stressed that the decisions taken in relation to their core duties (tariffs, balancing, etc.) should not be subject to review by national ministries[34] and highlighted the political pressure[35].

Moreover the ongoing financial crisis will have an impact on the NRAs' organisation as they are affected by national austerity measures. In a number of Member States, legislative provisions are being considered which could result in significant reductions to the financial and human resources of NRAs. Several regulators highlighted that some austerity measures directly or indirectly hindered their ability to carry out their duties[36].

The 3rd Package reinforces both the role of NRAs and their independence. In fact, new requirements foresee that NRAs take autonomous decisions, independently from any political body, that they have separate budget allocations, with autonomy as regards the implementation of the allocated budget, and that they dispose of adequate human and financial resources to carry out their duties. These new provisions are essential to ensure that regulatory decisions are protected from political and economic interests.

[32] For example the VPP measures adopted by the Italian regulator in 2009 for the Sardinia region according to provisions of Law 9/99.
[33] The breaches relate to EDFE's failure to provide offers for practicable connection.
[34] Spain.
[35] Latvia.
[36] Spain, Italy.

The above legal requirements must not be compromised by budgetary restrictions following the economic crisis. In particular, new NRA tasks springing from the transposition of the 3rd Package must be accompanied by an adequate increase in human and financial resources. This was also confirmed by a letter from the European Commission to the Italian Permanent Representation.

8.3 Regulation

In June 2009, the European Commission initiated infringement procedures for non-compliance with the 2nd Package against 25 Member States for electricity and against 21 Member States for gas[37].

The key violations identified by the Commission were:

- The lack of information provided by TSOs;
- An inadequate system for network capacity allocation;
- The lack of coordination and cooperation across borders by electricity TSOs and national authorities;
- The lack of effective enforcement action by the competent authorities in Member States in case of violations of the EU regulations.

According to the Commission, NRAs have the responsibility to take adequate action to ensure compliance with the provisions of the Regulations. As already highlighted in several ERGEG reports in the past, the lack of effective transposition of the 2nd Package and the fact that regulators lack the powers to do their job properly is a focal point for regulators in light of their role in ensuring compliance with the internal energy market provisions.

Under the 3rd Package, the role of regulators is strengthened. In addition, the new requirements provide for improvements in this respect as the promotion of regional cooperation is included in the scope of NRAs' responsibilities. The proposal for a new legislative package on energy infrastructure will also address parts of the abovementioned problems raised by the Commission.

It is crucial that the relevant provisions are transposed in national legislation in spirit as well. Their transposition is an issue for each Member State according to subsidiarity but also creates an important role for regulators, which may provide assistance in the effective transposition of the 3rd Package by promoting best regulatory practice.

[37] For not complying with the 2003 Electricity Regulation and the 2005 Gas Regulation. European Commission IP/09/1035.

8.4 Unbundling of TSOs and DSOs

TSOs unbundling

In 2009**,** there were no major changes to the unbundling obligations for TSOs.

In the Netherlands, the regulator initiated a specific project with the aim to investigate how the Dutch TSO for electricity and the one for gas fulfilled their regulatory tasks related to market facilitators (e.g. respect of unbundling requirements, separate logo, etc.).

In Bulgaria, the TSO prepared a compliance programme including specific obligations for the employees (independence of the persons responsible for the management, including the operational management).

Regarding the unbundling structure**, in Germany,** two TSOs adopted an ownership unbundling structure to comply with the European Commission's competition decision adopted last year.

The 3rd Package provisions could change the unbundling situation in the European Union as three unbundling options are foreseen, which Member States can choose from. These are:

- Ownership unbundling;
- The ISO model: ownership and operation of the transmission system are separated. The ownership of the transmission system can remain in the vertically integrated company if a separate entity is in charge of the operation of the transmission system (including development and maintenance);
- The ITO model: the vertically integrated company owns and operates the transmission system, but the existing legal and accounting unbundling is reinforced with much stricter provisions concerning TSO independence and deontology clauses.

In any case, NRAs have to certify TSOs, no matter which model is chosen. This implies closer regulatory supervision of TSO activities by NRAs.

DSOs unbundling

As last year, most regulators reported formal compliance with the legal and functional unbundling requirements of the 2003 Directives.

In the Netherlands, each DSO drafted an unbundling programme assessed by the regulator**.** This document explains how compliance with the national unbundling rules is ensured.
In Bulgaria, the DSOs sent the NRA their compliance programmes setting out the measures taken to ensure the independence from the energy sector. If necessary, the regulator can modify the programmes in order to guarantee the independence of the operator from the other activities of the vertically integrated undertaking.

Some regulators mentioned that operators were interested in developing a corporate culture of their own, beyond legal obligations (use of different logos and website etc.)[38]. Compliance programmes and reports to ensure functional unbundling contributed to an improvement of the situation.

In Denmark, the regulator issued guidelines on the independence of DSOs, mainly dealing with issues linked to corporate identity (separate websites, shared websites, etc.).

In Portugal, a new code of conduct was adopted by electricity DSOs. Their websites were separated from one another, from the parent company and from other entities. With the aim of separating their images, other measures were also added, such as placing the identity of each company in terms of its activity on bills, on letters replying to information requests and answering complaints, on business cards and on information leaflets.

Despite noticeable progress, national reports show that many distribution companies that are part of vertically integrated undertakings cannot act completely independently. DSOs at national level do not have active communication strategies and this affects their relationship with customers negatively.

In the Czech Republic, the concept of using a shared brand, logo and design of companies within the respective holding structures continues to prevail.

In France, DSOs and their roles remain relatively unknown to the general public. This situation exacerbates an ambiguity that is not conducive to competition. Similarly, parent companies should not seek advantage from the assignments entrusted to system operators.

The main conclusions of the ERGEG status report on the degree of adherence to the guidelines on informational and functional unbundling for DSOs published in 2008 confirm this state of play.

- DSO unbundling is key to the further development of retail competition;
- Customers still expect “integrated behaviour”;
- Some improvements are necessary (e.g. independence of the management, the ability to enforce their decisions to sanction or promote employees);
- In most of the countries, the role of the compliance officers has to be clarified;
- Non-discrimination is based on separate information flows between the vertically integrated undertaking and the DSO; and
- Regulators are sceptical about the fair allocation of economies of scale in reality because it has not been demonstrated that sharing services leads to the lowering of costs.

DSOs should act as market facilitators, meaning that they should facilitate the market entry of other participants and inform customers inter alia on their rights to switch supplier. DSOs of vertically integrated companies have to make significant structural changes to their businesses to ensure functional and informational unbundling.

[38] Estonia, Romania.

In the 3rd Package new provisions for DSOs are foreseen regarding the independence of compliance officers, the need for sufficient resources and a clear separation of communication and branding strategies.

8.5 Conclusions

The 3rd Package arrangements address several existing regulatory gaps, taking into account most of the recommendations released by ERGEG. Several NRAs are already working on the implementation of these new unbundling requirements[39].

The powers and tasks of NRAs, which still vary considerably across Member States, should become more harmonised with the transposition of the 3rd Package.

In the context of budget austerity, it seems essential to ensure that regulators have adequate financial and human resources to fulfil not only their current tasks but also the new ones that have to be transposed by March 2011.

[39] Estonia, Spain, United Kingdom.

Annex 1 – ERGEG

The European Regulators Group for Electricity and Gas (ERGEG) was set up by the European Commission in 2003 as its advisory group on internal energy market issues. Its members are the energy regulatory authorities of Europe. The work of the CEER and ERGEG is structured according to a number of working groups, composed of staff members of the national energy regulatory authorities. These working groups deal with different topics, according to their members' fields of expertise.

This report was prepared by the Unbundling, Reporting and Benchmarking (URB) Task Force of the Energy Package Working Group.

Annex 2 – List of abbreviations

Term	Definition
ACER	Agency for the Cooperation of Energy Regulators
CWE	(ERGEG) Central-West Electricity Region
CEER	Council of European Energy Regulators
DSO	Distribution System Operator
EEA	European Economic Area
EEPR	European Energy Programme for Recovery
EMCC	European Market Coupling Company
ENTSO-E	European Network of Transmission System Operators for Electricity
ENTSOG	European Network of Transmission System Operators for Gas
ERGEG	European Regulators Group for Electricity and Gas
EU	European Union
GGP	Guidelines of Good Practice
HHI	Herfindahl-Hirschman Index
IP	Interconnection Point
ITGI	Interconnection Turkey Greece Italy (pipeline)
ITVC	Interim Tight Volume Coupling
LNG	Liquefied Natural Gas
NRA	National Regulatory Authority
NTC	Net Transport Capacity
PX	Power Exchange
SEM	Single Electricity Market
TAP	Trans-Adriatic Pipeline
TSO	Transmission System Operator
UIOLI	Use-It-Or-Lose-It
UIOSI	Use-It-Or-Sell-It
VPP	Virtual Power Plant
WG	Working Group