

National Report 2009

National Report Regulatory Office for Network Industries Slovak Republic

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1. Introduction

Last period from the point of view of the state regulation of network industries can be characterized as period extremely demanding and at the same time a turning point. It was marked mostly by the world financial and economic crisis that markedly expressed in the Slovak Republic.

Regulatory Office for Network Industries proceeded in its activities according to the basic strategic document of the state regulation in network industries that is the Regulation Policy elaborated by the Regulatory Board.

The Regulation Policy in accordance with the legislation of the European Community and Slovak legislation has introduced such regulatory tools and methods that ensure transparent and non-discriminatory performance of the activities in network industries that enable, using all available controlling mechanism to trace observing the rules of competition and protection of the rights of consumers with the emphasis on the most vulnerable groups of consumers.

From the point of view of state regulation the year may be characterized as extremely difficult and at the same time turning point. In the energy sector, which is the key sector of the economy, the transition period of using regulatory methods has been finished and the stimulating methods has come into application, focused on economic effectiveness of regulated companies.

Primarily I was inevitable to face up the fact that "the invisible hand of market" does not sort out everything and intervention of the state and existence of the adequate rate of regulation is inevitable. Arguments supporting this thesis could be found in all kinds of network industries. Especially the electricity price is negatively influenced by the fact that the electricity market in consideration of absence of the sources in the Slovak Republic as well as in the EU is not fullvalue.

Far more explicitly it has been showed in the gas sector. We all witnessed enormous rise of the price of gas and gas products on the world market in summer season. Some speculative actions have expressed themselves. This led to the rapid decrease of prices at the end of 2008. The intervention of the Regulator and introduction of strict regulatory measures was inevitable. The situation in the heat supply sector developed very similarly as more than 70% of sources of heat use natural gas.

Based on the development of electricity and gas prices in the market from the reason of threaten of the consumers in the households and small scale companies, the Office began regulation aimed to accept proper measures protecting electricity and gas consumers in households and small-scale companies as the most vulnerable consumers. Gradually it secured that these consumers had an equal right to an energy supply that was as comparable, transparent, affordable and fairly priced as industrial consumers had.

New rules and conditions introduced by the Office through legislative activities were not intended only for the protection of consumers but also to ensure compensation of all costs and an adequate profit for all energy and water producers and suppliers. The entire process was carefully and thoroughly consulted with the European Commission. By this, Slovakia managed



effectively implement standard procedures with regard to protection of consumers that are applied in other EU member states.

Within its responsibilities and in accordance with its mission, the Office intends to monitor actively the situation on the energy markets and evaluate behaviour of the regulated subjects. Permanent process of evaluation of the results and effectivity of applying of regulatory methods is the basis for the active performance on markets and eliminating any barriers that hinder its development. In the context of the development of the European Commission in the future the Office will guarantee transparent and nom-discriminatory conditions for all market participants in order to deepen the market openness in order to make the Slovak market attractive by the respecting balance among all market participants.



2. Conclusions / Past Year Development

Assessment of the 2008 regulatory year in connection with market transparency

In order to secure electricity market functioning in Slovakia, the necessary legislative provisions are being realized with the provisions on market liberalization and the promotion of market environment being gradually implemented into them- however, without a respective protection of the consumer sector, and thus resulting in a rapid increase of energy prices. It can be stated that this aspect of the Office's activities had been insufficiently developed till 2006, and thus resulting in the fact that the regulated entities often acted in a non-transparent manner and abused the tariff policy while injuring the consumers. Therefore, the Office had to take the position of a stability warrantor, and after consultations with the EU bodies applied into its legislation the provisions of the Directive of EP and Council No. 2003/54/ES and 2003/55/ES on Common rules for the internal electricity and gas markets which, besides the promotion of the market environment development stipulate that "...all Community industry and commerce, including small and medium-sized enterprises, and all Community citizens that enjoy the economic benefits of the internal market should also be able to enjoy high levels of consumer protection, and in particular households and, where Member States deem it appropriate, small enterprises should also be able to enjoy public service guarantees, in particular with regard to security of supply and reasonable tariffs...". One of the important missions of the Office was to monitor the behavior of the individual stakeholders and to create the conditions for free competition development, so that its improvement would positively affect energy prices for consumers.

During the year 2008, the Act No. 276/2001 Coll. on Regulation in Network Industries and amending some other acts (hereinafter as "Act on Regulation") was amended twice: by the Act No. 112/2008 Coll. with the effective date as of 1 April 2008 and the Act No. 283/2008 Coll. with the effective date as of 1 August 2008.. The reason for the amendment was mainly the transposition of the Directive of the EP and the Council No. 2005/89/ES dated 18 January 2006 on the Measures to ensure security of electricity supplies and investments to infrastructures, into the legal measures of the SR (hereinafter as "SR"), as well as the application of knowledge from the up-to-date legal setout practice, especially in relation to security of electricity supply and to security and reliability of system operation, and creation of the conditions for improving security of electricity and gas supply, as well as security and reliability of system operation.

The Acts No. 112/2008 Coll. and No. 283/2008 Coll. amended also the Act No. 656/2004 Coll. on Energy and amending some other acts in the version of latter provisions (hereinafter as "Act on Energy"), inter alia even the part modifying the rights of households, and thus in the way it broadens the households rights to get the information on composition of the price for electricity supply consisting of regulated and non-regulated price items, and thus significantly contributing to the electricity market transparency improvement.

The year 2008 has become the first unbroken calendar year with the applied rules for electricity market functioning approved by the Government through the Order No. 317/2007 Coll. having effect as of 15 July 2007 (hereinafter as "the rules for electricity market functioning") and the Rules for gas market functioning in the Order No. 409/2007 Coll. (hereinafter as "the rules for gas market functioning").

Ensuring of transparent electricity and gas markets belongs, alongside with ensuring of nondiscriminatory performance of regulated activities in the gas sector, among the most important



Office's roles. The basic tool for regulatory policy application and the mean promoting competition and gas market transparency is represented by the rules for electricity and gas markets functioning. The Office, based on the gas market rules and other legislative provisions in energy sector, approves operational orders of the network operators which are binding for all gas market stakeholders.

2.1 Past Year Development- Electricity

The year 2008 is specific due to the impacts of the decommissioning of the Unit 1 of the JE V-1 Nuclear Power Plant Jaslovské Bohunice as of 31 December 2006 and the Unit 2 as of 31 December 2008, resulting in the fact that the Slovak Republic has lost its self-sufficiency in the field of electricity generation. Without the utilization of foreign capacities the Slovak electricity system (hereinafter as "ES SR") would have problems with securing electricity supply. This fact is significantly affecting the situation in the electricity market.

The executive tools of the Office for the area of price regulation for the regulatory period of the year 2008 were:

- Decree of the Office No. 1/2007 as of 27 June 2007, laying down the scope of price regulation in network industries and the method of its performance (hereinafter as "Decree No. 1/2007"), and
- Decree of the Office No. 2/2007 as of 27 August 2007, laying down the scope and structure of justified costs, the method of determination of adequate profit and the background information for price proposal in electricity sector amending the Decree of the Office No. 1/2007 as of 27 June 2007, laying down the scope of price regulation in network industries and the method of its performance (hereinafter as "Decree No. 2/2007).

In 2008, the price regulation pursuant to the valid legislation covered:

- a) generation of electricity generated from renewable sources of energy, electricity generated by combined heat and power production and electricity generated from domestic coal,
- b) connection to the system,
- c) access to the transmission system and electricity transmission,
- d) access to a distribution system and electricity distribution,
- e) electricity supply for households,
- f) provision of ancillary services in electricity sector,
- g) provision of system services in electricity sector.

The price regulation was performed by the direct price determination or by the stipulation of a method of calculation of price and tariff for individual regulated activities.

Further tools serving for non-discriminatory and transparent electricity market organization in relation with other provisions, are represented by operation orders issued by the Office for the transmission and distribution systems operators. Regarding the fact that the operation orders have to cover market rules, the Office based on the requests of the regional and local distribution systems operators, assessed and approved 107 operation orders of these system operators in total in 2008. The operation order approved by the Office is a binding document for electricity market stakeholders.



In 2008, the Office also prepared new significant tools of electricity market regulation:

<u>Ordinance of the Regulatory Office for Network Industries No. 315/2008 Coll.</u>, laying down quality standards of electricity supplied and services provided, with the effective date as of 1 September 2008. The implementation of quality standards serves for monitoring of the aims and roles as follows:

- Improvement of transparency and communication between suppliers and consumers,
- Improvement of quality of supply of services and goods,
- Development of market environment (competition), a consumer will choose the most convenient supplier,
- Improvement of security of supply,
- To head to the improvement of the stakeholders' technological level by means of gradual implementation of the compensation mechanisms,
- To secure the protection of hardly suppliable consumers,
- Utilization of the tool of rewards and penalties for non-achievement or exceeding of the determined standard level of service quality.

The regulated entities are obliged to assess quality standards as a calendar year summary, and to send them within the Annexes of individual Ordinances to the Office, and thus no later than 28 February of the following calendar year. The data outputs included in the tables will be a subject of an analysis on fulfillment of quality standards of supply of commodities and the related services.

Ordinance of the Office No. 415/2008 Coll. on the Method of administration of a separate records keeping which are a subject of the accounting, on the method of administration of records keeping of costs, revenues, assets and debits, and on submission of the separate records keeping outputs, with the effective date as of 1 January 2009. The operators of regulated activities administer the separate keeping of the records which are a subject of accounting and keeping of assets and debits and also on another activity conducted within business, and thus in the manner stipulated by the law and by the details according the Ordinance proposal. The Ordinance further stipulates also the details on the method of administration of records keeping which are a subject of accounting and the method of administration of keeping of assets and debits for electricity supplier in connection with electricity supply to a noon-household electricity consumer and electricity supply to a household electricity consumer.

The operators and suppliers in electricity sector shall provide the Office with the outputs in the form of table summaries and in electronic form, pursuant to the Ordinance and its Annexes not later than 30 June of the following year. Further on, they are obliged to submit the Rules for planning of the assets and debits, costs and revenues and the Rules for depreciation to the Office to be approved, and thus not later than 31 August of the calendar year. The rules approved by the Office shall be applied as of 1 January of the following calendar year.

Ordinance of the Office No. 349/2008 Coll. on Rules for electricity sale by the form of auctions, with the effective date as of 10 September 2008. The Ordinance lays down the details of the binding auction rules for electricity sale in order to secure transparent and non-discriminatory course of auctions resulting in determination of the price for electricity sale.



Generation of electricity generated from renewable sources of energy (hereinafter as "RES") and electricity generated by combined generation of heat and power (hereinafter as "CHP") and electricity generated from domestic coal

Price of electricity from RES was set out for the year 2008 as the fixed price with the expected investment return period of 12 years and was applied on the basis of guarantee of electricity origin issued by the Office. The price of electricity generated within CHP Technologies was set out for the year 2008 as the fixed price. The price of electricity generated from domestic coal was set out for the year 2008 the way, so that it considers justified costs on its generation and the profit determined by the Office.

The electricity generated from RES and CHP was being purchased for fixed prices stipulated by distribution system operators to cover losses. The difference between the determined fixed electricity prices and the market electricity losses price was reimbursed by a distribution system operator through the system operation tariff. In terms of general economic interest, electricity generated from domestic coal was obligatory purchased from the producer by electricity suppliers who applied the difference in the price through the system operation tariff.

The system operation tariff related to electricity end- consumption has a negative influence on the electricity final price for the electricity end- consumers, but it does not discriminate the stakeholders.

Connection to the systems

The system connection price was for the year 2008 set out for specific connections, and thus according to the Decree No. 2/2007. The price was of a one-shot payment nature.

Access to the transmission system and electricity transmission

The 2008 prices were proposed the way so that the truly achieved revenue for the Access to the transmission system and for electricity transmission would not exceed the maximum allowed revenue considering justified costs and adequate profit. The regulatory framework was set the way, so that it would ensure the transmission system operator with necessary financial means for the investment development and so that it would consider all incomes related to the provision of transmission and system services, and also for balancing the deviations in relation to ensuring stability and secure operation of the SR electricity system. The electricity transmission price was set out as a two-item fixed price. The incomes of the transmission system operator cover the revenues connected with cross-border electricity exchange. In 2008, the single-item price for electricity transmitted without losses increased by 3,73 % compared to 2007.

Access to a distribution system and electricity distribution

The maximum price for the access to a distribution system and electricity distribution was for the year 2008 set out separately for each voltage level and was calculated as a weighted average of individual tariffs on the respective voltage level. The maximum price on the respective voltage level covered justified costs and adequate profit of this voltage level and an aliquot part of justified costs and adequate profit from higher voltage levels including the costs on electricity transmission.

Adjustment of the initial parameters of the item of maximum price for access to a distribution system and electricity distribution on a respective voltage level came out for the year 2008 from the initial price level of the year 2005, while considering the nuclear inflation index and the effectivity factor of justified costs limiting the influence of escalatory coefficients.

The average price in SR for access to a distribution system and electricity distribution (including transmission) in 2008 increased by 7, 89% compared to 2007.



Electricity supply for households

Electricity household customers were given the right to switch a supplier as of 1 July 2007. At the same date, the legal unbundling of electricity supply from electricity distribution took place in the vertically integrated companies. The year 2008 was the first unbroken year of the functioning full legal unbundling of electricity supply from electricity distribution in the vertically integrated companies. Thus, three legally independent companies as operators of regional distribution systems emerged with the license for conducting business in energy sector, and thus in electricity end-suppliers with the license for conducting business in energy sector, and thus in electricity supply.

The Office approved maximum prices for household electricity supply for the households with a regional validity for the household delivery points connected to a distribution system of a respective vertically integrated company. The tariffs and fixed prices were stipulated the way so that the really achieved revenue per electricity unit would not exceed the determined maximum price for the household electricity supply. The maximum price considered justified costs including the costs on distribution and transmission, and adequate profit. For 2008, the average electricity supply prices for households were increased by 2,87% comparing to the 2007 level.

Such approved maximum prices are obligatory also for other household electricity suppliers in the part of a delineated territory of the respective vertically integrated company.

2.2 Past year development - gas

The gas market, in relation to the valid primary and secondary energy legislation and to the business conditions defined by Operational Orders of the network operators and approved by the Office, was in 2008 characterized again by the existence of one dominant natural gas supplier- the SPP, a.s. company (hereinafter as "SPP"), even despite the legislative conditions for gas market opening created by the Office and despite the entry of new stakeholders to the market. During 2008, the primary and subsequently secondary legislation were amended.

Despite the fact that the primary and secondary energy legislation builds preconditions for the full gas market opening in the Slovak Republic (hereinafter as "SR"), in fact it can be stated that its development in gas sector is very slow. In 2008, the EC legislative provisions were implemented in full extent to the law and order of the Slovak Republic, and thus mainly the provisions related to the protection of the most vulnerable group of gas consumers and their rights for reasonable prices. In relation to vulnerability of the household gas customers, the price policy of the Office protects the households through the stipulation of maximum prices. The maximum prices for household gas supply determined for the dominant household gas supplier must be accepted by each household gas supplier within the delineated territory of the SR.

The amendment of the Act on Energy No. 112/2008 elaborated in more detail the conditions for construction of energy facilities and the situations arousing in emergency status. It contains the assessment provisions of the supplied and offtaken amount in energy units. The security of supply in the energy market is guaranteed by the broadened provisions of the paragraph dealing with last resort supplier. The Act alongside legislatively modifies also other changed conditions in the SR gas market as a result of its development. Herein and in compliance with the EU legislation, it is



incorporating in more detail its requirements related to security of gas supply and liberalized gas market.

The second amendment of the Act on Energy No. 283/2008, with the effective date as of 1 August 2008, the scope of price regulation in gas sector, complying with the Directive of EP and Council No. 2003/55/ES, was broadened by supply of gas for heat production determined for households. The rights and duties of the gas stakeholders are connected with the Act on Energy the way, so that the security and reliability of gas supply for consumers would not be jeopardized and so that the equal conditions and possibilities for entry and acting on the gas market would be guaranteed for all stakeholders.

In relation to the secondary legislation, the Office issued an Ordinance with the effective date as of September 2008 laying down the quality standards of the gas supplied and services provided in gas sector. The Ordinance sets out the required quality of supply and services related to the regulated activities in gas sector and an obligation of the network operators, storage facilities operators and gas suppliers to provide data on assessment of the individual quality standards, and thus on an annual basis. The aim of this Ordinance is to fulfill the specified quality of gas supplied and services provided in relation with gas supply. The required quality of gas supplied and services provided is expressed through quality standards. Another aim of the Ordinance is to monitor, assess and publish the specified quality standards of gas supplied and services provided which should serve for comparison of effectivity of the gas network operators and gas suppliers within the territory of the Slovak Republic, with the possibility to compare these regulated entities with the gas network operators and gas suppliers within the EU member states. The application of compensation payments for non-fulfillment of the respective standards towards an end- consumer is being considered for later period, and thus after the implementation of the Ordinance into practice.

3. Electricity market behavior and its regulation

3.1 Regulatory issues

3.1.1 Management and allocation of inter- connection capacity and congestion management mechanism

The Slovak transmission system is of a relatively high transmission capacity of the inter- state interconnection. This capacity resulted from a long- term mutually different orientation within the interconnected electricity systems operation. Therefore, there is a dominancy of an imbalance within the capacities of the respective profiles, and thus a permanent need to enhance some of the interconnectors. As for the interconnection of ES SR with UCTE, there is a significant North-South electricity capacity flows orientation, and the most sensitive profile is currently the Slovak – Hungarian one.

The present- day installed capacity of the inter- state connections (according to the SR Strategy of Energy Safety approved by the Government) is as follows:

Slovakia (SEPS) – Czech Republic ČEPS)	3 636 MVA
Slovakia (SEPS) – Hungary (MAVIR)	1 660 MVA
Slovakia (SEPS) – Poland (PSE – O)	2 868 MVA



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Slovakia (SEPS) – Ukraine (WPS)

700 MVA

The electricity market development within the Central and Eastern Europe region, and the corresponding physical flows, have a contribution towards the congestion persistency mainly on the SEPS/MAVIR profile. Therefore, there is a relatively low value of the available tradable cross-border transmission capacities (ATC) on this profile. Despite a high overall installed transmission capacity of the ES SR transmission capacities in the volume of 8 864 MVA, the overall freely tradable capacity for 2008 electricity cross- border exchanges for the flows from the SR system was of 2 000 MW, and for the flows to the SR system of 2 100 MW.

The indicative values of the net network capacities (NTC) on the cross- border profiles of the control area of the Slovak transmission operator were published by SEPS on the ETSO website within the regional overview. The congestion rate on the respective cross- border profiles of SEPS (on the Slovak side of the respective profiles) is as follows: CZ/SK: 50 to 75 %, SK/CZ: 25 to 50%, PL/SK: 50 to 75%, SK/PL: 25 to 50%, UA/SK and SK/UA: no structural congestion, HU/SK: no structural congestion, SK/HU: 50 to 75%.

In 2008, at all cross- border profiles of SEPS, there was permanently applied a method of explicit auctions based on the net transmission capacities (NTC), stipulated according to the ETSO recommendations. Within all profiles, the majority of capacities was offered for long- term allocations, the unused long- term capacities and other free capacities were offered in monthly and daily auctions. In the profile with CZ, there are realized also intra- day allocations.

In 2008, there was a continuity in the system of coordinated explicit auctions of the trilateral region (ČEPS, VE-T, PSE-O). On the profile with Hungary, there were realized bilateral explicit auctions, on the profile with Poland unilateral explicit auctions. – both on the basis on the NTC capacities methodology based on the ETSO recommendations. The auctions on the SEPS/MAVIR profile were organized separately. Both MAVIR and SEPS offered in auctions half of the APC capacities each on the common profile, while SEPS admitted the capacity allocated in the MAVIR auction, and MAVIR admitted the capacity allocated in the SEPS auction.

All incomes related to allocation of the interconnection capacities as from 1 July 2008 to 30 June 2009 were used according to Article 6 par. 6 of the Regulation No. 1228. The ration of utilization of the incomes related to allocation of the interconnection capacities was defined by the RONI Decree No. 2/2008, and thus the way that the guaranty of the real availability of the allocated capacity and of the investment to the network to maintain or broaden the interconnection lines capacities was calculated as 50 percent of the incomes, and the other 50 percent of the incomes were included into the tariffs. The overall sum of the used incomes from congestion management, as for the respective period, was 36,244 mil. \in .

Ensuring of the compliance with the respective provisions of the guidelines to the EC Regulation No. 1228/2003 on conditions of an Access to the system for cross- border electricity Exchange (hereinafter as "Regulation 1228"), related to a coordination through the congestion management mechanism and the interconnection capacity allocation on the cross- border profiles, was being conducted on the basis of the Office' s participation at the management committee meetings, the implementation group meetings and the stakeholders' meetings within the Regional Initiative for Central and Eastern Europe (ERI CE), as the Office is its member.

In 2008, the Office was monitoring the fulfillment of the Regulation 1228, as for the nondiscriminatory Access of the cross- border lines users, even in case of a long- term contract dated back to 1997 between the Swiss company ATEL and the Slovenské elektrárne a. s., with the successor in the subject of this contract being the SEPS co.



In 2008, at the ERI CE meeting, there were discussions on the project of a new method on capacities allocation on the cross- border profiles through coordinated auctions that will be conducted in the Central Auction Office seated in Freising, Germany. The auctions will be explicit and wil include all 8 transmission system operators of the region (Verbund APG, ČEPS a.s., Electro-Slovenija d.o.o., Transport Stromübertragungs GmbH, MAVIR ltd, PSE-Operator S.A., SEPS, Vattenfall Europe Transmission GmbH). The Auction Office will coordinate capacities allocation on all cross- border interconnections of the region on a daily, monthly and annual basis, based on the real physical flows, and thus substituting the up-to-now different method of capacities allocation on the respective interconnections in this region. As for the transmission systems operators of the region, during 2008 were prepared the common auction rules of the Central Auction Office that will be consequently being approved by each regulator.

In 2008, The Czech and Slovak TSOs and the Czech Electricity Market Operator elaborated an interconnection project of the two national markets on the CZ/SR profile, and thus through a daily organized electricity market in SR, and its connection with the organized short- term market in CZ. The launch of the project is planned to be realized in the second half of 2009. The cross- border transmission capacity necessary for electricity transmission from one national market to another shall be allocated in the form of a so- called daily implicit auction, while the capacity shall be a part of traded electricity- this will be called Market Coupling. This initiative complies with the intentions of the European Union to create common electricity market by the form of interconnection of the national electricity markets, and in a full compliance with the Regulation No. 1228. The interconnection of Czech and Slovak national electricity markets through an implicit allocation of the transmission capacity is a pilot project within the Central and Eastern Europe region. The initiative has been welcome by other ERI CE regulation authorities as well.

3.1.2 Regulation of the responsibilities of transmission and distribution companies

Balancing of the system imbalance

Pursuant to Act on Regulation, the Office defines or approves:

- As for electricity producers:
- the tariffs for ancillary services provision in electricity sector,
- maximum prices for balancing electricity supply
- as for the transmission operator:
- the tariff for accounting of deviations for a stakeholder who has chosen a regime of self-responsibility for the deviation,
- maximum prices for purchase of the respective types of ancillary services,
- maximum allowed costs on purchase of all ancillary services,
- maximum prices of an offered positive balancing electricity,
- maximum prices of an offered negative balancing electricity.

The transmission system operator, based on the contract on ancillary services provision (hereinafter as "AS"), purchases AS from the AS providers, and uses the purchased AS through the management information systems and the instructions of the SEPS Slovak Energy Dispatching (following the consideration of balancing electricity offer prices of the AS providers on the basis of an economically effective principle and in compliance with the technical conditions).

In relation to the fact that the Office, within the electricity market, increased the balancing



electricity price, some new ancillary services providers have appeared, and this has led to an increase of the market competition. The higher offer of the ancillary service providers has led to the fact that the Office could reduce the tariff for system services provision.

In 2008, there were 17 contracts on ancillary service provision in total concluded (an increase by 1 compared to 2007). In particular due to more unfavorable conditions, 428 offers were rejected (compared to 50 rejected offers in 2007).

The system services lay under the responsibility of the transmission system operator, they are performed with the aim to secure operationability and reliability of the ES SR operation, and to fulfill the conditions of a synchronous interconnection with the neighboring electricity systems.

In order to secure operational stability and security of the ES operation in the territory of the SR, and as a temporary measure in relation to a significant blackout of the sources caused mainly by the JE V1 decommissioning, there was introduced a fee of the electricity producer for system services in case of electricity export for the year 2008, which, however, was repealed on 1 April 2009, and thus due to the prepared connection of the CZ and SR markets, and due to a significant reduction of the SR electricity consumption.

In relation to the fact that the Office stipulated new conditions related to the system operation, the overall system operation costs decreased, and thus resulting in the reduction of the system operation tariff by the Office. Based on these facts, the overall costs on electricity supply for electricity consumers were reduced.

The electricity trading is performed in the form of a trade with the commitment for the future to generate, supply or offtake a certain amount of electricity within a supply or offtake diagram defined in advance. In case this commitment is not fulfilled, the emerged difference between the contracted planned value and the real supply or offtake value is financially balanced by a deviation clearer represented by SEPS. In order to maintain quality and reliability of supply, SEPS is obliged to secure immediately additional sources (in case the contractual amount of electricity is exceeded), or to limit electricity generation of some of the producers (in case the contractual amount of electricity is not offtaken). This results in a formation of additional costs that are transferred by a deviation clearer onto the customers, and thus according to the ratio expressing nonfulfillment of their own offtake diagram bringing contribution to the development of the overall deviation.

Within the rules for electricity market functioning, the Office has stipulated the conditions for electricity market status improvement in the area of deviation clearing and payments of the deviation clearing subjects, and thus the way it defined new conditions of balancing electricity provision and the new mechanism of stipulation of higher system costs.

The customers' discipline in relation to the fulfillment of the registered electricity offtake daily diagrams has been significantly improved as from the electricity customers (clearing subjects). The most important electricity suppliers assess the cooperation with the deviation clearer as smooth, keeping the standard level. There is a positive fact that there has been achieved a success in lowering the costs for eliminating of the deviation caused by electricity customers, and thus in reduction of the payments for electricity offtake.

In 2008, the electricity market was covered by 59 clearing subjects performing activities in the meaning of the electricity market rules functioning. SEPS concluded in total 69 contracts on deviation clearing (an increase by 12 compared to 2007). In the monitoring period of the year 2008, there was no registration to any clearing subject suspended due to non-fulfillment of the financial security amount.



Regulatory office for Network Industries

3.1.3 Effective unbundling

In the process of development of the electricity market functioning, the Office cooperated with the state bodies, in particular in the process of securing transparency within the distribution systems operation unbundling from the activities not directly related to electricity distribution. The unbundling took place on 1 July 2007 and was related to the distribution system operators who are a part of a vertically integrated company and who provided services for more than 100 000 connected electricity customers.

The aim of the unbundling was to create non- discriminatory and transparent environment for all energy market stakeholders and to eliminate the abuse of the position of an integrated entrepreneur that is both a producer or a trader and the transmission system operator or a distribution system operator. The profit from the unbundling should be at last given to a customer who will have an opportunity to chose the most convenient supplier from a number of suppliers with the best price and high level of services. The unbundling implementation has brought an improvement in securing non- discriminatory and independent position of a distribution system operator, an optimization of the quality of individual processes and related costs, an improvement of transparency of individual processes, costs, revenues and cash- flow. Despite the expectations, it might be stated that the unbundling implementation led to an increase of investment and operation costs, in the meaning of implementation and operation costs (modification of information technologies, systems, contracts), an increase of the administrative demand and related costs, duplication of some processes (management, accounting) being performed in parallel in two unbundled companies, an increased complication for market stakeholders, purchase of the selected services for market prices etc.

The legal unbundling of the distribution system operation from supply did not influence electricity supply for households provided henceforth by an electricity supplier- being a part of a vertically integrated company, and thus on the basis of existing contracts. However, the content of the contracts has been modified. The existing contracts on household supply has been modified to the contracts on unified supply and distribution of electricity, and the fixed prices for electricity supply have been modified, based on the Decree of the Office, to maximum prices valid in a respective part of the delineated territory of SR. The value of the individual integrated prices (supply, distribution and other regulated fees) has not been modified, and the contracts, payment method and value of deposit concluded before 1 July 2007 remained valid as well. The contracts conclude by 1 July 2007 were not necessary to be modified because, except for supply secured on the basis of a mandate of a respective distribution company by any of the crucial electricity suppliers- ZSE Energia, a.s. (hereinafter as "ZSE E"), Stredoslovenská energetika, a. s. (hereinafter as "SE") and Východoslovenská energetika, a. s. (hereinafter as "VSE") , they contain distribution as well.

3.2 Competition issues

3.2.1. Electricity wholesale from the view of competition issues

By the end of 2008, the SR market was covered by 49 electricity generation licensees. Besides them, the market included also the producers generating electricity in the facilities of up to 1 MW, who are not obliged to apply for a license according to the Act on Energy, they are obliged only to



fulfill a reporting obligation to the Office which was applied by 194 electricity producers, out of them 154 RES producers.

The most significant position among the electricity producers was held by Slovenské elektrárne a. s. (hereinafter as "SE"). Its production and purchase from long- term contractual capacities, they secure no less than 81 % of the SR electricity consumption. There is a real assumption that the SE position in the SR electricity market shall be even higher after finishing the third and fourth unit of the Nuclear Power Plant (hereinafter as "NPP") Mochovce, and thus despite the facts that two units of the NPP V-1 Jaslovské Bohunice have been decommissioned. The Ministry of Economy of SR (hereinafter as "ME SR") has issued a certificate on compliance of the investment intention with a long- term energy policy strategy to various potential investors (excluding SE), and has registered applications on a respective certificate for approx. 1000 MW of the capacity from the potential wind power plants investors. A principal modification in the production structure can be awaited only after a construction of a nuclear source in Jaslovské Bohunice, i.e. after 2020.

While SE are the only operator of the SR Nuclear Power Plants, and in relation to their market share and the variability of the production sources, they can be both flexible in their reactions and have a significant influence on SR electricity generation as well as on ancillary services provision, and thus having a big competition advantage compared to other electricity producers.

Other electricity producers are disposing of practically one type of a power plant, and each of them have a market share of less than 5 % (e.g. PPC Power, U. S. Steel Košice, Tepláreň Košice, Slovnaft, Mondi SCP, Slovintegra, Vodohospodárska výstavba). Generation in industrial power plants is secured mainly for self- consumption. The big CHP power plants provide electricity supply mainly to the so- called electricity end- consumers in households and small businesses, represented by ZSE-Energia, SSE a VSE.

As for wholesale level, there were utilized mainly the following forms of trade:

- *bilateral contracts*, based on non- public (out-of-exchange) OTC trades within which most of electricity is traded. The trades have been concluded directly between the partners, or mediately through broking companies through the platforms of TFS, ICAP, GFI, Spectron, within our conditions, mainly through the SPX, s.r.o. company (hereinafter as "SPX"). This is a platform focused on electricity trading on both short- term and long- term basis which, however, does not publish nor develops prices for each trading hour of a day. By the end of 2008, the SPX services were used by more than 30 electricity producers, electricity traders and electricity suppliers performing their activities in the Central European region. Since 2008, SPX has been providing mediate services between the offers of sale and purchase, with the aim to promote the spot and long- term trading and to improve liquidity of the Slovak electricity market. After conclusion of an agreement of both parties, the trades are realized on a bilateral basis. The activity of stakeholders under the SPX portal conditions, has been significantly improving year by year. Provided in 2007, there was mediated electricity trade on the portal with the volume of 7,37 GWh, in 2008 this number reached a value of 1 035 GWh,

- *auctions* – up to now they were organized explicitly by the dominant producer SE. In 2007, there was an offer of a zone product for 40 blocks per 10 MW, in total 400 MW (resp. 3 500 GWh). This relatively low offer resulted in a significant increase of the price of power electricity for the year 2008, not corresponding to the real market situation. After the amendment of the respective primary legislation, the rules for electricity sale through auctions are amended by the new Ordinance of the Regulatory Office for Network Industries No. 349/2008 Z. z. on Rules for Electricity Sale through Auctions, with the effective date as of 10 September 2008.



- *balancing market* in the real electricity supply time was managed by the TSO- SEPS through the Slovak Energy Dispatching,

- *Exchange trades* applied mainly through the German EEX Exchange and the Prague PXE Exchange. In October 2008, the PXE started with supply trading to the territory of SR, but, however, by the end of 2008, there was no trade realized resulting in a still valid but unrealistically stipulated price.

- organized short- term market- at present, the SR does not have any coordinated trading spot with concentrated offers and demands created by reference daily hourly prices. However, a number of brokers offer a trading possibility, and thus from daily standard products of TFS, ICAP etc. types to forward trades, both through their monitors or via phone. The existence of a spot and futures market is a necessary condition for good electricity market functioning, but, however, the non- existence of a spot market in SR is mostly compensated (even in a complicated way and under the risk of an immediate availability) by a possibility to balance short- term positions on cross- border profiles, mainly on the ČEPS/SEPS profile. On the other side, a futures market, enables the stakeholders to secure positions (the producers to sell, and the customers to purchase) within a longer time horizon. - market coupling. On the basis of a Memorandum of the SR and CZ prime ministers from December 2008, there were initiated activities on an interconnection of the SR and CZ short- term electricity markets in 2009. The cross- border transmission capacity necessary for electricity transmission from one national market to another shall be allocated in the form of a daily implicit auction (the transmission capacity shall be a part of traded electricity). The aim of the SR and CZ national electricity markets interconnection, while maintaining the sovereignty of the national transmission systems and regulation areas management, to enable the stakeholders of both national markets to demand or to offer electricity in the national market places.

All mentioned trading possibilities within the wholesale market are improving competition in the SR territory and assisting in the process of development of a SR competition environment in the field of electricity trading.

3.2.2. Electricity retail from the view of competition issues

As from 1 July 2007, the electricity market is open to all electricity consumers including households. Therefore, the year 2008 was the first continuous year with the electricity market open for all stakeholders who could freely chose their electricity supplier. The electricity market opening was not still proved in full extent in 2008, in particular in the category of household consumers. The suppliers and traders, from the view of offtake volume, focused more on the more attractive groups of customers, mainly due to lower unit costs and service demands, and thus resulting higher trade margin. Despite this fact, the SR households experienced for the first time from the half of 2008 an opportunity to order electricity from another than their traditional end- supplier. The first alternative supplier with the valid license for electricity supply to households and small businesses, and with the valid price decision, who provided electricity supply to 29 households as of 31 December 2008, is providing multipercentage saving for electricity supply when compared to the existing suppliers.

During the past two years, the household prices have been amended more significantly only due to the increase of power electricity price in the wholesale market, and only in the tariffs not covering suppliers' justified costs. These included mainly the tariffs for directly heated electric heating. Every year, there are price shiftings within the structure of household tariffs, and thus on the basis of a trade policy of the crucial suppliers, with a special focus on optimization of costs on both electricity purchase and effective utilization of assets.



The electricity suppliers are represented by electricity producers, electricity end- suppliers for households- three regional supply companies ZSE Distribúcia, a. s. (hereinafter as "ZSE D"), Stredoslovenská energetika – distribúcia, a. s. (hereinafter as "SSE D") and Východoslovenská distribu•ná, a. s. (hereinafter as "VSD"), small businesses and electricity traders. By the end of 2008, the market was covered by 296 electricity supply licensees. Out of the mentioned number of electricity supply licensees, there are 120 traders purchasing electricity for its further sale. In more cases, these are organizational items of foreign companies.

In 2008, the total numbers of applied supplier switching are as follows:

• 29 household electricity consumers (in 2007, there was only 1 case), and thus within 45 delivery points,

• 1462 non- household electricity consumers (only 524 in 2007), within 3 770 delivery points. In 2008, the total number of termination of a contract on electricity supply with the electricity end-supplier is as follows

- 90 902 delivery points in household,
- 42 827 delivery points out of households.

The numbers mentioned above cover all performed changes in the contracts, i.e. there is not just a contract termination included. Thus, the year 2008 performed a positive tendency in the are of a possibility to switch an electricity supplier. In 2008 when compared to 2007, the customers in a slightly broader extent used possibilities of electricity supplier switching, and thus were assisting in the process of competition improvement in the area of electricity retail market and in the process of competition environment improvement in this field.

The Office, in compliance with the field of activities defined by the Act on Regulation, was handling with initiatives and complaints in 2008, and thus in the classification as follows:

- 11 related to price of electricity supply application
- 1 related to measurement
- 2 related to supplier switching constraints
- 6 related to supply problems in relation to payments
- 10 other.

All initiatives and complaints were handled through an Office Position, while in 5 cases it was necessary to perform a control in the respective regulated entities.

3.2.3 Measures for preventing dominant position abuse

Competition protection on the market of goods, outputs, activities and services against its abuse, formation of the conditions for its further development in order to promote economic development to guarantee profit for customers, as well as an amendment of the rights and field of activity of the Antimonopoly Office of the SR (hereinafter as "AMO"), is defined by the Act on Competition Protection (hereinafter as "ACP").

AMO did not apply, within the monitored period, none of its competencies in the meaning of ACP against the subjects acting in the electricity wholesale and retail markets.

The investigation performed by AMO led to the following possible problematic areas in the SR electricity distribution.

There are problems with availability and correctness of the measured data on electricity consumption of end- customers required as an obligation to be provided from the regional



distribution system operators to electricity suppliers. As for electricity suppliers in the SR electricity market, the availability and correctness of these data is necessary for invoicing of electricity supply and the related services. This might result in a late or incorrect invoicing impairing the electricity supplier's name and his relationship with a customer, and therefore, it would be suitable to secure collection and provision of these data by an independent subject.

An Exchange of data and information necessary for SR electricity market functioning with the operators of the regional distribution systems is not unified. As for SR electricity market stakeholders, this fact requires a settlement of their information system the way so that they would communicate with all three regional distribution companies, however, this is connected to higher costs of the SR electricity market stakeholders. The unified data Exchange with all operators of the regional distribution systems would help to simplify the communication among the SR electricity market stakeholders, and thus to lower the costs on this activity.

4. Natural gas market behavior and its regulation

4.1 Regulatory issues

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

The transport is being realized on the basis of entry- exit tariff system. The Overall volume of natural gas transport for both Slovak and foreign consumers in 2008 reached 76,2 mld. m^3 . The transport network capacity possibilities – 90 mld. m^3 , are sufficient and able to cover consumers' demands. In relation 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 flows continuity is sufficiently secured. The continuity of operation is promoted by the operator's provision of regular information to consumers on the availability of transport capacity. 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 the subjects of annual or quarterly discussions and coordination with all involved parties, and thus in advance.

The methods related to capacity allocation, contractual congestion and capacity excess in the transport and distribution networks are a part of the provisions of the rules on gas market functioning.

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 transport capacity trading in the secondary market is not limited in the SR. The trader is only obliged to submit a trading report to the Slovak transport network operator - Eustream, a. s. (hereinafter as "Eustream") who is providing a so-called "bulletin board system" on its website to provide an opportunity to advertise offer and demand of the transport capacity in connection with the secondary market trading.

The number of concluded contracts on natural gas transport with the fixed transport capacity in 2008 was amounted to 28, out of this 7 long- term, 9 annual and 12 short- term contracts.

In 2008, 1 contract on natural gas transport with an interruptible capacity bearing a character of a long- term annual contract was concluded.



The management and allocation of an inter- connection capacity within the cross- border gas Exchange, and the congestion management mechanism on the Slovak profiles with the neighboring EU member states in 2008, was closely connected with the development within the GRI SSE with Slovakia and other 9 countries being its member.

One of the significant steps that were taken in 2008 within GRI SSE in order to intensify the mutual cross- border gas Exchange, was implementation of a so- called bulletin board, through which the transport network operators promote transparency of the published secondary capacity market information. During 2008, there were discussions on enhancing an effective utilization of the existing gas lines' capacities, in order to intensify the national markets integration. In practice, this discussion was transformed into the provisions of the so- called one-stop-shop services, which enable the transporters to transport gas through several transport networks.

In 2008, there was a continuity in the ambitions to conclude Agreements on cross- border points along with Operational balancing accounts with the aim to enhance interactions between network operators and to intensify the cross- border trading, as well as in the overall integration of the regional gas market, and thus through a creation of a common regional tariff system on the "entry-exit" basis.

Another step leading to the common regional market functioning should be a stipulation of a Central-European hub as a balancing center for the whole region. As a promotion feature of the mentioned goals, the regional transport network operators signed a Memorandum on Understanding. The principal aim of this document is to enforce the network broadening coordination, to improve transparency and harmonization of technical norms in order to enhance security of energy supply to Europe. By means of Memorandum signature, the partners are fulfilling the goals of the European regulatory authorities defined within the Gas Regional Initiatives project in 2006. In order to enhance the liquidity, in 2008, there was implemented a price index for day ahead trading within the business conduct in the Central European business hub Baumgarten (CEGH). As for the future, it is expected this step will lead to increase of transparency and to clear price signals.

4.1.2. Regulation of the transport and distribution companies' obligations

In the SR territory, there is one transport network operator- Eustream and one dominant distribution network operator- SPP - distribúcia, a.s. (hereinafter as "SPP-distribúcia").

Network Tariffs

The price regulation in gas market covers:

- Connection to the transport network,
- Connection to the distribution network,
- Access to the network,
- Gas transport for the gas end- consumers in the delineated territory,
- Gas distribution for the gas end- consumers in the delineated territory,
- Gas supply for households,
- Gas supply for household heat production,
- Provision of ancillary services in gas sector.

When determining the 2008 prices, the justified costs and adequate profit were taken into consideration. The justified costs are provably and in an adequate scope expended costs for the



regulation activity performance with the content of the focues stipulated by the Decree. An adequate profit must reflect the scope of necessary investments to secure a long- term operationability of the network, and adequate return of the operation assets and a stimulation of a stabile long- term business conduct.

Based on the Decree of the Office No. 4/2007 laying down the scope and structure of justified costs, the method of determination of the amount of adequate profit and the background documents for price proposal in gas sector (hereinafter as "Decree No. 4/2007"), and on the Decree No. 1/2007, the Office defined and approved for the year 2008:

• for the transport network operator

- tariffs and tariff conditions for Access to the transport network and gas transport for the transport network users;

• *for the distribution network operator*

- tariffs for access to the distribution network and gas distribution and provision of ancillary services in gas sector,

- the price for connection to the distribution network for

- the category of households – connection of an offtake gas facility of a household gas consumer to the distribution network,

- the non- household category – connection of an offtake gas facility of a non- household gas consumer to the distribution network;

• for gas supplier to household gas consumers

- maximum prices for gas supply for household consumers,

- maximum prices for gas supply for household heat production for the period of two final months of 2008.

Transport Network Operator

The prices for Access to the transport network and for gas transport, and for connection to the transport network are regulated. The method of gas transport price regulation is defined as the direct determination of a comparable price complying with the Act on Regulation based on a comparison analysis of the gas transport price in other EU member states.

The price for connection to the transport network is based on justified costs necessary for documentation, technical and realization phase of the connection approved by the Office according to the submitted price proposal.

The tariff system for Access to the transport network and for gas transport covers special tariffs for the transport network entry points, and special tariffs for the transport network exit points. It is divided into the tariffs related to a daily capacity and the tariffs related to the amount of truly transported gas. 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 increased by the escalatory factor stemming from an inflation rate of the EU countries in 2008 compared to 2007.

Distribution Network Operator

The price regulation for an Access to the distribution network and for gas distribution is related to a regulated entity with the number of delivery points from the distribution network in the previous year being more than 100 000, and to a regulated entity with the number of delivery points from the distribution network in the previous year not exceeding 100 000. In case of a regulated entity with the number of delivery points being more than 100 000, the tariffs for an access to the distribution



network and for gas distribution in 2008 were proposed the way so that the overall planned revenues from the tariffs for an Access to the distribution network and for gas distribution for a respective year of the regulatory period would not exceed the overall revenues for an Access to the distribution network and for gas distribution approved by the Office. In case of a regulated entity with the number of delivery points being less than 100 000, the prices are defined by the cost method, and thus the way so that the price for an Access to the distribution network and for gas distribution approved by the distribution network and for gas distribution approved by the office. In case of a regulated entity with the number of delivery points being less than 100 000, the prices are defined by the cost method, and thus the way so that the price for an Access to the distribution network and for gas distribution would cover justified costs and adequate profit while this price is being determined on an annual basis.

The price for connection to the distribution network is defined the way so that the connection price or the tariff would not exceed regulated entity's planned average costs for connection to the distribution network. The tariffs for connection to the distribution network are proposed extra for household gas consumers and extra for non- household gas consumers.

As for 2008, the Office approved the tariffs for an Access to the distribution network, the tariffs for gas distribution, and the price for ancillary services provision which are not provided within the tariff for an access to the distribution network and for gas distribution.

The tariffs for an Access to the distribution network and for gas distribution were proposed the way so that they would not include cross- subsidies among the particular groups of gas consumers. In the process of their determination, the gas offtake characteristics of gas market stakeholders are taken into account.

Gas Supply

The supply prices for household gas consumers are defined for 2008 in the form of maximum prices. They were stipulated the way so that the weighted average for gas supply would not exceed the share of overall permitted revenues for household gas supply and the planned amount of gas supplied, with an adjustment through a correction factor considering the assumed and real costs of the regulated entity for the previous period.

As for price regulation in case of household gas supply, there is a detailed specification of the gas storage costs as a part of security and reliability of gas supply, and an elaboration of the correction factor correcting mainly the planned and assumed costs for gas purchase, or a part of gas purchase costs related to households in the meaning f an allocation key foe gas purchase costs entering the formula foe the calculation of overall permitted revenues for household gas supply.

Following the full gas market liberalization (1 July 2007), the Office guarantees the protection of household gas consumers through a determination of the maximum price for household gas supply which includes mainly the costs for gas purchase and the costs related to transport, distribution and storage of gas. The gas supply for non-household gas consumers is not regulated.

Production, storage and accumulation of gas, as well as gas storage access in 2008 were not covered in the Office's price regulation. Based on the Act on Energy, an agreed methodology was applied in case of these activities.

In case of utilization of the both transport and distribution networks in a delineated territory while using the selected parameters and under the annual contract, the assumed average national network fee, and the users of these networks according to the individual categories in 2008 paid the price in SR as follows:

I4-1	0,040 €/m ³	I1	0,103 €/m ³	D3	0,112 €/m ³ .
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A household gas consumer, in case of an average household consumption, paid in 2008 an average gas supply price in the amount of $0,394 \notin /m^3$.

Balancing of network imbalance

The network balancing is being applied in accordance with the rules for gas market functioning. From the perspective of the physical balancing, the SR territory is the balancing zone of the both transport and distribution networks. From the perspective of a distribution network user, the SR is one balancing zone.

The physical balancing lays under the responsibility of the network operator. The business balancing of the network and the deviations clearing is assessed bz the distribution network operator. Non-fulfillment of the balance and a deviation, i.e. the difference between the amount of gas allocated to a gas market stakeholder at the entry point do the network, and the amount of gas offtaken by a gas market stakeholder at the exit point from the network, is being charged. The deviation lays under the responsibility of a gas market stakeholder (hereinafter as "a user") who has concluded a contract with the network operator.

The distribution network operator and the transport network operator shall secure the interconnection of the distribution and transport networks, as well as the submitting of the data necessary for network balancing.

A transport network user who is not a distribution network user within the contractual relationship with the respective capacity and period, is obliged to make an agreement with the transport network operator on the conditions of a trade balancing of the network and the method of balancing of an imbalance between his amount of gas entering the transport network and the amount of gas offtaken from the transport network. The distribution network operator is the only entity to conduct trade balancing and deviation clearing for a distribution network user, even if this has concluded a contract on gas transport with the transport network operator, within which the only exit point form the transport network is a household virtual point; in such a case, the distribution network user pays only the distribution network deviation fee.

The distribution network operator is responsible for the physical network balancing and deviation clearing in the delineated territory. Provided there are more distribution network operators within the delineated territory, the network balancing lays under responsibility of the distribution network operator obliged to fulfill the roles of the gas dispatching within the delineated territory. The distribution network operator has a reserved part of the storage capacity, in particular to cover daily deviations of the gas market stakeholders, while the costs on this capacity are included in the gas distribution price.

The balancing regime is of a daily nature. The distribution network operator administers a balancing account for every distribution network user liable for a deviation. The balancing is being performed and assessed on a gas day principle. Every distribution network user is calculated one daily deviation for all exit points. The amount of a daily deviation is recorded onto a balancing account of the distribution network user. A permissible deviation of a distribution network user is stipulated to the amount of 5 % out of the contractually agreed daily distribution capacity of the distribution network user.

The distribution network operator keeps separate records on the distribution network balancing fees. The detail information of the network operator for stakeholders, related to the balancing, are included in the operation order of the respective distribution network operator which is available on the distribution network operator's website, and constitutes a basis for defining the conditions in the business contracts of the distribution network operator and a gas market stakeholder.



Regulatory office for Network Industries

4.1.3 Effective unbundling

In relation to the historical development, the Slovak natural gas market consisted of one vertically integrated monopoly company SPP until 30 June 2006. With the effective day as of 1 July 2006, the SPP company legally unbundled the transport and distribution activities. Besides the parent company, its 100% subsidiaries started to perform their activities on the market as well: Eustream as a transport network operator, and SPP-distribúcia, a. s. (hereinafter as "SPP-distribúcia") as a distribution network operator. The SPP legal unbundling took place in compliance with the Act on Energy.

Eustream operates the transport network in the delineated territory of SR which is owned by the SPP parent company. It secures natural gas transport from the Ukrainian borders through Slovakia to the European market with the total length of the transport network of 2270 km. The company secures operation and maintenance of the compressor stations and the line gas transport parts, and thus through four regions (Veľké Kapušany, Jablonov nad Turňou, Veľké Zlievce a Ivánka pri Nitre). The transport network is managed by the gas dispatching.

SPP-distribúcia is an operator and owner of the distribution network- gas lines in the SR including the technology objects – natural gas regulation stations and the central gas dispatching. The SR is, within the gasification, on the second place in comparison with other EU member states. The SPP-distribúcia scope covers also the sale of distribution capacities, the development, operation and maintenance of the gas networks. SPP-distribúcia secures natural gas distribution from the transport networks through the distribution gas facility in the delineated territory of SR up to its customers. It also secures connection to the distribution network and meter reading of the natural gas consumption.

Both SPP subsidiaries are subjects of an independent accounting audit. The SPP organization structure still includes the gas trade and supply division.

In the Slovakia region in 2008, there were operating 45 independent local distribution companies. Number of customers of the particular local distribution companies is not exceeding 100 000.

Unbundling of the companies operating the networks of trade and supply of the natural gas was positively reflected in relation to gas market transparency, and is contributing to the improvement of the competition environment in the field of gas supply, however, on the other side, it is necessary to put an emphasis on the negative side- effects of the mentioned unbundling, and thus in relation to an application of the Service level agreements among the originally integrated entities. The contracts concluded among the unbundled companies bring contribution to an increase of operational costs of the respective subsidies, they mean a significant risk of overcharging of the provided services, the realized repairs and investments. This fact brings at last a contribution to price increase.



4.2 Competition issues

4.2.1 Wholesale market description

In the SR conditions, there is one company- SPP, with the market share of more than 5%. The companies with a share on an available gas capacity are represented by SPP and NAFTA a.s. (hereinafter as "NAFTA"). The foreign companies are, within the Slovak market, actively operating through interests in the SPP co., in which the Slovak Gas Holding, B.V. co. (consisting of E.ON Ruhrgas and Gaz de France companies) is a 49 % shareholder.

Eustream acts as the transport network operator and is focused on the activities related to gas transport. It is a 100 % SPP subsidiary.

The SPP-distribucia acts as an operator of the biggest distribution network in Slovakia. It is a 100 % SPP subsidiary as well.

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

The shareholder' s structure of POZAGAS a. s. which owns and operates an underground storage facility is as follows – SPP 35 %, NAFTA - 35 % and Gaz de France - 30 %.

The natural gas consumption in SR in 2008 reached the level of 5,9 mld. m^3 . In the wholesale segment, there was an increase by 3,6 %, the retail consumption was reduced by 2,4 %. In case of households, the consumption was higher by 6,5 % compared to 2007. The changes in consumption within the respective segments were in particular affected by the winter weather nature (compared to previous years, the winter was colder), the performed economy measures, as well as the modernization of technology facilities. In case of households, i tis still possible to observe searching of alternatives towards natural gas. The principal reason still remains the natural gas price for this consumers' category which prefers other fuels, such as coal or wood. Taking into account another price development on the global energy market, it can be assumed that the natural gas prices in 2009 would remain on the current level, or slightly decrease. Approximately 98 % of the domestic gas consumption is imported. Natural gas supply for SR needs is ensured on the basis of a long-term contract between Eustream and the Russian company Gazprom Export as the main natural gas supplier for the Slovak market needs, that was concluded in November 2008 with the effective date as of 1 January 2009 for the period of 20 years.

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, and thus by NAFTA and POZAGAS. The storage facilities' services are utilized by SPP, a. s. and by the foreign companies from Austria, Germany, Czech Republic and France. Storage and exploitation of natural gas from the storage facilities was conducted in 2008 without any problems. In 2008, In 2008, there was also a performance of a trading on the secondary market covering also a sale of an unused storage capacity and a natural gas sale. The storage capacity trading within the secondary market may lead, in case of the imported gas outage, to potential problems with the security of gas supply on the domestic market.



Gas import from Russian Federation in 2008 reached the level of 76,2 mld. m^3 , the export from Slovakia was of 69,1 mld. m^3 . The Slovak transport network transported 76,2 mld. m^3 of gas in total in 2008. In 2008, the Eustream co. recorded an extension of the contractual portfolio- in connection with both the number of network users and the number of signed contracts. An increase of the share on the overall contracted transport capacity was recorded mainly in connection with the short- term transport contracts.

The domestic natural gas exploitation in 2008 reached the level of 102 mil. m^3 . From the long- term perspective, it can be assumed that the natural gas exploitation shall continue from the current sources with the decreasing tendency. The eventual changes of this tendency might be brought only by newly discovered bearings- however, the exploited volumes will depend on the extent, character and localization of the eventual new bearings.

SR acts as a national gas market. There are interconnections of the transport networks with Ukraine, Czech Republic and Austria. The Slovak transport network stands for a significant part of the European gas network and acts as a significant, reliable and secure transport route transporting the Russian natural gas to the Central and West European countries.

SR also utilizes a storage facility situated in the territory of the Czech Republic (Dolní Bojanovice), and is directly connected to the SR gas system. At the same time, both companies operating underground storage facilities in the territory of SR store natural gas for several foreign companies.

4.2.2. Retail market description

In 2008, the SPP acted as a dominant gas supply in the SR territory and covered all market segments, both household gas consumers, small and medium businesses, and large industrial businesses. This fact still remains, even despite the opportunities of the business entities created by the legislation, and despite the fact that the modification of legislative conditions leads to a gradual moderate increase of the number of the companies providing services in gas sector. This covers mainly an increase of the local supply and distribution companies. The overall number of local companies which, based on the granted license, deal with, besides other activities, both supply and distribution of natural gas in SR, was approximately 30 in 2008.

The Office, in compliance with the sphere of activity limited within the Act on Regulation, was solving initiatives and complaints in 2008 in the classification as follows

- 3 related to application of the gas supply price
- 3 related to measuring
- 1 related to gas supply accounting
- 2 related to the problems with technical parameters of supply
- 1 related to the problems with supply in connection with payments
- 7 others.

All complaints and initiatives were carried out through the Office's statement, while 3 cases were needed to be carried out through a control in the regulated entities.

4.2.3 Provisions for prevention of the dominant position abuse

In 2008, the process of market liberalization entered the stage of an expectation of a gradual change of the market structure as for the number and status of its stakeholders. The Slovak market is still characterized by a dominant position of one gas supplier. At present, the households share is of



95,1% of the eligible gas customers in Slovakia. The competition opportunities and the conditions for new players' entering are given a space by the legislative provisions anchored in the primary energy legislation, and in the Office's secondary legislation. The process of market liberalization is narrowly connected to networks and their operators' flexibility, and with an appropriate diversification of the gas network structure, being a part of the market opening condition.

The amended Act on Regulation, effective as of 1 April 2008, has enhanced the Office's powers in price regulation. The aim of this modification was to consistently verify the invested costs during regulated activity performance from the perspective of their appropriateness. The Ordinance of the Office on the method of handling a separate record of the facts being a subject of accounting, on the method of handling a separate record of costs, revenues, assets and debits, and on submitting of the separate recording outputs with the effective date as of 1 January 2009, is also aimed at preventing of discrimination and cross- subsidies among the respective network operators' activities who, besides the regulated activities, are performing other activities as well.

The conditions for an optimal electricity and gas markets functioning created by the Office provide broad application opportunities both for the existing entities and for the entities trying to get entrenched in the market. The opportunities provided within the electricity and gas markets functioning rules are not sufficiently utilized from their perspective at present. The rules for gas market functioning provide sufficient space for non- discriminatory and transparent competition of all entities in the market.

5. Security of Supply

5.1 Electricity sector

An installed capacity of Slovakia was 7 453 MW in 2008. The 2008 yearly maximum load reached the value of 4 342 MW.

The capacity structure of the production base was equally divided among the nuclear, heat and water power plants. As of 31 December 2008, the second unit of the JE EBO V1 with the capacity of 440 MW was decommissioned as well. The overall electricity generation in Slovakia reached the value of 29 309 GWh, out of this 57 % was the nuclear power plants share, 28,4 % the heat power plants and 15,6 % stood for water plants generation. Comparing to 2008, the electricity generation increased by 1402 GWh, and thus representing 5 % of generation increase. This was caused by a significant generation increase in the nuclear power plants, as compared to 2007.



Graph 1 Installed capacity of SR - 2008

Graph 2 Electricity generation SR – 2008



Source: MH SR

The total balance of the foreign exchanges reached 521 GWh in 2008, as for the benefit of the import. The electricity import balance in 2008 was of 1,7% out of the total consumption in Slovakia. The balance of the electricity foreign exchanges within the SR electricity system is shown in Graph 3:





Source: SEPS

The ES SR operation in 2008 was reliable, while all determining UCTE criteria and recommendations in the primary and secondary regulation, in voltage management and in the cross-border balance regulation were fulfilled.

The permitted balance deviation was of only 0,3 % out of the overall annual hourly time fund. Comparing to 2007, this indicator improved by 0,71 %.

In 2008, the blackouts on the VHV equipments resulted in limitation of electricity supply in the amount of 505 MWh. Comparing to 2007, the supply limitation for the customers increased by 199 MWh.

The principal investment activities in the 2008 annual investment plan were represented by the realization of the set of constructions, and thus the electricity line of 2x400 kV Lemešany - Moldava, within which there was also realized a switching station construction in Košice, a reconstruction of the 400 kV control room in Lemešany, and an enhancement of the control room in Moldava. The realization of these constructions shall lead to significant improvement of security and reliability of the ES in the whole Eastern Slovakia region.

In 2008, there was a resumption of the reconstruction activities of the control room 400 kV Križovany invoked by the decommissioning of the two V1 nuclear power plant units in Jaslovské Bohunice. Within this project, there was a direct transformation of 400/110 kV, compensation chokes, self- consumption and an automatic management system constructed.

In the period mentioned above, there were recorded 12 failure interruptions of the transmission system facilities, out of this 10 did not break the facility, and 2 of them broke the facility. The facility damages were caused by poor weather conditions. The specific failure rate of the breaking facility type per 100 km of the lines achieved a number of 0,073, while the planned specific failure rate of 0,254 of failure per 100 km of the lines was not exceeded.

There was also proceeding a preparation and realization of a remote management of electric stations, of the information and telecommunication systems in order to secure reliable and failure-free operation of the ES SR.

Electricity consumption development

The overall electricity consumption in Slovakia in 2008 was amounted to 29 830 GWh, and comparing to 2007 there was an increase by 198 GWh. During the last 5 years, i.e. from 2003 to 2008, the overall electricity consumption in Slovakia had increased in average and on an annual basis by 0,6%, and thus alongside with the annual GNP increase of 7,0%. The previous untypical status of the electricity consumption development towards GNP in Slovakia can be partly charged on a relatively rapid increase of less energy- demanding industries and a reduction of energy demands. In 2008, compared to 2007, an increase of the overall electricity consumption in SR was amounted to 0,7%, however, in the last quarter of 2008, there already appeared the signs of the economic crisis upon the SR economy efficiency, and the electricity consumption gradually decreased.

Electricity generation

The biggest influence on SR electricity generation was experienced after the decommissioning of the 2nd block of JE V1 as of 31 December 2008, and thus leading to further reduction of an installed system capacity by 440 MW and generation by approx. 2900 to 3000 GWh. The JE V1 decommissioning influences, besides the reduction of an active energy supply, also an availability



of ancillary services and operation of the transmission system. An assumed necessity of high electricity imports has been reduced due to economic crisis, and thus invoked lower ES load. The EBO V1 decommissioning invokes a necessity of higher electricity import supply in the scope of 200 to 400 MW, in the period of 2010 to 2012.

The mentioned data consider the electricity consumption increase and the necessity to replace the capacity and generation from the decommissioned generation facilities. The crucial factor in securing the missing electricity up to 2013 will be its purchase from the import.

From the perspective of the facilities under construction, the most real new big electricity capacities are currently PPC Malženice and finishing construction of EMO 3 and 4. After putting these sources into operation, a slightly surplus SR electricity balance shall be achieved. The most unfavorable period from the view of providing Slovakia with electricity supplies will be from 2009 to 2012. Realization of the further prepared bigger electricity sources is assumed after 2014. The balance of the development is shown in the following graph.





Source: SEPS

Ancillary services

The decommissioning of the 4 blocks of 110 MW in EVO Vojany as of 31 December 2006, and the already decommissioned 1st block of EBO V1 resulted in the reduction of ancillary services availability. Further reduction of the ancillary services availability was experienced after decommissioning of the 2nd block of JE V1 as of 31 December 2008. In case of PRV+/- primary regulation, the availability of sources providing this service was reduced by 12 MW, in case of the positive TRV 30 min+ tertiary regulation by 40 MW, and the negative TRV 30 min- by 40 MW. The source took part in voltage regulation in the Križovany transmission system node.

Despite the decommissioning of the significant part of sources, the system still disposes of a sufficient number of sources that will enable to secure the system with ancillary services in the period of a maximum load. A slightly worse situation will be during summer with insufficient



guaranty of ancillary services. In summer, the insufficiency of torque reserves might exceed 10%. During the past period, there has been initiated a provision of ancillary services from a number of smaller industrial power plants. This arises from the fulfillment of one of the provisions of the approved Strategy of Energy Safety, related to the provision of ancillary services. Thus, the availability of sources providing ancillary services improved during 2008 when compared to the previous period.

The primary and secondary regulation is not possible, within the current status, to secure with foreign import, therefore it is necessary to solve the situation through coverage by the domestic sources. In case of tertiary regulations, the alternative solution would be an import acquisition. In the Slovakia regulatory territory, and for the mentioned of TRV30min+ purpose, the electricity consumption regulation is used as well. Regulation. The extraordinary operation statuses due to extreme weather conditions may endanger securing the system with ancillary services due to affecting of a source base in the regulatory territory. These include e.g. high levels of water flows (use of a big forced unregulated capacity), big frosts (fuel freezing and reduction of a capacity in steam power plants), strong wind and high generation in wind power plants (necessity of bigger amount of ancillary services), high temperature (cooling limitation in steam power plants and reduction of supplied capacity out of the limits of the regulatory possibilities), and a possibility of gas non-supply to SR.

The renewable sources, except for big water plants and biomass sources shall demand additional pretences on regulatory capacities. In case of significant increases of electricity generation from wind power plants and from photovoltaic sources, the situation on ancillary services securing would get worse, and the ancillary services demands would significantly increase.

The decommissioning of generation capacities within the electricity system is leading to the decrease of the availability of the particular types of ancillary services. The construction of new generation capacities has a market base, and the compliance with the decommissioning of the endof-life or environmentally unacceptable capacities is not continual. This results in an existence of narrow points during the provision of ancillary services and during keeping the reliability of the fulfillment of the balanced system balance, and thus of the supply reliability.

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

One of the SR energy policy goals is to secure sufficient amount of electricity to cover all needs related to the increase of living standard.

An average annual increase of electricity supply up to the year 2025 is expected to be from 0,6 to 2,0 %. Within the reference scenario with the average annual increase of 1,3 %, and compared to 2008, this refers to the increase by 7,1 TWh, that is 23,8 % of electricity consumption in 2008.

Another goal of the energy policy is to achieve a balanced balance of the inland consumption and of electricity generation up to 2013. This status would be possible to reach under the condition that there will be an extra electricity generated in the blocks 3 and 4 EMO and in new renewable sources available, and thus in compliance with the conception of their utilization.

Guaranty of the increase of consumption and a substitute of the end-of-life capacities will be solved the way so that there would be an appropriate and balanced development of the new capacities. In case of heat power plants, there is a notification that a greater focus shall be placed on the development of new coal power plants and on cogeneration production, as a substitute for decommissioned capacity in EVO and ENO.

The construction of big water power plants is not currently in place due to a big economic costingness and due to certain regional limitations. From a long-term perspective, the big water plants like Sered' 52 MW and energy utilization of the river Váh in the distance between VD Žilina



and VD Lipovec 28 MW were being academically and projectionally prepared. An important impulse for their realization would be a provision of at least equal economic conditions as for small water power plants, because they can have more significant contribution through their generation to the ecologization of electricity generation and energy security.

The foreboded great increase of utilization of the wind and solar electricity generation sources will lead to the problems with the ES management, in relation to the fact that their availability cannot be predicted and causes big capacity variation. A solution of this problem would be partly a new overpumping water plant Ipel' 600 MW, which, according to the intentions, should be able to accumulate energy from crash generation and to provide it at the ES peak load. However, a construction of such a power plant will depend on a number of factors, and even being the most optimistic, its contributions cannot be awaited earlier than in 10-15 years.

The balanced consumption balance according to the new prognosis and electricity generation, will be possible to achieve on the basis of the electricity capacities as follows:

Year		2015	2020	2025
Nuclear power plants	MW	1180	1180	2320
Heat power plants and	MW	440	450	780
cogeneration				
Renewable sources	MW	700	1000	1400
Total	MW	2320	2630	4500

 Table 1.
 Cumulative capacity increases to secure electricity reference consumption up to 2025

Source: MH SR

All planned capacity increases in the nuclear power plants up to 2020, are under construction or partly realized.

Out of the classical heat power plants, the PPC Malženice is under construction, while other fossil fuel capacities shall be, in order to balance the balance, necessary after 2020.

The mentioned balance shows that the achievement of a balanced consumption and generation at the reference scenario of the prognosed consumption an at fulfillment of the program of cogeneration and renewable sources up to 2020, the construction of other sources, except for the under construction capacities in the EMO3,4 and PPC Malženice, shall not be necessary.

The expressed investors' interest in realization of fossil sources within the time frame of up to 2015, is shown in the table.

Table 2. Datance of expressed interest in realization of Jossii juet electricity capacit	Table 2.	e 2. Balance of expressed inte	rest in realization	of fossil fuel	electricity	capacities
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Item	Region			Fuel		
	West	Center	East	gas	coal	petrol
	MW	MW	MW	MW	MW	MW
Investors' expressed interest	1262	1420	3737	4503	1820	96
Total	6419			6419		

Source: MH SR

The balance of the expressed investors' interest in realization of fossil sources and the balance of new capacities' needs show that these capacities put into operation before 2020 shall increase the



positive balance of the inter-state Exchange, and in case they are put into operation, there will arise necessary investments to the transmission system in such a scope so that the electricity surpluses would be exported abroad.

Development intentions of the transmission system operator

The operational reliability of the TS SR is guaranteed through a performance of necessary and required maintenance and reconstruction activities on the TS SR facilities. From the future perspective, the maintenance and increase of operational reliability is secured through planning, gradual preparation and realization of the respective investment actions, while taking into consideration necessary development of TS SR from the view of physical and moral shabbiness of the SEPS facilities, and the future development intentions related to the prepared construction of new generation sources. The strategic direction of the 400 kV facilities, is closely related to the operation decommissioning of especially JE V1 in Jaslovské Bohunice, as well as other blocks (EVO, ENO) with the capacity conducted away to the 220 kV transmission system.

Other factors affecting the gradual attenuation of the 220 kV system:

- The 220 kV system is significantly physically older than the 400 kV system, and thus reflected in higher operational costs (particularly due to maintenance and repairs) and in its lower operational reliability.
- Electric lines and stations of the 220 kV system have not been, except for a couple of adjustments, further expanded since 1966, and their status of operationability has been kept by a minimum maintenance of the lines and by an alteration of some devices only if necessary.
- Reconstructions of the important 220 kV control rooms, new 220/110 kV transformations and more essential repairs of some of the 220 kV lines with the aim to use the lifetime of the existing 220 kV system to the limit, have been conducted only since 1998 in a necessary rate to secure their further operation until their final decommission. Within the system, there are only common and necessary repairs and maintenance being conducted while assuming that the operation of the 220 kV system shall be terminated gradually during the period from 2013 to 2025.

List of the most important assumed SEPS investments up to 2014:

- Set of constructions: 2x400 kV Lemešany Moldava (400 kV Košice switching station) line
- Set of constructions: 2x400 kV Gabčíkovo Veľký Ďur line and 400 kV switching station Gabčíkovo
- Set of constructions: 400/110 kV Medzibrod transformation and the relevant new 400 kV lines for its connection to the 400 kV system
- Set of constructions: 400/110 kV Voľa transformation
- Replacement and increase of the 400/110 kV transformation capacity in the Bošáca, Levice stations.

List of the most important assumed SEPS investments in the period from 2015 to 2019:

- Set of constructions: 2x400 kV V. Kapušany Voľa Lemešany line
- Set of constructions: 400/110 kV Bystričany transformation
- Set of constructions: Connection fo the 400 kV line V492 V. Ďur H. Ždaňa onto R400 kV Levice
- Change of transformers in ES Liptovská Mara, Spišská Nová Ves, Podunajské Biskupice a Stupava.

The situation in the area of planning of the construction of cross-border lines is significantly affected by the interest and approaches of the transmission system operators from the neighboring countries. In the near past, a multiple endeavor of SEPS was evolved to construct new 400 kV lines to Austria and Hungary, however, they still have not found any solutions to be accepted by the relevant transmission system operators from these countries. At the moment, the most elaborated preparation relates to the inter-state line of 2x400 kV Gabčíkovo - Hungary/Austria. It is a version of an interconnection realization of the prepared new 400 kV switching stations of Gabčíkovo with R 400 kV Szombathely in Hungary by one tug of the 2x400 kV line, and by the second tug in order to realize the interconnection with R 400 kV Vienna Süd - Ost. This version is still in the stage of a work discussion and there is an assumption that in case of a conclusion of the contractually binding trilateral agreements on the construction of this line, its realization would be initiated no earlier than in 2013, or 2014. The date of start and finishing shall depend on a number of factors, including the financial possibilities of SEPS that must be analyzed and agreed within the proceeding discussions. From the Hungarian side, the construction of the above mentioned line from the Gabčíkovo switching station conditioned also by the parallel construction of the "400 kV R. Sobota - Maďarsko line". Therefore, it assumed that in case there is an agreement, both lines would be realized almost simultaneously.

The intention of the Slovak side is to construct the 2x400 kV Kapušany - Maďarsko line as fast as possible. However, preparation of the construction shall still require a number of complicated negotiations with MAVIR. At present, the point of this line aperture to the transmission system at the Hungarian side is still not known.

There are currently work discussion proceeding with the Polish PSE Operátor on the preparation of a new 2 x 400 kV Varín - Byczyna line between SR a Poland. However, the Poland side is experiencing a number of environmental, network and financial problems that must be feasibly resolved. Therefore, a research will be focused on several geographic and technical versions. Provided an agreement is achieved, the construction of this line is taken into account to be initiated only after 2015. A Slovak side intention is also to construct a duplication of the existing 1 x 400 kV Veľké Kapušany - Mukačevo line between Veľké Kapušany - Mukačevo between SR and Ukraine as soon as possible. The existing line is no more sufficient, and in relation to the assumed development of the Eastern Slovakia region, in the near future, there might arise significant congestions here. However, this intention has not been so far harmonized with the Ukrainian side with different priorities in this field.

Scope of the prepared construction of lines in the SR territory that will significantly affect the crossborder exchange

In 2009, there is a plan to finish the construction of the "2x400 kV Moldava –Switching station Košice line", and in 2011 the construction of the "2x400 kV Switching station Košice – Lemešany line", and thus to build an inter- connection of 400 kV Lemešany - Moldava. In 2014, there is a plan to finish the construction of the "2x400 kV Veľký Ďúr – new switching station 400 kV Gabčíkovo line".

The projects to enhance the SR-HUN and SR-UA profiles are included into the projects within the TEN-E program. The projects comply with the Decision of European Parliament and Council No.1364/2006/ES, within which these projects are incorporated in the Annex III No. 2.25 (2x400 kV Sajóivánka - Rimavská Sobota line), 2.26 (Moldava - Sajóivánka) and 4.32 (Veľké Kapušany – Ukrainian borders). The future enhancement of the cross- border interconnections between the electricity systems mentioned above is a subject of discussions with the respective foreign transmission system operators.



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The Decision No.1364/2006/ES includes, besides the mentioned projects for enhancement of crossborder interconnections, also the projects dealing with improvement of the internal pert of TS SR. These are the projects of the 2x400 kV Gabčíkovo - Veľký Ďur line (project 3.77), connection of the TR Medzibrod to the 400 kV voltage system (project 3.74), 2x400 kV Lemešany - Moldava line (project 3.75) and 2x400 kV Lemešany - Voľa - V. Kapušany line (project 3.76). These investments are aimed at the enhancement of the TS SR on the level of 400 kV, a reliable lead out of the capacity from new electricity sources, and the creation of the conditions to connect new industrial consumers to the both TS SR and distribution systems. In order to elaborate the necessary studies for the 2x400 kV Lemešany - Voľa - V. Kapušany line project (project 3.74), in 2008 SEPS applied for a financial grant from the TEN-E budget. A decision on granting/ non- granting of the financial contribution shall be noted during 2009.

A detailed list and description of the individual mentioned investment actions shall include the document of "SEPS Development Program for the years of 2011-2020", that will be issued after its approval in the company's Board of Directors in 2009. However, the realization of these investments on the SEPS side will depend on the decisions of the individual investors on realization/ non- realization of their investment intentions in the field of electricity sources construction.

5.2 Gas sector

Natural gas consumption in SR in 2008 reached the level of 5,9 mld. m^3 . In the wholesale segment, the re was an increase by 3,6 %, the retail consumption was reduced by 2,4 %. In case of households, the consumption increased by 6,5 % compared to 2007.

The changes in consumption within the respective segments were in particular affected by the winter weather nature (compared to previous years, the winter was colder), the performed economy measures, as well as the modernization of technology facilities.

In case of households, it is still possible to observe searching of alternatives towards natural gas. The principal reason still remains the natural gas price for this consumers' category which prefers other fuels, such as coal or wood. Taking into account another price development on the global energy market, it can be assumed that the natural gas prices in 2009 would remain on the current level, or slightly decrease. Approximately 98 % of the domestic gas consumption is imported.

From a long- term perspective, it can be assumed that the domestic natural gas exploitation from current sources shall continue, however, this will have a decreasing tendency. The eventual changes of this tendency might be brought only through newly discovered bearings- however, the exploited volumes will depend on the extent, character and localization of the eventual new bearings.

In the period of the next 3 to 5 years, it can be assumed that the consumption will slightly increase, and thus in relation to the new sources for electricity and heat generation from gas, in connection to the fact that according to the energy legislation, there have been issued authorizations of the electricity and heat generation facilities, event. licenses for energy facilities construction, or the business entities published their intentions in this field. Other factors that will affect the consumption level include average annual temperature, and continuity of realization of the economy measures including building isolation.

An assumption of natural gas consumption in SR in the next 3 years is shown in the table below.

Table 3Assumption of natural gas consumption for the period of the next 3 year, and the 2018 perspective



Consumption [mld. m ³]	2009	2010	2011
Households and retail	1,8	1,7	1,8
Industry	2,5	2,7	2,7
Electricity and heat generation	1,8	1,8	1,9
Total	6,1	6,2	6,4

Source: MH SR

The SR gas network covers the transport network, distribution networks and natural gas underground storage facilities. These have an important role in the area of ensuring security of gas supply. The SR gas network is interconnected with the networks of the neighboring countries, and thus with Ukraine, Czech Republic, and Austria. Nearby Slovak- Austrian borders, there is a significant gas node Baumgarten that is a cross- road of several transport networks (Austria, Germany, Italy, Slovenia and Hungary), and is an assumed final point of the planned gasline Nabucco, as well as of the so- called Northern line within the South Stream gasline project.

In the monitoring 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 SR territory to other countries recorded. The consumers' requirements were fulfilled in full extent, and the offtake was performed in compliance with the volumes agreed within the gas supply contracts.

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

With the aim to secure integrity, reliability and security of the SR transport network, the transport network operator- Eustream co. – conducts inspections, preventive repairs and maintenance of the gas facilities according to the stipulated criteria. The maintenance was performed on the basis of the results of diagnostic activities on the level of compressor stations, as well as on the line part of the network, and thus in a quality complying with the European standards. There was also a realization of elimination of the shortages discovered by an external and internal gasline inspections, and thus through repairs or reconstructions of the gas facilities. The transport network operator plans to perform correctional activities in the extent necessary for easy operationability of the transport network.

In connection with the status analysis during the gas crisis, there is still a process of intensive negotiations between the Slovak and Hungarian transport networks operators on the interconnection possibilities. The interconnection project (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.

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

During the monitoring period, there arose just a few short- term and time limited (several hours) narrowly local outages in gas supply, caused by a necessity to interrupt the supply due to safety reasons.

Within the distribution network of the SPP- distribucia operator, consisting of a complex of gas distribution facilities that include pipeline gas network and technology facilities, there were performed inspections, preventive repairs and maintenance of the gas facilities according to the stipulated criteria contributing to securing ist integrity, reliability and security. There was performed an elimination of the shortages discovered by an internal and external inspection of the gaslines, and thus through repairs or reconstructions of the gas facilities.



Maintenance of the SPP-distribucia distribution network is guaranteed in compliance with the valid legislation, the respective norms, the internal management acts of the company, the technical gas rules, as well as with the collateral documentation of the producers of the respective components.

SPP-distribucia is planning to broaden its distribution network in the near future only in a minimum scope. In the period of the next three years, there is an assumption that it shall be broadened in the length of approximately 214 km, while the planned broadening of the distribution network capacity is on the level of approx. 50 mil. m³ annually.

The gasification was conducted in case of 2 230 municipalities out of the total number of 2 891 SR municipalities, and thus standing for 94% out of all Slovakia citizens.

SR is disposed with the underground gas storages that are situated in the South- Weset part of the country and having a significant role in balancing the imbalances of gas supply and offtake, as well as in case of peak offtakes. The storage facilities operators are currently providing services of natural gas storage even for a number of the foreign gas companies.

The overall capacity of the SR storage facilities is 2,75 mld. m³, while the maximum daily mining capacity is approx. 34 mil. m³, the maximum daily fixed embedding capacity is approx. 29 mil. m³. The storage facilities operators are represented by NAFTA a.s., Gbely and POZAGAS a.s., Malacky companies.

As for SR needs, there is also a utilization of an underground storage facility situated in the CZ territory (Dolní Bojanovice) with its capacity of 0,57 mld. m³ operated by the SPP Bohemia a.s., Praha. This storage facility is connected to the Slovak gas network and is independent of the connection technologies utilized by the POZAGAS a.s. a NAFTA a.s. companies. At the same time, the Dolní Bojanovice storage facility offers possibilities of an additional guaranty of gas supply security for household gas consumers.

In the second half of 2008, there were no recordings of serious failures that might affect the storage operation.

For the period of the next 3 years, the POZAGAS a.s. company is planning to broaden the storage facility capacity by approx. 0,07 mld. m^3 (on an interruptible basis), the NAFTA company is planning, within 3 years, to broaden the storage facilities capacities by approx. 0,10 mld. m^3 .

Measures to cover peak consumption, supply outage solutions

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 roles in the delineated territory of SR, according to the Decision of the Ministry of Economy of SR, are being fulfilled by the dispatching of the distribution network operator of the SPP- distribucia co.

Preventing the formation of the transport network congestion and its solution

Provided the sum of required transport capacities is higher than a technical capacity for the respective entry point or exit point of the transport network, there comes to a formation of the transport network congestion.

The transport network operator preventing the transport network congestion by:

- an assessment of the application on an access to the transport network, and the 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 time limit, duration and scope of works,
- nomination of gas transport within the agreed and available transport capacity,

• a gas market stakeholder's opportunity to provide his unused free transport capacity to another gas market stakeholder.

An insufficiency of the 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 formation of the distribution network congestion and its solution

Provided the sum of required distribution capacities is higher than a technical capacity of the distribution network, there comes a formation of the distribution network congestion.

A distribution network operator is preventing the formation of a distribution network congestion through an assessment of the applications on an access to the distribution network and the following limitation of the access of the distribution network provision in a 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 of the required distribution capacities is higher than the technical capacity of the distribution network, the distribution network operator calls 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 non-discriminatory 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

An emergency in energy sector was, according to the amended Act on Energy with the effective date as of 1 April 2008, defined as a sudden insufficiency or a threatening insufficiency of the individual kinds of energy that might cause a significant reduction or interruption of energy supply or a decommissioning of energy facilities from operation, or the threat of human life or health in a delineated territory of SR or in a part of the delineated territory as a consequence of the legally stipulated statuses, while these might include extraordinary events, measures of the state bodies during economic mobilization, accidents within the facilities for electricity generation, transmission, and distribution even out of the delineated territory, the accidents in the facilities for gas production, transport, storage, and distribution even out of the delineated territory, a danger of security and operational reliability of the ES, a danger of security and operational reliability of the estimates of the territory.

An emergency in the delineated territory of SR or in a part of the delineated territory is, following an assessment of the consequences defined by the Law, announced and called off by a distribution network operator who, based on a decision of the Ministry, fulfills the roles of a gas dispatching in the delineated territory. An announcement and call off of an emergency is reported to the Ministry immediately.

In case of an emergency announcement, the stakeholders are obliged to take part in the removal of emergency causes and consequences and in the gas supply renewal.

A standard of gas supply security during emergency is ensured by the respective gas market stakeholders through the storage gas supplies. They can secure no more than 50 % of the volume gas necessary for ensuring the standard of security of supply, and thus through a utilization of the



cross- border capacity of networks by contractually secured auxiliary gas supply available in case of emergency in the delineated territory.

A distribution network operator, a gas supplier and a gas consumer securing gas supply from the EU territory or from the third parties' territory, submit to the Ministry, on an annual basis no later than 28 February, a proposal of the method of securing a standard of gas supply security for the upcoming period from 1 November to 31 March.

After the submitted proposals are discussed between the Ministry and the Office and the distribution network operator fulfilling the role of a gas dispatching in a delineated territory, the Ministry shall issue a decision on the method of securing the standard of gas supply security.

A distribution network operator, a gas supplier and a gas consumer securing their gas supply form the EU territory or from the third parties' territory are annually, no later than 31 August, submitting the information on securing a standard on gas supply security to the Ministry, and thus for the upcoming period from 1 November to 31 March. If the guaranty of the gas supply security standard is insufficient, the Ministry shall impose measures based on its decision.

Further possibilities of how to bring contribution to security of supply, is based on LNG utilization or diversification of gas supply (diversification of transport routes and diversification of sources). The diversification (sources and transport routes) is realized on the basis of new long- term contracts on gas supply with the E.ON Ruhrgas and GDF SUEZ companies, by the most significant Slovak supplier- SPP. At present, there is no LNG facility operated in the Slovak territory, and even in the horizon of the next three years, a utilization of such facilities is not planned. However, the planned interconnection of the Slovakian and Hungarian transport networks is a way that might make the considered Adria LNG terminal in Adriatic Sea available to be utilized.

The Ministry of Economy, cooperating with the professional public and with the companies conducting business in 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 gas hub. Another alternative for the region is represented by 2 planned gasline projects- Nabucco and South Stream. The Nabucco gasline should be finished in Baumgarten, while there is already an existing interconnection, and following the technical adjustments 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 gasline might be put into operation in 2015.



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6. General economic interest

6.1 Electricity

Due to the reason of ensuring security and reliability of the SR electricity system operation, on 4 May 2005, the Government of SR accepted a Decision No. 356 to the proposal on the utilization of domestic coal in electricity generation in the general economic interest, and to the ensuring of the necessary amount of domestic coal for such generation. The general economic interest is possible to be applied incase of fulfillment of the share of electricity generated from domestic coal in the amount of no more than 15 % on the overall domestic electricity consumption. In relation to the domestic electricity consumption, this share can reach the value of maximum 8% in real. The SR Government alongside imposed on the Minister of Economy a task to impose, within the general economic interest, the electricity market stakeholders with the obligations to secure electricity generation from the domestic coal.

At present, this energy source is being used by the dominant electricity producer who, along with the utilization of heat power plants, ensures also the provision of ancillary services, the generation of balancing power, as well as heat supply for the central heat supply activities. An analysis of the ES SR management for the 1st quarter of 2005 proved that, during the ancillary services provision, it is necessary to incorporate also the ENO heat power plant blocks into regulation. Following the decommissioning of the V1 nuclear power plant Jaslovské Bohunice, it is necessary to ensure a reliable operation of the ENO heat power plant in a broader extent, in order to guarantee security and reliability of the ES.

The brown coal- beds are the only significant and perspective fuel source in Slovakia. The domestic brown energy coal is burnt mostly by the ENO heat power plant, operated by the SE company that was built just in connection to the local fuel basement. The consumption of the ENO heat plant brown coal has reached a level of 2400 kt of coal during the past years. The share of electricity generation from domestic coal on the overall SR generation for the period from 2006 to 2008 ranged from 5,1 % to 5,7 %.

The Decisions in the general economic interest issued by Ministry of Economy of SR on 28 August 2008, imposed the following obligations:

- for the SE company to generate electricity from domestic coal in the volume of 1 881 GWh and to provide electricity supply generated from domestic coal in the amount of 1 651 GWh; at the same time, to comply with the share of the 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 electricity generated from domestic coal defined by the Office,
- for the SEPS company to ensure priority Access and 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 ZSE D, SSE D and VSD companies to ensure priority Access and priority distribution of electricity generated from domestic coal,
- for the ZSE E, SSE a VSE companies to preferentially provide supply of electricity generated from domestic coal in a stipulated volume.



Due to the necessity to secure protection and security of electricity supply for household and small businesses electricity consumers, on 2 July 2008, the SR Government approved a general economic interest in energy sector to ensure electricity supply including the prce of electricity supply for electricity consumers in households and small businesses for the period until the economic indicator "share of energy costs on overall household incomes: is balanced with the EU member states average, and thus as an electricity producer' s obligation to provide electricity supply in the amount of at least 6 TWh for the price defined by the Office, for electricity consumers in households and small businesses, with the amount of electricity consumption as follows:

- households without electric heating with an offtake of up to 5000 kWh/year,
- households with electric heating with an offtake of up to 20 000 kWh/year,
- small businesses with an offtake of up to 30 000 kWh/year.

Based on the Decision of the Government No. 457/2008 to the proposal on securing electricity supply including the price of electricity supply for electricity consumers in households and small businesses in the general economic interest, on 3 July 20008, the Ministry of Economy of SR issued a Decision imposing, within the general economic interest and due to ensuring of security of electricity supply including the price of electricity supply for electricity consumers in households and for small businesses, the obligations for the electricity producer- the SE company, as follows:

- to provide electricity supply in the amount of at least 6 TWh for the price defined by the Office for household electricity consumers and small businesses with the following amount of electricity offtake:
- households without electric heating with an offtake of up to 5000 kWh/year,
- households with electric heating with an offtake of up to 20 000 kWh/year,
- small businesses with an offtake of up to 30 000 kWh/year.
- To provide electricity supply according to letter a) for households and small businesses under the condition that these suppliers provide supply of such purchased electricity explicitly for the purposes according to letter a).

Universal service

The Act on Energy defines universal services as a service for households and small businesses provided by an electricity supplier on the basis of a contract on electricity supply and including at the same time electricity distribution and electricity supply and taking- over the responsibility for a deviation. The price of electricity for households is regulated by the Office. The mentioned regulation does not affect 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 No. 54. 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 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 offtake device.

Combined electricity and heat generation

According to the act on energy, 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 sources of energy

According to the Act on Energy, 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 Gas

The Government of SR, during the meeting on 2 July 2008 and through the Decision No. 456/2008, approved a general economic interest for ensuring gas supply including the price of gas supply for household gas consumers and the prices of gas supply for heat production determined for households, for the period until the economic indicator of "share of energy costs on overall households incomes" is balance with the EU member states average.

The reason for the general economic interest declaration related to ensuring gas supply including the price of gas supply for household gas consumers and the prices of gas supply for heat production determined for households, consists in the protection and safety of gas supply for household gas consumers and of heat supply for households.

An increase of oil prices recorded during 2008 directly related to the increase of natural gas prices, an insufficiently developed competition environment on gas market with the significant dominant position of the gas supplier- SPP company, as well as non utilization of the legislative conditions enabling transparent and wide gas market opening in SR, have created conditions for generating the measures to achieve the goals of social and economic cohesion. An unpredictable increase of natural gas price closely connected to oil price in the global markets would result in an increase of the price of gas supply for the household gas end- consumers. The price of natural gas purchased by a gas supplier to secure gas supply for Slovak consumers, makes approximately 56 % of the total price for household gas supply. In relation to the further increase of the price for gas supply, it was necessary to consider the share of Slovak households costs on energies that are inevitably needed for household running, and the amounts of the SR households real incomes.

The Government of SR endeavored to ensure the fact so that the household gas consumers and producers of heat determined for households would have the right to be supplied with gas in a defined quality for affordable and fair prices.

Ministry of Economy of SR, through the Decision in the general economic interest and due to ensuring gas supply including the price for gas supply for household gas consumers and the price of gas supply for heat production determined for households, imposed the SPP company- the gas supplier with the obligations as follows:

• to provide gas supply to household gas consumers with an annual gas consumption not exceeding 6 500 m³ for the price defined by the Office,



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- to provide gas supply to heat producers for household heat production for the price defined by the Office,
- to provide gas supply according to letter b) to heat producers under the conditions the heat producers shall use the gas purchase this way, explicitly for the purpose of household heat production.