

# National Report Regulatory Office for Network Industries Slovak Republic

31 July 2010



# 1. Introduction

The year 2009 was the first year of the 3-year regulatory period from 2009 to 2011 and it manifested a significant decrease in generation and consumption of electricity. The global financial and economical crisis going along with a decline in consumption of electricity and gas, brought a number of urgent economic issues. The Regulatory Office for Network Industries (thereinafter "Office") as a state administrative authority in charge of price regulation in network industries dealt with the complex question of how to ensure, within its competences, a reliable and safe functioning of the energy sector and prevent any abuse of the dominant position of major suppliers at the expense of consumers.

In January 2009, serious problems arose with natural gas supplies culminating in the gas crisis – the complete stop of gas supplies to Slovakia the Slovak Republic declared a state of emergency. The Office, using its competences, was actively involved in solving this crisis.

Based on the results for the period of the year 2009 and the part of the year 2010 it can be alleged that the situation in the energy prices development, on the basis of uncompromising Office's attitude, has stabilized, the prices'determination and their structure is transparent and the recovery on investments and adequate profit of regulated subjects shall be ensured in the future provided that they are forced to manage economically.

An important milestone has been the coupling of the day ahead electricity markets of the Czech and Slovak Republics since September 1, 2009. The results show an enormous interest of market participants in this type of trading. Also there was a substantial interest in the entry of alternative electricity suppliers into the electricity market, which may offer attractive prices also for small businesses and household electricity consumers. Exactly legislative conditions prepared by the Office from 1 July 2007 established in accordance with EU legislation, bestired the market and helped to set up a real competitive environment having a positive impact on the end price of electricity, gas and heat.

Alternative energy suppliers were entering the market only gradually. In the electricity sector in 2008, 8 households and 1462 other electricity consumers switched from their traditional suppliers, in 2009, 7 700 households and 3 000 other electricity consumers switched their suppliers. In 2008 no gas consumer switched a gas supplier, however, in 2009 as many as 45 gas consumers switched from their traditional suppliers. It can be stated that the year 2009 represented a milestone in liberalization of the market as there evolved a real competitive environment. It is possible to assume that the entry of other alternative suppliers will consequently have a positive impact on the prices of electricity a natural gas for consumers.

A significant change made in 2009 was the adoption of Act on the Promotion of Renewable Energy Sources and Highly Efficient Combined Heat and Power Generation. The Office through its amendment of the Decree worked out the practical details concerning the Act and set out new purchase prices of energy from those generating sources. Purchase prices are guaranteed for a period of 15 years and are determined so that they allow actual or potentional investors in renewable energy sources to achieve adequate return on investments and an adequate profit. The past situation was favorable for only the generators supplying the electricity into the distribution system. The present state, however, provides guarantees also for electricity which a generator uses, for example in the production of its own products.

A relatively new mater that fully evolved in 2009 is regulation of service quality. The effective instrument securing the quality of supplied gods and services in such sensitive commodities as electricity and gas, was the introduction of standards of quality as a new instrument of regulation. The aim is to achieve that the withdrawn sources shall be used for renewal,



development of capital goods and improvement in quality of services for consumers. The Office through its decrees has established the standards of quality in network industries and the year 2009 was the first year of monitoring and evaluation of the standards of quality.

In September 2009 the EU "The Third Liberalization Energy Package"entered into force. The new directives strengthen independence and powers of regulatory authorities and introduce new possibilities of structuring the markets with electricity and gas. Immediately after their publication, the Office began an intensive co-operation on drafting of new energy legislation, the result of which will be a new Act on Regulation, and at least amendment of the Energy Act and the follow-up legislation.

# 2. Last year development

# Electricity

In 2009, an amount of 26 074 GWh of electricity was generated, meaning a decrease to the level of 1998, and the consumption in the amount of 27 386 GWh decreased to the level of 1995. Compared to 2008, the production was lower by 11,04 %, and the consumption by 8,19 %. The amount of cross-border transmitted electricity exchanges was, compared to 2008, lowered by 8,9 %. The import value reached 8994 GWh, the export 7682 GWh, the balance (with the import dominance) reached the amount of 1312 GWh. The import from abroad secured 4,79 % of the SR consumption. It was the third year of the SR Electricity System to be dependent on electricity import from abroad.

# i) Electricity wholesale market

In 2009, as well as in 2008, the SR crucial electricity stakeholders were represented by:

- a) Slovenské elektrárne, a. s. (hereinafter as "SE, a. s.") as the most significant electricity producer who secured 72,8 % of electricity generation in the SR in 2009 from his own sources, and 69,3 % of the SR consumption,
- b) Slovenská elektrizačná a prenosová sústava, a. s. (hereinafter as "SEPS, a. s.") as en explicit operator of the national transmission system, fulfilling also both the roles of an energy dispatching (ensuring balanced balance in the delineated territory of the SR) and a deviation clearer,
- c) ZSE Distribúcia, a. s., Stredoslovenská energetika Distribúcia, a. s., and Východoslovenská distribučná, a. s., the regional distribution systems operators with more than 100 000 connected delivery points. Besides these three companies, there are also 167 distribution system licensees with less than 100 000 delivery points acting in the electricity market. These include areas of production and non- production companies.
- d) ZSE Energia, a. s., Stredoslovenská energetika a. s. (hereinafter as "SSE, a. s. ") and Východoslovenská energetika, a. s. (hereinafter as "VSE, a. s. "), the most significant electricity suppliers. The volume of electricity supply of these companies in 2009 amounted to 56, 4 % out of the SR consumption. There are other 33 suppliers and 134 electricity traders having a valid electricity supply license.

The wholesale electricity market uses standard trading forms, e.g.: bilateral contracts, auctions, stock exchange trades, balancing market. Within the delineated area, the electricity trading is



being organized mainly by the SPX, s.r.o. company. On June 30, 2009, the <u>www.isot.sk</u> portal was put into operation with the aim to promote the process of the organized intra-day electricity market in the SR, being used even in trade conduct within the interconnections of the CR and SR intra-day markets.

SEPS, a.s. is an active participant of the CEE region electricity initiative with its aim to coordinate the regional congestion management.

# ii) Electricity retail market

The year 2009 was the second uninterrupted year with the electricity market fully liberalized. During this year, a number of electricity suppliers switching significantly increased. The price decrease in the electricity market between the years 2008 and 2009 was used by alternative electricity suppliers to whom almost 7 800 household electricity consumers and furthermore, almost 3 000 non-household electricity consumers switched from the three traditional electricity suppliers in 2009. Despite the fact that there is a possibility for all electricity consumers to choose the most convenient supplier, this right has been used only by approximately 0,5% out of the total number of consumers.

Regarding the electricity supplier switching process, there were identified the following crucial issues:

- inefficient technical and professional facilities and competence in case of alternative electricity suppliers, and thus in the field of electronic data exchange,
- inefficient level of consumers' awareness on the supplier switching process,
- exploiting of the legislative freedom by the alternative suppliers, mainly in the field of exacting of different fees and settlement of inadequate switching conditions.

#### iii) Public Service Obligations

Generation of electricity from renewable sources of energy (hereinafter as "RES"), by combined electricity and heat generation (hereinafter as "CHP"), and from domestic coal, represents a special form of electricity generation. The above mentioned forms of production are legislatively guaranteed by preferential access and connection to the system, preferential electricity transmission or distribution, and in case of RES and highly efficient CHP even the off-take of electricity generated to cover the losses in a distribution system, for the period of 15 years from the date of putting the facility into operation. The details are set in the Act No. 309/2009 Coll. on Promotion of RES and highly efficient CHP, and the Office' s Decrees introducing fixed prices for generated electricity. The increased costs related to electricity purchase to cover the losses, were reimbursed by the regional distribution system operators through the system operation tariffs (hereinafter as "SOT"), which is paid by every electricity end-consumer.

The promotion of electricity generated from domestic coal is, upon the public interest, covered through SOT, which is paid by every electricity consumer. The promotion system of RES, CHP, electricity produced from domestic coal, anchored in the valid SR legislation, is fully corresponding with the EC legislation.

Table 1: The SOT value and its structure as for 2009

SOT – System operation tariff	€/MWh	-out of which:	€/MWh
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	RES	0,1161
2,7219	СНР	0,3484
	ENO Nováky	2,2574

The data mentioned above correspond with the amount of financial means representing an aliquot part of the tariff determined for the respective technology promotion. The ENO Nováky power station is generating electricity solely from domestic coal.

The Act No. 656/2004 Z. z. on Energy and amending some other laws as amended (hereinafter as "Act on Energy") does not require holding a license for conducting business in the field of electricity generation and supply by a generation facility with the output of up to 1 MW, including RES. In case of such activity, the business certification is in the form of a confirmation on reporting obligation fulfillment issued by the Office. In 2009, the Office issued 198 Certifications on electricity origin for RES electricity producers and 48 price decisions for CHP electricity producers.

#### iv) Transmission system

As for the investments into the transmission system in 2009, the preparation and realization of investment projects took place. There was an amount of 71 346 125  $\in$  in total invested. This was covered mainly by a construction and reconstruction of the substations and lines, and of the information and business systems.

#### v) Security of supply

The year 2009 was characterized mostly by a significant decrease of electricity generation and supply. In January 2009, there appeared some serious problems with natural gas supply from Ukraine. During the natural gas supply interruption, the electricity generation facilities using natural gas as a fuel were put out of operation. As for the electricity system, this meant the loss of ancillary services. The electricity sector status was critical mainly after the two units in ENO Nováky were decommissioned due to fire on January 12, 2009.

Even in 2009, we have imported more electricity than have exported. However, the absolute production and supply values in 2009 are lower than the values of the years 2006 - 2008. The economic crisis has understandably influenced the supply. Attenuation or an absolute detention of the productivity processes in some of the companies has of course been manifested by lower electricity consumption. Therefore, either electricity import was not that high as was expected after the JE-V1 decommission in Jaslovské Bohunice.

#### vi) Regulation and unbundling

The basic regulatory framework in network industries for the respective regulatory period is set by the regulatory policy which, as for electricity sector, was focused mainly on an improvement of the competitive environment, making the market transparent and on improving the quality of the goods and services supplied.

The Office, through its Ordinance No. 415/2008 Coll., set the details on the method a separate facts record being a subject of accounting and on the method of assets and debits record administration in order to avoid the formation of discrimination and cross- subsidies of the transmission and distribution system operators. The date of submission of the separate facts record being a subject of the 2009 accounting is set to be June 30, 2009, as for the electricity system operators and suppliers. The entities must submit to the Office the Rules for allocation of assets and debits, costs and revenues, and the rules for depreciation before August 31 of



a calendar year to be approved. The rules approved by the Office will be applied from the January 1 of the upcoming calendar year.

In 2008, the Office issued Ordinances setting quality standards in network industries. The year 2009 was the first one during which these standards were monitored. The entities were obliged to send to the Office an assessment of their fulfillment, and thus in the extent of annexes of the respective Ordinances. As for the method of quality standards monitoring and assessment, the regulated entities were methodically coordinated through workshops, various meetings and consultations organized by the Office.

On September 1, 2009, there was created a unified business area for intra-day electricity market on the basis of an implicit auction between the CR and the SR. The main goal is to ensure stability and secure operation of the both electricity systems. At the end of 2009, there were 22 stakeholders participating in the so-called market coupling between the CR and the SR.

The Office's tools for regulatory policy realization in the sphere of price regulation in electricity sector, are represented by the generally binding legal measures issued on the basis of enabling provisions of the Act on Regulation. The price regulation in the electricity sector was being executed according to the Office's Decree No. 2/2008 setting price regulation in electricity, amended by the Decrees No. 7/2008 and 2/2009.

#### Gas

#### i) Gas wholesale market

As for the gas wholesale market, there have been no significant changes compared to the previous period.

#### ii) Gas retail market

In compliance with the regulatory policy, the year 2009 was the first year of price regulation performed by the Office according to the new regulatory "price cap"method, set for the third regulatory period (2009 - 2011). It can be stated that the price development situation in 2009 was stabilized, the price creation and their structure was transparent and the regulated entities in 2009 were guaranteed by return of investments and reasonable profit, while they were forced to economize in an efficient way.

The year 2009 was the first uninterrupted year when the standards, according to the Ordinance No. 328/2008 Coll. setting the quality standards of gas supplied and services provided in gas sector, were assessed. The assessed standards have not had any impact on tariff setting up to now, while the introduction of compensation payments is being planned for the later period.

The year 2009 meant the real beginning of the competition functioning on the Slovak gas supply market. There are four new players on the natural gas supply market: RWE GAS Slovensko, s.r.o., Shell Slovakia, s.r.o., VNG Slovakia, spol. s r.o. and Lumius Slovakia, s.r.o. They have initiated competition with the traditional gas supplier-Slovenský plynárenský priemysel, a.s. (hereinafter as "SPP, a.s.").

#### iii) Public Service Obligations



The current Slovak energy legislation is forming transparent and non- discriminatory conditions for all gas stakeholders, complying with the European Community legal documents. The provisions related to the protection of the most vulnerable gas consumers and their rights to gain reasonable prices, are one of the priorities of the Office's regulatory policy. Regarding the vulnerability of household gas consumers, these are protected through the maximum prices setting, as they have the right to obtain reasonable prices. The maximum prices for household gas supply, stipulated for the dominant household gas supplier, must be accepted by every household gas supplier within the delineated territory of the SR.

## iv) Distribution network

Out of the total number of 2 891 SR municipalities, there have been gasified 2 233 municipalities with 94 % out of the all SR citizens. Out of the total length of the distribution network of 32 506 km, as of 31 December 2009, the high-pressure gas lines are forming 6 298 km and the middle-and low- pressure gas lines 26 208 km.

In 2009, the SPP- distribucia a. s. invested 42 000 000 € to the distribution system renovation.

## v) Security of supply

The Russian- Ukrainian crisis at the beginning of 2009 influenced the Slovak gas market which is almost entirely dependent on one source and one gas supply route. More information on this topic is mentioned in the chapter 5.2.

#### vi) Regulation/ unbundling

The gas crisis brought a significant change in the implementation of the security of supply concept. In order to avoid the repeating of gas supply jeopardy for the Slovak gas consumers, a modification of security of gas supply standards through the amended Act on Energy with the effective date as of 15 March 2009, was adopted. This amendment introduced an obligation for gas companies to secure gas supply for the determined consumer categories, even in case of the total cessation of gas supply from the third countries, and thus during the period from 1 November to 31 March. The modifications covered also broadening of price regulation by the regulation of access to a storage facility and for gas storage having been effective since 2010.

# **3.** Electricity regulation and market functioning

# 3.1. Regulatory issues

# **3.1.1.** Management and allocation of cross-border capacities, and congestion management mechanism

#### Electricity cross-border exchange

The Slovak transmission system disposes of a relatively high transmission capacity of the interstate connections. This capacity amount resulted from a long-term miscellaneous orientation in the operation of the interconnected electricity systems. Therefore, there is a prevalence of an imbalance of the capacities of the respective profiles, and thus there is always a necessity to foster some of the interconnections. Within the composition of the SR electricity system (hereinafter as "ES SR") into the ENTSO-E system, there is an expressive north-south



orientation of electricity capacity flows, and at the present, the most sensitive part is the Slovak-Hungarian profile.

The current installed capacity of the inter-state connections on the Slovak side, and the total capacity determined by a maximum permeability on both sides, is as follows:

Slovakia – Czech Republic	4 602 MVA / 4 209 MVA (to/back)
Slovakia – Hungary	2 772 MVA / 2 772 MVA (to/back)
Slovakia – Poland	2 078 MVA / 1 662 MVA (to/back)
Slovakia – Ukraine	1 115 MVA / 831 MVA (to/back)

The overall installed transmission capacity of the inter-state connections of the ES SR amounts to 10 567 / 9 474 MVA. Despite this relatively high transmission capacity, the total free tradable capacity for cross-border electricity exchange is much lower, as the system technology flows influenced by the concrete conditions in the supra-national system of ENTSO-E are relatively high.

The indicative free tradable transmission capacities for cross-border electricity exchange for the 2009-2010 winter seasons on individual inter-state profiles are available on the ENTSO-E website.

The inter-state profiles are being loaded by the respective business cases between two systems, transits, but also by the so-called circle flows. The volume of tradable capacities depends on the necessity to maintain secure operation of the inner-state systems and on the installed capacities on the inter-state profiles, while it is important to keep a reliable n-1 criterion. Due to the mentioned reason, there is a huge difference between installed capacities of the inter-state lines and a possibility of free trading on the inter-state transmission lines.

In 2009, there was initiated an interconnected electricity market between the CR and the SR and an organization of the daily market. On the SEPS/ČEPS, there is market coupling fully functioning. i.e. the cross-border capacities are allocated implicitly on a daily basis within this profile.

Moreover, there is also an intra-day capacity allocation existing on this profile, and thus without payment, based on an admittance of the assigned requests on cross-border transmission, while applying the "first come first served" principle. In all profiles, there is a transfer possibility of the capacities gained in yearly and monthly auctions.

SEPS, a.s. is a member of the Common Auction Office (CAO GmbH, Freising) compound of 8 transmission system operators. The CAO was established in order to coordinate congestion management within the region and to allocate capacity to the market complying with the Regulation (EC) No. 1228/2003 of the European Parliament and Council on Conditions for access to the network for cross-border exchanges in electricity (hereinafter as "Regulation 1228).

# **3.1.2.** Regulation of the duties of the transmission and distribution companies

#### Network tariffs

The assessed year 2009 was the first year of the current 3-year regulatory period. Its complexity, but also indisputable meaning for further development results from the application of the regulatory method based on a motivation principle. As of the beginning of 2009, the revenue method usage was terminated, and the price cap method was initiated.



The Office, within its terms of reference, stipulated for the year 2009 through the Decree No. 2/2008 setting the price regulation in electricity (in the version of the Decree No. 2/2009), the method of calculation of the tariff for Access to the transmission system and electricity transmission, as well as the tariff for access to the distribution system and electricity distribution. This tariff is calculated separately for each voltage level, and, within a respective voltage level, is divided as a weighted average of the individual tariffs. The division into individual tariffs itself with exactly specified admission conditions, is the subject of the DSO' s business policy, which is out of Office' s control.

The structure of the price for electricity supply for household electricity consumers and for small businesses is stipulated by the respective Decree, as well. The price of electricity is generally composed of regulated and non-regulated items. The regulated items cover activities related to electricity transmission from a producer through TS and DS to an end- consumer (i.e. transmission and distribution), and activities related to securing stability of the electricity system (transmission and distribution services, system services and system operation services containing grants for promotion of RES, CHP and domestic coal electricity generation). And the prices for deviation clearer' s services, and in case of households and small businesses, there is also the price for electricity supply. The structure of electricity distribution price (including transmission) is composed of a fixed and variable item. The approved or determined regulated prices are published by the Office on its website.

As for bigger off-takes, the supplier's power electricity offers are not usually published, but the consumers are offered individual prices based on a load diagram and on the wholesale power electricity prices.

In 2009, compared to 2008, the tariff for transmitted electricity did not change, the reserved capacity tariff inter-yearly decreased by 3,67 %, meaning in an absolute expression decrease by  $673,2683 \notin$ /MW. This resulted from changing the percentual weight ratio of revenues division into reserved capacity and labor. The electricity payments were divided the way so that the bigger share was related to capacity (reserved capacity tariff), and the smaller share for labor (transmitted electricity tariff).

The tariff for electricity transmission losses decreased by 6,61 %, even despite the increase of commodity price, and thus mainly due to decrease of share of the volume of permitted losses during electricity transmission to the volume of planned transmitted electricity in 2009, compared to 2008.

In 2009, compared to 2008, the system operation tariff decreased inter-yearly by 6,82 %, due to an increase of electricity end-consumption entering into tariff setting calculations in 2009, compared to 2008, and due to a decrease of costs calculated on electricity end-consumption entering into the system operation tariff in 2009.

The tariff for system services decreased inter-yearly by 3,75 %, due to a decrease of the costs on ancillary services purchase permitted by the Office, the tariff for Access and electricity distribution including electricity transmission recorded slight increase by 0,5 %, due to increase of electricity transmission costs, and the tariff for losses during electricity distribution increased, due to increase of the power electricity price (to the value of more than 90 €/MWh), which was being generated on the electricity market in the period of electricity purchase in 2008.

#### **Quality standards**



An important regulatory mechanism of the Office is applied through surveillance and assessment of quality of services provided by suppliers, therefore, the Office through the Ordinance No. 315/2008 Coll. set quality standards of electricity supplied and services provided, in order to protect consumers, ensure reliability and security of supply and services in network industries, in order to secure quality services and goods the way, so that a customer would pay for appropriate quality, in order to secure prescribed quality for reasonable costs, to use draw able sources with the aim to reconstruct and improve technology Facilities parameters.

The year 2009 was the first uninterrupted year when the quality standards in the meaning of the above mentioned Ordinance could be assessed.

The regulated entities' discipline as for submission of the records on quality standards fulfillment did not reach required level, as only 53 % of the regulated entities conducting monitored activities submitted their assessment to the Office. The regulated entities with regulated activities not being their primary business activities, were not technically and personally prepared for recording and assessing quality standards, and they paid only marginal attention to this obligation.

Table 2:	Selected	data	on the	transmission	system	and	on	three	regional	distribution	systems in	n
2008 and	2009											

Year	2008	2009
Volume of transmitted electricity in a delineated territory (GWh)	26737, 3	24116,6
No. of electricity transmission interruptions in a delineated territory	10	13
Out of which: No. of those lasting more than 3 minutes	6	3
Average duration of electricity transmission interruption on the 220 kV level	9 min.	2,8 min.
Average duration of electricity transmission interruption on the 400 kV level	6,5 min.	1,8 min.
Volume of RDS distributed electricity in a delineated territory (GWh)	18 612	17 235
No. of distribution interruptions in the RDS	64 195	58 296
Out of which: No. of interruptions lasting more than 3 minutes	53 086	47 697

#### Balancing

The transmission system operator, based on the contract on provision of ancillary services (hereinafter as "AS") purchases AS from the service providers and, based on the consideration of the offered power electricity prices from AS providers on the basis of economically efficient principle and in compliance with the technical conditions, uses the purchased AS through management systems of the Slovak Energy Dispatching of SEPS, a.s. The price for regulated electricity is being reimbursed in case of AS activation.

System services (hereinafter as "SyS") are provided by SEPS, a. s., according to the instructions of a dispatching, using the purchased AS. Basically, this is about maintaining electricity quality and capacity balance by dispatching management, and if needed, about restoring the operation.



With the rules on electricity market functioning, the Office has stipulated the conditions for electricity market status improvement in the area of deviation clearing and payments of the deviations clearing subjects and thus the way it defined new conditions of balancing electricity provision. With regard to the fact that the Office has increased the price for balancing electricity, new providers of ancillary services have appeared and thus the market competition increased. The more providers of ancillary services resulted in the reduction of tariffs for providing ancillary services by the Office. Although the number of separate ancillary services providers is increasing annually, the scope and particularly the costs for ancillary services are higher compared to other countries that invoke an acute need for revaluation of the whole complex of problems connected with the ancillary services. The Office by the thorough application of valid legislation on conditions system operation achieved that the overall costs in this field has decreased that contributed to the reduction of overall costs on electricity supplies for electricity consumers.

Year	2008	2009
No. of ancillary services providers	15	18
No. of offers provided by ancillary services providers	2 660	3 380
No. of concluded contracts on ancillary services provision	16	22

The transmission system operator has refused 428 offers for provision of ancillary services for the reason of more disadvantageous conditions.

#### 3.1.3 Effective unbundling

As for the transmission system operator, the ownership unbundling within the SR conditions has been realized already in 2001.

# **3.2.** Competition issues

#### 3.2.1. Wholesale market description

As compared to 2008, the production volume decreased by 11,04 % and consumption by 8,19 %. Moreover, due to the decommissioning of the first unit of the JE V-1 Jaslovské Bohunice nuclear power plant as from 31 December 2006, followed by the decommissioning of the second unit as from 31 December 2008, the SR lost its self-sufficiency in the field of electricity generation. Whereas the Slovak transmission system disposes of relatively high transmission capacity of the cross-border interconnections, in order to cover production deficiency, the electricity system partly uses imports from abroad with the aim to ensure electricity supply. The import ensured 4,79 % out of the total SR consumption.

The most important electricity production status was held by the SE, a. s. company. By means of its generation and purchase from the long-term contracted capacities, it ensures no less than 81 % of the SR electricity consumption. There is a real assumption, that the SE, a. s. status on the SR electricity market will increase after the finalization of the third and fourth unit of the Mochovce nuclear power plant (hereinafter as "NPP"). Other electricity producers are disposing of practically one type of a power plant, and each of them has a market share of less than 5 % (e.g. PPC Power, U. S. Steel Košice, Tepláreň Košice, Slovnaft, Mondi SCP, Slovintegra,



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Vodohospodárska výstavba). The production in industrial power plants is secured mainly for their own use. The large CHP heat plants provide electricity supply for mainly so-called electricity end-suppliers for households and small businesses represented by ZSE-Energia, a. s., SSE, a. s. and VSE, a. s..

## 3.2.2. Retail market description

As already mentioned in the previous sections, the crucial electricity suppliers are represented by the companies of ZSE Energia, a. s., SSE, a. s. and VSE, a. s., being parts of vertically integrated companies performing activities in the field of electricity distribution as well. The volume of electricity supply in 2009 by the mentioned three suppliers amounted to 56,4 % out of the SR consumption (in 2008 it was 57,7 %), with the number of supplied delivery points of 2 368 626, out of which 2 070 817 in households and 297 809 non-households. The electricity supply for household electricity consumers amounted to the volume of 4 966 GWh, in 2008 it was 4897 GWh. Besides these three most significant electricity suppliers, there are more than 260 entities holding valid license for conducting business in the field of electricity supply.

#### Electricity supplier switching

The electricity supplier switching process is being applied according the electricity market rules. In order to improve electricity market participants' awareness, the Office published all relevant questions and answers related to this process on its website.

As a result of modification of the valid legislation, in 2008, there were created supplier switching conditions. In 2008, these opportunities started to be used by some of the consumers, however, the real consumer competition was developed only in 2009. There was recorded a significant improvement in the sphere of household supplier switching. The electricity supplier switching is not a subject of any electricity consumer's payments.

Year	2008	2009
No. of household consumers having switched their suppliers	8	7697
No. of household delivery points having switched their suppliers	45	7923
No. of other consumers having switched their suppliers	1462	2999
No. of other's delivery points having switched their suppliers	3770	6798

Table 4: Supplier switching process in 2008 and 2009

The electricity market is being developed mainly on the level of large and medium consumers with approx. 40 electricity suppliers and traders being active. Even in the category of household electricity consumers, there is approx. 30 electricity suppliers being active, however, more than 20 out of them provide household electricity supply only within closed areas.

#### **Complaint handling, information requests**

In 2009, the Office was delivered 46 complaints/queries related to electricity regulation covering

- prices (application of electricity supply prices) (7),
- metering (5),
- customer services (1),
- contractual conditions (1),
- invoicing (3),



- supplier switching problems (4),
- others (25).

All complaints were handled by the Office's statement, while in 14 cases, it was necessary to conduct surveillance in the regulated entities.

# **3.2.3** Measures to avoid a dominant status abuse

The competition protection and the SR Antimonopoly Office (hereinafter as "AO") terms of reference are anchored in the Act No. 136/2001 Coll. on competition protection.

In 2009, except for the concentration of ČEZ a. s, Czech Republic and OPERATORI I SISTEMIT TE SHPERNDARJES Sh.a. Albania, did not review any concentration related to electricity sector. Due to application of the respective concentration, there was no impact on any relevant market recorded, and thus the mentioned concentration did not have any impact on the SR market. As for the mentioned reasons, the SO did not handle any demarcation of the relevant markets. In 2009, the AO executed a couple of investigations on the electricity market, out of which none of them led to an intervention.

# 4. Regulation and Performance of the Natural Gas market

## 4.1 Regulatory issues

# 4.1.1. Management and allocation of inter-connection capacity and congestion management mechanism

The transport of the gas for the Slovak consumers of the transport system as well as the international transit is being realized by the only transport network operator Eustream a.s. (hereinafter Eustream) on the basis of entry – exit tariff system. The overall volume of natural gas transport for both Slovak and foreign consumers in 2009 reached 66,4 mld.  $m^3$ . The transport network capacities - more than 90 mld.  $m^3$  are sufficient and able to cover consumer demands.

The number of concluded contracts on natural gas transport with the fixed transport capacity in 2009 was amounted to 54, out of this 5 long-term, 23 annual and 26 short-term contracts. In 2009 no contracts on natural gas transport with interruptible capacity were concluded.

With regard to the concluded long-term contracts, the Slovak Republic territory is not experiencing neither physical nor contractual overload of the transport network and the gas flow continuity is sufficiently secured.

Eustream on its website publishes regular information on the availability of its transport capacity at separate entry-exit transport network points Veľké Kapušany, Lanžhot, Baumgarten and Domestic point. Any different experience in the field of securing the gas flow continuity is not expected so far, neither in the near future. All planned network maintenance activities are subjected to annual or quarterly discussion and coordination with all involved parties. The methods related to capacity allocation, contractual congestion and capacity excess in the transport network are a part of the provisions of the rules on gas market functioning.

The transport capacity trading on the secondary market proceeded by means of "bulletin board" on the website of Eustream where transport network users advertise their capacity demands.

The natural gas cross-border trading is an issue of a longer – term development. Its faster development relates also to the north-south network diversification.



The management and allocation of the inter-connection capacity within the cross-border gas Exchange and the congestion management mechanism on the Slovak profiles with the neighbouring EU member states in 2009 was closely connected with the development within GRI SSE with Slovakia and other 9 countries being its member.

# 4.1.2. Regulation of the transport and distribution companies' activities

#### Network Tariffs

Based on the Decree No. 1/2008 laying down the content and method of the price regulation in the gas sector, the price regulation in 2009 covered:

- Connection to the transport and distribution network,
- Access to the transport network and gas transport for the gas end-consumers,
- Access to the distribution network and gas distribution for the gas end- consumers,
- Provision of ancillary services in the gas sector.

The price regulation in 2009 was performed on the basis of the Decree No. 4/2008 laying down the scope and structure of justified costs, the method of the determination of an adequate profit and background documents for the price proposal in the gas sector. Based on this Decree, methods of determination of regulated prices for the gas transport and distribution for the end-consumers in 2009 were applied.

In case of utilization of the both transport and distribution networks in the delineated territory while using the selected parameters and under the annual contract, the users of the mentioned networks according to the individual categories in 2009 paid the price in Slovakia as follows:

I4-1: 0,040 €/m<sup>3</sup> I1: 0,113 €/m<sup>3</sup> D3: 0,129 €/m<sup>3</sup>

Regulated prices for the gas transport and distribution determined by the Office in the price decisions are published on the RONI website as well as on the websites of the particular network operators.

#### Transport network operator

The prices for the access to the transport network and for gas transport are regulated. The method of gas transport price regulation is defined as the direct determination of a comparable price for the access to the transport network and for gas transport in compliance with the Act on Regulation based on a comparison analysis of the gas transport price in other EU member states (benchmarking).

The tariff system for the access to the transport network and gas transport consists of special tariffs for the transport network entry points and special tariffs for the transport network exit points. Tariffs are of two components: it is divided into the tariffs related to the daily transport capacity for transport network entry and exit points and tariffs related to the amount of truly transported gas for transport network entry and exit points that cover gas costs for operational purposes of the transport network,. Tariffs are valid for both Slovak and foreign transport network users.

The background tariff rates in all tariff groups which the network users were divided into according to the contractually agreed daily maximum gas transport capacity, were in 2009 compared to 2008 decreased at an average by 9, 43 % that was caused among others by



conclusion of a long-term contract on the access to the transport network and gas transport between Eustream and the company Gazprom export LLC.

Besides long-term contracts and standard annual contract on gas transport it is possible to conclude short-term agreement in the line with the gas market rules already for a period starting from one day in case of one-day agreements or for a period from one to eleven months in case of monthly agreements. In short-term agreement the payment for gas transport depends on the value of calculation of the duration factor, in monthly or one-day agreements it depends on the duration of a short-term agreement.

Eustream is obliged to invoice the payment for the gas transport to all participants on the gas market based on the concluded agreement on the gas transport. Its structure in a price in the gas supply is determined by the gas supplier according to ordered transport capacity and their business policy. Household gas consumers pay a charge for gas transport in the price for gas supply within a variable rate for gas extracted and in the final invoice it forms only a negligible part of the overall price for gas supply.

Regulated price for a connection to the transport network issues from reasoned costs necessary for technical, documentary and realization phase of connection that is approved by the Office on the basis of a submitted price proposal. In 2009 the Office received no price proposal regarding connection to the transmission network.

#### Distribution network operator

The price regulation in gas distribution in 2009 was undertaken for those regulated companies:

a) for one single operator of a distribution network, namely SPP – distribucia, a. s., whose number of points of supply is more than 100 000 and that at the same time fulfills the role of a gas dispatch centre on the restricted territory,

b) for areal distribution network operators on the restricted territory, so called local distribution networks whose number of points of supply from a distribution network does not exceed than 100 000. In 2009 the number of individual local distribution companies in different regions of Slovakia reached 45.

Regulated prices are defined for a calendar year with the effective date as of January 1 of a respective year. The process of determining the price for an access to the distribution system and for gas distribution for 2009 for a dominant distribution network operator was performed in the line with the approved method of performance of a price regulation based on a "price cap": method laying down the price cap for the entire 3-year regulatory period (2009-2011). An average price for an access to the distribution network and for gas distribution for 2009 stemmed from an average price set for 2008 modified by the value of a core inflation, effectivity factor and inter-year gas price difference to cover losses and own gas consumption in the distribution system. Regarding new investments, in average price calculation takes into account the value of an annual depreciation of classified new long-term corporeal property in the previous year necessary for securing network operability, but not higher than 2,5 % of its acquisition value.

Tariffs for the access to the distribution system are determined on the principle of the so-called postal stamp, that means according to the annual amount of distributed gas regardless of the distance of a point of supply and they were proposed so that they would not include cross subsidies between individual groups of gas consumers. The annual tariff for a maximum daily quantity of gas is applied for gas consumers with an annual distributed quantity of gas exceeding



60 thousand  $m^3$ . Tariffs also include charges for exceeding the contractually agreed daily distribution capacity.

Portfolio of agreements on gas distribution in 2009 consisted of agreements concluded by default for one calendar year. Another two long-term agreements and several short-term agreements, for less than a year were concluded too. Besides long-term agreements and a standard annual agreement on gas distribution according to the rules on gas market it is possible to conclude a short-term agreement of a duration of one day in case of one-day agreements or for a period of duration of one to eleven months in case of monthly agreements.

Prices for access to the distribution network and gas distribution for local distribution companies are determined on the basis of the method of cost regulation and the final price reflects justified costs of the regulated subject expended on network operation together with correction factor for the previous period and reasonable profit stated by the Office.

Price for connection to the distribution system of SPP-distribucia, as well as to the local distribution networks is determined so not to exceed planned average costs of a regulated subject for connection to the distribution system. Tariffs for connection to the distribution network are established separately for household gas consumers and for off-household gas consumers.

#### Balancing

SPP-distribucia secured a trading balancing on a daily basis for the following companies SPP, Mondi SCP, a.s., SHELL Slovakia, s.r.o., VNG Slovakia, s.r.o., Lumius Slovakia, s.r.o. and RWE Gas Slovensko, s.r.o. by means of calculation of daily and cumulated deviations arising among quantities of gas nominated at the entry points to the distribution network and quantities actually exiting from a distribution network. The distribution network operator administered balancing accounts for the mentioned companies and performed the billing of deviations.

Physical balancing of distribution network was secured by the distribution network operator by means of gas production from the storage tanks balancing lack of gas or by injection of gas into the storage tank in case of balancing gas surplus in the distribution network. In 2009 no problems caused by the unbalancing of distribution network occurred.

#### 4.1.3 Effective unbundling

From the point of view of ownership relations there is not unbundled neither transport network operator nor distribution network operator in the Slovak Republic. With the effectivity from 1 July 2006 one vertically integrated monopoly company SPP has legally unbundled transport and distribution activities. Besides mother company SPP a. s., doing business in gas trading and gas supply, there are its 100 % subsidiaries: Eustream as a transport network operator and SPP-distribúcia a. s., as a distribution network operator. Legal unbundling have been implemented according to the Act on Energy. Both subsidiaries of SPP are subjected to separate accounting audit.

#### 4.2. Competition issues

# 4.2.1. Wholesale market description



#### Companies active on the gas market

Predominant stakeholders on the gas market in the Slovak Republic in 2009 were:

- a) Eustream a transport network operator,
- b) SPP-distribúcia, a. s. a distribution network operator on the restricted territory of SR,
- c) POZAGAS, a.s., NAFTA, a.s. – gas storage operators,
- d) SPP, a. s. a dominant gas supplier,
- e) RWE Gas Slovensko, s.r.o., SHELL Slovakia, s.r.o., VNG Slovakia, spol. r.o., Lumius Slovakia, s.r.o. – new traders on the gas supply market,
  f) Gas consumers.

There is the only company operating in SR– SPP, a. s., with a market share higher than 5%. At the present time there operates no LNG facility on the territory of SR.

The foreign companies, within a Slovak market, actively operating via property share in the company SPP, a.s., where a company Slovak Gas Holding, B.V. (consisting of companies EON Ruhrgas and Gaz de France) owns 49 % shares.

Eustream acts as the transport network operator and focuses on the activities related to gas transport. It's a 100 % SPP, a.s subsidiary.

SPP – distribúcia, a.s. acts as an operator of the biggest distribution network in Slovakia. It is a 100 % SPP, a.s. subsidiary as well.

The company NAFTA a. s., which owns and operates underground gas storage facilities and performs gas exploitation which quantity is irrelevant in comparison with the total consumption, has shareholder's structure as follows – SPP, a. s. 56,15 %, E.ON Ruhrgas 40,45 %, other shareholders 3,40 %.

The shareholders structure of POZAGAS a. s., which owns and operates an underground storage facility is as follows – SPP, a. s. 35 %, NAFTA a. s. 35 % and Gaz de France 30 %. The management of operation is performed from one point – the dispatcher center of the company NAFTA a.s.

SR acts as a national gas market. There are interconnections of transport networks with Ukraine, Austria and the Czech Republic.

Gas import from the Russian Federation in 2009 reached the level 66,4 mld. m<sup>3</sup>, export from Slovakia was 60,4 mld. m<sup>3</sup>. The Slovak transport network transported 66,4 mld. m<sup>3</sup> of gas in total in 2009. In 2009 continued extension of the contractual portfolio of the transport network operator – there was recorded increase of the number of network users as well as number of signed contracts. In 2009 Eustream gained several new clients oriented on flexible short-term transport agreements.

The natural gas consumption in SR reached the level of 56,1 TWh, that in calculation represents approx. 5,3 mld. m<sup>3</sup>. Approximately 98 % of domestic gas consumption is imported. The natural gas supply for the needs of SR is ensured on the basis of long-term contract between the company SPP, a.s. and the Russian company Gazprom Export as a main gas supplier for the needs of the Slovak market that was signed in November 2008 with the effective date as of 1 January 2009 for the period of 20 years.



On 29 June 2009 SPP, a.s. signed a long-term agreement on gas supply to Slovakia (for 10 years) with the company E.ON Ruhrgas with the effective day as of 1 July 2009. According to this agreement E.ON Ruhrgas will supply approximately 500 mil. m<sup>3</sup> /year of natural gas to SPP. On 5 October 2009 was signed the agreement (for 5 years) with the company GDF SUEZ too. According to this agreement GDF SUEZ will supply up to 500 mil. m<sup>3</sup> /year of natural gas to SPP. The agreements with E.ON Ruhrgas and GDF SUEZ have been an achievement of SPP, a.s. in attempts to diversify natural gas supply arising from gas crisis in January 2009. Both agreements ensure gas supply to Slovakia whereas are independently of the transport through Ukraine.

In November 2008 was also signed a new long-term agreement on the transport of natural gas between companies eustream, a.s. and Gazprom Export. The agreement is valid from 1 January 2009, with the validity time of 20 years.

#### Production, storage and accumulation of gas and gas storage access

In 2009 these activities were not covered in the Office's price regulation. On the basis of the Energy Act an agreed procedure on the gas market rules was applied in case of these activities.

The domestic natural gas exploitation reached the level of 103 mil.  $m^3$  in 2009. In gas production from existing domestic sources can be assumed slightly decrease in exploitation that will be partly eliminated by the connection of newly found sources of a lesser extent.

In the area of natural gas storage in the Slovak Republic territory, the storage capacity is offered by two operators of the natural gas storage facilities, namely NAFTA and POZAGAS. The storage facilities' services are utilized by SPP and by the foreign companies. The Slovak Republic utilizes a gas storage facility situated in the territory of The Czech Republic (Dolní Bojanovice) that is directly connected to the gas network of SR.

In 2009 the company NAFTA received no new requests on the access the storage facility, concluded no new agreements on natural gas storage. For a contractual period of a storage year from May 2008 to May 2009 a secondary trading with the storage capacity was recorded. The company's storage capacity was utilized by 100 %.

In 2009 the company POZAGAS accepted two requests for the access to the storage facility, one request was refused due to the allocation of developing capacity to another applicant. In the relevant period two contracts on access to the storage facility were concluded as well as two contracts on the natural gas storage, one with the interruptible storage capacity and another with firm storage capacity. In the framework of the secondary market trading in 2009 the sale of an unused storage capacity as well as the sale of the natural gas proceeded.

The availability of a storage capacity in the underground storage facilities is published on operators' websites together with the example of application for capacity booking.

The price for the access to storage facility and for the natural gas storage was not covered in the Office's price regulation. The act amending the Energy Act has introduced the storage facilities regulation with the effective date as from 2010.

The Antimonopoly Office of the SR adjudicated no concentration in relation to the gas sector in 2009. In case of concentration of GDF Suez SA, France and Hetech Services a.s., Bratislava, Račianska teplárenská, a.s. Bratislava, AB správcovská, a.s., Bratislava a Prvá ružinovská spoločnosť, a.s. Bratislava, No. decision 2009/FV/3/1/003 as of 06.02.2009 the gas supply market was defined.



# 4.2.2. The structure of a retail market

Except for the five main traders on the natural gas market, the Office registered more than 90 holders of the gas supply license in 2009. The majority of these companies did not perform their gas trading activity even though they owned the license. Other companies formed local gas suppliers supplying gas to companies in the frame of their operational premises. With respect to the source of their supplies and taking into account fact that the main subject of their enterprising is not gas sector, they cannot be considered as gas market competitors. These local gas suppliers are operating within their premises as well as distribution network operators.

A typical household consumer agreement is concluded for an indefinite period.

In connection with the entry of new gas suppliers to the market there have been recorded first supplier switchings. In 2009 the new gas suppliers addressed only industrial consumers. Their portfolio consisted of particularly wholesale consumers as well as consumers from the category middle off-take and retail consumers. The number of gas supplier switching - commercial subjects reached the number of 45 in 2009.

The gas supplier switching at the off-take points of the five main gas suppliers without taking into account gas supplier switching in the local distribution networks is shown in the table.

	2009					
Category of gas	Number of gas					
consumers	supplier switching	The total number of	Switching rate			
		off-take points *	[%]			
Wholesale consumer	39	886	4,40			
Middle consumer	14	3 389	0,41			
Small consumer	5	70 794	0,01			
households	0	1 407 846	0,00			

Tab.No5: Gas supplier switching

\* does not include off-take points of local gas suppliers in local distribution networks

The biggest gas supplier in the SR remains SPP, a.s. At the beginning of 2009 another business subjects started their performance on the market executing gas supply to industrial consumers. These companies can be designated as new at the gas supply market.

#### Complaint handling, information requests

In 2009, the Office was delivered 11 complaints/queries related to gas regulation covering

- prices (application of gas supply prices) (6),
- metering (2),
- contractual conditions (1),
- others (2).

All complaints were handled by the Office's statement, while in 1 case, it was necessary to conduct surveillance in the regulated entity.

#### 4.2.3. Measures to avoid a dominant status abuse

The Decree of the Office on the method of conducting of a separate reporting on the matters that are subject to accounting, on the method of conducting of a separate recording of costs, revenues, assets and liabilities and submitting of outputs from separate recording with the



effective date as of 1 January 2009 has its goal to hinder any discrimination and cross subsidies among individual network operator activities that are performing other than regulated activities too.

The Antimonopoly Office of SR cooperated with the Office in 2008 and at the beginning of 2009 on elaboration of the Report on natural gas market functioning in SR in which based on its data evaluated the situation at separate levels of this market from a competition view.

Except for elaboration of the data for the mentioned Report the Antimonopoly Office executed a couple of investigations on the natural gas market particularly based on market participants' initiatives, out of these investigation no one led to the beginning of proceedings towards subjects acting on the market in 2009. Amongst them one of the higher importance was the investigation at natural gas storage market in SR.



#### 5 Security of supply

#### 5.1. Electricity

#### 1. Evaluation of recent situation

Table no. 6: Development in electricity supply in SR from 2005 to 2009 and prognosis for 2010

Year	Generation Total consumption		Average loading	Maximum loading	
	[TWh]	[TWh]	[MW]	[MW]	
2005	31, 294	28, 572	3262	4346	
2006	31, 227	29, 624	3382	4423	
2007	27, 907	29, 632	3383	4418	
2008	29, 309	29, 830	3396	4342	
2009	26, 074	27, 386	3126	4101	
2010	26, 500	28, 600	3265	4280	



Picture.1: total electricity generation and consumption in SR for years 2005 - 2009

The overall electricity consumption in Slovakia in 2009 was 27,386 TWh, that represents in comparison with the previous year decrease by 8, 2%. The annual maximum load reached the level 4 131 MW in 2009. When comparing it with 2008 there was a decrease by 211 MW. The



annual minimum reached the level 2 001 MW. In comparison with the previous year there is a decrease by 336 MW.

The total electricity generation reached the value of 26,074 TWh in Slovakia, out of this 54 % was generated in nuclear power plants 28,1 % in heat power plants and 17,9 % stood for water power plants. The year 2009 was characterized by 11% decrease in production in Slovakia. The electricity generation reached the level of 1998 and consumption fall to the value of 1995. The installed capacity of Slovakia was 7 101 MW in 2009, out of 25,6% was the installed capacity of nuclear power plants share, 39,5% heat power plants and heat power plants made up 34,9% share. The capacity structure of generation basis and share of resources on the overall electricity generation is shown on the next pictures.



Picture .2: Installed capacity of SR in 2009

Picture 3: Electricity generation of SR in .2009



Picture 4: course of load and its covering during the day of maximum of 2009 (annual maximum: date 9.1.2008 at 17 - 4.131 MW)



The overall balance of foreign exchanges reached 1 312 GWh in 2009 in favor of import. The volume of cross border exchanges of electricity has decreased by 8,9 % in comparison with 2008. On the contrary the total balance (import) of cross border exchanges has tripled compared to 2008 and foreign import secured 4,79 % of Slovak consumption (in 2008 it was 1,75 %). However it is necessary to allege that the import oriented balance was not caused by the absence of sources in Slovakia. It was a result of trading aspects of the electricity market. The structure of import and export flows is shown in the following scheme.



*Picture No. 5: The balance of cross border exchanges of electricity system in SR in 2009 (in brackets are data for 2008)* 

The ES SR operation was in 2009 reliable while all determining ENTSO-E criteria and recommendations in the primary and secondary regulation, in voltage management and the cross-border balance regulation were fulfilled.

The balance regulation deviation ( $\pm$  20 MWh/h) was in 2009 in the ES SR operation over crossed only 48 times that represents 0,55 % out of the overall annual hourly time fund. Transmission losses were 0, 92 % out of electricity transmitted through transmission network. The average annual frequency of ES SR or of ENTSO-E system was 50,00 Hz.

In 2009 the blackouts on the VHV equipments resulted in limitation of electricity supply in the amount of 152 MWh. Comparing to 2008, the supply limitation to customers decreased markedly by 353 MWh.

Within the mentioned period there were recorded 26 failure interruptions of the transmission system facilities, out of this 21 did not break the facility and 5 of them broke the facility. The specific failure rate of the braking facility type per 100 km of the lines achieved the number of 0,180, while the specific failure rate of 0,254 of failure per 100 km of the lines was not exceeded.



#### **Electricity consumption development**

The overall electricity consumption in Slovakia from 2000 to 2008 had increased annually in average by 0,7%, and thus alongside with the annual GDP increase of 6%. The mitigation of consumption increase by the end of 2008 can be referred to the beginning of influence of the world economic crisis with the impact on the economic development in SR. The electricity consumption decrease became evident entirely in 2009. Further consumption decrease was sharpened by the gas crisis in the beginning of 2009. The overall electricity consumption in Slovakia in 2009 was 27,386 TWh and compared to the year 2008 had decreased by 8, 2%.

With regard to the world financial crisis and resulting impacts to the Slovak economy, the development in electricity consumption in SR has been updated for the following years.

The improvement in economic situation has been evident in the ongoing year that at the same time influenced the electricity consumption. In the first 4 months of 2010 the consumption has increased by 4% compared to the same period of 2009. Based on these changes long-term prognoses of the electricity consumption have been updated. It can be assumed that due to the influence of the economic crisis the electricity consumption will reach the level of 2008 only in 2012. For the next five years the assumed overall electricity consumption will reach the following values:

		2010	2011	2012	2013	2014	2015
Reference scenario	TWh	28,6	29,3	30,0	30,7	31,3	31,9

Table No. 7: prognosis in the electricity consumption development for the next 5 years

#### **Electricity generation**

The biggest influence on SR electricity generation was experienced after the decommissioning of the second bloc of JE VI as of 31 December 2008 and thus leading to further reduction of an installed system capacity by 440 MW and generation by aprox. 2, 9 to 3 TWh. Initially assumed need of high electricity imports for 2009 to 2012 has, as a result of the economic crisis and thus aroused lower electricity system load, decreased. Securing of the consumption for Slovakia in 2010 will apparently contain proimport balance in the approximate volume of 2 to 4 % of imported electricity whereas this import will be of business character rather than a result of lack in installed capacity of sources in the SR territory. From 2011, or in the next five years, as a result of putting into operation of the PPC power plant Malženice, SR can await moderate surpluses in the field of electricity generation.

From the perspective of the facilities under construction the most real new big electricity capacities are PPC Malženice and finishing construction of the nuclear power plant Mochovce. After putting these sources into operation a slightly surplus SR electricity balance shall be achieved. Realization of the further prepared bigger electricity sources is assumed after 2015 although investors have shown their interest in realization in earlier dates.





Graph 6 Balance of the development of the overall electricity generation and consumption in SR for the period of 2008 – 2015

#### Ancillary services

Despite of the decommissioning of the significant part of sources in 2006 and 2008, the system still disposes of a sufficient number of sources that will enable to secure the system with the ancillary services in the period of a winter maximum load. A slightly worse situation will be in summer season with insufficient guaranty of ancillary services. In summer, the insufficiency of torque reserves might exceed 10%. During the recent period there has been initiated a provision of ancillary services from a number of a new smaller heat sources and industrial power plants. The availability of sources providing ancillary services improved from 2008 to 2010 when compared to the previous period.

The primary, secondary and tertiary regulation cannot be, within the current status, secured with foreign import; therefore it is necessary to solve the situation through their coverage by the domestic sources. In case of positive tertiary regulations, the alternative solution is the import acquisition.

#### Perspectives of electricity supply guaranty for the period of 5 to 15 years

Perspectives of electricity supply for SR results from the real prognosis of GDP growth and the energy demand development. As a consequence of gas, financial and economic crisis there have been recorded decrease in economy development particularly in 2009 that became evident in decrease of the electricity consumption. Prognosis of the SR Energy policy goals were necessary to correct.





Graph No.7: development of the overall electricity consumption and its coverage from 2010 to 2025 (comparison "Strategy of energy security of SR" and a new prognosis proposal)

Based on the ministry analyzes it is possible to claim that the achievement of the balanced consumption and generation at the referent scenario of the prognosed consumption and at an fulfillment of the program of cogeneration and renewable energy sources up to 2025, the construction of other sources except for those under reconstruction, shall not be necessary.

The balance of the expressed investor' interest in realization of fossil sources and the balance of new capacities' needs suggest that new capacities put into the operation before 2025 should increase the positive balance of the inter-state Exchange and in case of their launching into operation there will arise necessary investments into transmission system in such a scope so that the electricity surpluses would be exported abroad. The construction of these new sources would not enable a nuclear variant of a future development of the source basis of SR in the sense of notified intentions of the Slovak government. That means that so-called new nuclear source in the locality Jaslovské Bohunice not only will be unnecessary, moreover with regard to the abroad as well as the capacity of the domestic transmission it shall not be possible to construct it.





Graph No. 8: prognosis of the consumption development and its coverage from 2010 to 2025

# Development intentions of the transmission system operator

A detailed list and description of the individual investment actions are included in the document "SEPS development program for the years of 2011-2020", with the perspective to 2025 (PR 2020), whereas its substantial parts are available at the website of SEPS, a.s. (www.sepsas.sk).

#### Measures to cover peak demand, outages in ES and transmission system elements overload

The following graph shows the results of monitoring of one of the factors having influence on the technical reliability of the electricity system "the development in failure rates of main technological equipments of ES SR for the years 2000 to 2009". With regard to continually rising average physical age of the main technological equipments of the transmission system it will be necessary for the next years to consider financial investments necessary for reconstruction of the facilities and maintenance of their operability.







Graph No. 9: development in failure rate of the transmission system of SR

# Quality and level of maintenance of the system

The maintenance of the system facilities was secured continually in the previous year. The factor of continually rising average age of the main technological equipments of the system adverts to several risks. In the future it will be necessary to wait increasing in demandingness of maintenance and repairs and thus higher operational costs in this field.

During the preparation of the operation the maximum coordination of the discharging plans and breakdowns of separate equipments is performed. The effort is to hinder decreasing of a reliability of conducting away the capacity from separate productions. This area is particularly demanding in conducting away the capacity from nuclear power plants. The important part is securing of reserve feed of the own consumption of nuclear power plants. Moreover the accent is put on the coordination of discharging plans with transmission system operators.

In the SEPS Development Program of main technological equipments the conception of the development of 400 kV of a part of the transmission system has been confirmed together with the simultaneous reducing of importance of 220 kV systems and its subsequent liquidation and replacement by the system 400 kV.

On 8 September 2009 the new 400 kV switching station Košice was launched. Two new 400 kV lines connecting the switching station Košice and substation Moldava started its operation on 7 September 2009. Two new transformers 400/110 kV, USS Košice have been put into operation both with the capacity of 250 MVA that replaced former transformers 220/110

# 5.2 Security of supply in gas sector



During the watched period there were no outages in the transport network that would affect natural gas supply for SR consumers or for the companies transporting natural gas through the Slovak territory to other countries recorded. The consumers' requirements were fulfilled in full extent and the off-take was performed in compliance with the volumes agreed within the gas supply contracts.

During the gas crisis in January 2009 the transport network operation was limited or in order to preserve its operability the interconnections with Ukrainian, Czech and Austrian transport networks were closed.

In connection to the status analysis during the gas crisis, the Slovak operator Eustream and the Hungarian FGSZ Zrt. have agreed on the construction of interconnection. The interconnection project of Veľký Krtíš – Vecsés is included in the Regulation of the European Parliament and Council laying down the program for a promotion of economy recovery through granting a financial aid of the Community for the energy projects. The finalization of the binding phase of the Open season process is planned for the end of June 2010. Based on the results the decision on the project realization shall be accepted.

In January 2009 for the first time in history a reverse flow from the Czech Republic to Slovakia was applied (from west to east). This solution provided for gas supply for Slovakia from the Czech Republic in such volumes that enabled to repeal the limiting sampling number for industrial consumers.

In the distribution networks operation, there were no recordings of any emergency event that might affect natural gas supply for consumers in SR.

During the mentioned period there occurred just a few short-term and time limited solely local outages in gas supply caused by a necessity to interrupt the supply due to a safety reasons.

SR disposes with underground gas storage facilities situated in the south-west part of the country that are playing a significant role in balancing imbalances of gas supply and off-take as well as in case of peak off-takes. Their operators are currently providing services of natural gas storage even for a number of the foreign gas companies.

During gas crisis at the beginning of 2009 the storage facilities were the primary gas sources supplying the consumers of Slovakia until the time of putting into operation of the reverse flow from the Czech Republic or after renewing the standard supply of the Russian gas through Ukrainian transit.

For the period of the next 3 years there are plans for broadening of storage facilities capacity by approximately  $0,2 \text{ mld. m}^3$ .

#### 5.2.2 Measures to cover peak consumption, supply outage solutions

The rules on the management of gas networks are set in the Energy Act.

The distribution network in the delineated territory of SR is operated by a "gas dispatching", that is liable for an operative management of the distribution network. The gas dispatching role in the delineated territory of SR, according to the decision of the Ministry of economy is being fulfilled by the dispatching of the distribution network operator of the SPP – distribucia, a.s.

#### Preventing the formation of the transport network congestion and its solution

The transport network operator prevents the formation of transport network congestion by



- an assessment of the applications on an access to the transport network and consequent limitation of the access of the transport capacity provision within the transport network in compliance with the transport network operator's conditions,
- coordination during an elaboration of a plan of repairs and maintenance works, while considering the network users' needs related to the time limit, duration and scope of works,
- nomination of gas transport within the agreed and available transport capacity,
- a gas market stakeholder's option to provide his unused free transport capacity to another gas market stakeholder.

An insufficiency of a free transport capacity in the transport network is being solved by the transport network operator and thus through concluding of a contract on gas transport with an interruptible transport capacity with a gas market stakeholder.

#### Preventing the forming of the distribution network congestion and its solution

The distribution network operator prevents the formation of a distribution network congestion by an assessment of the applications on an access to the distribution network and the consequent limitation of the access to the distribution network capacity provision in distribution network in compliance with the distribution network operator's conditions, through the requirements to prolong the existing contracts on gas distribution without increasing the agreed distribution capacity and through the requirements of the household gas consumers.

In case the sum the required distribution capacity is higher than the technical capacity of the distribution network the distribution network operator call on the gas market stakeholders to adjust the volume of the capacity as required by them within the application on an access to the distribution network.

Provided the sum of the required distribution capacities in the applications on an access to the distribution network still remains higher than the technical capacity of the distribution network, the distribution network operator shall divide the remaining free distribution capacity in a nondiscriminatory manner in the ratio of the volumes of the respective applications the way if this applicant's application exceeds the volume of the remaining free capacity, the application is dividingly reduced to the volume of the remaining free capacity.

#### **Emergency solutions**

In case of emergency the stakeholders are obliged to submit to the limiting measures, measures aimed at preventing emergency causes and measures aimed at emergency removal. The limiting measures are applied in terms of the Energy Act.

An emergency in the delineated territory of SR or in a part of the delineated territory is announced and called off by a distribution network operator, who based on a decision of the Ministry fulfills the role of a gas dispatcher center in the delineated territory by means of public mass media and by means of dispatcher's management measures..

The national energy legislation valid in 2008 solving the emergency cases by reasons of historically determined standards of security of supply as well as from recent needs did not sufficiently cover he situation when the total gas supply to Slovakia was stopped. Such a situation became reality in the beginning of 2009.



Particularly for this reason the SR government and consequently the parliament has approved the amendment to the Energy Act (with effective date as of 15 March 2009), that reacted to the findings of the gas crisis. The obligation to secure the standard of quality of supply for the market stakeholders was transferred into the Act and herewith extended by further situation that occurs in case of total stoppage of supply. In terms of the amendment in question, the standards of security of supply for the gas end-consumers are the following cases:

- a) Gas supply limitations or interruptions during the minimum period of 10 days in the extent of 30 % of the overall sum of a daily volume of a gas supply on the basis of all contracts on gas supply to end-consumers or contracts on gas purchase from a gas producer or supplier from the territory of EU or from the third countries,
- b) Gas consumption during 5 consecutive days during which the measured average daily temperatures in the delineated territory are below 12 °C,
- c) The needs to cover gas consumption in the delineated territory caused by the development of low outside temperatures in the coldest season that occurred in the last 20 years preceding the respective year during the period from 1 November to 31 March,
- d) Interruptions or limitations in gas supply during the period from 1 November to 31 March at least for 30 consecutive days in the extent of average daily volume of an assumed gas supply of the respective month on the basis of the overall sum of contracts on gas supply to end-consumers of contracts on gas purchase from the gas producer or gas supplier from the territory of EU or from the third countries.

Touched gas market stakeholders ensure the mentioned standard of security of gas supply by means of gas stocks in the gas storage facilities with disponibility of gas supply in the state of emergency to the network in the delineated territory. The most of 50 % of the gas volume necessary for securing the standard of security of supply can be ensured by utilization of cross-border network capacity by contractually secured auxiliary gas supply disposable in states of emergency in the delineated territory.

A distribution network operator, a gas supplier and a gas consumer securing the gas supplies from the territory of EU or from the territory of third countries, annually no later than 28 February submit the proposal of securing the standard of security of supply for the following period from 1 November to 31 March to the ministry.

The Ministry after discussing the submitted proposal with the Regulatory Office for Network Industries and distribution system operator fulfilling the role of the gas dispatching center in the delineated territory decides on the method of ensuring the standard of security of gas supply.

A distribution system operator, a gas supplier and a gas consumer ensuring the gas supplies from the territory of EU or from the territory of third countries are obliged to submit to the Ministry annually no later than 31 August information on securing the standard of security of gas supply for the following period from 1 November to 31 March. In case that ensuring the standard of security of gas supply is not sufficient, the Ministry imposes measures by its decision.

Based on the contract, the gas supplier and gas consumer have the option to depute the responsibility for ensuring the standard of security of gas supply to another stakeholder on the gas market.

Measures for removal of the state of emergency in gas sector are performed as special proceedings for renewal of the ordinary operation of the distribution and transport networks in



the shortest possible time. When removing the states of emergency in gas sector, the gas companies are proceeding within the approved emergency plans, instructions of the superior gas dispatcher center and instructions of their own dispatcher center.

Among further options securing gas supply belongs the utilization of LNG, or gas supply diversification (transit routes diversification and resources diversification). The mentioned diversification is being realized by the most significant Slovak supplier SPP, a.s. on the basis of new contracts on gas supply with companies E.ON Ruhrgas and GDF SUEZ. At present there is no LNG facility operated in the SR territory and even in the horizon of net 3 years a utilization of such facilities is not planned.

Planned north-south interconnection mentioned in the Declaration V4+ as of 24 February 2010 V4 countries summit and central and south-east European countries in Budapest represents a possibility of utilization of the planned LNG terminals in Poland and Croatia.

#### Investments in the network development

With regard to the analysis of situation during the gas crisis situation, the Slovak transport network operator Eustream and Hungarian FGSZ Zrt. decided on the construction of a new interconnection. The project of interconnection (Veľký Krtíš – Vecsés) has been included into the Regulation of the European Parliament and European Council establishing the program supporting the economy recovery by granting the financial help of the Community for energy projects. The completion of the binding phase of the Open season is planned by the end June 2010. Based on the results, the decision on the project realization shall be accepted. Putting the new gas pipeline into operation is planned for the beginning of 2013.

The Ministry of Economy in cooperation with the professional public and the companies conducting business in the energy sector has elaborated a document called Strategy of Energy security. In the section dedicated to natural gas there are mentioned potential diversification possibilities. The diversification of sources under the SR conditions is limited by the existing infrastructure. Certain limited possibilities are offered by the Baumgarten hub. Another alternative for the region is represented by two planned gas pipeline projects – Nabucco and – South Stream. The Nabucco pipeline should be finished in Baumgarten while there is already existing interconnection and following the technical adjustment on the transport network operators' facilities in Austria, it will be possible to use a reverse flow. Promotion of the Nabucco project is also expressed within the SR Energy policy, while being considered to be as one of the significant possibilities for supply diversification. According to the available information and under an assumption the process of all necessary activities related to the construction is successful; the pipeline might be put into the operation in 2015.

#### The quality and level of network maintenance

Within the distribution network of the operator SPP-distribucia a. s., formed by the complex of gas grid facilities that include gas pipeline network and technological facilities, there were performed inspections, preventive maintenance and repairs of gas facilities according to the established criteria that contributed to securing of its integrity, reliability and security. There was realized removal of defects detected by outside and inside inspection of pipelines by repairs or reconstructions of gas facilities.

The maintenance of the distribution network of SPP-distribúcia a. s. is secured according to the valid legislation, respective norms, internal management acts of the company, technical gas rules as well as accompanying documentation of the producers of separate components.



SPP-distribúcia a. s. in 2009 invested 42 000 000 € in the renewal of the distribution network. Out of the total number 2 891 of municipalities in SR the number of gasified was 2 233 with the total percentage of 94 % of all Slovak inhabitants. From the overall length of the distribution network of 32 506 km out of which high pressure gas pipelines represent 6 298 km and middle and low pressure pipelines form 26 208 km by 31 December 2009.

SPP-distribúcia is planning to widen its distribution network only at the minimum extent. In the next 4 years it is assumed to be extended in the length of 2000 km, whereas the planned extension of the distribution network capacity reaches the level of approximately 1000 mil. m<sup>3</sup> annually.

#### 6.1 General economic interest - electricity

The decisions in the general economic interest for 2010 issued by the Ministry of Economy imposed the following obligations:

- For the company SE, a.s. in 2010 to generate electricity from the domestic coal in the volume of 1 890 GWh and to provide the electricity supply generated from domestic coal in the volume of 1 659 GWh; at the same time to comply with the share of electricity generated from domestic coal in the amount of no more than 15 % on the overall domestic electricity consumption and to comply with the price of the electricity generated from domestic coal defined by the Office,
- For the company SEPS, a.s. to ensure the priority access and the priority transmission of electricity generated from domestic coal in the delineated territory and at the same time to monitor the share of electricity generated from domestic coal on the overall domestic electricity consumption,
- For the companies ZSE distribúcia, a.s., Stredoslovenská energetika Distribúcia, a.s. and Východoslovenská distribučná, a.s. to ensure the priority access and the priority distribution of electricity generated from domestic coal,
- For the companies ZSE Energia, a.s., SSE, a.s. and VSE, a.s. to preferentially provide supply of electricity generated from domestic coal in the stipulated volume.

The decisions in the general interest as of 28 October 2009 issued by the Ministry imposed too:

- To the electricity producer the company SE, a.s., to ensure in 2010 provision of ancillary services necessary for securing the operational reliability of the system in the facilities generating electricity on the basis of domestic brown coal; in case of provision ancillary services from the source on the basis of domestic brown coal (heat power plant Nováky) to comply with the maximum prices defined by the Office,
- To the transmission system operator the company SEPS, a.s., to ensure in 2010 provision of ancillary services necessary for securing the operational reliability of the system from the source on the basis of domestic brown coal; in case of provision of ancillary services to comply with maximum prices defined by the Office.

#### Universal service

The act on Energy defines the universal service as a service for households and small businesses provided by an electricity supplier on the basis of a contract on electricity supply and over the responsibility for a deviation. The price for electricity for households is regulated by the Office. The mentioned regulation does not affect a national nor international competition. A household



electricity consumer has the right to conclude a contract on electricity supply with an electricity household end-supplier providing universal service under the conditions defined in the law which correspond with the conditions laid down in the Annex of the Directive 2003/54/EC. A distribution system operator, in the delineated territory and under the conditions defined by the Office while complying with the price or methodology of its determination laid down by the Office, is obliged to ensure the connection of household electricity consumers to the system provided the technical and business conditions are met. The contract on connection must include the time limit within which a distribution system operator is obliged to ensure the connection of an electricity off-take device.

#### **Combined heat and electricity generation**

The electricity producer operating a combined generation facility with the overall installed electricity capacity of up to 5 MW, has a preferential right for electricity transmission or distribution, provided these are enabled by the technical conditions of the system; this provision does not cover connection line.

A preferential right for electricity transmission or distribution in case of combined generation with the overall installed electricity capacity of more than 5 MW is related only to the electricity generation arising alongside during heat production generated for the purposes of heat supply to physical or legal persons, and the supply for technology purposes.

## Electricity generation from renewable electricity sources

A producer generating electricity from renewable sources of energy has a preferential right for electricity transmission, electricity distribution and for supply, provided the generation facility determined for electricity generation from renewable sources of energy complies with the technical and business conditions. The preferential right for electricity transmission does not relate to electricity transmission through a connection line.

# 6. 2 General economic interest - gas

The Ministry through the Decision No. 456/2008, in a general economic interest and in order to ensure gas supply including the price of gas supply for household gas consumers and the prices of gas supply for heat production determined for households, imposed to the gas supplier - the company SPP, the following obligations:

- To provide gas supply to the household consumers which annual gas consumption does not exceed 6 500 m<sup>3</sup> for the price defined by the Office,
- To provide gas supply to the heat producers generating the heat determined for the households for the price defined by the Office under the condition that these heat producers shall use gas purchased this way explicitly for the purpose of household heat production.