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Political and economic aspects of energy prices and their regional context in the Slovak Republic after joining the European Union

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Political and economic aspects of energy prices and their regional context in the Slovak Republic after joining the European Union

INTRODUCTION

Functioning energy market with reliable and safe energy is essential predisposition to the success of any economy. Ensuring adequate energy supplies for both the industry and population is becoming increasingly important element of the state policy and transnational integration groupings, including Slovakia and the EU as well. In addition to ensuring the necessary amount of energy, price of energy for the end user is another key aspect of well-functioning economy. Pricing is a highly sensitive issue since it is related to household and industrial consumers as well. Currently, energy costs have become a critical element in the management of various entities significantly affecting their living standards and prosperity.

Like in many other countries, the issue of energy prices ranks to extremely topical issue also in Slovakia. Globalization has hit the Slovak economy in full strength and exposed it to high pressure coming from the side of the worldwide market. Countries have to deal with a number of major events that have large impact particularly on open and vulnerable economies - the global economic and financial crisis, the Russian-Ukrainian gas dispute, the war in Iraq and huge increases in oil prices, nuclear accident in Fukushima and so on.

In case of Slovak Republic, country's accession to the EU is a very important point, which is associated with a vast range of significant changes, particularly related to the introduction of different types of liberalization measures. Largely monopolized energy market has been gradually opening up to competition and countries with regulated prices face the increasing pressure to let the free market decide. Thus, proceeding liberalization of energy markets enables consumers of energy services to choose from proposals offered by various private companies.

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The main ambition of this contribution is to highlight the price differences between distinct energy commodities in the Slovak Republic not just at state but also international level. In spite of unification effort, national energy markets are still trying to remain highly specific and also some local factors might prove as significant. Liberalization processes can also lead to a state when globalization trend will result in strong regional disparities in energy prices as response to the emergence of various regional players existing in the field of energy. In this paper, we shall examine four major energy commodities (electricity, gas, water, heat). We will focus primarily on pricing, market operation, the number of suppliers and price differences in Slovakia regarding the EU context at the same time.

ELECTRICITY

The liberalization of electricity trade

There is a real revolution in electricity trading in Slovakia. What the mobile operators and alternative providers of telecommunications services brought to the telecommunications market a few years ago gradually comes to the electricity market as well. Competition is growing and especially larger companies have been negotiating hard with different suppliers of electricity for several years. Increasingly, this involves the households, too. A fall in electricity prices in the spot market experienced at the time of global crisis was the factor the most contributing to this situation.³

In 2007, an Intensive liberalization of the electricity market began in Slovakia. In accordance with European Union legislation, all traditional monopolies (ZSE, SSE, VSE) had to be divided into electricity supplier and distributor of electricity as well. This division process is called in English as "unbundling". The supplier is one who sells electricity to final customers. The distributor is the one who provides "transportation" of electricity from the producer to the end customer. Other important changes occurred in 2011, when all EU countries began to apply so-called the third liberalization package. Among other things, it allowed a very fast and flexible switching of electricity supplier to end customers - households.

However, the newly established distributors have remained monopoly electricity distributor in their delimited territory. Therefore, if the end customer obtaining electricity from the above-mentioned distributors decides to change supplier, electricity will be still

³ Oberndorfer, O., 2011. Energy prices, volatility, and the stock market: Evidence from the Eurozone. In: Energy Policy, Vol. 37, No. 12.

distributed to him by the same distributor. It can be very simply explained by the fact that for no one is worth to invest the money to build a new distribution network - all such costs would be eventually paid by end customer through the higher price of electricity. Due to legislative changes, alternative electricity suppliers were added to the traditional suppliers of electricity in Slovakia. A competitive fight took place among all these electricity suppliers, which brought profit to the end user of electricity - the end customer can negotiate a better (lower) price for energy. Electricity has become goods, whose final price is starting to be affected by the customer choosing supplier with the lowest price of electricity. On alternative supplier, we will give more detail in a separate subchapter

Electricity prices

The rules governing the electricity market in Slovakia are in accordance with the EU standards on functioning of the electricity market. Nevertheless, state maintains control over prices of electricity (and also gas) for end users in many EU countries. In most cases, this is the result of efforts to shield household and industry from violent fluctuations in prices, since electricity is a strategic commodity for the operation of the economy and the quality of life as well. Price of electricity in Slovakia is monitored and regulated by the Regulatory Office for Network Industries (ÚRSO). It is important to note that the maximum final prices of individual components of electricity prices for households are regulated by this office. Each alternative supplier of electricity for households in Slovakia must have a maximum final price of electricity approved by this authority. In the near future, the cancellation of this regulation is expected.

Despite some degree of regulation, prices are being determined in the greatest extent by market. In a liberalized market, customers may affect unregulated part of final electricity price by choice of their supplier. In particular, prices in Slovakia are highly dependent on prices on international markets, especially on the stock exchange in Leipzig. Slovak price with a small surcharge actually follows the stock price forming there. In turn, price of electricity on the stock exchange usually moves very much like the price of oil. If the oil price is going up, the price of electricity is also increasing, and vice versa. In general, there is a very close relationship between the price of oil on the world market and price of electricity in Slovakia. Therefore, development of electricity prices is linked to the uncertainty and price risk. Prices may grow rapidly, as for example in the first half of 2008. But they can also fall sharply, as in the second half of 2008. Exceptions pose the prices which are not determined by market, but are regulated, as electricity for households and small businesses (with annual consumption up

to 30 MWh) in Slovakia in 2010, where the price was administratively fixed by regulator (ÚRSO). Other components of prices are set by the state. Level of excise tax is established by the National Council of the Slovak Republic, however the minimum rates are given by the EU rules.⁴

If customer considers the switching of electricity supplier due to dissatisfaction with the height of final electricity price, it is enough to compare the price of electricity supply. Other components of price are determined as fixed prices by ÚRSO and are not the subject of market competition. The price coming from supplier is the only item that the customer can influence.⁵ State regulation is very often a subject of strong criticism from the side of electricity providers and many international institutions. In this case, the several courts in a row marked state regulation as illegal. Whether the state will pay for this sin, is still pending. However, the market should fully take over the role of regulator in the future.

In addition to oil prices and the impact of regulation, the electricity price is influenced by many other factors. For example, the economic and financial crisis caused both a sharp decline in consumption of electricity and a decrease in electricity prices on energy stock exchanges at the turn of 2008/2009. In Slovakia, shutdown of 1st and 2nd block of nuclear power plant (NPP) in Jaslovské Bohunice had a significant impact on retail electricity prices at the end of 2006 and 2008. However, this event showed significantly in the segment of industrial customers only. During the mentioned period, the end prices for households were subject to strengthening regulation caused by distribution of power in the domestic political scene then. After completion of the 3rd and 4th reactor in Mochovce NPP, we can expect some pressure on reduction of electricity prices, since the security of electricity supply would substantially increase in Slovakia and the country's export potential on the electricity market would be partially restored.

Currently, the market is struggling with the expansion of renewable energy resources in Europe with an impact on the functionality of the power system, but also on the final price of electricity. In this case, we can observe that the mutual globalization of electricity markets also has its drawbacks. The situation in Slovakia is negatively affected by wind and solar power plants located in northern Germany, which increased the production of electricity due to the decommissioning of some nuclear power plant after disaster in Japan. Given that

⁴ ÚRSO, 2011a. Ceny elektriny pre domácnosti v roku 2011. Úrad pre reguláciu sieťových odvetví, Odbor strategických analýz, Bratislava.

⁵ ÚRSO, 2011a. Ceny elektriny pre domácnosti v roku 2011. Úrad pre reguláciu sieťových odvetví, Odbor strategických analýz, Bratislava.

between northern and southern parts of Germany, where they shut down nuclear power plants, there are not enough lines and transmission capacity needed for extreme cases of high wind power plant production, electricity produced from renewable sources flows parallelly through the neighbouring system of Czech Republic and Slovakia, too. To avoid the so-called black – out situation potentially caused by unplanned loop flow from Germany, transmission system operator of Slovak electricity transmission system (TSO SEPS) must seek optimal solutions to maintain the safety and reliability of the transmission system operation. In order to increase safety and security of the transmission system from unscheduled loop flows from Germany, TSO SEPS should consider investing in the development and protection of the transmission system. Provision of these measures requires increased need to regulate the transmission system (balancing electricity supply), which will adversely affect the price of electricity and can occur in the future by growth of the end electricity price.⁶

Figure 1 – Electricity prices for household and industrial consumers in SR (2004 – 2012)

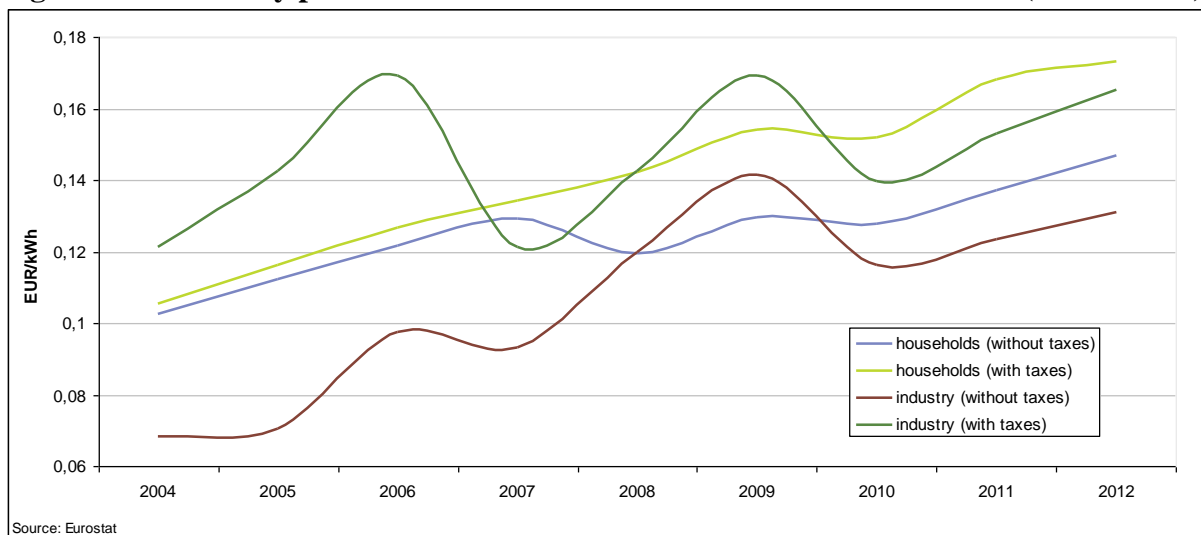


Figure 1 shows the evolution of electricity prices in Slovakia after joining EU in 2004. We can observe differentiated development of prices for industrial consumers, which is characterized by large fluctuations during the period under study. This is mainly due to frequent changes in the consumption of industrial enterprises, which can vary in particular years dramatically. On the other hand, the price level for the households is constant and stable since the electricity consumption shows no major changes. However, the development of electricity prices in both segments has offset and run almost parallel with minimal differences since 2010. The question is whether the turbulence in the evolution of prices within the period

⁶ ÚRSO, 2012a. Správa o dodržiavaní pravidiel trhu s elektrinou a plynom za rok 2011 a o opatreniach na ich dodržiavanie. Úrad pre reguláciu siet'ových odvetví, Bratislava.

of 2006 - 2010 was in addition to the global crisis also associated with the current political situation in Slovakia. In this period, the government tried to make some pressure on privatized monopolies in order to prevent sharper increases in energy prices. The result was a decision that allows ÚRSO take into account purchasing power of the Slovak households when determining the price of gas, electricity and heat as well.

However, we should keep in mind that the principle of electricity pricing is geographically located elsewhere than in Slovakia. Wholesale electricity prices, which are being traded on the Slovak market, derive from the price level on the Leipzig stock exchange. In practice this means that no matter what the actual cost of production to generate one megawatt hours of electricity in Slovakia is, the commodity is placed on market under conditions which oscillate around the German stock exchange. Existing link between the Czech and Slovak electricity market is also important; a unified Czechoslovakian market is de facto the neighbouring market of Germany. Thirdly, the German factors are passed through the border also due to a flow-based method that is used to determine the capacity for cross-border electricity transmission. Very simply, the practical consequence may be situation when wind power plants on the northern coast of Germany deliver more energy into a network, increased costs concerning the system operation would affect the foreign participants on the market, although this electricity is being traded on the German market.

2010 was the first comprehensive year when electricity production began to promote electricity from renewable energy resources and combined electricity and heat production in accordance with the law on their promotion. Most of the interannual increase in the amount of charges is connected with the solar power plants, which are typical of the highest feed-in tariffs among all types of renewable energy resources. Construction of facilities generating electricity with unstable power such as wind and solar power plants requires both the additional costs to regulate the power system and the construction cost concerning additional infrastructure. In 2010, ÚRSO often pointed out that the spontaneous increase in the number and capacity of photovoltaic sources may have very negative impact on the final price of electricity.⁷

Comparison of Slovak Republic and the EU in terms of electricity prices

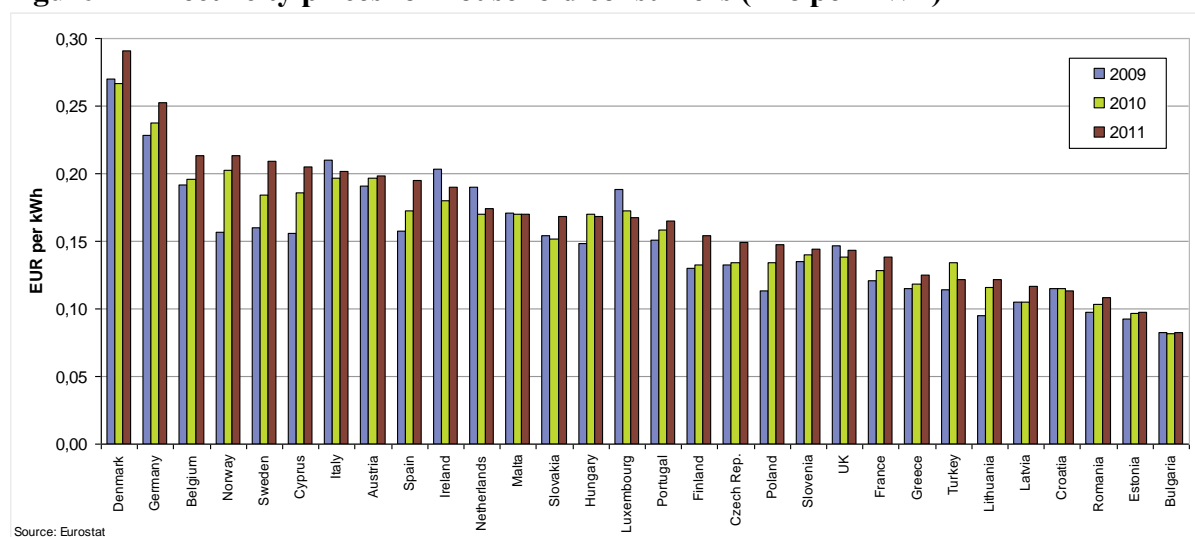
In each country, price for electricity paid by end users consists of several items, which may be differently defined and may have distinct division. Therefore it is not easy to

⁷ ÚRSO, 2011b. Správa o dodržiavanií pravidiel trhu s elektrinou a plynom za rok 2010 a o opatreniach na ich dodržiavanie. Úrad pre reguláciu sieťových odvetví, Bratislava.

determine the actual structure of the final electricity prices in order to compare them with the structure of the end user prices in Slovakia. In addition to the basic components of price, consumers of electricity may be loaded by other charges, which distort the final price then. The form of price lists is differential from one electricity supplier to other. The distribution of prices by the different rates of electricity, regulated and unregulated part, surcharges, taxes or benefits are also included.

In the analysis of electricity prices in EU countries, we use a database of the European Statistical Office.^{8,9,10} We will focus mainly on the households segment, but will not also forget the industrial customers.

Figure 2 – Electricity prices for household consumers (in € per kWh)



In 2011 in the EU-27, the average price per kWh of electricity (for households) was at € 0.178 (Figure 2). Compared to 2010, it means an increase of about 7%. For all three years (2009 - 2011), the most expensive electricity was observed in Denmark, followed by Germany and Belgium. On the other hand, the cheapest electricity for household was registered in Bulgaria. In Slovakia, the price of electricity is very near to EU-27 average and the country is approximately in the middle of the ranking. (Slovak Republic is about 95% of average EU-27). However, Slovak households have the most expensive electricity among the Visegrad Four (V4) countries.

⁸ EUROPEAN COMMISSION, 2007. Gas and electricity market statistics. Eurostat, Publications Office of the European Union, Luxembourg.

⁹ EUROPEAN COMMISSION, 2009. Panorama of energy - Energy statistics to support EU policies and solutions, Eurostat, Publications Office of the European Union, Luxembourg.

¹⁰ EUROPEAN COMMISSION, 2011. Energy, transport and environment indicators. Eurostat, Publications Office of the European Union, Luxembourg.

In terms of purchasing power parity comparison eliminating price level differences between countries, this statement is even more striking (Figure 3 and Figure 4). While the average in EU-27 is € 16.76/100 kWh, Slovakia reaches more than € 22/100 kWh. Slovak households have to pay for electricity the second highest price in the EU just after Denmark, which occupies the first place. Conversely, households paid at least for electricity in Finland (Figure 3).

Figure 3 - Electricity prices in purchasing power standards (PPS) per 100 kWh for household consumers (all taxes included) in 2011

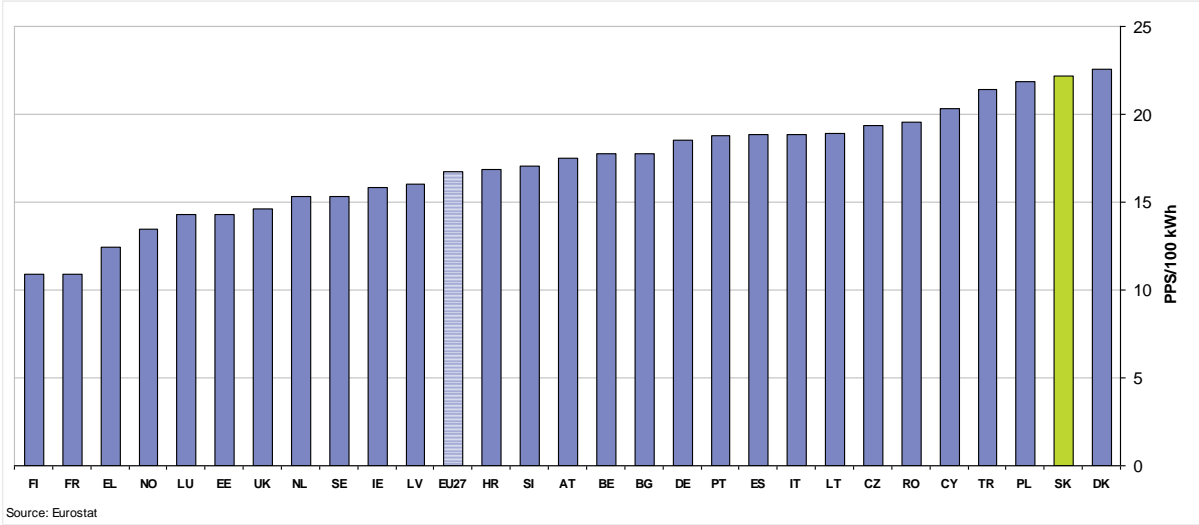


Figure 4 - Electricity prices in purchasing power standards (PPS) per 100 kWh for household consumers in selected countries of Europe in 2011 (all taxes included)

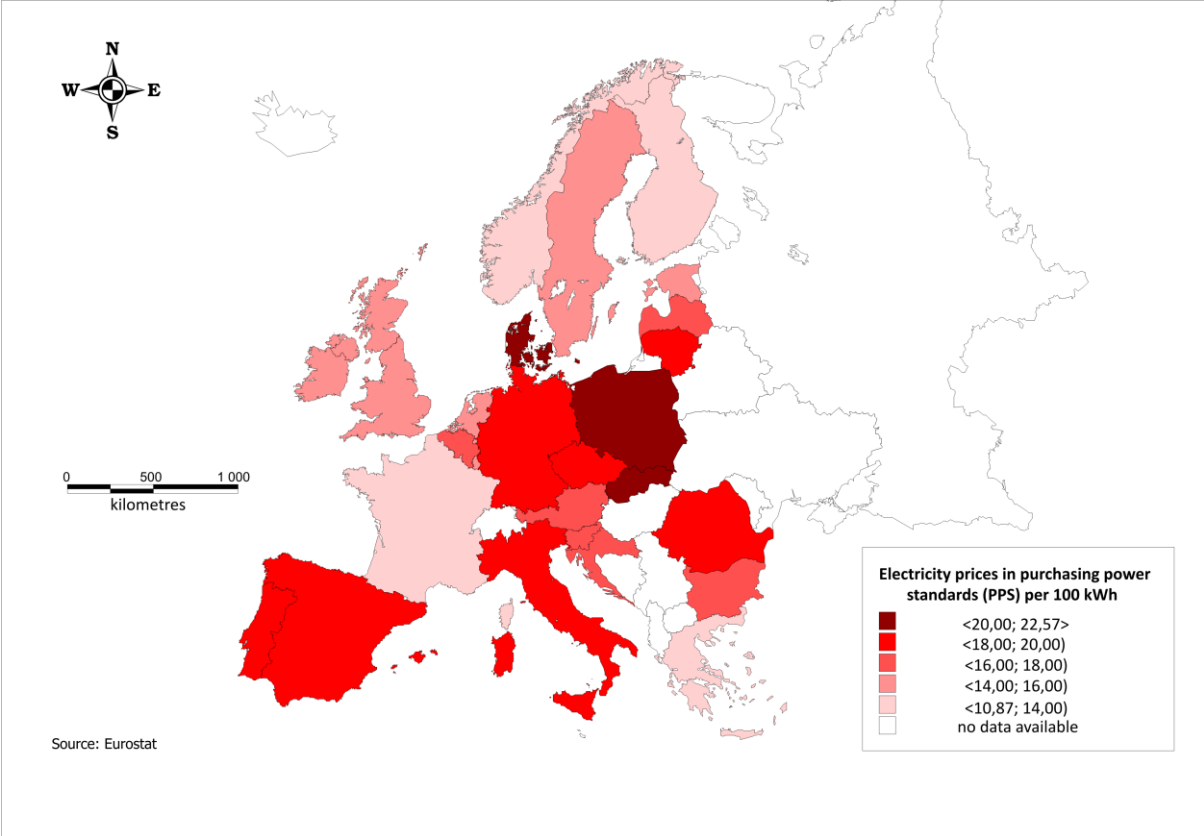
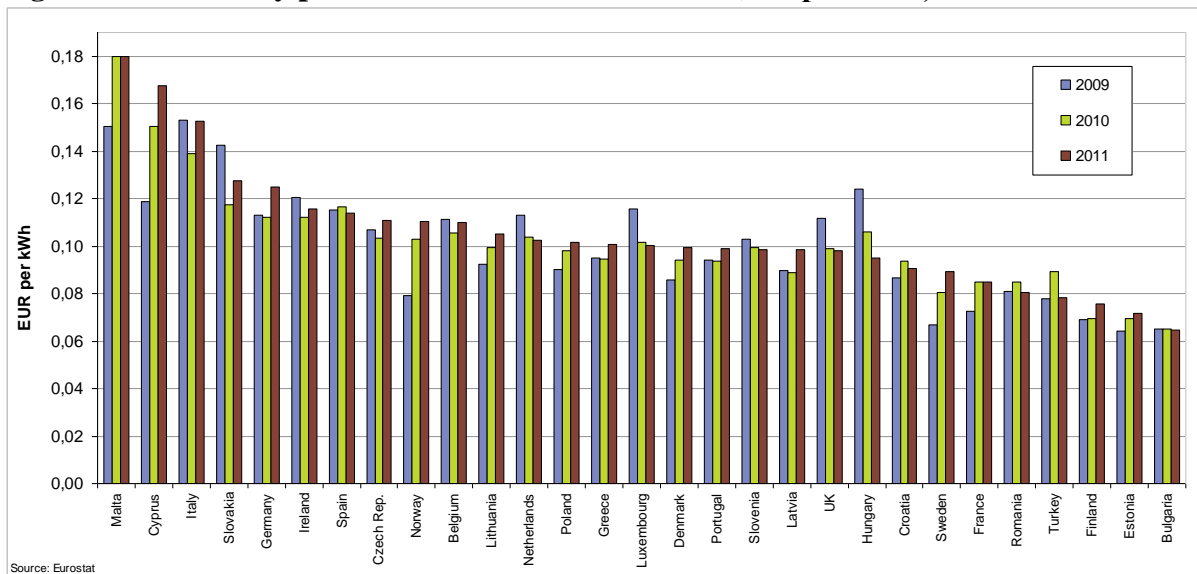


Figure 5 – Electricity prices for industrial consumers (in € per kWh)



As in the case of households, the cheapest industrial electricity was observed in Bulgaria. In 2010, we can observe a sharp decline in prices in most EU countries. World economic and financial crisis has resulted in dramatic decline in electricity consumption very often, especially for large industrial companies. In this segment, prices of electricity have recorded a considerable decline. In 2011, gradual catching up of the prices to levels before the onset of economic crisis was expected. Several experts supposed that the electricity price on the world commodity market would rise sharply and remain high after a nuclear accident in Japan and the German government decision on the gradual decommissioning of nuclear power plants. However, this prediction was not confirmed and the market responded illogically.¹¹ In the Slovak Republic, electricity price declined very modest (Figure 5). In the case of households, the decrease in electricity consumption was not such a dramatic and price drop occurred in a few countries only (Figure 1 and Figure 2).

Electricity prices for industry (corporate consumers) in Slovakia are ranked among the highest within the EU. Club 500, which includes large companies in Slovakia, protested repeatedly against expensive electricity for industry. The highest price was recorded only in two small island countries (Malta, Cyprus) and Italy (Figure 5). In 2011, the average price in the EU-27 was at €0.110/ kWh, which means that the current Slovak electricity prices for industrial customers is more than 15% above the EU-27 average.

¹¹ Oberndorfer, O., 2011. Energy prices, volatility, and the stock market: Evidence from the Eurozone. In: Energy Policy, Vol. 37, No. 12.

We have mentioned that the price of electricity consists of several components. It is not easy to identify these components accurately, although a basic comparison can be made at least. It can be very interesting to see how the different countries show distinct charges or dissimilar level of value added tax on the final price of electricity (Figure 6 and Figure 7). Within the EU-27, taxes and fees pose € 0.051/ kWh on average, which represents nearly 30% of final electricity prices charged to households. Denmark is at the top of ranking, since this proportion is more than 56%. After deduction of fees and taxes, the base price of electricity in Denmark is one of the lowest in the EU. In Slovakia, these contributions reach the share of 18.43% that ranks us among the countries with relatively low tax burden in electricity prices. The best situation for households is observed in the UK, where the price of electricity is imposed only by minimum tax (4.75%).

Figure 6 - Taxes and levies on electricity prices for household consumers in 2011

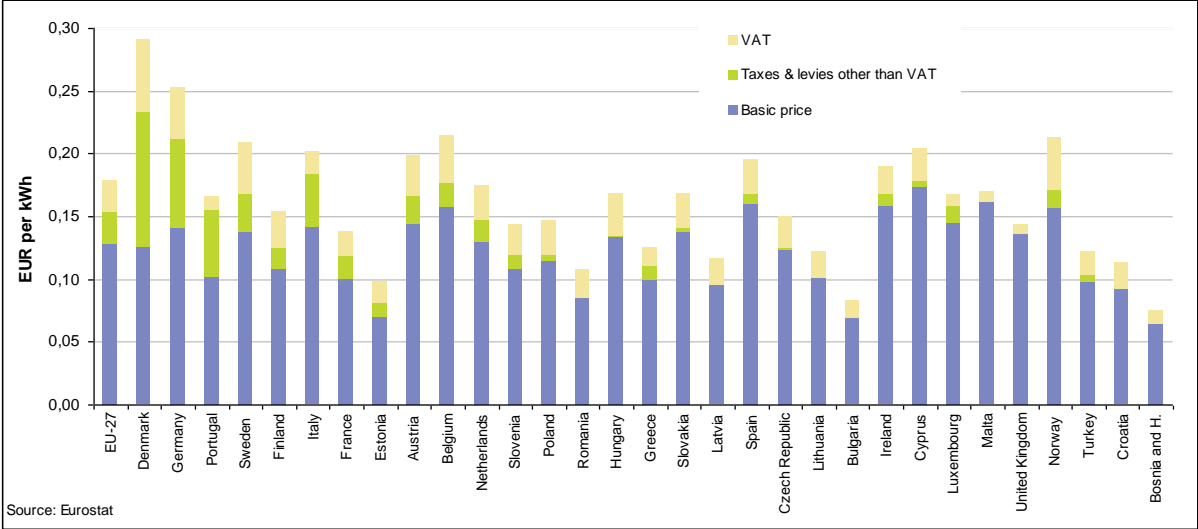
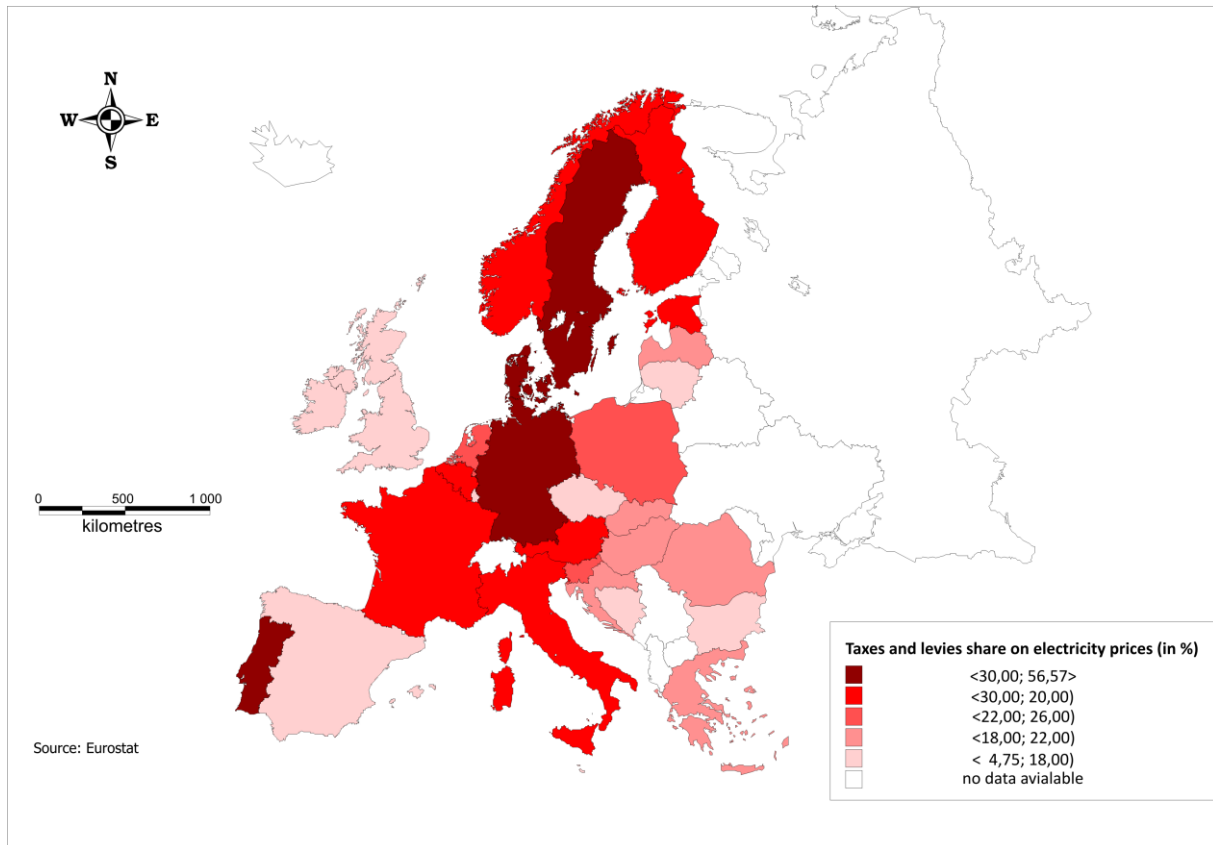


Figure 7 - Taxes and levies on electricity prices for household consumers in selected countries of Europe in 2011



Electricity suppliers in Slovakia

At the end of 2011, 385 entities with a valid license to do business in the power sector offered electricity supply, which poses annual increase of 16 subjects. Despite this relatively high number, it is necessary to highlight the fact that in the category of "supply of electricity to households" there were 41 suppliers and only 15 of them with a more significant volume of electricity supply (in addition to ZSE, SSE a VSE).¹² The rest of them supply electricity to households located within the grounds, local distribution systems and enterprises. An important event took place on January 1 of 2011, when the ČEZ Slovensko, Ltd. (one of the biggest supplier of electricity and gas in Slovakia) entered the market. It signed more than 15,000 contracts on electricity supply and gas in two months after its entry into the household segment. The gradual increase in electricity supply by the new electricity suppliers has taken a

¹² ÚRSO, 2012a. Správa o dodržiavaní pravidiel trhu s elektrinou a plynom za rok 2011 a o opatreniach na ich dodržiavanie. Úrad pre reguláciu sieťových odvetví, Bratislava.

significant position and thus we can say that today the suppliers are not already divided into traditional and alternative, but rather into the old and new or large and small as well.

Table 1 - Electricity suppliers for households in Slovakia in 2012

electricity supplier	location	electricity price in 2012 (EUR/100 kWh)*
<i>A.En. Slovensko s.r.o.</i>	Martin	17,72
<i>BUSINESS COMMERCIAL FINANCE s.r.o.</i>	Banská Bystrica	17,63
<i>ČEZ Slovensko s.r.o.</i>	Bratislava	17,75
<i>Energetické centrum a.s.</i>	Bratislava	17,35
<i>KORLEA INVEST, a.s.</i>	Košice	16,62
<i>Komunal Energy a.s.</i>	Žilina	17,91
<i>MAGNA A.E.</i>	Piešťany	15,88
<i>PB Power Trade, a.s.</i>	Žilina	15,82
<i>POWER-EN a.s.</i>	Bratislava	17,58
<i>SE Predaj</i>	Bratislava	17,40
<i>Slovakia Energy</i>	Bratislava	17,58
<i>Stredoslovenská energetika, a.s. (SSE)</i>	Žilina	18,15
<i>Vaša energia s.r.o.</i>	Bratislava	17,27
<i>Východoslovenská energetika, a.s. (VSE)</i>	Košice	18,16
<i>ZSE Energia, a.s. (ZSE)</i>	Bratislava	18,16

Notes: * - price are based on list of prices of electricity suppliers (with VAT, tariff zone DD2);
 - the amount must be added the cost of distribution, which are however the same for all companies

Source: ÚRSO

Households and small businesses are increasingly beginning to recognize the presence of market competition. Although not as large as for corporate clients, alternative suppliers got over the higher business margin and the positive trend of change in electricity supplier accelerated in order to get the new clients, too. A remarkable deal of customers has left great traditional suppliers, which represents a certain standard in liberalized markets. It is also a clear signal that the electricity market works indeed. However, the large companies have advantage in built customer centres and other infrastructure that will be gradually needed also by the other market players. Then, it can push on prices of new competitors. Furthermore, most alternative suppliers of electricity consider this area as some sort of supplementary sector, which means mainly the marketing potential for them.¹³ This kind of competition also affects the market prices and it is clearly visible that delivers both the better services and the pressure on more favourable prices.¹⁴

¹³ Galbas, B., 2011. Český gigant ponúka Slovákom novú šancu. Inštitút pre energetickú bezpečnosť, Bratislava.

¹⁴ Marčan, P., 2010. Trh s elektrinou rozhybala konkurencia. Inštitút pre energetickú bezpečnosť, Bratislava.

Selected indicators characterizing the shares of three critical electricity suppliers and new suppliers in the electricity market are documented by data in the table below:

Table 2 – The volume of electricity supplies from the old and new suppliers in 2009 - 2011

	2009	2010	2011
<i>Volume of electricity supplies for non-household customers (GWh)</i>			
ZSE Energia + SSE + VSE	10481	10064	9732
SE Predaj, s.r.o	0	1125	1423
ČEZ Slovensko, s.r.o	750	961	1036
Magna E.A	73	239	280
KORLEA INVEST, a.s.	0,862	0,045	20
PB Power Trade, a.s.	0,658	30	45
SLOVAKIA ENERGY s.r.o	40	34	19
POW-en, a.s.	0,8	2,72	12,25
Energetické centrum, a.s.	0	0,057	2,372
<i>Volume of electricity supplies for household customers (GWh)</i>			
ZSE Energia + SSE + VSE	4966	4920	4884
SE Predaj, s.r.o	0	0	0,071
ČEZ Slovensko, s.r.o	0	0	14
Magna E.A	6,73	21	25
KORLEA INVEST, a.s.	0	0	0
PB Power Trade, a.s.	0,05	0,148	2,12
SLOVAKIA ENERGY s.r.o	40	91	99
POW-en, a.s.	0	0,009	0,0422
Energetické centrum, a.s.	0	1,08	45

Source: ÚRSO SR

Manifestation of both the progressive liberalization and development in the electricity market is an annual increase in number of electricity customers who have changed their electricity supplier. Development is documented by the following information:

Table 3 – Changes of electricity supplier in the years 2009 - 2011

supplier change	2009	2010	2011
Number of household customers	7 697	17 171	40 574
Number of non-household customers	2 999	4 644	2 210

Source: ÚRSO SR

In period of 2009 - 2011, the end suppliers of electricity and alternative suppliers involved in the security of electricity supply to delivery points in the households as follows

Table 4 – Delivery points of electricity in the years 2009 - 2011

indicator	2009	2010	2011
Number of delivery points in households in three RSC together	2 080 377	2 096 684	2 112 856
Number of delivery points in households in final suppliers of electricity	2 071 143	2 071 233	2 036 394

Number of electricity consumers in households with alternative suppliers of electricity	9 234	25 451	58 227
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Abbreviations: RSC - regional supply companies

Source: ÚRSO SR

GAS

The liberalization of gas market

Following the decision of the European Commission, Slovak government had an obligation to liberalize the gas market. The first step came on 1 July of 2006, when the monopoly supplier and distributor of natural gas, Slovak Gas Industry, Inc. (Slovenský plynárenský priemysel, a.s. - SPP), broke away transmission and distribution activities from the supply of gas to final consumers, by which three new companies were established:

(supplier) Slovak Gas Industry, Inc. (SPP)

(distributor) SPP – Distribution (SPP - Distribúcia), Inc.

(transit) Eustream, Inc.

The supplier sells natural gas to final customers (households, industrial plants). Distributor is one who provides "transportation" of natural gas to the end customer. The transit company is responsible for gas supplies from abroad (Russia) and abroad (Western Europe) through the territory of Slovakia. In its coverage is also care of high load carrying capacity. Newly established distributor, SPP - Distribution, Inc., would remain a monopoly distributor of natural gas in its defined territory. Therefore, if the end customer decides to change suppliers, natural gas will be still distributed to him by the same distributor. It can be very simply explained by the fact that for no one is economical to invest the great deal of money to build a new distribution network - all such costs would be eventually paid by the end customer in a higher price for natural gas. However, this is not obstacle for new distributors to build their new distribution networks, where SPP - Distribution, Inc. has not got an established distribution network. Therefore, small (local) distributors are already on the market covering a specific area. This concerns mainly the newly built flats and houses.

In Slovakia, there has been a choice of an alternative gas supplier since 2007. Despite this fact, the gas market was not sufficiently liberalized until 2011. Alternative suppliers were mainly focused on industrial customers, from whom they expected the biggest gains. Even in 2010, trading in gas was secured by monopoly of SPP, Inc., which has guaranteed long-term gas supply contracts with Gazprom Export.

Until 2011 can be described as first year, when the gas market is in all segments (industry + households) real open in Slovakia.¹⁵ This result is attributable to the excess of gas supply over its demand, hence its availability in terms of prices for gas retailers who sell gas purchased not only by long-term contracts, but also on the stock exchange. Trading of gas within the Baumgarten gas hub in Austria, which is the nearest trading place beyond the Slovak Republic, is dynamically increasing. Trading hub in Baumgarten (business place established in the territory where the pipelines are crossing) began in 2009. These changes in the conditions of gas market operation initiate the modification of relationship between gas market participants. Both the development of production from unconventional sites in North America (so-called shale gas) and increase supplies of liquefied natural gas have resulted in surplus of gas supply over its demand.¹⁶ This development also affects the price of gas when there is a positive development in favour of gas prices on spot markets compared to traditional gas purchases based on long-term contracts. New gas suppliers purchase gas on spot markets gaining a competitive advantage over traditional suppliers and the final selling price of gas for customers is made by a mix of spot market price and long-term contracts.

Gas prices

Gas prices are dependent on the projection of value concerning the planned purchase price of natural gas in €/m³ for a particular year, which is affected by a presumption of USD/EUR exchange rate for a particular year, assumption of an average annual price of heavy fuel oil FO for a specific year in USD/mt and the assumption of an average annual price of light fuel oil GO for specific year in USD/mt.¹⁷

The gas market is characterized by better potential of having the more players entered in the households sector than electricity is. Compared to the gas, the electricity price is caused by many factors (e.g. when current is drawn) and hence for people the bids can be much more transparent and readable. Moreover, we observe relatively few households with a sufficiently large consumption that would be also interesting for electricity suppliers in terms of

¹⁵ ÚRSO, 2012a. Správa o dodržiavaní pravidiel trhu s elektrinou a plynom za rok 2011 a o opatreniach na ich dodržiavanie. Úrad pre reguláciu sieťových odvetví, Bratislava.

¹⁶ Scholtens, B., Yurtsever, C., 2012. Oil price shocks and European industries. In: Energy Economics, Vol. 34, No. 4.

¹⁷ ÚRSO, 2011b. Správa o dodržiavaní pravidiel trhu s elektrinou a plynom za rok 2010 a o opatreniach na ich dodržiavanie. Úrad pre reguláciu sieťových odvetví, Bratislava.

profitability.¹⁸ And also for reason that significantly less people heat their homes by electricity than gas. For gas, the households segment is more interesting.

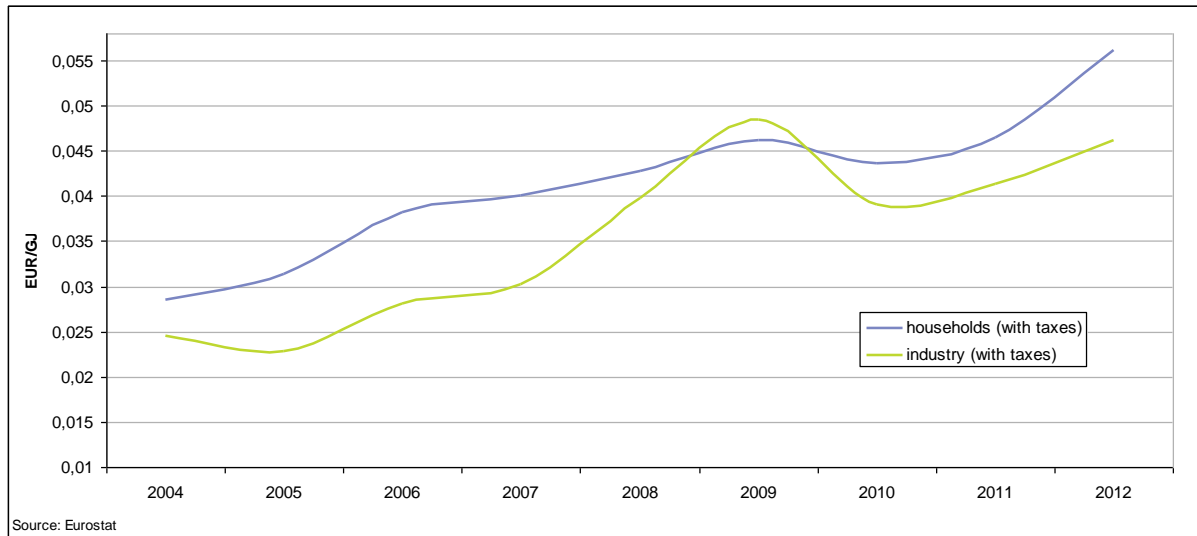
However, regulated gas prices must achieve an acceptable level and suppliers must be confident that the state would not unreasonably interfere with pricing in the future. The same as in the case of electricity, price of natural gas is being closely monitored by a state Regulatory Office for Network Industries (ÚRSO). Maximum retail prices of individual components regarding the natural gas prices for households are regulated by this office. Each alternative supplier of gas for households in Slovakia must have a maximum final price of gas approved by the ÚRSO. In the near future, abolition of this regulation is expected.

The development of gas prices for households and industry is shown by Figure 8. In certain sections of the period under study we can see some differences between households and industrial segment. In 2004, development of natural gas prices was showing divergent trend between these segments with unfavourable trend for households. During 2005 and especially in 2006, annual changes in gas prices recorded approximately the same trend for households as well as for industrial businesses. Over three quarters of 2007, gas prices for households were slightly growing year-on-year, and for industrial producers they were declining from the second quarter to the end of 2007. From early 2008, gas prices for households were at the same level as previous year, but gas prices for industrial producers were constantly increasing and in September 2008 recorded growth almost of 24%.¹⁹ Since 2010, there has been a relatively rapid increase in prices of both categories, while the gap between households and industry begins to rapidly increase. Considerable differences in the development of energy prices for both the households and industrial producers are largely due to the different methodology of energy prices setting for producers on one hand and small consumers on the other. During the period of 2006 - 2010, we also observed the stricter regulation of eligible costs concerning suppliers and distributors of energy for households by the regulator.

¹⁸ Galbas, B., 2011. Český gigant ponúka Slovákom novú šancu. Inštitút pre energetickú bezpečnosť, Bratislava.

¹⁹ Cár, M., 2009. The current development of energy prices in Slovakia. In: Biatec, Vol. 17, No. 1, Národná banka Slovenska, Bratislava.

Figure 8 - Gas prices for household and industrial consumers in Slovakia (with all taxes)



Comparison of SR and the EU in terms of gas prices

Demand for gas in Europe is growing together with the economic recovery after overcoming the economic crisis. Natural gas is increasingly gaining prominence due to the nuclear crisis in Japan, which caused that many European countries are beginning to review the use of nuclear energy. Instead of that, they plan to increase the use of renewable energy sources, but also gas.

From the perspective of the European Union, gas prices for households in Slovakia were slightly below the average in 2011, which reaches € 0.056/ kWh within the EU-27 countries (Figure 9). From the data of three years period under study, it is clear that gas prices are extremely stable in Slovakia. Households pay for gas the most in Sweden and Denmark, the least in Bulgaria. Within the V4 countries, Slovakia has the second lowest gas prices after Poland, but the differences are minimal. The same as in the case of electricity, we observe reduction in gas prices due to a decrease in consumption in 2010, which slowly got to their previous values in 2011, however.

If we recalculate the gas prices to purchasing power parity, the situation is getting worse again. Among the 27 members of EU, Slovak households have 8th the most expensive gas. On the other hand, Slovakia has the cheapest gas within the V4 countries. EU-27 average in 2011 stood at € 0.5. The most expensive gas for households was registered in Bulgaria, while Romania was the country where people spent the least for this kind of energy (Figure 10 and Figure 11).

Figure 9 – Gas prices for household consumers (in € per kWh)

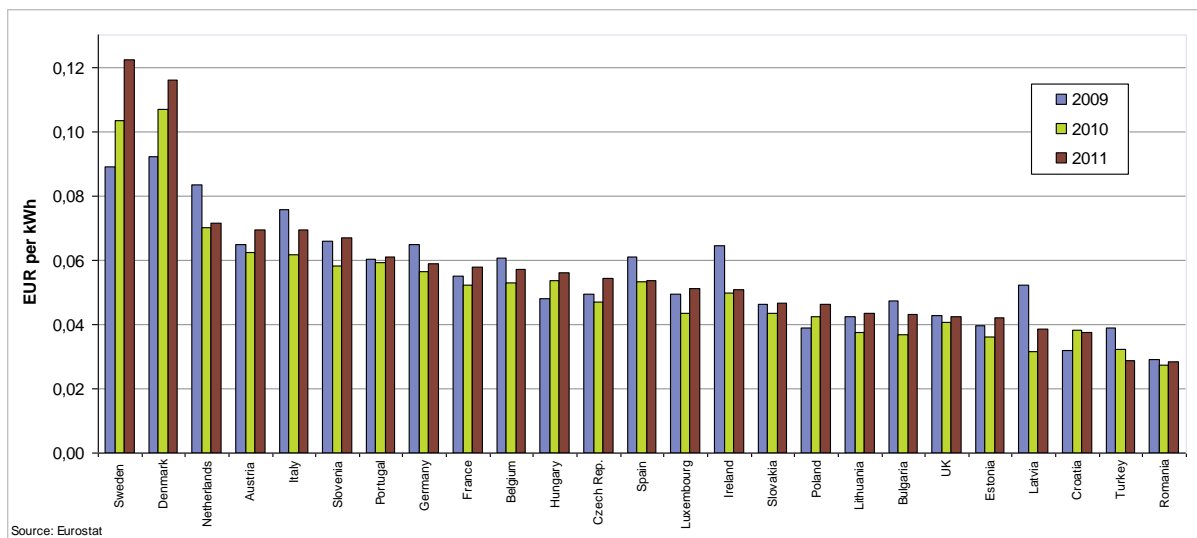


Figure 10 - Gas prices in purchasing power standards (PPS) per 100 kWh for household consumers (all taxes included) in 2011

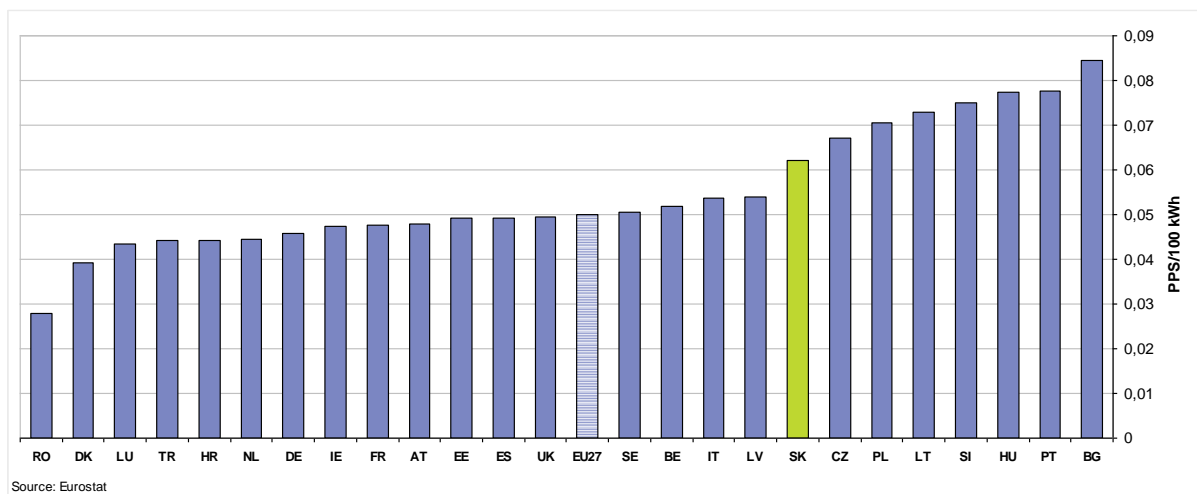
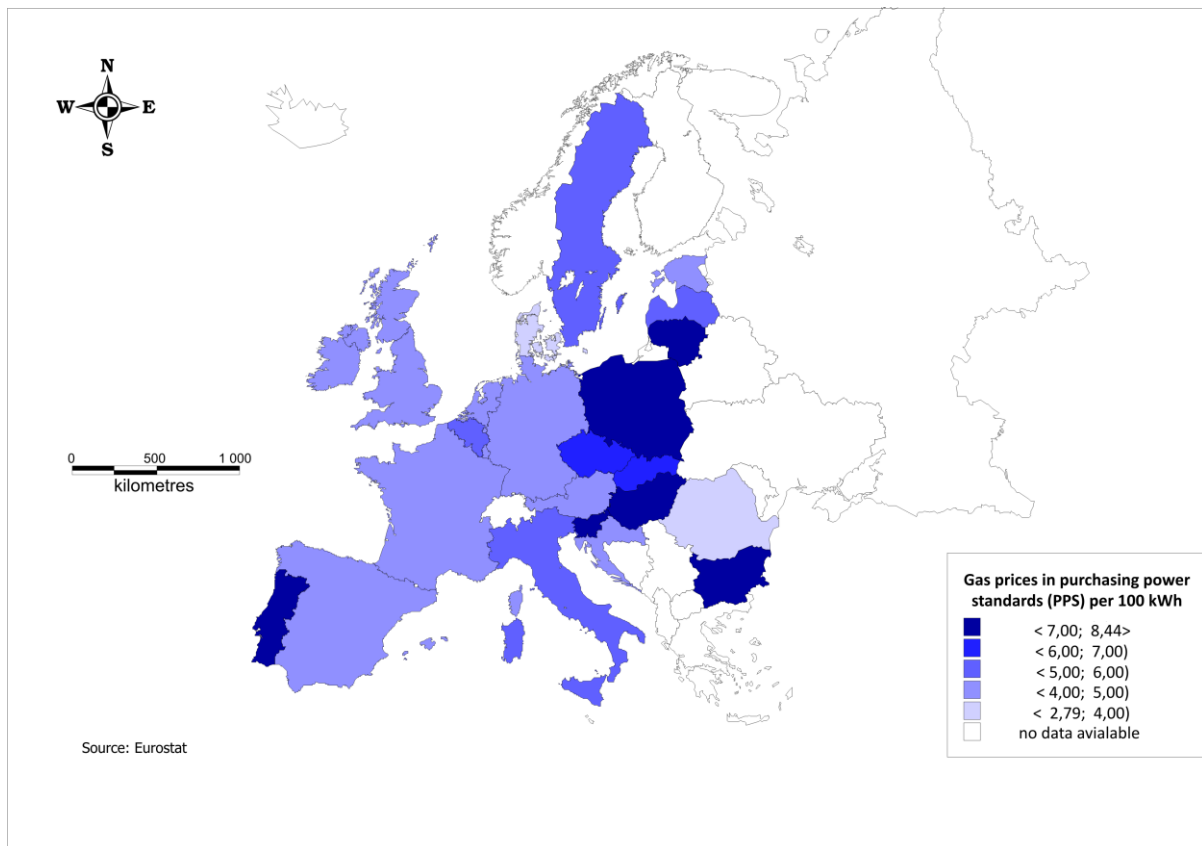


Figure 11 - Gas prices in purchasing power standards (PPS) per 100 kWh for household consumers in selected countries of Europe in 2011 (all taxes included)



Gas prices for industrial consumers in the EU shows a little difference only, except some countries such as Denmark, which it is considerably higher than average (Figure 12). Slovakia is located in the lower half of the price ranking at €0.035/kWh, which is the highest value among the V4 countries (80% of the EU-27 average). In 2010, there was a significant price reduction in the most states. On the European gas market, the global economic crisis led to excess of supply over demand, which resulted in both a significant drop in gas prices on spot markets and the diversion of development in gas prices from oil prices path (EC 2011). The most expensive gas is purchased by companies in Denmark and conversely the cheapest one in the United Kingdom.

The same like electricity price, the gas price consists of several parts, especially taxes. Highest tax burden of gas prices for households is observed in Denmark - almost 50%. In Slovakia, the share of taxes on the final price of gas is one of the smallest in the European Union (Figure 13 and Figure 14). Remarkable dynamics in average energy prices for producers has been mainly due to the rapid rise in gas prices in recent years, which are most associated with the development of oil prices on world market. Within the former EU-25, the

average gas prices for producers cumulatively increased in 2005 by over 50% compared to 2000. In Slovakia, the increase was of 133% in 2005, up to over 180% one year later.²⁰

Figure 12 – Gas prices for industrial consumers (in € per kWh)

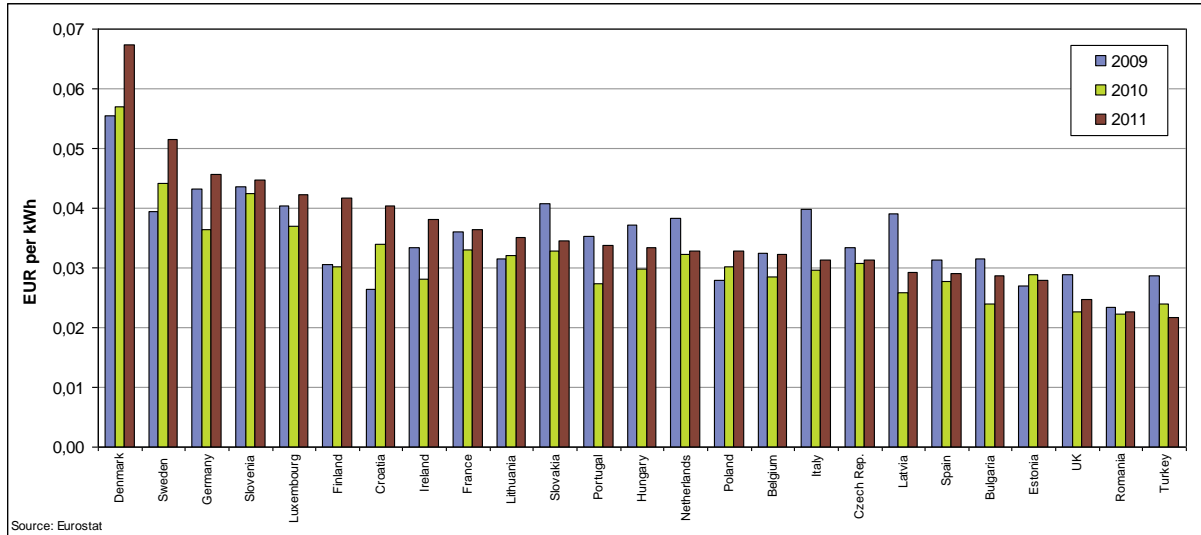
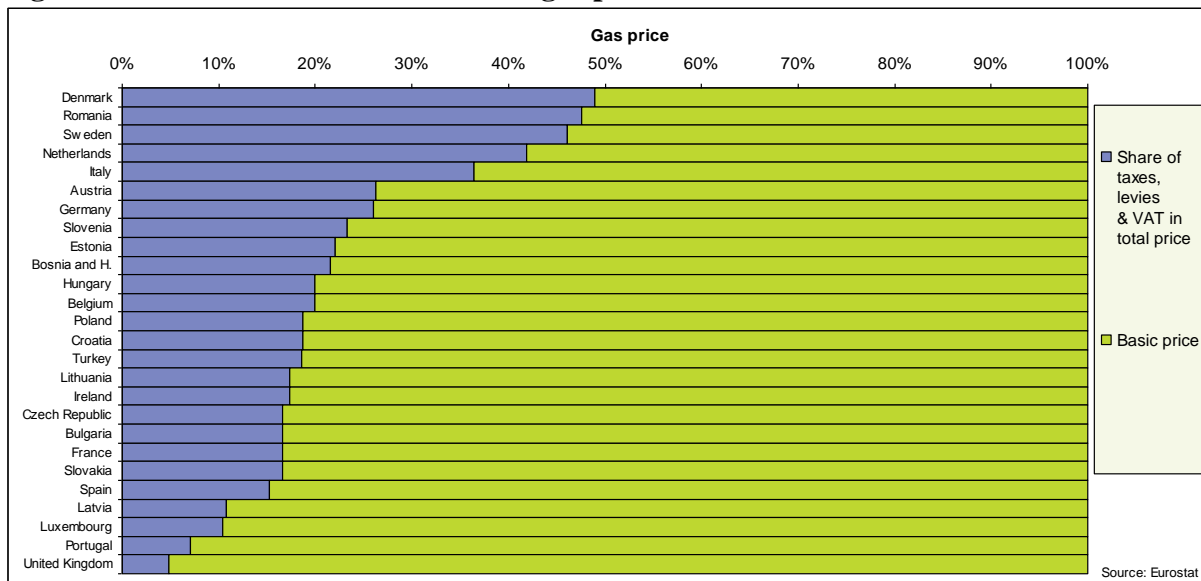
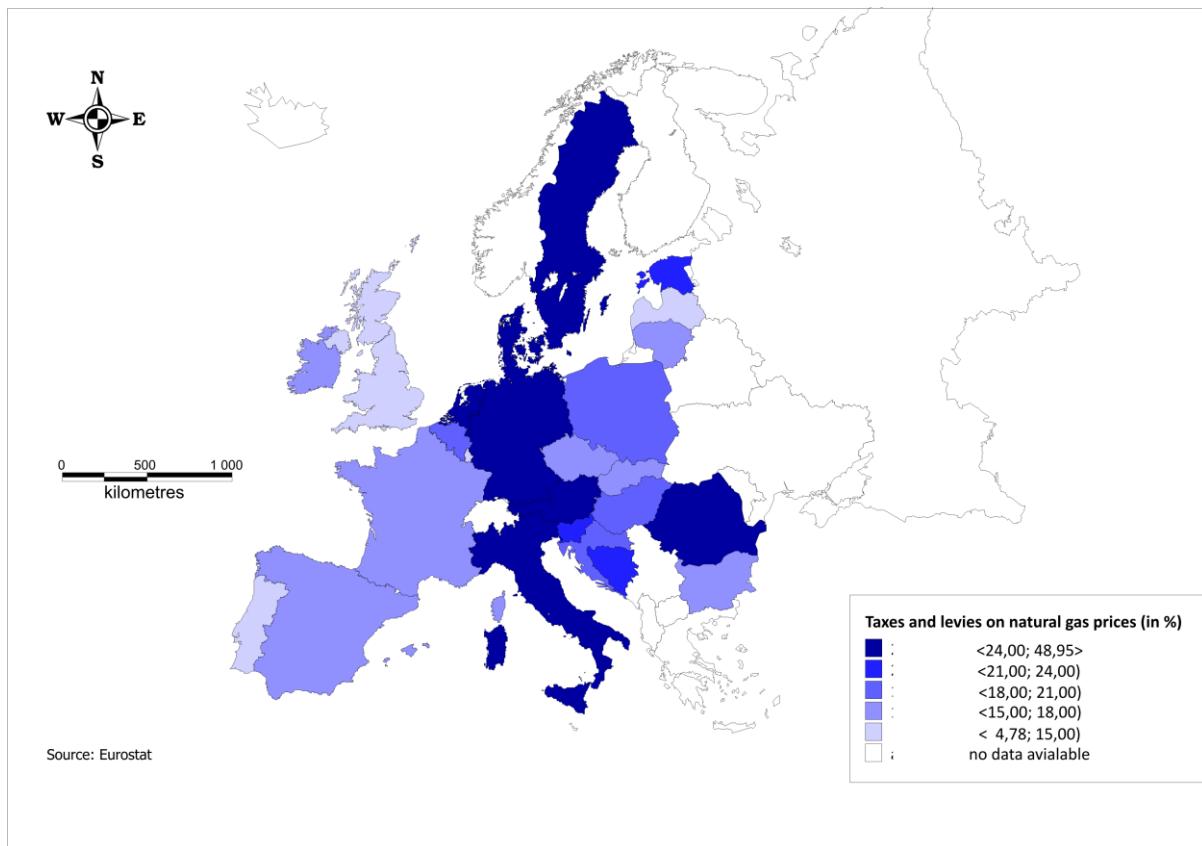


Figure 13 - Taxes and levies on natural gas prices for household consumers in 2011



²⁰ Cár, M., 2009. The current development of energy prices in Slovakia. In: Biatec, Vol. 17, No. 1, Národná banka Slovenska, Bratislava.

Figure 14 - Taxes and levies on natural gas prices for household consumers in selected countries of Europe in 2011



By energy prices for standard households and industry, Slovakia got closer to average level for EU-25 in early 2006 more significantly than the neighbouring countries did. Since the energy prices are an important inflation factor, from a monetary policy point of view it is a good starting point for keeping the relatively favourable price development in Slovakia in relation to neighbouring countries and also to Europe in the upcoming years.²¹ In Slovakia in recent years, gas prices for producers have grown much faster than oil prices on world markets.

Gas suppliers

Except the SPP, there was another supplier of gas for households in Slovakia in 2011 for the first time. In the households segment, seven other companies joined the gas market, although the office issued a price decision on gas supply to households up to 11 gas suppliers. In addition to the dominant supplier of gas, which is still SPP, following suppliers began to

²¹ Cár, M., 2007. Energetika a otázky vývoja cien energií na Slovensku v posledných rokoch. In: Biatic, Vol. 15, No. 6, Národná banka Slovenska, Bratislava.

supply the gas to the households in 2011: RWE Gas Slovakia, Ltd., ČEZ Slovakia, Ltd., Vaša energia, Ltd, Slovakia Energy, Ltd., Energie2, Inc., Energetické Centrum, Inc. All these companies supplied gas to households at a lower price level than the SPP company. For them, the source of gas supply posed the purchase of gas on both the spot market and the stock exchange through the long-term contracts and from other gas suppliers. The share of new companies within this market represents only about 1%. Unlike the SPP having contracts on gas supply with households for an indefinite period, the new suppliers contracted with customers to supply the gas mainly with two-year commitment.

Table 5 – Gas suppliers for households in Slovakia in 2012

gas supplier	location	gas price in 2012 (EUR/100 kWh)*	gas price in 2012 (EUR/100 m ³)*
<i>A.En. Gas a. s.</i>	Martin	32,08	96,37
<i>ČEZ Slovensko, s.r.o.</i>	Bratislava	31,62	91,56
<i>Energetické Centrum a. s.</i>	Bratislava	31,40	89,28
<i>Energie 2, a.s.</i>	Bratislava	31,67	92,06
<i>LAMA energy a. s.</i>	Bratislava	32,08	96,37
<i>MAGNA E.A. s.r.o.</i>	Piešťany	31,54	92,04
<i>RWE Gas Slovensko, s.r.o.</i>	Košice	32,08	96,37
<i>SLOVAKIA ENERGY, s.r.o.</i>	Bratislava	31,63	91,68
<i>Slovenský plynárenský priemysel a.s.</i>	Bratislava	31,79	93,33
<i>Stredoslovenská energetika, a.s.</i>	Žilina	31,79	93,33
<i>Vaša energia s.r.o.</i>	Bratislava	31,76	93,08
<i>ZSE Energia, a.s.</i>	Bratislava	31,79	93,33

Notes: * - price are based on list of prices of electricity suppliers (with VAT, tariff zone DD2);
 - the amount must be added the cost of distribution, which are however the same for all companies
 - 1 m³ = 10,55 kWh.

Source: ÚRSO SR

The portfolio of these companies consists of businesses, which delivery points are included in all categories of customers, namely small, intermediate and large consumption. Switching the gas supplier across various user categories in period of 2009 - 2011 is shown in the following table.

Table 6 – Changes of gas supplier in the years 2009 - 2011

Categories of delivery points for consumers	2009		2010		2011	
	Number of DP with change supplier	%	Number of DP with change supplier	%	Number of DP with change supplier	%
large offtake	39	4,4	84	10,12	99	12,42
medium offtake	14	0,4	84	2,67	267	9,04
small offtake	5	0,01	2950	4,1	5270	6,44
together	58	0	3118	0,21	5636	1,8

Abbreviations: DP – delivery point

Source: ÚRSO SR

Number of registered changes at all delivery points increased from 3118 to 5636 compared to 2010, which means increase of 81%. In the category of intermediate consumption, growth is about 318%, whereas in the category of small consumption about 177%. Thus, the largest increase in supplier switching occurred in the category of intermediate consumption. Regarding the duration of contracts, most gas supply contracts were concluded for one year, in the case of traditional gas supplier for longer period. Also in 2011, some industrial gas customers returned to traditional gas supplier - SPP, thus fight for customer is permanent. In 2011, none of the gas customers did secure supply of gas by more gas suppliers. We must mention the first events of 2012, when traditional suppliers of electricity joined the gas market and vice versa - accession of the traditional gas supplier to the electricity market.

In 2011, category of industrial users was dominated by SPP. Table 7 shows the share of the most significant companies on the industrial customers market:

Table 7 – Major companies in the market of industrial customers in 2011

The amount of gas supplied to industrial customers in 2011	4,0 bil. m ³
SPP, a.s.	69%
RWE Gas Slovensko, s.r.o	21%
The share of other gas suppliers in the total gas supply to industrial users of gas in 2011	10%

Notes: share of other suppliers is in the range from 2,5% to 0,00001%

Source: ÚRSO SR

Distribution of the gas market in the category of customers – households in 2011 is shown by Table 8:

Table 8 – Major companies in the sector of households in 2011

The amount of gas supplied to household customers in 2011	1,4 bil. m ³
SPP, a.s.	99,19%
RWE Gas Slovensko, s.r.o	0,46%
ČEZ Slovensko, s.r.o	0,28%
Others	0,07%

Source: ÚRSO SR

The structure of the gas suppliers in the period of 2009 - 2011 and their market shares (industrial customers and households supply) is shown by Table 9:

Table 9 – The market shares of leading suppliers of gas in the years 2009 - 2011

	2009 (%)	2010 (%)	2011 (%)
SPP, a.s.	94,8	84,5	77,1
RWE Gas Slovensko, s.r.o	4,1	13,5	15,6
Other suppliers	0,9	1	7,3

Notes: share of other suppliers is in the range from 1,9% to 0,00001%

Source: ÚRSO SR

It is likely that the business in electricity and gas would be stabilized after several years and around 10 suppliers would remain on the market. Number of valid business permits for the period under study is approximately at the same level, which means from this perspective that the market is a relatively stabilized. Emergence of more companies coming from the Czech Republic is to be expected, where the market is traditionally more liberalized and share of alternative suppliers is much greater than in the case of Slovakia. Assumptions of lower energy prices are promoted by the surplus of supply over demand on world commodity markets. Currently, the possibility of accurate forecasts for price development over a longer period is under the effect of numerous factors included very difficult. Decisions on large investments in new gas deposits or building the new power plants based on gas valid mainly in the past are going through both the development and the review of business plans.

WATER

Until 1989, state's duty was to supply inhabitants by drinking water and provide sewerage and sewage treatment. This obligation was implemented through five state water and sewerage companies. The whole system of management was centrally organized by the Ministry of Agriculture of the Slovak Republic through the regional and municipal authorities, and these state-owned enterprises had very limited powers, especially for investment in public water and sewer systems, which were almost entirely financed from the state budget and state subsidies. However, since 1989, the process of restructuring of water management had slowly begun and in 1990, the competence to provide water supply, drainage and sewage treatment was transferred to municipalities based on the Municipalities Act.

For this purpose, the Slovak government developed several models of concepts for the transformation of state enterprises, which were followed by privatization projects as pilot measures implemented in this area. Subsequently, on the basis of Government Resolution no. 217 from the 7th March of 2001, the conditions and timetable for the steps to transfer the

ownership of property from existing state water and sewerage companies to municipal water companies were approved.

Since September of 2003, the following water companies have been gradually established:

Bratislavská vodárenská spoločnosť, Inc., Bratislava

Západoslovenská vodárenská spoločnosť, Inc., Nitra,

Trnavská vodárenská spoločnosť, Inc., Piešťany,

Východoslovenská vodárenská spoločnosť, Inc., Košice,

Podtatranská vodárenská spoločnosť, Inc., Poprad,

Stredoslovenská vodárenská spoločnosť, Inc., Banská Bystrica,

Severoslovenská vodárenská spoločnosť, Inc., Žilina.

In addition to the above-mentioned companies, several other regional water companies operate in the Slovak Republic. List of them is shown in Table 10. Fourteen largest providers of drinking water supplies provide about 95% water services associated with the operation of public water and sewer systems in Slovakia. They supply the drinking water to 4,384,142 inhabitants of Slovakia representing 92.7% of the population connected to public water supply. In addition to these companies, several smaller ones of local importance operate in Slovakia.

Table 10 – Price of supply of drinking water and price of sewerage services in 14 major water companies in 2012

company	drinking water supply €/1 m ³ 2012	sewerage services €/1 m ³ 2012
<i>Východoslovenská vodárenská spoločnosť</i>	1,2787	0,8576
<i>Stredoslovenská vodárenská spoločnosť</i>	1,1022	1,0443
<i>Západoslovenská vodárenská spoločnosť</i>	1,0518	0,8302
<i>Podtatranská vodárenská spoločnosť</i>	1,0415	1,0006
<i>Oravská vodárenská spoločnosť</i>	1,0246	0,9778
<i>Trenčianska vodárenská spoločnosť</i>	0,9300	0,9416
<i>Považská vodárenská spoločnosť</i>	0,9223	0,9898
<i>KOMVAK Komárno</i>	0,9878	0,8643
<i>SEVAK Žilina</i>	0,9126	0,9500
<i>Bratislavská vodárenská spoločnosť</i>	0,9106	0,9030
<i>Liptovská vodárenská spoločnosť</i>	0,9019	0,9792
<i>Vodárenská spoločnosť Ružomberok</i>	0,7370	0,8456
<i>Turčianska vodárenská spoločnosť</i>	0,7045	0,9499
<i>Trnavská vodárenská spoločnosť</i>	0,6879	1,0253

Source: Association of Water Companies (AVS)

Unlike the other energy sources (e. g. gas or electricity), prices of drinking water and sewage have some regional context. In the particular regions covered by the specific water

company, water and sewerage prices vary. The most expensive water supply must be borne by households in eastern Slovakia, where the price of 1m³ reaches almost € 1.3. Paradoxically, it is this part of the country which suffers from a considerable unemployment and high number of people is relatively in difficult economic situation there. Local water company seeks to compensate inhabitants for higher prices of drinking water by lower charges for sewage (waste water). Generally speaking, the higher water prices would be reflected in lower wastewater charges for households, and vice versa. Despite some regional differences, the final prices of water supply (water + sewerage) are therefore rather balanced.

The disparities in the prices of drinking water supplies between different regions are due to several factors. In Slovakia, there is a relative abundance of drinking water, which is not evenly distributed. Some agglomerations require drinking water transport, which is very difficult from the economic perspective. The quality of drinking water resources is another closely related reason and also costs spent on water treatment by the water company. Regions of the south-western and eastern Slovakia are illustrative examples. The area of the Podunajská nížina (Danube Plain) and especially Žitný ostrov (Rye Island) is characterized by large reserves of groundwater - within the middle of Europe is even the largest reservoir of drinking water. Moreover, the quality of these resources is extremely high and the particular water companies operating in this territory arrange the final deliveries only in minimal way. In contrast, some areas of eastern Slovakia are very poor in drinking water supply mainly due to unfavourable geological conditions. Several large dams are built in this part of Slovakia, whose main task is to supply the drinking water to people living in the region. For example, the city of Košice is largely supplied by water dams of Starina, Bukovec and Ružín. Deliveries of this type are more cost-consuming and this is the reason for price differences existing between the water companies.

However, the process by which water comes to the consumer requires additional costs. It depends on the distance between the water source and delivery points, the nature of water source (e. g. groundwater, surface), investment of water company in both the transmission and distribution network and the number of delivery points. The cost of water production is being increased by introduction of new technologies, renewal and expansion of distribution networks and electricity price increases on the one hand, its consumption is reducing on the other, however. All this is reflected in the price of water, which is still growing. Development in average prices of water supply in Slovakia during the period of 2004 - 2012 is shown by Figure 15:

Figure 15 - Prices of drinking water and sewerage services in Slovakia (2004 – 2012)



Since 2007, water prices have recorded steady moderate growth of approximately 5% per year. In this period, average annual inflation has stood at 3.1%. However, almost all water companies are dissatisfied with the rate of price increase and they are actively fighting for a greater price increase, which would maintain the quality of provided services. In 2011, particular water companies prepared proposals to increase the household price of drinking water and sewerage for 2012. For instance, Východoslovenská vodárenská spoločnosť (VVS) prepared a proposal to increase the price by 20%. Discrepancy between the invoiced price and the real production cost spent on activities in water supply and sewerage system for the households and also pressure from ÚRSO to remove cross-subsidies between citizens and corporate bodies were alleged reasons for adjustment of prices. Currently, households pay only about 80.7% of the drinking water costs and over 90% of the sewage costs. However, ÚRSO largely ignored these requirements and allowed to increase the prices by 5% mentioned above.

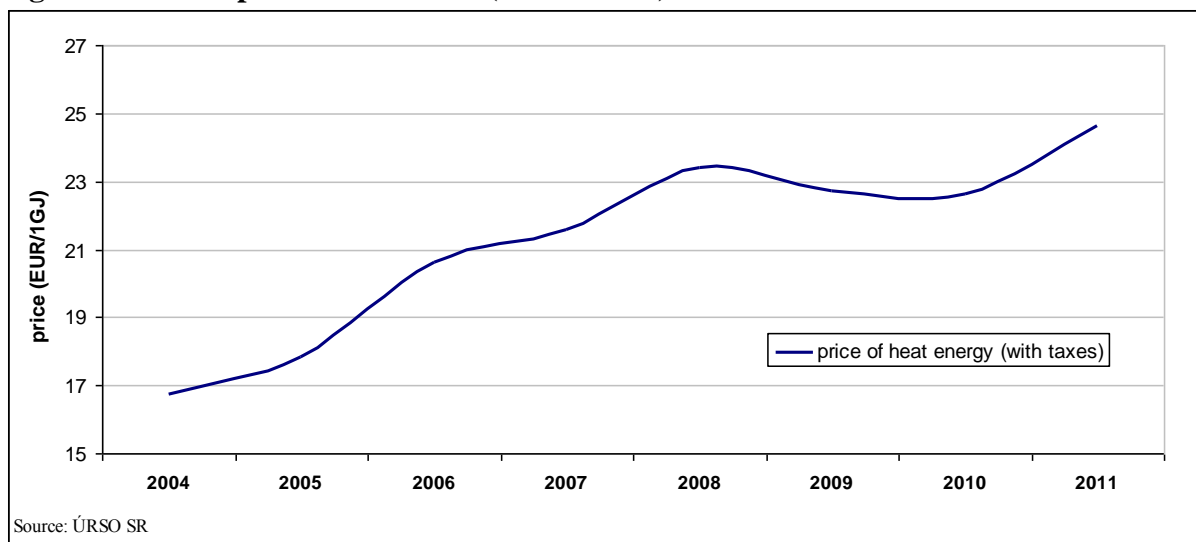
Increasing water prices is paradoxically caused by decreasing consumption, too. By saving and lower consumption of water, the consumers would not pay less, but more. These findings are warning that we are dangerously getting closer to the border of minimum sanitary, which was established by World Health Organization in the range of 80-100 litres. Residents of rural communities using their own well they think that their own water from wells is cheaper. They do not take into account the cost of well drilling, water chemical treatment or prices of pumps. However, actual trend of water-saving paradoxically results in its price increasing, because almost 80% of the costs concerning the water supply are fixed, which have to be met, even when the water is not being consumed. The largest part of the

price consists of the costs regarding distribution and sewage systems, hence network maintaining and operating.²²

HEAT

Goal of this paper has been to examine the prices of four major energy sources - electricity, gas, heat and water. However, heat energy in Slovakia is characterized by a great number of suppliers what we did not suppose in the early research. According to ÚRSO database, 350 subjects with real heat supplies to households have operated in the field of heat energy in Slovakia.²³ This can be explained by the fact that in addition to 6 largest heating plants (Bratislava, Trnava, Žilina, Martin, Zvolen and Košice), a number of municipalities in Slovakia has so-called urban boiler room and single production of heat. Increasingly, we also witness the disconnection of houses and flats from both the central urban distribution and building of own boiler rooms. According to an estimate of housing associations, more than ten percent of dwellings are disconnected this way in Slovakia.²⁴ Due to the large time-consuming and lack of necessary data, we are not going to deal with this topic in this paper. In order to preserve the continuity with other energy sources, we will take a closer look only at the average price of heating in Slovakia during the period of 2004 - 2011.

Figure 16 – Heat prices in Slovakia (2004 – 2011)



²² Ižová, K., 2006. Trend vývoja spotreby pitnej vody v domácnostiach. In: Acta Montanistica Slovaca, Vol. 11, No. 2, pp. 168-171.

²³ ÚRSO, 2012b. Správa o plnení štandardov kvality za rok 2011. Úrad pre reguláciu sieťových odvetví, Bratislava.

²⁴ Somorovský, M., 2011. Obnova bytového fondu a energetická hospodárnosť budov. In: Spravodajca SZBD, Vol. 2., No. 2, Slovenský zväz bytových družstiev, Bratislava.

Development in heat is particularly interesting from 2009 to 2010, when the decline occurred. Drop in prices of energy commodity in the two-year cycle is relatively rare phenomenon. A price decrease of heat depends mainly on both the way of production and the size of gas consumption. The above-mentioned period was typical of a decline in gas consumption, which is used in heat production the most. According to SZVT (Slovak Association of Heat Producers), purchase of gas poses about 70 percent of the total heat price. Decrease in costs concerning the purchase of this substance thus finally translated into lower prices of heating supplies for households. However, prices of heat produced from biomass largely maintain the same level, whereas prices of heat produced from coal even raised due to higher prices paid for this commodity. In 2011, we observe an increase in heating prices by about 9%. In addition to increasing costs to purchase the natural gas, declining consumption of heat has negative impact on the unit price, as well. Compared to the previous year, consumers purchased from 7 to 10% less heat on average for 2012. Reasons for decline in heat consumption are mainly insulation, saving and climate change, too.²⁵

CONCLUSION

In recent years, power sector in Slovakia has been characterized by careful separation of the production, transmission and distribution of electricity. The restructuring process within the sector has been organizationally and legally completed. Development of resources and insufficient regulatory power has been driven by market principles, which favours the development of competition. The level of country's economic development has affected the market situation, which has been also impacted by external economic factors. Proper legislative conditions set in conjunction with appropriately chosen methods of price regulation in electricity and gas supplies have resulted in a significant number of suppliers operating on the electricity and gas market in Slovakia.

In terms of the market operation with electricity and natural gas, the current period can be described as a combination of the global financial and economic crisis and its effects and gradual liberalization. Electricity and gas market in Slovakia does not work autonomously, but in the context of a much larger regional energy market, which is operated by many players and where a large amount of electricity and gas is daily traded. Compared to the past, the

²⁵ Obšivaný, M., 2012. Na Slovensku klesla spotreba tepla aj vďaka úsporám. Slovenský zväz výrobcov tepla, Zvolen.

market situation is thus characterized by high dynamics and less predictability. It is expected that this trend would continue in the oncoming years.

Slovak electricity market is fully liberalized, open to all market participants and has sufficient transmission capacity. Increasing participation in regional markets, the existing surplus of electricity in the region and sufficient cross-border exchange of electricity create together a highly competitive market environment. Concerning the natural gas, competition has firstly developed in the segment of corporate customers, since until 2010, the gas supplies to households were secured by only one traditional supplier (SPP). 2011 can be characterized as the first year with real competition in the all segments of gas market, when the structure of the gas was not "one-coloured" for the first time. In that year, the gas market in Slovakia became liberalized in all categories of customers, indeed. Slovak Gas Industry (SPP) still holds its dominance with 77.1% market share. The most serious competitor is a company of RWE Gas Slovensko, Ltd. with 15.6% market share.

Within the EU, Slovakia hasn't shown dramatic differences in energy prices. The basic price for both the electricity and gas is around the EU-27 average and tax burden is also at relatively low level. However, since Slovakia is not among the most developed EU countries and the level of its GDP is one of the lowest within community, the gas and electricity prices in Slovakia count even among the highest in Europe after calculation of purchasing power parity. Compared to the last year, almost 5% increase in electricity prices has resulted in higher market share of photovoltaic power plants. Extremely high purchasing costs of such electricity are the reason of that, because they are being included in tariff for system operation, which is part of the end price for consumers. If the state does not restrict the photovoltaics, we probably will not miss the high price increase in 2012. Although, the role of renewable energy in power sector of Slovak Republic will keep gaining the importance, further development is rather questionable. For energy mix, the more important it is, the more opponents appear. Currently, particular energy sources are fighting with certain restriction or possibly are moving forward just in the narrow boundaries.

External events can be considered to be the main reason for increase in energy prices, since a small country like Slovakia has no impact on price development within the global market. In Slovakia, the prices of particular energy sources simply follow the development on world markets. Oil prices are especially important, because they greatly affect the final consumer prices. Gas prices for households rose from January 2011 to January 2012 by more than 17 percent, while the increase in oil prices due to the conflict in Libya is considered to be one of the most important reasons of that. And just the trend in oil price is not favourable.

Another looming conflict in region of the Middle East has already increased the price of this commodity on stock exchange. It is expected that if the situation in Iran escalate, the oil prices will increase much more than during last year's war in Libya did. Both the development in Europe and continuing debt crisis also don't pose predispositions to cheaper gas. Moreover, this commodity is traded in dollars and the sinking euro has increased costs for its purchase. On the other hand, gas would keep its price because of its abundance on the market (except during heavy frosts in exceptional situations). Its surplus is strengthened by the fact that the world economy has been rather stagnant and thus demand for energy hasn't increased so far.

During the period of 2008 – 2009, the global economic crisis caused a significant drop in consumption of different types of goods, not excluding the energy. This state subsequently resulted in a price decline, particularly of electricity and gas. In Slovakia, the price of gas is largely linked to the price of heat. In the case of gas heating plants, it enters into the final price by two-thirds. Although there are new sources of biomass and other alternative fuels mounting up, gas still plays an important role in our heating sector. Due to this fact, the Slovak households paid more for heat last year. In addition to the input commodity, investment costs affect the price of heat, too. In Slovakia, several heat distributions are in poor condition. Investments in their reconstruction may just increase payments for heating in the future. However, households might not feel the rising costs of heat production if they increase the energy efficiency of their homes. Thermal insulation is one of the basic steps how to reach that.

Regarding the water prices, we have observed significant regional differences in Slovakia, which is specific compared to other energy sources. For drinking water, it is mainly due to an uneven deployment of its quality resources and costs emerged by its treatment. In recent years, a decreasing trend in water consumption has been registered, which paradoxically results in growing cost of its supply.

Finally we can note that energy prices are becoming a more valuable in time and thus also more expensive. Development in recent years has confirmed that we will have to cope with price increases in the near future. Moreover, it will not be a subject to price regulation. In Slovak conditions, regulation is just a tool for endurable growth of prices, since the regulator (ÚRSO) monitors this area quite hard and closely. It can be expected that after the abolition of this power, the state will interfere with the energy segment in some way in order to prevent an unrestrained price increase, however.