АГЕНЦИЈА за ЕНЕРГЕТИКУ
РЕПУБЛИКЕ СРБИЈЕ

2013 ENERGY AGENCY REPORT

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2013 ENERGY AGENCY REPORT

Serbian Energy Sector Report

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Annual and Financial Report

Belgrade, May 2014

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INTRODUCTORY REMARKS

In line with the provisions of the Energy Law, the Council President and members are accountable for their work and the work of the Agency to the National Assembly of the Republic of Serbia. Once a year, the Agency submits a report to the National Assembly, as it is hereby done. Apart from the report on the activities of the Agency and its financial report, this document also includes a report on the situation in the energy sector of the Republic of Serbia within the jurisdiction of the Agency.

The report on the situation in the energy sector of Serbia includes a review of the situation and the activities in the field of electricity and natural gas markets and partly oil and oil derivatives, security of electricity and natural gas supply, activities of general interest and electricity and natural gas customer protection. Its structure and content is also in line with the recommendations of the Council of European Energy Regulators – CEER.

To the extent necessary to follow its content, the Report lists the provisions of the Law and the changes arising from it. The Law fully transposed the provisions of the so-called Second Energy Market Package of the European Union in the legal system of Serbia on the internal energy market including expanded jurisdiction of the Agency. The idea is to make the energy sector more rational and cost-effective, to regulate monopoly activities more efficiently and enable market operation on national, regional and Pan-European level, whereby providing a sustainable long-term development. In September 2011, the Energy Community (EnC) Ministerial Council adopted a decision on the enforcement of the so called Third Package. This package will be adequately implemented in Serbia via the adoption of a new Law which is being drafted.

Since its establishment, the Agency has strived to build, strengthen and keep a high level of professional capacities. This is ever more important today, bearing in mind the necessity to meet the challenges and competences which will be introduced in the new Law as well as to comply with international obligations as efficiently as possible.

In 2013, the Agency worked in line with all its obligations prescribed in the Law which are important for the planned tempo of energy market opening in Serbia. It also played an important role in the work of the Energy Community institutions and gave support to other institutions in the activities on both national and international level.

In line with the Law, all the decisions on the issues within the Agency jurisdiction are adopted by the Agency Council. In 2013, the Council held 43 sessions during which different acts were adopted such as: decisions, approvals, certificates and other acts in the field of price regulation, energy market establishment and monitoring, issuance and withdrawal of licences, internal organisation, working methods of the Agency and other activities within the Council jurisdiction.

The security of electricity, natural gas and oil derivatives supply in 2013 achieved a satisfactory level. Thermal power plants operated reliably, whereby high annual use of capacities and production were enabled. Therefore, electricity net export reached as high as over 2,200GWh. Electricity consumption in Serbia increased by 1.3% while the transit through Serbia increased slightly. To a great extent, the security of natural gas supply was provided by the increase of capacities and the operation of the underground storage. Natural gas consumption was increased by 8% due to consumption growth in industry.

The Council of the Agency considers three groups of issues to be extremely important for the future of the energy sector of Serbia: establishment of a more certain pricing policy in the long-run, enabling long-term security of energy supply as the most important issue and electricity and natural gas market opening.

Electricity and natural gas pricing policy is currently one of the most complex issues of the energy sector with multiple consequences. One of its important components is costs rationalisation in operations of energy companies. When issuing approval of regulated prices, the Agency insisted on the reduction of costs which are not recognised as justified and are not included in the approved prices.

Electricity losses within the distribution network kept decreasing slightly but they are still very high in comparison to those technically justified. Electricity theft has not been fought efficiently enough. Investments in the distribution network and more efficient meters replacement are also necessary.

The current level of regulated electricity public supply prices is below the economically justified level. To a great extent, it limits the development of the power sector since it does not create local funds for investments. In addition, it has discouraging effect on other investors, as well as on the rationalisation of energy consumption.

Since 2010 till September 2013, the approved natural gas procurement price of was lower than the contracted procurement price, and thereby, PE Srbijagas operated with a negative financial result in the area of natural gas tariff customers supply. As of September 2013, public supply gas price covers all justified gas procurement costs and it is changed in line with market conditions.

The best modalities for the ***provision of a long term security of energy supply*** should be developed rapidly. The uncertain tempo of economic growth burdens the process of making consumption forecast to a great extent and increases the risk for potential investors. The increase in electricity consumption of less than 1% by average is expected annually in the Republic of Serbia in the period until 2025. Future demand will be covered by the extension of the life time of existing power plants and by the construction of new power plants, including the power plants using renewable energy sources.

The enforcement of the EU Directive on Large Combustion Plants, i.e. on the emission of sulphur and nytrogene oxide was postponed by a decision of the Energy Community Ministerial Council until 2023 with certain conditions that need to

be met. Thereby, over 1,100 MW to which this Directive refers to and which now provide for more than 15% of the total production may be still operating until that moment in a prescribed operating regime. The need to construct new power plants is thereby postponed.

The construction of the South Stream and interconnection with Bulgaria via Niš-Sofia gas pipeline are the most important projects for the long-term security of gas supply.

The new Energy Sector Development Strategy certifies the conditions for long-term energy stability and principles of harmonisation of the energy sector of Serbia to global and EU requirements, in a manner which will be the most favourable to customers and contribute to the economic development of the state. Energy companies need to adopt development plans on the same ground as soon as possible.

Thereby, conditions are met for the establishment of a more long-term pricing policy, for the removal of recognised disbalances and for the creation of an atmosphere which will be, to a sufficient level, stable and stimulating for investments. The most important precondition for this is the establishment of a more efficient mechanism for the protection of socially vulnerable energy customers which is being implemented as of May 2013. However, in line with the records of competent institutions, the number of protected customers is several times lower than the number of customers which need to be protected.

In 2013, important steps were made towards ***electricity and natural gas market opening and towards more efficient regulation of monopoly activities***. However, the deadlines prescribed by the Law were not strictly complied with, but with a delay. In addition, it was noticed that irrationalities in the energy sector are not removed efficiently enough.

All important regulatory conditions for electricity customers connected to the distribution network to enter the market were created. Households and small customers are exceptions. Balancing mechanism started functioning on market bases.

Legal unbundling between the distribution system operator from electricity supply and other activities was completed.

In 2013, further progress was made in the method of exercising rights to the use of cross-border electricity transmission capacities. Joint auctions of available cross-border capacities on the border with Hungary and Romania have already been organised in the past. Now, upon the approval of the Agency to the rules for the cross-border transmission capacity allocation on the Serbian-Bulgarian and Serbian-Croatian border, joint auctions will be organised on all those four important borders in 2014.

The activities within the EnC on the development of the regional electricity market were carried on.

In terms of realised trading activities, electricity market concentration level in Serbia remained high or moderately high in 2013.

Over the past several years, there has been a slight increase in electricity consumption in households in wintertime. The Agency will pay attention to this and, if necessary, take measures in price regulation so as to destimulate irrational use of electricity for heating purposes.

The Agency adopted the Rules on Monitoring Technical and Commercial Indicators and on Regulating Quality of Electricity and Natural Gas Delivery and Supply. Even before this was prescribed by the Law, in different phases since 2009, the Agency has set the rules for monitoring technical and commercial indicators of quality of electricity delivery and supply.

Indicators of uninterrupted delivery are on the same level as those in the region. However, they are several times worse than the European average.

Natural gas customers connected to the transmission system purchase gas in the market.

The Agency approved Natural Gas Transmission Network Code adopted by PE Srbijagas. Further gas market development depends greatly on more dynamic procurement and installation of adequate metering devices.

The method of legal unbundling of transmission system operator within the vertically integrated company Srbijagas is still being considered while this activity is legally unbundled within Yugorosgaz JSC.

Gas sector is characterised by a low household gasification rate (around 10%) and a great number of small distribution companies.

The first and modified versions of ten-year development plans of electricity transmission and distribution systems and natural gas transmission system were drafted and, to a necessary level, mutually agreed.

Council of the Energy Agency of the Republic of Serbia

May 2014

SERBIAN ENERGY SECTOR

REPORT

1. ENERGY DEMAND IN SERBIA

Annual demand of primary energy in Serbia without the Autonomous Province of Kosovo and Metohija (APKM)[1] amounts to around 14.6 million tons of oil equivalent (mtoe). It is characteristic of Serbia to have a high share of coal, primarily lignite with low calorific value in the total primary energy (over 50%) which is dominantly used for electricity generation. A high share of local lignite enables a relatively high energy independence of the country, in comparison to other countries. On the other hand, it decreases the efficiency of energy transformations and increases their impact to the environment and, in the long run, it will increase the prices due to the costs in terms of carbon dioxide emission, i.e. the greenhouse gases in Serbia.

This chapter includes the latest published data on total consumption of primary and final energy as well as other important data linked with the energy sector, as well as the comparisons with the European Union.

The energy net import dependence of Serbia recorded 27.7% (the European Union 54%) in 2012. In 2013, the costs of net energy imports amounted to € 1,815 million (20% lower than in 2012). These costs present even 40.6% of the net import and export trading balance of the Republic.

Table 1-1: Energy sector of Serbia (without APKM) – some indicators for 2011 and 2012

	Measurement unit	Year	
		2011	2012
Population (number)	thousands	7,241	7,216
GDP per capita, per spending power parity	Fixed $ from 2005	9,803	9,683
Primary energy consumption	Million toe	16.19	14.63
Final energy consumption	Million toe	9.25	8.51
Import dependence	%	30,3	27.7

Data: RZS, World Bank, MERZZS, AERS

Compared to the European Union, gross domestic product of Serbia per purchasing power parity (which reflects the level of development and standard in a more realistic manner) in 2011 was on the level of 35%, consumption of total primary energy per capita – 66% and final electricity consumption – 70%. Energy intensity, i.e. total primary energy consumption per domestic product unit (per purchase power parity) was on the level of the countries in the region, but it was 1.89 times higher than the European average. A greater energy intensity is partly a consequence of inevitable technical losses in the process of transformation of lignite into electricity. However, it is primarily due to irrationality, i.e. low efficiency in consumption in households, industry, due to low rate of capacity use and old technology, as well as in other sectors. Primary gas consumption per capita amounts to around 33% of the EU and therefore, this sector can have a high growth potential.

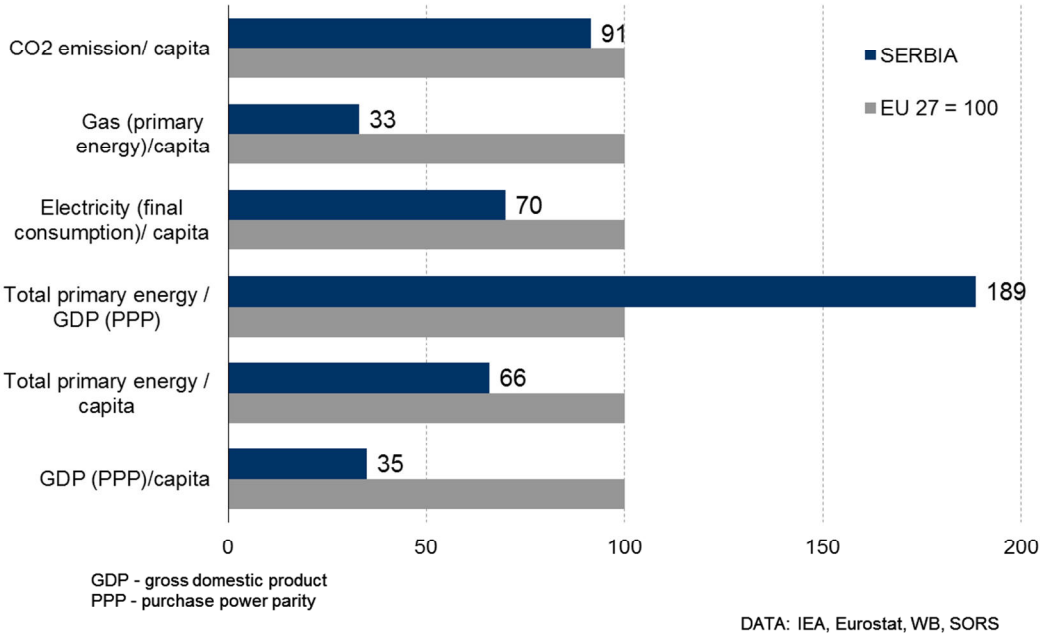


Figure 1-1: Comparative indicators of Serbia and the European Union in 2011

[1] The treatment of energy data for the territory of the Autonomous Province of Kosovo and Metohija (APKM) in this Report depends on their availability, reliability and the need to present them if it is referred to a single function on the whole territory (single regulation area), while bearing in mind the United Nations Security Council Resolution 1244 of 10/06/1999.

2. ELECTRICITY AND NATURAL GAS MARKETS IN 2013

As of 2008, all electricity and natural gas customers are entitled to purchase them in the open market, except for households which will be entitled to it as of January 1, 2015. Electricity customers did not exercise that right since the regulated price is lower than the market price. Natural gas customers purchased even 46% of gas in the market in 2010. However, in the following years they opted for regulated supply again.

The Energy Law ("Official Gazette of RS", No. 57/11, 80/11-corrigendum, 93/12 and 124/12, hereafter: Law) prescribed the obligation to enter the market, i.e. the right to regulated supply was annulled as of January 1, 2013, for those customers whose facilities are connected to the electricity, i.e. natural gas transmission system, while it was annulled as of January 1, 2014 for electricity customers whose facilities are connected to the distribution system, except for households and small customers and as of January 1, 2015 for natural gas customers connected to the distribution system, except for households and small customers.

2.1 Market openness in 2013 and expected tempo of further development

Regulated market, i.e. public supply still held a great share in the electricity and natural gas sectors in 2013.

In the electricity sector, 26 customers purchased 2.24 TWh in the open market, which amounts to 8% of final customers' consumption. Additional 5.5 TWh were purchased in the open market for loss recovery purposes, 1 TWh for the purpose of pumping water into accumulation lakes and 0.5 TWh for other power plant purposes, i.e. additional 20% of gross consumption.

In the natural gas sector, 55 customers purchased 649 million m^3 in the open market, which amounts to 34% of final gas customers' consumption realised by purchasing gas from suppliers. Gas consumption for technological demand of the system amounted to only 20 million m^3, i.e. 1% of gross consumption. Total consumption of final customers recorded 2,192 m^3, out of which 300 million m^3 of gas were spent by NIS outside the market, directly from their own production capacities.

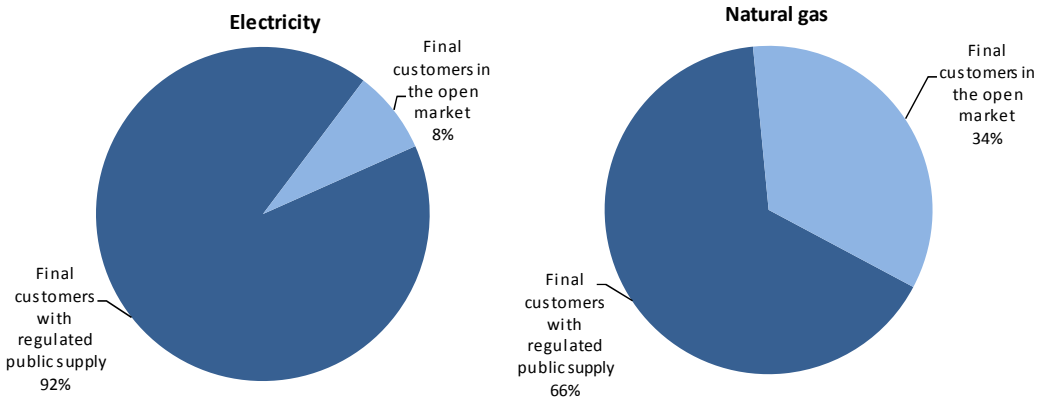


Figure 2-1: Market openness in 2013

Due to initial feeling of confusion in the market environment, 8 electricity customers exercised their right to the supply of the last resort, while later, the number of these customers reduced. In April, every customer had their suppliers. The right of the supply of the last resort was exercised by 3 natural gas customers in January and in February.

Although there is a great number of suppliers licenced in the open market, i.e. even 72 of them for electricity at the end of2013 and 24 for natural gas, in 2013, final electricity customers were supplied by only two suppliers, while, in case of natural gas, 3 suppliers. The dominant suppliers are PE EPS for electricity and PE Srbijagas for natural gas.

2.2 Conditions for market functioning

Before market opening, in early 2013, competent bodies adopted all the bylaws necessary for market functioning. The following bylaws are applicable:

- decrees on conditions for electricity and natural gas supply;
- rules on conditions for issuance, modification and withdrawal of the energy licence;
- electricity Transmission Network Code (applied as of 2008) and electricity Distribution Network Code(applied as of the beginning of 2010) – they were harmonised with the Law during 2013;
- natural gas Transmission Network Code of PE Srbijagas which also includes the necessary natural gas market rules;

- rules on the allocation of cross-border transmission capacity for the allocation of 50% of cross-border capacities on all borders except with the ones with Hungary and Romania where joint auctions are applied;
- electricity market rules;
- supplier switching rules;
- rules on monitoring technical and commercial indicators and on regulating quality of electricity and natural gas delivery and supply;
- methodologies for setting electricity, i.e. natural gas transmission and distribution use-of-system charges;
- methodologies for setting public supply electricity and natural gas prices and
- methodologies for setting electricity, i.e. natural gas transmission and distribution connection charges.

Natural Gas Transmission Network Code of Yugorosgaz and Natural Gas Distribution Systems Code were under preparation during 2013 and they will be adopted in 2014. The first draft of the Natural Gas Distribution Systems Code will be prepared by the PE Srbijagas distribution system operator and the other operators will follow.

Electricity transmission use-of-system charges have been regulated since 2008, while the distribution use-of-system charges have been regulated since 2012 for all 5 distribution companies.

Natural gas transmission use-of-system charges have been regulated since 2008, while the distribution use-of-system charges have been regulated since 2009.

Pursuant to the Law, Natural Gas Storage System Code is adopted by the natural gas storage system operator and approved by the Agency. The access to the existing storage is not regulated.

2.3 Supplier Switching Rules

It is important to note that the Supplier Switching Rules are applicable in case of full supply, that the Supplier Switching is a free of charge procedure and that it cannot last longer than 21 days starting from the day the application is properly filed.

Figure 2-2 indicates the scheme for Supplier Switching upon a customer's request.

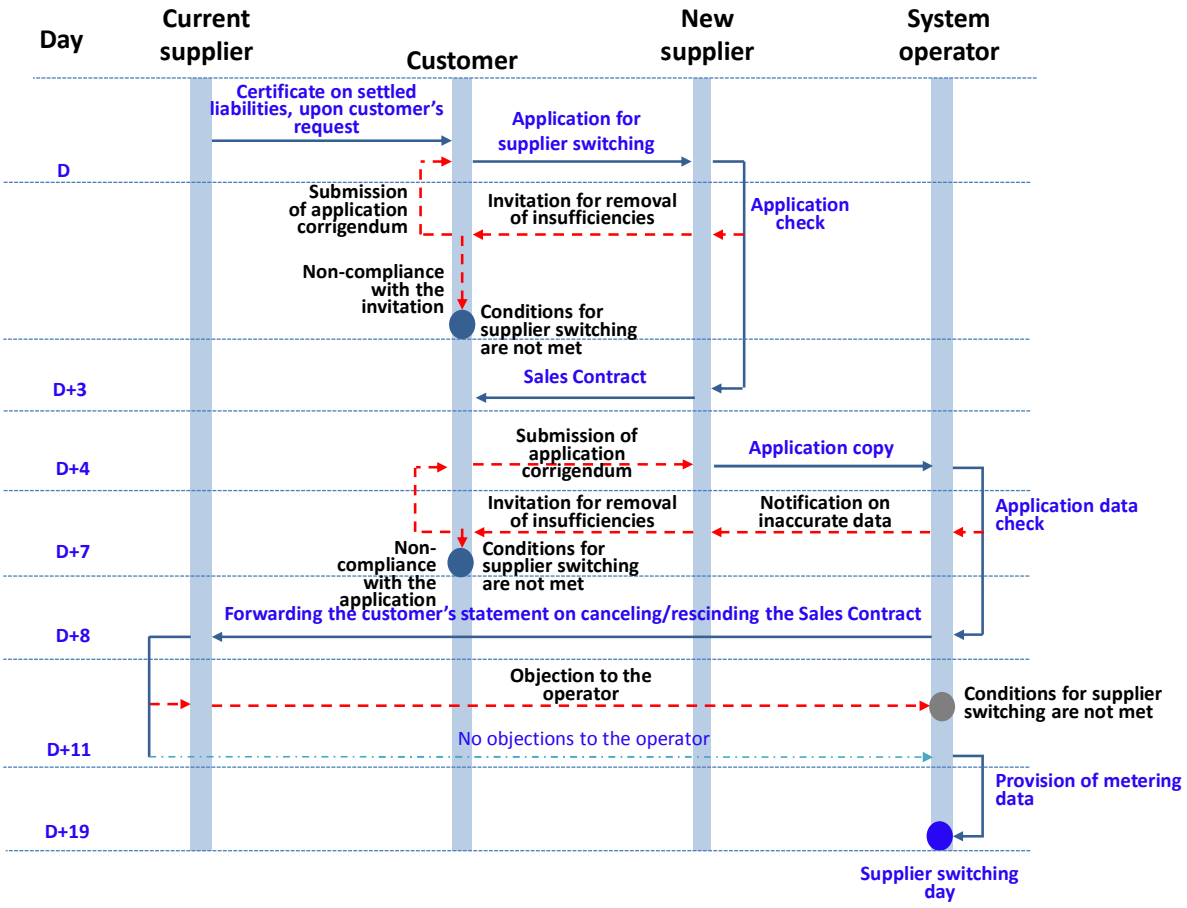


Figure 2-2: Scheme for Supplier Switching upon a customer's request

The rules include the cases of Supplier Switching upon a customer's request, as well as the switch to the last resort or to public supply when the customer is entitled to it by the Law, as well as the procedure during Supplier Switching in case a purchase contract is terminated due to unpayment.

A supplier may be switched upon a customer's request if the customer is entitled to the free choice of supplier pursuant to the Law and if the customer has settled all the liabilities towards the current supplier. When the customer selects a new supplier and submits a request for Supplier Switching, along with the certificate on settled financial liabilities towards the current supplier, all further steps are made by the new supplier and the system operator to which the customer's facility is connected to. The duration of the Supplier Switching procedure is especially important in cases when a new supplier is selected due to the fact that the contract with the current supplier is close to termination. In each of the phases of the procedure, the data and infomation validity is checked and, if necessary, corrections are made. Once all the deficiencies are removed the system operator reads the meter and the supplier is switched on that day, while the balance responsibility for exchange point of the customer is transferred to the new supplier.

2.4 Regulated and market prices of energy and energy sources

Until the end of 2012, electricity customers did not exercise their right to enter the open market, i.e. they purchased electricity at regulated prices. In 2013, 8% of final consumption was sold at open market prices.

As of 2010, natural gas customers have purchased gas at market prices – 16%-46% of final annual consumption. In 2013, around 34% of natural gas was sold at open market prices.

2.5 Security of electricity and natural gas supply

The security of electricity and natural gas supply was on a satisfactory level in 2013.

The security of natural gas supply was drastically improved by commissioning the underground storage Banatski Dvor with the withdrawal capacity of 5 million m^3/day.

Generally speaking, there were better conditions for safe supply in the field of electricity since it is produced from local resources and a very low amount of it is imported during the periods of the lowest temperatures. Gas demand is mostly covered by import and only via one connection through Hungary.

The Law stipulates a set of activities performed by state bodies so as to provide for short-term and long-term security of electricity and natural gas supply:

- The Ministry in charge of energy issues prepares a report on security of electricity and natural gas supply every year;
- The Government of RS specifies the conditions for electricity and natural gas delivery and supply, as well as the measures which should be taken in case of endangered security of electricity and natural gas supply to customers due to disruptions in energy system operations or market disruptions;
- In case of endangered security of customers supply or energy system operations due to insufficient demand in the energy market or due to other extraordinary circumstances, the Government prescribes measures on electricity or natural gas restriction or special measures on import or export of certain energy sources, the manner and conditions for price establishment and control, the obligation to deliver energy to certain customers only or special conditions for energy activities with minimum energy market disruption in the region;
- Separate measures are planned for natural gas. Namely, the Government of RS adopts:
  - Prevention action plan so as to provide for the security of natural gas supply which includes risk assessment in terms of security of supply and measures for mitigation of certain risks related to necessary transmission capacity which would meet total demand and secure supply for certain groups of final natural gas customers and
  - Crisis plan which establishes measures, energy entities which will be obliged to provide for the security of transmission system operations and security of supply of certain groups of final customers, natural gas quantity and capacity, in case of general shortage of natural gas overall natural gas shortage.

The Working Group for Analysis and Monitoring of the Situation on Security of Supply with Energy and Energy Sources which was established by the Ministry held regular sessions and took adequate measures in line with the situation on site, especially during the period of increased consumption. The Agency participates in the work of the Group.

3. ELECTRICITY

3.1 Sector structure and capacities

3.1.1 Organisational and ownership structure of the electricity sector

The basic structure of the electricity sector was established in 2005 upon the adoption of the Energy Law in 2004 ("Official Gazette of RS", No. 84/04) by unbundling and internal reorganisation of a common vertically integrated PE EPS.

The structure of the electricity sector at the end of2013 is indicated in Figure 3-1.

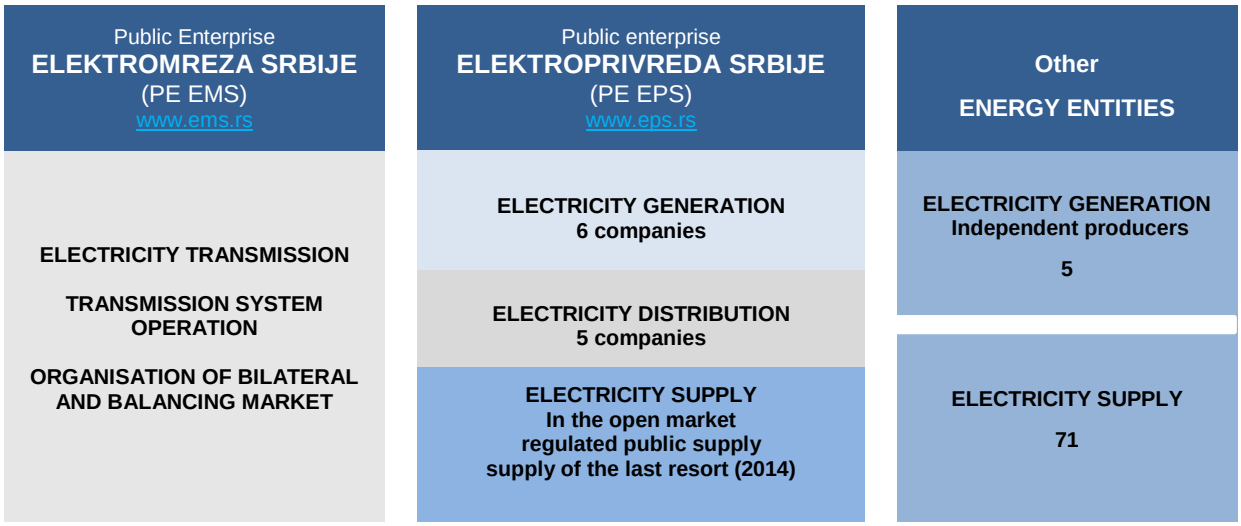


Figure 3-1: Organisational structure of the electricity sector

Public enterprises PE EMS and PE EPS were established on July 1, 2005 by the decision of the Government of the Republic of Serbia and both of them are 100% owned by the Republic of Serbia.

Since 1999, a part of the power system on the territory of the APKM has been under UNMIK management in line with the UN Resolution.

Transmission and transmission system operation are performed by PE EMS.

There are six daughter companies for electricity generation and five daughter companies for distribution and distribution system operation which operate within the vertically integrated enterprise PE EPS. DC Renewable Energy Sources works on the modernisation of existing small HPPs owned by PE EPS as well as on the construction of new small HPPs and other power plants using renewable energy sources.

There is a great number of licenced electricity suppliers in Serbia (at the end of2013, there were 72 of them and the number is growing). Only half of them perform the activity, mainly through cross-border trade for the sake of transit and trade among the very suppliers, including PE EPS, in Serbia. Only two suppliers were involved in final customers supply. Out of the two, EPS Snabdevanje (EPS Supply) is the dominant player. DC EPS Snabdevanje is also appointed by the Government of RS for electricity public supply of final customers at regulated prices entitled to that right.

As it was prescribed, by the Law, upon a tendering procedure, the Government of RS also selected PE EPS as the supplier of the last resort.

3.1.2 Unbundling of electricity operations and the operator's independence

Separation of electricity transmission and distribution which represent natural monopolies, from generation and supply as market operations is one of key elements of market reforms.

Electricity transmission and transmission system management were separated in 2005 into a separate company PE EMS, thereby realizing unbundling between the transmission system operator from the vertically integrated PE EPS.

Unbundling of network activities of electricity transmission and distribution, which are natural monopolies, from production and supply, which are market activities, represents one of the key elements of market reforms.

Electricity transmission and transmission system operation were unbundled into a separate company PE EMS in 2005. Thereby, transmission system operator was unbundled from the vertically integrated PE EPS.

In 2013, PE EPS established a daughter company EPS Snabdevanje (EPS Supply) and thereby, distribution (which is performed in five daughter companies) was unbundled from the supply, in terms of legal form. Electricity generation is performed in six daughter companies which are separate from network activities in terms of legal form.

The way the energy entities which deal in electricity distribution and distribution system operation unbundled their accounts did not comply with the requirements arising from the Article 19 of the Energy Law until they were unbundled

into two separate legal persons. Namely, distribution companies used to set their balance sheets and income statements for each activity based on ex-post unbundling of bookkeeping on a single account of a daughter company, not on the actual (ex-ante) accounting unbundling.

The Law also defined a set of measures the implementation of which enables the independence of the distribution system operator, especially in terms of adoption of decisions on the funds necessary for operation. The parent company will be in a position only to approve annual financial plans and set the debt-level limits to the system operator but it will not be in a position to give guidance for everyday operations.

The system operator which operates within the vertically integrated company has to adopt a Program for the provision of non-discriminatory behaviour, the content of which is set by the Law and to appoint a person responsible for the supervision of the Program. The approval to the Program is given by the Agency. The distribution system operators with more than 100,000 final customers connected to their system and to which this obligation is applicable did not adopt the programs for non-discriminatory behaviour or appoint the persons responsible for monitoring.

Table 3-1: Unbundling of energy activities

	Transmission	Distribution
	YES/NO	YES/NO
Ownership unbundling	YES	NO
Legal unbundling	YES	YES
Separate headquarters	YES	YES
Separate website	YES	YES
Separate accounts	-*	Incomplete
Audit of separate accounts	-*	NO
Publishing separate financial reports	-*	NO
Separate management bodies without managers from other energy operations	YES	YES
Program for the provision of non-discriminatory behaviour	-*	NO
Person appointed for Program implementation	-*	NO
Annual report on Program implementation	-*	NO

* Transmission system operator is a separate company

3.1.3 Generation, transmission and distribution capacities

The total net installed capacity of the power plants in Serbia amounts to 8,351 MW, including small hydro power plants and power plants on the territory of APKM, which are under UNMIK jurisdiction. In lignite-fired thermal power plants, the installed capacity amounts to 5,140 MW, in hydro power plants – 2,835 MW, in natural gas- fired or heat oil-fired thermal power plants - 356 MW, in small hydro power plants – 19.8 MW. The lignite used in thermal power plants is produced in open pits which belong to PE EPS.

The total net installed capacity of the power plants in Serbia without those on APKM, including small hydro power plants of independent producers amounts to 7,177 MW (table 3-2).

Table 3-2: Electricity generation capacities in 2013 (without APKM)

Technology	Installed capacity MW
Hydro power plants	2,835
Thermal power plants (coal)	3,905
Combined heat and power plants (gas,fuel oil)	356
Gas fired power plants	-
Nuclear power plants	-
Other sources (renewable sources) – small PE EPS power plants	20
Small power plants – independent producers	61
TOTAL INSTALLED CAPACITY	**7,177**

The structure of production capacities of PE EPS, without power plants on the territory of APKM is given in Figure 3-2.

The share of the capacities within thermal power plants (TPP) and combined heat and power plants (CHPs) amounts to 60%, while the hydro power plants (HPPs), including small HPPs cover 40%. There is also one pumped-storage hydro power plant among HPPs of PE EPS with 2x307 MW capacity which is very important for system operation.

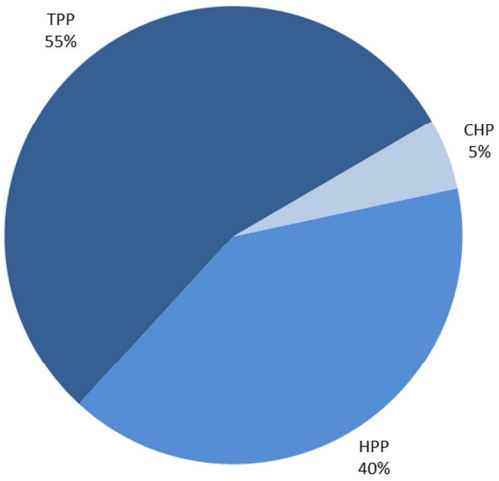


Figure 3-2: PE EPS generation capacities structure in 2013 (without APKM)

These capacities belong to five daughter companies of PE EPS which hold the licence for electricity generation: Hidroelektrane Đerdap llc, Drinsko-limske hidroelektrane llc, Panonske termoelektrane-toplane llc, Termoelektrane Nikola Tesla llc and Termoelektrane i kopovi Kostolac llc. Small hydro power plants owned by PE EPS are within companies for electricity distribution Elektrosrbija llc and Jugoistok llc. There are also 72 small power plants which are not owned by PE EPS with total installed capacity of 61.1 MW and they are connected to the power grid.

PE EPS also operated two power plants (HPP Piva and HPP Gazivode) which are not owned by PE EPS with total capacity of 374 MW.

Companies for electricity distribution also hold licences for electricity generation: Elektrosrbija llc, Jugoistok llc and the company Milan Blagojević – Namenska JSC Lučani, ALLTECH SERBIA fermentation industry JSC Senta, GREEN WASTE LLC Belgrade, ECO ENERGO GROUP llc Novi Beograd and SOLAR MATAROVA llc Novi Sad. They all have small-scale generation facilities connected to the distribution grid.

3.1.3.1 Transmission

The transmission system, without APKM, includes 30 transformer stations of 400/x and 220/xkV/kV with installed capacity of 13,469 MVA (25 transformer stations with 12,981 MVA of installed capacity are owned by PE EMS), 8 switchgear plants and lines of 400, 220 and 110 kV with total length of 9,637 km (9,312 km owned by PE EMS). PE EMS also owns 3 transformer stations of 110/x kV/kV. In 2013, the transfer of 53 transformer stations of 110/x kV/kV to companies dealing in electricity distribution was initiated and it is in the final phase as well as the procedure of overtaking the overhead line of 110 kV from these companies. The completion of the transfer and overtaking of facilities is expected during 2014.

The PE EMS transmission system is connected to the neighbouring power systems via 22 interconnection overhead lines of 400, 220 and 110 kV.

Table 3-3: Transmission system of PE EMS - end of2013 (without APKM)

Transmission system elements	Unit	
Network length per voltage levels, total	km	9,312
400 kV	km	1,614
220 kV	km	1,884
110 kV	km	5,814
Number of transformers		54
Number of transformer stations and switchgear plants		33
Number of (active) interconnections		22

3.1.3.2 Distribution

Electricity distribution on the territory of Serbia without APKM is performed within five companies for electricity distribution - Elektrovojvodina LLC Novi Sad, Elektrodistribucija Beograd LLC Beograd, Elektrosrbija LLC Kraljevo, Jugoistok LLC Niš and Centar LLC Kragujevac. Distribution system without the territory of APKM includes around 36,000 transformer stations with the total installed capacity of around 30,600 MVA and around 158,900 km of distribution lines, with voltage of 110, 35, 20,10 and 0.4 kV through which electricity is distributed to final customers.

There are 34,230 transformer stations owned by companies with total installed capacity of 28,965 MVA and around 152,079 km of distribution lines of all voltage levels. Their structure is given in Table 3-4. The procedure of overtaking transformer stations of 110/x kV/kV from PE EMS was not completed on the legal level. Nevertheless, the companies

dealing in electricity distribution will assume the obligation of the maintenance of these facilities in 2014. In line with this, the PE EMS will assume the obligation of maintenance of the overhead line of 110 kV. The transfer of the facility is also in the final phase.

Table 3-4: Distribution lines length - end of2013 (without APKM)

km

Voltage level	Distribution company					Total
	Elektrovojvodina	EDB	Elektrosrbija	Jugoistok	Centar	
110 kV	0	33	151	0	0	183
35 kV	1,355	955	2,137	1,698	706	6,851
20 kV	7,523	0	1,530	0	0	9,053
10 kV	623	4,564	12,037	9,387	3,953	30,564
0,4 kV	13,759	12,083	46,492	20,894	12,200	105,428
Total	**23,260**	**17,635**	**62,347**	**31,978**	**16,859**	**152,079**

3.2 Consumption and generation

In 2013, electricity consumption was on the same level as in 2012. More detailed review of the consumption will be presented in Item 3.6.1.2.

Since 2000, PE EPS has increased its production from the existing capacities year by year. 2012 was an exception, primarily due to long revitalisation processes within important units and due to hydrologic conditions which were below the average ones. This is why there was a production drop in 2012. In 2013, maximum production was achieved, i.e. almost 37.5 TWh, which is around 30% higher than in 2000. Production in hydro power plants was on the average level. Due to the fact that hydrological circumstances depended on the season, production was below the average level in the first half of the year while it was below the average level in the second half. Production in coal-fire thermal power plants was extremely good, which is a result of revitalisation processes in previous years as well as of reduced duration of planned overhauls in 2013. Combined heat and power plants worked in line with the heat demand during the winter season and they produced considerably lower quantities than in 2012. Production from small power plants connected to the distribution grid is relatively small. However, in 2013, they produced around 40% more electricity since there were favourable hydrologic conditions and since new capacities were constructed. Incentives for privileged producers contributed to that fact.

Beside import via long-term contracts on the exchange with power industries of Montenegro and Republic of Srpska, PE EPS imported 630 GWh of electricity in 2013. Based on the available data, it is estimated that other suppliers imported around 10 GWh in the open market to meet the demand of final customers.

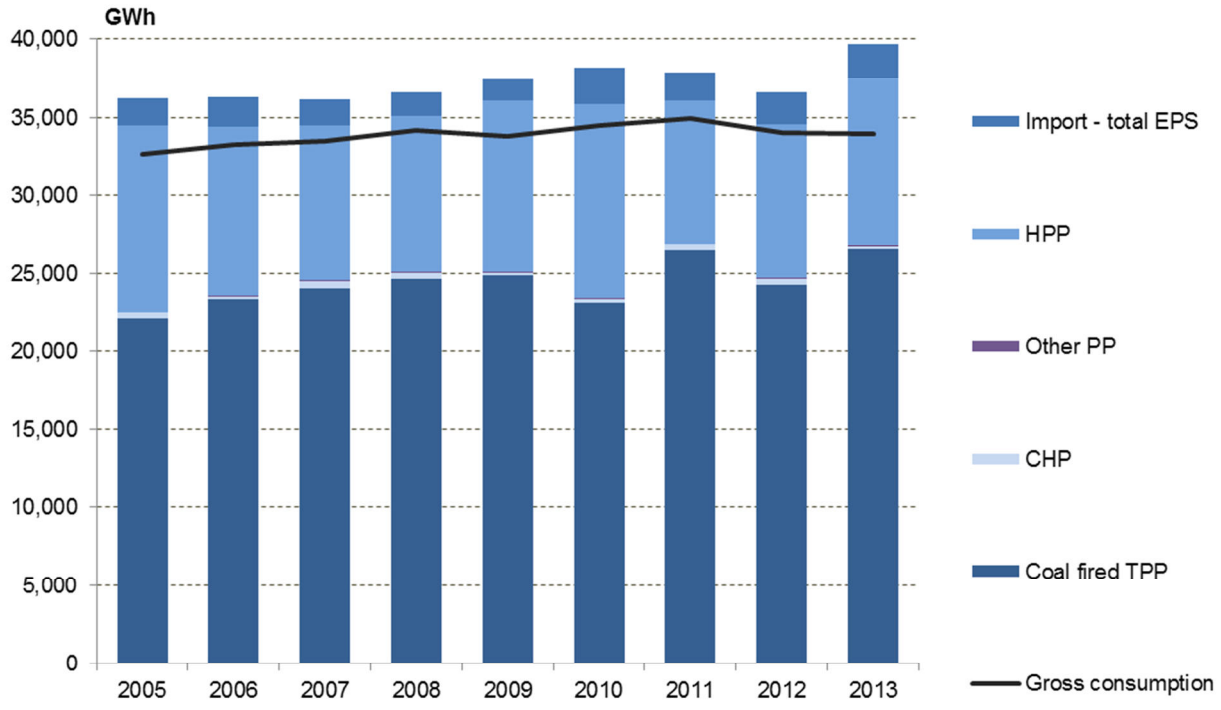


Figure 3-3: Generation, import and gross consumption in Serbia (without APKM)

In 2013, power plants in Serbia generated 37,537 GWh in total. Out of that number, thermal power plants fired by coal produced 70.7%, hydro power plants 28.46%, combined heat and power plants 0.4 % and other plants, small power plants connected to the distribution system 0.3%.

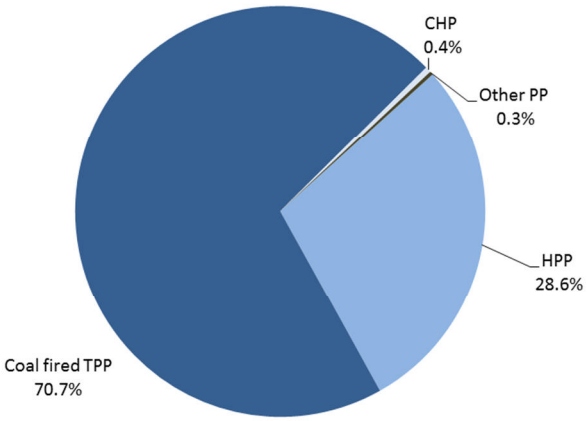


Figure 3-4: Generation structure in 2013 (without APKM)

Table 3-5: Electricity generation and consumption in 2005 – 2013 (without APKM)

GWh

	2005	2006	2007	2008	2009	2010	2011	2012	2013
GENERATION									
Hydro power plants	11,924	10,850	9,930	10,011	11,045	12,420	9,145	11,924	10,729
Coal fired thermal power plants	22,138	23,361	24,016	24,661	24,880	23,162	26,462	22,138	26,537
Combined heat and power plants	382	180	483	367	139	222	408	382	167
Other power plants	57	53	40	40	48	61	46	57	104
Total generation	**34,501**	**34,444**	**34,469**	**35,079**	**36,112**	**35,865**	**36,061**	**34,501**	**37,537**
Other (UNMIK)	1	21	88	0	44	93	184	1	0
IMPORT									
Commercial import by EPS and suppliers' import meant to cover customers' demand in Serbia	662	853	792	616	121	755	1,106	662	640
Long-term contract with EP Montenegro	1,024	993	647	797	1,116	1,463	630	1,024	1,294
Annual contracts	3	0	249	121	85	86	64	3	218
Import – total import of EPS and for supply purposes	**1,689**	**1,846**	**1,688**	**1,534**	**1,322**	**2,304**	**1,800**	**1,689**	**2,152**
TOTAL AVAILABLE QUANTITY	**36,191**	**36,311**	**36,245**	**36,613**	**37,478**	**38,262**	**38,045**	**36,191**	**39,687**
EPS – sales to suppliers for export	1,076	812	249	173	1,442	1,286	764	1,076	3,140
Long-term contract with EP Montenegro	1,285	1,201	1,235	1,220	1,184	1,204	1,210	1,285	1,235
Annual contracts	16	23	246	115	94	69	90	16	100
Total – EPS export and sales to suppliers for export	**2,377**	**2,036**	**1,730**	**1,508**	**2,720**	**2,559**	**2,064**	**2,377**	**4,475**
Pumping	962	852	864	878	903	1,049	860	962	1,007
Other (UNMIK)	169	99	133	59	71	145	199	169	207
Gross consumption	**32,683**	**33,324**	**33,518**	**34,168**	**33,784**	**34,509**	**34,928**	**32,683**	**34,000**
Transmission network losses	1,423	1,295	1,286	1,224	1,106	1,065	1,096	1,423	1,013
Distribution network losses	4,225	4,434	4,583	4,671	4,864	4,957	4,747	4,225	4,486
Total losses	5,648	5,729	5,869	5,895	5,970	6,022	5,843	5,648	5,499
Losses to gross consumption ratio	17.3%	17.2%	17.5%	17.3%	17.7%	17.5%	16.7%	17.3%	16.2%
Final consumption	**27,035**	**27,595**	**27,649**	**28,273**	**27,814**	**28,487**	**29,085**	**27,035**	**28,501**

3.3 Regulation of transmission system operator

PE EMS is the holder of licences for energy operations such as transmission, transmission system operation, organisation and administration of bilateral and balancing electricity market.

Transmission system operator is responsible for:

- safe and reliable transmission system operations and the quality of electricity delivery;
- transmission system management which provides for secure electricity delivery;
- non-discriminatory and economical access to the transmission system;
- transmission system development providing for long-term capability of the transmission system to comply with rational requirements in terms of electricity transmission;
- coordinated operations of the transmission system of the Republic of Serbia with interconnected transmission systems, i.e. with distribution systems in the Republic of Serbia;
- system balancing and provision of system services within the transmission system;
- determination of technical and technological requirements for connection of power facilities, devices and plants into a common system;
- accuracy and reliability of electricity measurements on delivery points from and into the transmission system and
- organisation and administration of electricity market within their jurisdiction.

The most important activities of the transmission system operator in 2013 which provide the compliance of its work with the commitments arising from the Law and electricity market opening are as follows:

- drafting ten-year transmission system development plan;
- adoption of the electricity market rules;
- adoption of the rules for the cross-border transmission capacities allocation in 2014, general and bilateral ones with the transmission system operators of Hungary, Romania, Bulgaria and Croatia;
- procurement of energy for the recovery of transmission network losses in the tender procedure;
- system services contracting;
- monitoring security of supply and submission of the data which are to be incorporated into the report on security of energy supply to the Ministry;
- setting electricity prices for the purpose of system balancing, in line with the electricity market rules and regular publication of the data on active balancing energy and the settlement price;
- collecting and publishing the data and information related to electricity market transparency and monitoring;
- exchanging information necessary for safe and secure operations of the system with other system operators;
- activities related to the transfer of tranformer stations 110/x kV/kV to companies dealing with electricity distribution and overtaking 110 kV overhead lines;
- submission of the data and documentation necessary for monitoring transmission system operator's operations and price regulation to the Agency;
- preparation for the establishment of an organised electricity market and
- other activities which improve the security, efficiency and transparency in the operations of the transmission system.

3.3.1 Network Code

The enforcement of the PE EMS Network Code began in May 2008, upon the Agency's approval. The Code was supplemented upon PE EMS initiative in December 2011. The Code regulates technical aspects of the transmission system operations and the relations between PE EMS as a transmission system operator and system users. The Code is published on both PE EMS and Agency websites.

During 2013, expert teams of PE EMS and Agency were preparing amendments to the Code so as to harmonise it with the new Decree on Conditions for Electricity Delivery and Supply and the Electricity Market Rules.

3.3.2 Regulation of electricity transmission use-of-system charges

Upon the positive opinion of the Agency and the approval of the Government of the Republic of Serbia, regulated electricity transmission use-of-system charges were applied on January 1, 2008 for the first time. Since then, they have been modified four times. The trend of the annual level of approved electricity transmission use-of-system charges are given in the table below:

Table 3-6: Trend of annual level of average approved transmission use-of-system charges

RSD/kWh

	Annual level of approved price				
	as of 01/01/2008	as of 01/08/2008	as of 01/03/2010	as of 01/04/2011	as of 01/03/2013
Total electricity transmission use-of-system charge	0.230	0.252	0.279	0.337	0.435
Net electricity transmission use-of-system charge *	0.105	0.104	0.114	0.169	0.184

* Net electricity transmission use-of-system charge is calculated by reducing the total maximum allowed revenue by system services costs and loss recoveries in the transmission grid.

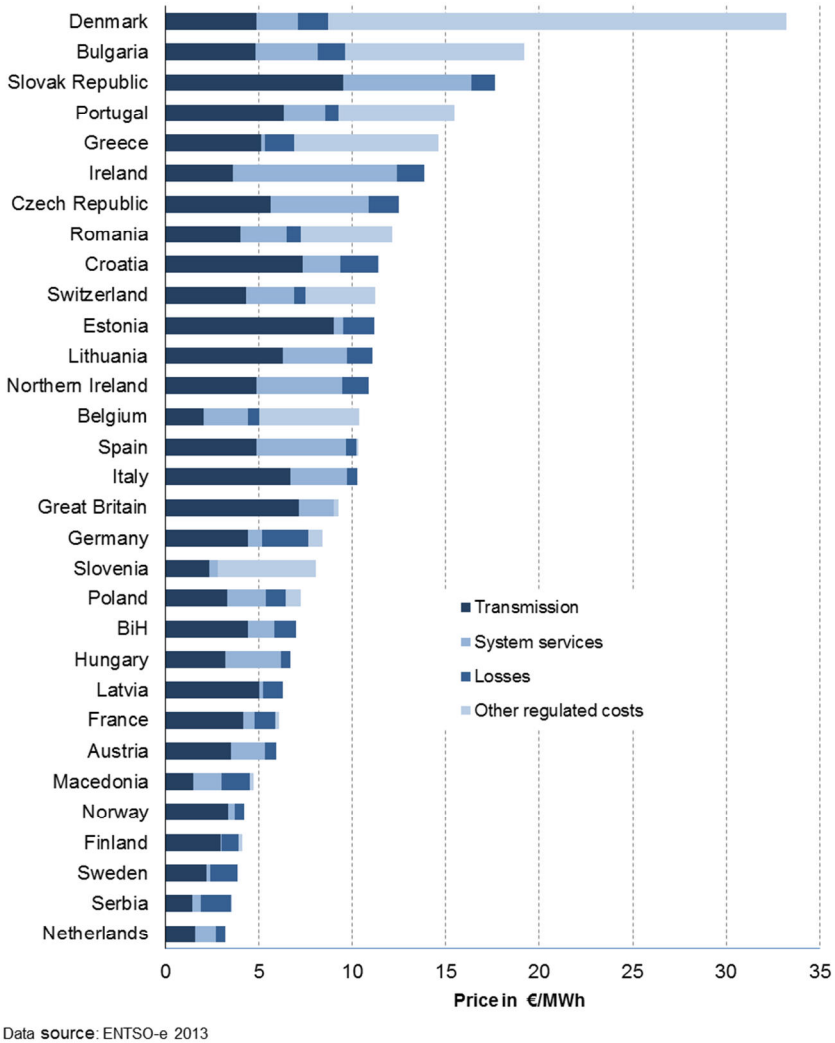
The charges which have been valid since March 1, 2013 are listed in Table 3-7.

Table 3-7: Transmission use-of-system charges valid as of 01/03/2013

RSD

Tariff element	Calculation element	Unit	Charge as of 01/03/2013
Power	Accounting power	kW	37.5638
	Extra power	kW	150.2554
Active energy	Higher day-time	kWh	0.3303
	Lower day-time	kWh	0.1651
Reactive energy	Reactive energy	kvarh	0.1399
	Extra reactive energy	kvarh	0.2798

In 2013, by the application of ruling charges, average transmission use-of-system charge was realised. It amounted to 0.42 RSD/kWh. Pursuant to ENTSO-E data, with the exception of Netherlands, even after the 2013 increase, transmission charges in Serbia are the lowest one in comparison with other European countries (Figure 3-5).



Data source: ENTSO-e 2013

Figure 3-5: Transmission use-of-system charge (€/MWh)

The current transmission use-of-system charge is available on the Agency's website (www.aers.rs).

3.3.3 Harmonisation with the EU directives

Transmission system operator's operations are harmonised with the Directive 2003/54/EC, as given in Table 3-8.

Table 3-8: Harmonisation of the PE EMS operations with the requirements of the Article 9 of the Directive 2003/54/EC

System operator's tasks (Article 9 of Directive 2003/54/EC)	Methodology for use-of-system charges	Methodology for connection costs	Code	Developm. plan
Ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity	YES	YES	YES	YES
Contributing to security of supply through adequate transmission capacity and system reliability	YES	-	YES	YES
Managing energy flows on the system, taking into account exchanges with other interconnected systems. To that end, the transmission system operator is responsible for ensuring a secure, reliable and efficient electricity system and, in that context, for ensuring the availability of all necessary ancillary services insofar as this availability is independent from any other transmission system with which its system is interconnected	-	-	YES	-
Providing to the operator of any other system with which its system is interconnected sufficient information to ensure the secure and efficient operation, coordinated development and interoperability of the interconnected system	-	-	YES	YES
Non-discrimination between system users or users groups, particularly no to the benefit to the company to which it is connected	YES	YES	YES	-
Providing system users with the information they need for efficient access to the system	YES	YES	YES	-

* Not covered by methodologies
** Not covered by development plans

3.3.4 Transmitted electricity quantities

Table 3-9 indicates the transmitted electricity quantities in 2013 in comparison to the quantities planned in the balance sheet and realised in 2012. In comparison to 2012, 4.3% more electricity was transmitted which was primarily due to a higher electricity generation in PE EPS power plants connected to the transmission system.

Table 3-9: Basic indicators of transmission plan realisation

	Balance		Realised			Realised (%)	
	2013 without APKM	2013 with APKM	2012 with APKM	2013 without APKM	2013 with APKM	2013 Real./Bal. without APKM	Real. 2013/real. 2012 with APKM
	1	2	3	4	5	4/1	5/3
Entry (GWh)	40,900	46,591	45,866	41,463	47,853	101.4	104.3
Losses (GWh)	1,098	1,280	1,206	1,013	1,195	92.2	99.1
Losses (%)	2.68%	2.75%	2.63%	2.44%	2.50%	91.0	95.0
Exit (GWh)	39,802	45,311	44,660	40,440	46,658	101.6	104.5

Realised physical electricity transit in 2013, calculated as a lower value of average hourly electricity which was withdrew into or out of the transmission system via interconnection overhead lines amounted to 3,953 GWh. The physical transit per month is indicated in table 3-10.

Table 3-10: Electricity transit by months of 2013 (physical flows)

Month	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Transit (GWh)	385	241	237	381	337	165	150	289	327	444	480	517

Including APKM, 47,853 GWh, were transmitted in total in 2013. 43,200 GWh were produced in the power plants connected to the transmission system while 4,653 GWh were withdrawn from the neighbouring systems. Physical flows of electricity on the borders of the control area of Serbia in 2013 are given in Figure 3-6.

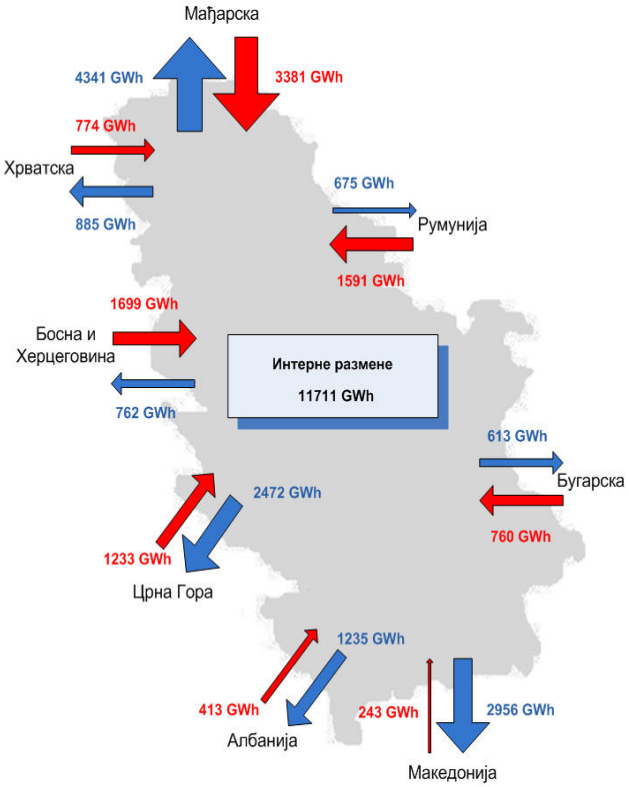


Figure 3-6: Physical flows – electricity exchange on the borders of the Serbian control area in 2013

On a part of the system without APKM, 41,463 GWh were transmitted, while 37,433 GWh out of these were produced outside the plants on APKM, 3,494 GWh were withdrawn from the neighbouring systems and the remaining 586 GWh were withdrawn from the territory of APKM. The greatest share of transmitted energy was delivered to electricity distribution systems (around 70% is delivered to distribution companies by average). The second largest share was transmitted to customers and other users whose facilities are connected to the transmission system, neighbouring systems and pumped-storage HPP facilities for pumping purposes.

Table 3-11: Transmitted energy, maximum load and losses (without APKM)

	Unit	2012	2013	2013/2012
Transmitted electricity	GWh	40,197	41,463	103.1
Maximum daily gross consumption	GWh	141.4	124.1	87.8
Maximum hourly load	MW	6,622	5,895	89.0
Transmission system losses	GWh	1,024	1,013	98.9
Transmission system losses (as % of transmitted electricity)	%	2.55	2.44	95.7

Since 2005, transmission network losses were reduced from 3.38% to 2.44% in 2013. In comparison to 2012, losses were reduced also due to the fact that transformer stations 110/x kV/kV, being parts of the distribution system were transferred to electricity distribution daughter companies. Thereby, electricity losses in these facilities are no more considered to be the transmission system losses, but the distribution system losses.

Electricity consumption in Serbia, but in the region as well, depends on the season. Therefore, maximum consumption is seen in wintertime at lowest temperatures or on days prior to holidays. During the winter period, in the beginning and at the end of2013, average daily temperatures were greatly above the average ones. It lead to the electricity consumption trend of around 120,000 MWh in Serbia, without APKM these days. The highest daily gross consumption amounted to 124,138 MWh on December 18. On this very date, the maximum 2013 hourly load was reached – 5,895 MW.

3.3.5 Use of cross-border transmission capacities

The Republic of Serbia has eight borders and eleven interconnection overhead lines (400kV and 220kV) where PE EMS allocates the rights to use transmission capacities by having PE EMS and neighbouring transmission system operators allocate 50% each of net transmission capacity on all interconnectors. The exception is Serbian-Hungarian border and on the Serbian-Romanian border where joint explicit auctions for the allocation of 100% of available capacity have been organised since 2011 and since 2013 respectively.

3.3.5.1 Rules for the cross-border transmission capacities allocation

Being the transmission system operator in Serbia, PE EMS is responsible for the allocation of rights to use available cross-border transmission capacities on interconnection lines of the Serbian power system. The mechanism for the allocation of rights to use available cross-border transmission capacities is defined by the Transmission Network Code and the Rules for Available Cross-Border Transfer Capacities Allocation on Borders of Control Area of Republic of Serbia.

Rules and agreements with neighbouring system operators in Hungary and Romania were approved by the Agency at the end of2012.

At the end of2013, PE EMS reached an agreement with transmission system operators of Bulgaria (ESO EAD) and Croatia (HOPS) on the organisation of joint explicit auctions for the allocation of 100% of available capacity in 2014. The agreements were submitted to the Agency for approval. On December 13, 2013, the Agency Council adopted a decision on the approval to the "Agreement between the Croatian Transmission System Operator LLC and the Transmission System Operator of the Republic of Serbia – Public Enterprise "Elektromreža Srbije" on the Procedure and Method of Cross-border capacity allocation and on the Access to Cross-Border Transmission Capacities for 2014" and to the "Agreement between the Transmission System Operator of the Republic of Bulgaria – Elektroenergien Sistemen Operator EAD and the Transmission System Operator of the Republic of Serbia – Public Enterprise "Elektromreža Srbije" on the Procedure and Method of Cross-border capacity allocation and on the Access to Cross-Border Transmission Capacities for 2014". These agreements defined the organisation of long-term auctions for the allocation of 100% available capacity (annual and monthly auctions) by ECO EAD and HOPS in 2014. On the other hand, PE EMS is in charge of the allocation of available transmission capacities on daily level. It was also agreed to have HOPS organise the auctions for the allocation of available transmission capacities on intraday level, while the auctions on available transmission capacities on the intraday level on the border with Bulgaria will not be organised.

3.3.5.2 Allocation of cross-border capacity

PE EMS is responsible for the calculation, allocation and use of cross-border transmission capacities on all borders of the control area of the Republic of Serbia. More details on the cross-border capacity allocation are available on the website of the Transmission System Operator (www.ems.rs).

Tables 3-12 and 3-13 indicate average monthly amounts of net cross-border transmission capacities (NTC) on all borders in both directions.

Table 3-12: Average monthly amounts of NTC for entry into Serbia in 2013 (MW)

Border/months	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Hun--->Ser	700	700	700	700	700	700	658	587	700	700	700	700
Rom---> Ser	500	500	569	597	406	392	402	440	478	408	587	590
Bul ---> Ser	250	250	250	250	250	247	250	250	217	232	300	250
Mac---> Ser	250	250	250	250	250	250	300	350	250	242	300	250
Alb---> Ser	250	250	250	250	183	210	210	210	196	218	250	250
Mon---> Ser	600	550	550	550	594	600	600	600	540	471	600	600
BiH--- Ser	500	400	500	400	432	500	500	500	450	550	530	500
Cro---> Ser	500	400	500	400	345	500	500	500	537	550	600	600

Table 3-13: Average monthly amounts of NTC for exit from Serbia in 2013 (MW)

Border/months	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Ser --->Hun	700	700	700	800	771	675	800	674	800	800	800	800
Ser --->Rom	200	150	239	392	216	240	387	395	350	374	307	319
Ser --->Bul	200	200	200	200	100	100	100	100	115	150	250	250
Ser --->Mac	650	600	550	543	424	489	529	515	428	552	600	600
Ser --->Alb	250	250	244	243	171	168	210	196	188	218	250	250
Ser --->Mon	600	500	582	520	548	454	584	514	562	561	600	600
Ser --->BiH	400	400	450	428	392	352	460	408	313	300	530	400
Ser --->Cro	400	400	450	428	328	352	460	448	313	350	600	500

In 2013, PE EMS organised explicit auctions on cross-border transmission capacities on all borders and in all directions of the control area of the Republic of Serbia. In 2013, in line with the "Rules for the Cross-border transmission capacity allocation on the Borders of the PE EMS Control Area for the Period 01/01/2013 – 31/12/2013", PE EMS organised explicit auctions for 50% of the available capacity on the following borders: Serbia-Albania, Serbia-Bosnia and Herzegovina, Serbia-Bulgaria, Serbia-Croatia, Serbia-Montenegro and Serbia-Macedonia. In case of congestion,

reservation was charged at marginal price. The allocation of the other half of transmission capacity quantities was organised by the transmission system operators of neighbouring countries, in line with their rules.

In 2013, the right to participate in the auctions on 50% of available capacity was on disposal of 45 market players. 26 of them actively participated in the auctions.

Annual auctions for the allocation of 50% of the available cross-border capacity for 2013 were held on November 26, 2012 with 21 participants. On each border/in both directions, congestions occurred. General data on the given annual auctions are given in Table 3-14.

Table 3-14: General data on annual auctions for the allocation of 50% of available cross-border transmission capacities in 2013

Border – direction	Congestion scale: Total demanded/total allocated capacity	Number of participants in the auctions	Price of the last successful bid in case of congestion EUR/MWh
Albania - Serbia	6.56	11	0.07
BiH – Serbia	5.80	15	0.35
Bulgaria - Serbia	4.97	15	1.31
Croatia - Serbia	4.70	12	0.32
Montenegro - Serbia	2.90	13	0.08
Macedonia - Serbia	4.00	10	0.13
Serbia - Albania	7.56	12	1.72
Serbia – BiH	4.20	10	0.2
Serbia - Bulgaria	5.96	17	0.71
Serbia - Croatia	5.20	13	0.32
Serbia - Montenegro	3.38	14	0.37
Serbia - Macedonia	5.00	12	1.23

In 2013, PE EMS organised monthly auctions for the allocation of 50% of available capacity for each month, on all the above given borders and in both directions. The number of participants on monthly auctions per each month for 2013 is given in Table 3-15. The general data on monthly auctions are given in the Table 3-16.

Table 3-15: Number of participants in monthly auctions for 2013

Month	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
No. of participants	19	18	21	21	20	19	20	19	19	19	19	20

Table 3-16: General data on monthly auctions for the allocation of 50% of available cross-border transmission capacities in 2013

Border – direction	No. of days with "0" capacity	Number of congestions/total number of auctions	Congestion scale: total demanded/total allocated capacity	Number of participants in auctions (min.-max.)	Range of prices of the last successful bid in case of congestion EUR/MWh
Alb - Ser	6	14 / 17	1.98 / 3.88	5 - 11	0.03 – 1.33
BiH - Ser	0	17 / 17	1.75 / 4.25	11 - 16	0.11 – 1.50
Bul - Ser	7	16 / 17	1.80 / 7.84	8 - 16	0.02 – 4.72
Cro - Ser	9	15 / 16	1.25 / 2.60	7 - 13	0.05 – 0.23
Mon - Ser	0	19 / 19	1.16 / 3.43	10 - 15	0.01 – 1.10
Mac- Ser	5	15 / 16	1.22 / 4.84	8 - 13	0.03 – 0.85
Ser - Alb	6	25 / 27	1.73 / 4.60	7 - 11	0.24 – 1.84
Ser - BiH	0	29 / 29	1.03 / 5.90	7 - 13	0.03 – 1.10
Ser - Bul	130	9 / 14	2.60 / 6.30	10 - 14	0.23 – 3.60
Ser - Cro	9	27 / 28	1.53 / 6.60	9 - 14	0.08 – 1.10
Ser - Mon	0	30 / 31	1.05 / 4.60	9 - 15	0.01 – 0.57
Ser - Mac	5	27 / 28	1.58 / 3.99	7 - 12	0.26 – 14.21

Weekly auctions were organised when there was remaining transfer capacity from monthly auctions, or when, due to changing circumstances, cross-border transmission capacity was calculated with delay, upon monthly auctions. This was the case in 9th, 10th, 11th and 12th week of 2013 as it is given in Table 3-17.

Table 3-17: General data on weekly auctions for cross-border transmission capacities in 2013 – for 9th, 10th, 11th and 12th week (when there were congestions)

Border – direction Period		Available Transmission Capacity (ATC) MW	Total demanded capacity MW	Congestion scale: total demanded/total allocated capacity	No. of participants in weekly auctions	Price of the last successful bid in case of congestion EUR/MWh
Ser-Alb	9th week	16	15	0.94	2	0
	10th week	16	15	0.94	2	0
	11th week	16	10	0.63	1	0
	12th week	16	0	0	0	0

In 2013, PE EMS organised long-term (annual and monthly) and intraday (first come-first served) auctions for the allocation of 100% of the available capacity on the Serbian-Hungarian border. The Hungarian transmission system operator MAVIR ZRt. allocated the available capacity on daily level. In 2013, Transelectrica organised long-term (annual and monthly) and intraday (first come-first served) auctions for the allocation of 100% of the available capacity on the Serbian-Romanian border, while PE EMS allocated the available capacity on daily level.

Out of the 51 entitled participants, 35 of them participated in the auctions for 100% available capacity on the Serbian-Hungarian border. Out of the 35 entitled participants, 21 of them participated in the auctions for 100% available capacity on the Serbian-Romanian border.

The number of participants as well as the other general data on joint annual auctions for 2013 on the Serbian-Hungarian and Serbian-Romanian borders are given in Table 3-18.

Table 3-18: General data on joint annual auctions for cross-border transmission capacities in 2013

Border – direction	Congestion scale: total demanded/total allocated capacity	No. of participants in auctions	Marginal price EUR/MWh
Hungary - Serbia	3.88	20	0.76
Serbia - Hungary	2.93	17	0.11
Romania - Serbia	3.11	16	0.50
Serbia - Romania	2.55	14	0.07

Number of participants as well as other general data on common monthly auctions on Serbian-Hungarian and Serbian-Romanian borders in 2013 are given in the Table 3-19.

Table 3-19: General data on joint monthly auctions for the allocation of 100% of available cross-border transmission capacities on Serbian-Hungarian and Serbian-Romanian borders in 2013

Border – direction	No. of days with "0" capacity	Number of congestions/total number of auctions	Congestion scale: total demanded/total allocated capacity	Number of participants in auctions (min.-max.)	Marginal prices range EUR/MWh
Hungary - Serbia	5	12 / 12	1.72 – 2.70	17 - 23	0.1 – 1.03
Serbia - Hungary	5	12 / 12	1.11 – 10.10	15 - 23	0.01 – 0.87
Romania - Serbia	3	40 / 49	1.01 – 2.76	7 - 15	0.01 – 0.88
Serbia - Romania	3	41 / 63	1.04 – 3.08	6 - 13	0.01 – 0.37

3.3.5.3 Annual exchange across the borders of coltrol areas

The total scale of cross-border transactions in 2013 amounted to 10,094 GWh – entrance, i.e. 13,939 GWh –exit from the market area of Serbia. The scale of internal transactions amounted to 11,711 GWh. Table 3-20 indicates the scale of nominated and confirmed internal and external (cross-border) transactions in the period 2008-2013.

Table 3-20: Annual exchange through the borders of the control area 2008 - 2013

GWh

Year	Cross-border transactions – entry	Cross-border transactions – exit	Internal transactions
2008	7,077	7,203	2,045
2009	6,883	8,681	3,679
2010	10,551	11,581	5,835
2011	11,171	11,481	10,004
2012	10,781	10,769	7,815
2013	10,094	13,939	11,711

Beside the transactions given in Table 3-20, a part of the cross-border trade in 2013 was realised via connected operations of the distribution systems of Serbia and Bosnia and Herzegovina. Transactions from Serbian to BiH amounted to 58,825 MWh, while they amounted to 688 MWh in the opposite direction.

Energy exchange with APKM was realised through internal and external transactions. Table 3-21 indicates the scale of external and internal transactions with APKM in the period 2008-2013.

Table 3-21: Part of external and internal transactions related to APKM 2008-2013

GWh

Year	External transactions – exit to APKM	Cross-border transactions – entry to APKM	Internal transactions – exit to APKM	Internal transactions – entry to APKM
2008	162	160	575	135
2009	522	125	245	149
2010	142	129	676	222
2011	31	88	785	283
2012	53	101	572	371
2013	64	101	458	755

In addition to Table 3-20, a part of internal exchange related to APKM was realised with a part of transmission and distribution system on the north of APKM (44,265 MWh were delivered to PE Elektrokosmet through the distribution system, while 135,218 MWh through the transmission system while 1,766 MWh were delivered via transmission system).

Table 3-22 indicates the scale of electricity cross-border transactions on each border.

Table 3-22: Entry and exit nominated cross-border transactions for each border for 2013

GWh

Border with	Entry into Serbia	Exit from Serbia
Romania	1,591	675
Bulgaria	760	613
Macedonia	243	2,956
Montenegro	413	1,235
Albania	1,233	2,472
BiH	1,699	762
Croatia	774	885
Hungary	3,381	4,341
By all borders	10,094	13,939

3.4 Regulation of the distribution system operator

Distribution system operators are daughter companies within PE EPS, holding licences for the performance of electricity distribution and distribution system management.

Transmission system operator is responsible for:

- safe and reliable distribution system operations and the quality of electricity delivery;
- distribution system management;
- non-discriminatory and economical access to the distribution system;
- distribution system development providing for long-term capability of the distribution system to comply with rational requirements in terms of electricity distribution;

- determination of technical and technological requirements for connection of power facilities, devices and plants into a common system;
- provision of the information relevant for an efficient access to the distribution system to energy entities and distribution system users, based on principles of transparency and non-discrimination and
- accuracy and reliability of electricity measurements on delivery points from and into the distribution system.

The most important activities of the distribution system operator in 2013 which provided the compliance of its work with the commitments arising from the Law and electricity market opening are as follows:

- unbundling of the supply operations;
- implementation of measures for energy system loss reduction, which are above the technically justified level;
- elaboration of the ten years' distribution system development plan and harmonisation with the transmission system development plan, other distribution systems and applications for the connection of facilities of producers and customers which are not completed;
- application of the price level for standard connections within the distribution system adopted at the end of2012;
- preparations for market opening for the customers who will lose the right to public supply in 2014;
- cooperation with PE EMS on the preparation of the type of data and format which is submitted by the distribution system operator to the transmission system operator related to market functioning and balancing responsibility;
- submission of the data and documents necessary for monitoring operator's work and for the analysis of the data necessary for price regulation;
- submission of the data which are to be incorporated into the report on security of energy supply to the Ministry in charge of energy;
- overtaking tranformer stations 110/x kV/kV from PE EMS;
- procurement of energy meant for distribution grid loss recovery and
- other activities which improve the security, efficiency and transparency of the distribution system operations.

By mid-2021, the distribution system operators are obliged by the Law to take over metering devices, switchboards, connection lines, installation and equipment in the switchboard and other devices within the connection in the facilities of existing customers or producers since these devices and equipment are part of the distribution system. The plan for the takeover should have been adopted by every operator by January 1, 2013 upon making an analysis of the situation with metering devices, switchboards, connection lines, installation and equipment in the switchboard and upon determining the necessity to replace them or adjust them to the requirements stipulated by technical regulations and distribution system code. However, there is a delay in the realisation with this obligation due to, among other things, distribution systems' reorganisation.

3.4.1 Distribution system code

Upon the Agency's approval, the Distribution Network Codehas been enforced in all the five companies for electricity distribution since early 2010. The Code regulates technical conditions for connection of customers to the system, technical and other conditions for safe operation of the distribution system and for the provision of reliable and continuous delivery of electricity to customers, procedures in case of crisis, rules on third party access to the distribution system, functional requirements and the category of measuring devices, electricity measuring method and other conditions. The Code should be harmonised with the Law and the Decree on Conditions for Electricity Delivery and Supply. Harmonisation procedure has been initiated in 2013.

At the end of2013, upon the approval of the Agency, distribution system operators adopted amendments to the Distribution System Code. The amendment relates to the definition of consumption profile, i.e. the method for setting hourly load for customers whose electricity consumption is metered on monthly level.

3.4.2 Regulation of the electricity distribution use-of-system charges

Distribution companies started applying regulated distribution use-of-system prices on March 1, 2010 upon positive opinion of the Agency on the charge proposal and upon the approval of the Government. The distribution use-of-system charges were modified on April 1, 2011 and on August 1, 2013 and the latter ones are still valid. Defined distribution use-of-system charges enable the customers connected to the distribution grid to purchase electricity from the suppliers in the open market. However, in 2013, the customers who were entitled to that right did not use the option of Supplier Switching.

Table 3-23: Trend of annual level of average approved distribution use-of-system charges – total Serbia (without APKM)

RSD/kWh

Consumption category	Annual level of approved charge		
	as of 01/03/2010	as of 01/04/2011	as of 01/08/2013
Medium voltage - total	1.171	1.385	1.557
Low voltage (0.4 kV I grade)	2.710	3.189	3.525
Mass consumption - total	2.113	2.432	3.268
- 0.4 kV II grade	2.381	2.721	3.747
- households	2.077	2.393	3.204
Public lighting	1.614	1.895	3.063
Total low voltage	2.196	2.537	3.303
TOTAL	1.825	2.302	2.930

Figure 3-7 indicates average electricity transmission and distribution use-of-system charges (in total) for Serbia (without APKM) by customers' categories in 2013. The total average transmission and distribution charge for all customers amounted to 2.7 RSD/kWh.

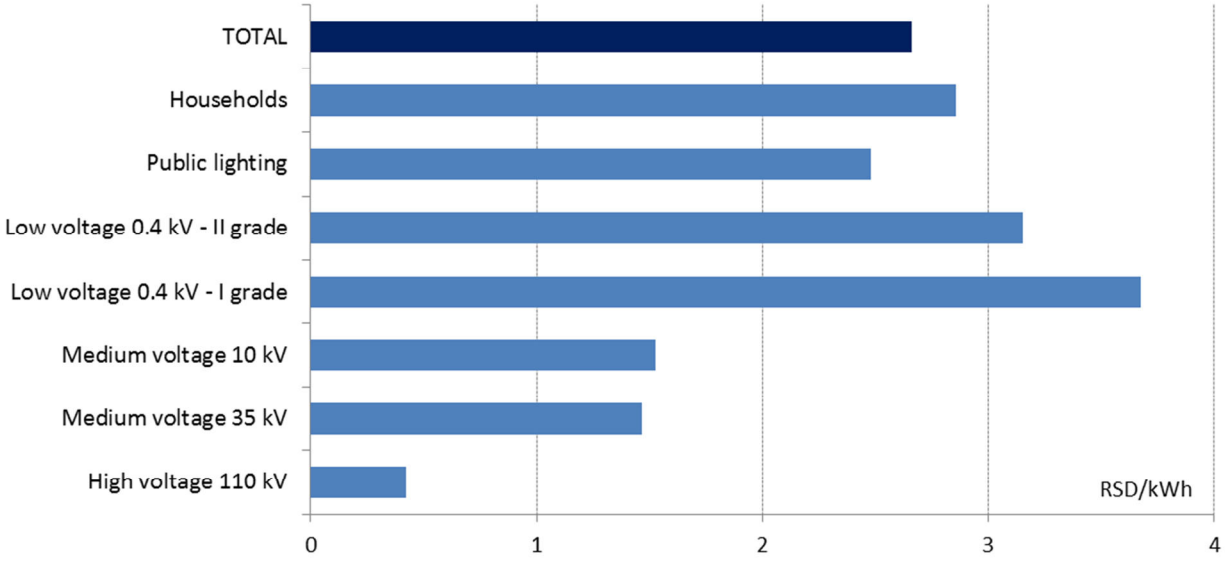


Figure 3-7: Average annual distribution use-of-system charge in 2013

The current distribution use-of-system charges for each company are available on the Agency's website (www.aers.rs).

During 2013, the Council of the Agency adopted two decisions on amendments of the Methodology for Setting Electricity Distribution Use-of-System Charges, upon public consultations with the distribution system operators and users.

After the establishment of DC EPS Snabdevanje, the greatest segment of the activities related to supply is performed by distribution system operators as additional activities, via service contracts. Strengthening DC EPS Supply in personnel and information terms would enable gradual assumption of these tasks. If these relations between daughter companies prolong, it will make the performance of certain activities of the Agency more difficult. These activities refer to regulation of distribution use-of-system charges, public supply prices as well – to the extent they are within the jurisdiction of the Agency, i.e. the insight into costs arising from such contract and assessment on whether they are justified.

3.4.3 Distributed electricity quantities

The electricity delivered to customers through the distribution system is almost fully withdrawn from the electricity transmission system. Only a small portion of it is provided from the power plants connected to the distribution system.

Table 3-24: Electricity quantities distributed in 2005 – 2013

GWh, %

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Distributed - Total electricity withdrawn by the distribution system	28,556	29,030	29,355	29,942	29,970	30,453	30,604	30,256	30,069
Withdrawn from the transmission grid (excluding customers connected to 110 kV)	28,449	28,977	29,315	29,902	30,392	30,558	29,922	30,183	29,965
Generation from power plants connected to the distribution system	57	53	40	40	61	46	48	73	104
Total delivered electricity quantities (excluding customers connected to 110 kV)	24,331	24,596	24,772	25,271	25,106	25,496	25,797	25,672	25,583
Distribution system losses	4,225	4,434	4,583	4,671	4,864	4,957	4,747	4,579	4,486
Distribution system losses (as % of total withdrawn energy)	14.7	15.3	15.6	15.6	16.2	16.3	15.5	15.1	14.9

Electricity losses within the distribution system exceed the technically justified ones. Such volume of losses can only partially be justified by inevitable technical losses due to a high share of low voltage consumption (even twice as high as in the EU). High losses are primarily due to unauthorised connections to the distribution network and unauthorised withdrawal (theft) of electricity. In addition, losses are increased due to long-term low investments into the distribution network. Another problem includes a big delay in terms of replacement of meters. In 2013, distribution system operators continued with the activities on losses reduction, mainly by greater control of metering points so as electricity theft could be identified. These activities, as well as slightly higher electricity on medium voltage and lower consumption on low voltage in comparison to 2012 led to certain loss reduction. On the other hand, overtaking transformer stations 110/x kV/kV from PE EMS led to increase in technical losses in the distribution grid. All the given effects caused losses of 14.9% of total delivered energy in 2013, which is around 100 GWh lower than losses which amounted to 15.1% in 2012.

3.5 Regulation of prices of regulated electricity supply

Pursuant to the 2004 Law, regulated electricity prices for final customers were applied on January 1, 2008 for the first time, upon the positive opinion of the Energy Agency on the PE EPS proposal and the approval given by the Government of the Republic of Serbia.

Regulated electricity public supply price for final customers was approved on August 1, 2013 in line with the 2011 Law. Average price increase for households amounted to 10.9%. The increase of public supply price for all customers amounted to 11.3%. The table below indicates the trend of regulated electricity price for final customers. In the High Voltage customer category (110 kV), the prices are given for customers connected to the part of the distribution grid of this voltage level (a small share of consumption) and they do not apply to customers connected to the transmission system.

Table 3-25: Annual level of average approved price for final customers

RSD/kWh

Consumption category	Annual level of approved price			
	as of 01/08/2008	as of 01/03/2010	as of 01/04/2011	as of 01/08/2013
High voltage (110kV)	3.250	3.509	4.078	4.514
Medium voltage – total	4.183	4.517	5.190	5.804
35 kV	3.917	4.231	4.667	5.209
10 kV	4.223	4.560	5.285	5.911
Total high and medium voltage	3.877	4.186	5.140	5.746
Low voltage (0.4 kV I grade)	6.118	6.613	7.565	8.501
Mass consumption – total	4.580	5.109	5.792	6.423
- 0.4 kV II grade	6.060	6.766	7.649	8.483
- households	4.382	4.887	5.544	6.148
Public lighting	4.446	4.557	5.243	5.743
Total low voltage	4.821	5.335	6.054	6.729
TOTAL	4.554	5.010	5.851	6.511

The current regulated electricity prices for final customers are available on the Agency's website (www.aers.rs).

Until 2013, all final customers purchased electricity at regulated prices. Since the beginning of 2013, all customers connected to the transmission grid have been obliged to purchase electricity at market prices. Their price has increased by 43% by average.

Figures 3-8 and 3-10 indicate comparative review of electricity prices for standard customers for households and industry in Serbia, EU countries and the region in the second half of 2013. They are calculated in line with EUROSTAT methodology. The prices in Serbia for both customer categories were the lowest ones in this period, not only in comparison to the developed European countries, but to the countries in the region which are approximately on the same level of economic development as Serbia.

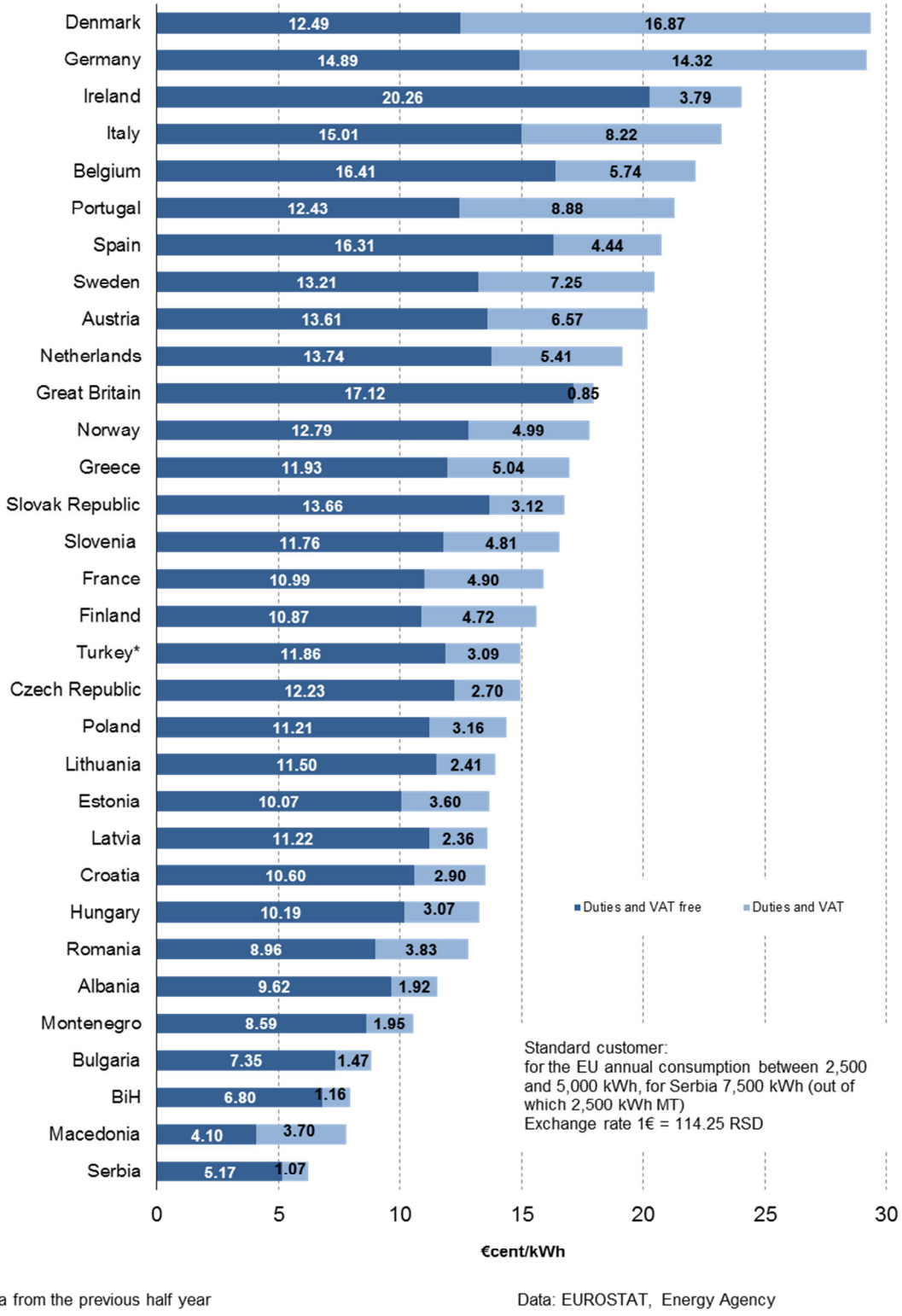
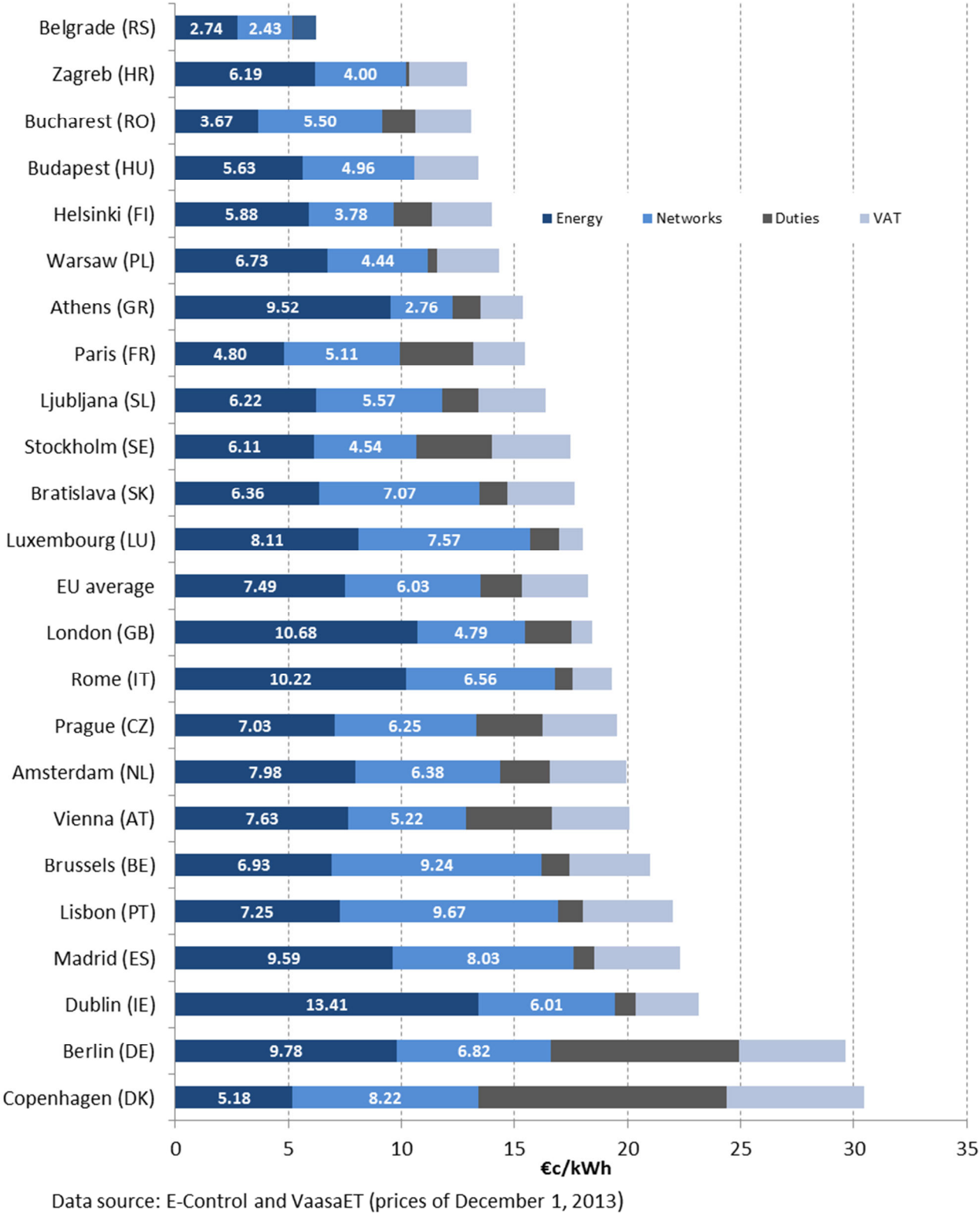


Figure 3-8: Electricity prices for households – second half of 2013

Figure 3-9 indicates a more detailed structure of retail electricity price for households in some of European capitals in December 2013. The data indicate that Serbia has the lowest energy prices and the prices of access to (transmission and distribution) grids.



Data source: E-Control and VaasaET (prices of December 1, 2013)

Figure 3-9: Structure of final electricity price for households in some European capitals in December 2013

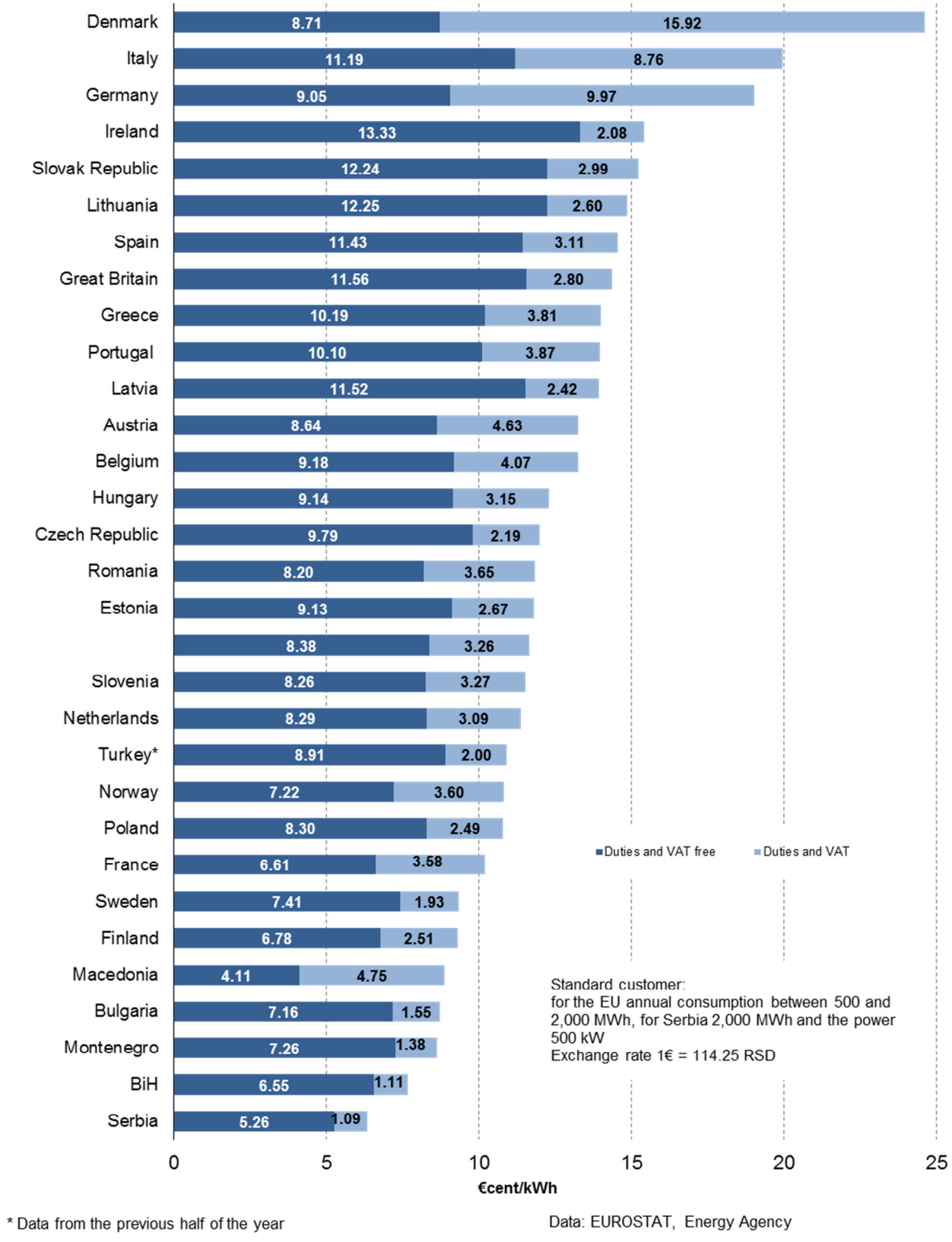


Figure 3-10: Electricity price for industry – second half of 2013

The current level of regulated electricity price is not economically justified which limits the future growth and development of the power sector to a great extent since, on one hand, it does not create the space for local reserve fund which could be used for investments, and on the other hand, it is destimulating other investors and does not stimulate energy efficiency enough.

3.6 Electricity market

Electricity market in Serbia includes:

1) bilateral electricity market;
2) balanced electricity market and
3) organised electricity market.

Electricity market players are the following:

- electricity producers;
- electricity suppliers;
- electricity public supplier;
- final customers;
- transmission system operator in case of provision of system services, system balancing, provision of the safe system operations and electricity purchase for loss recovery within the transmission system;
- distribution system operator in case of electricity purchase for loss recovery within the distribution system and
- market operator.

The scheme of electricity market is given in figure 3-11.

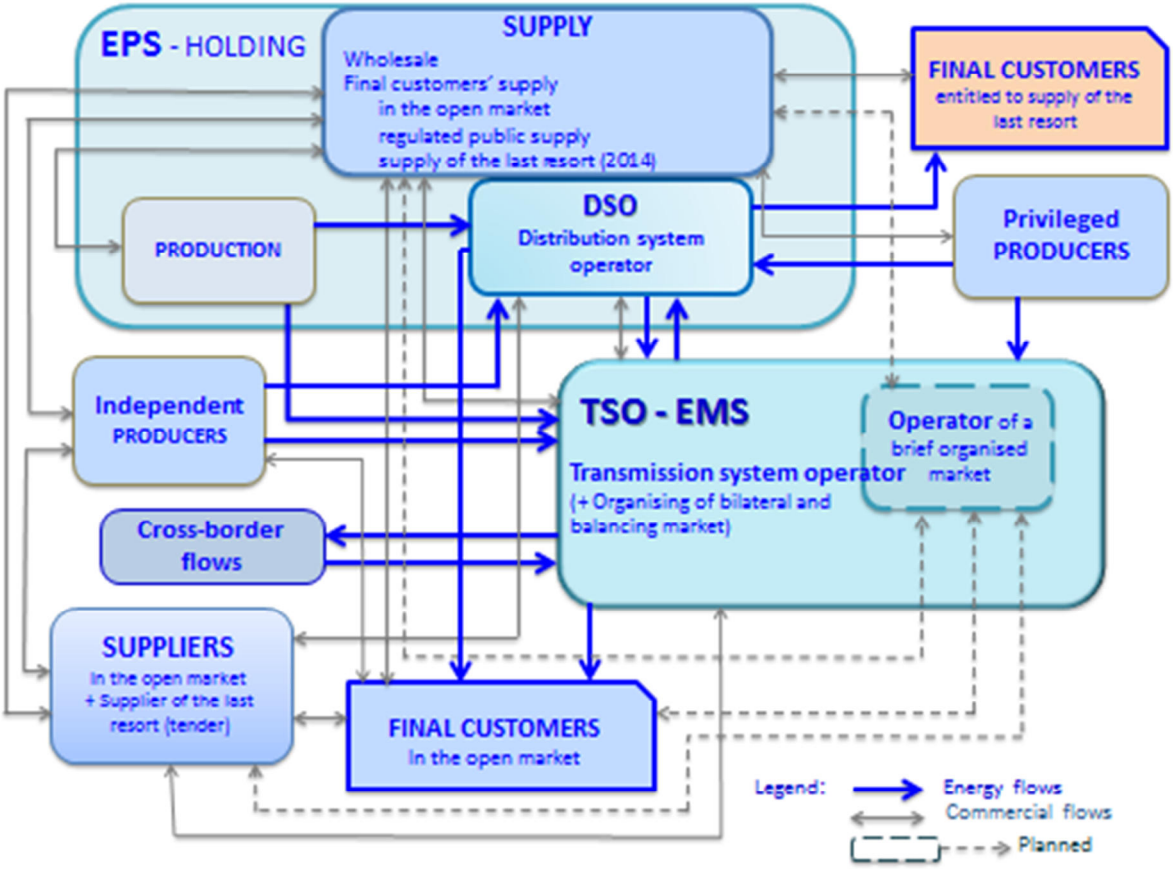


Figure 3-11: Electricity market scheme

3.6.1 Bilateral electricity market

Both electricity purchase and sales are organised on the bilateral market directly between market players, while on the wholesale bilateral market, the players traded in electricity at open market prices, while on the retail bilateral market, supply was organised at open market prices and regulated prices due to the fact that in 2013, customers whose facilities were connected to the transmission system were obliged to purchase electricity in the open market. Other electricity customers were supplied at regulated prices.

3.6.1.1 Open wholesale market

Open wholesale electricity market in 2013 was based on trade between suppliers since there are almost no independent electricity producers at all. The activities of the suppliers in the open market are mostly concerned with the field of cross-border exchange, mostly for transit through Serbia which is dominant due to the central geographic position of the power

system in the region and the 8 existing borders, as well as for the purpose of import meant to meet the demand of final customers and export. In 2013, export was considerably higher than the import. In 2013, there were 37 electricity market players entitled to nominate operation plan based on an adequate contract signed with PE EMS. 33 of them dealt with cross-border exchange while the remaining 4 dealt only with trade with suppliers on the internal electricity market in Serbia.

Table 3-26: Number of market players 2008 - 2013

Year	2008	2009	2010	2011	2012	2013
Number of market players	30	31	35	35	45	37

In 2013, electricity transit was slightly increased (commercial data) in comparison to 2012. The quantities of electricity purchased from PE EPS in the open market were greatly increased. During the winter season, import of PE EPS and electricity purchase quantities in the open market during winter were considerably lower, thanks to the increased production of PE EPS and reduced consumption in the winter period due to more favourable weather conditions. During other periods of the year, the sales of PE EPS to other suppliers in the open market grew. Those suppliers used this energy mainly for export.

PE EPS was the dominant supplier of final customers in the open market.

Figure 3-12 indicates electricity quantities for each of suppliers' activities in 2012 and 2013.

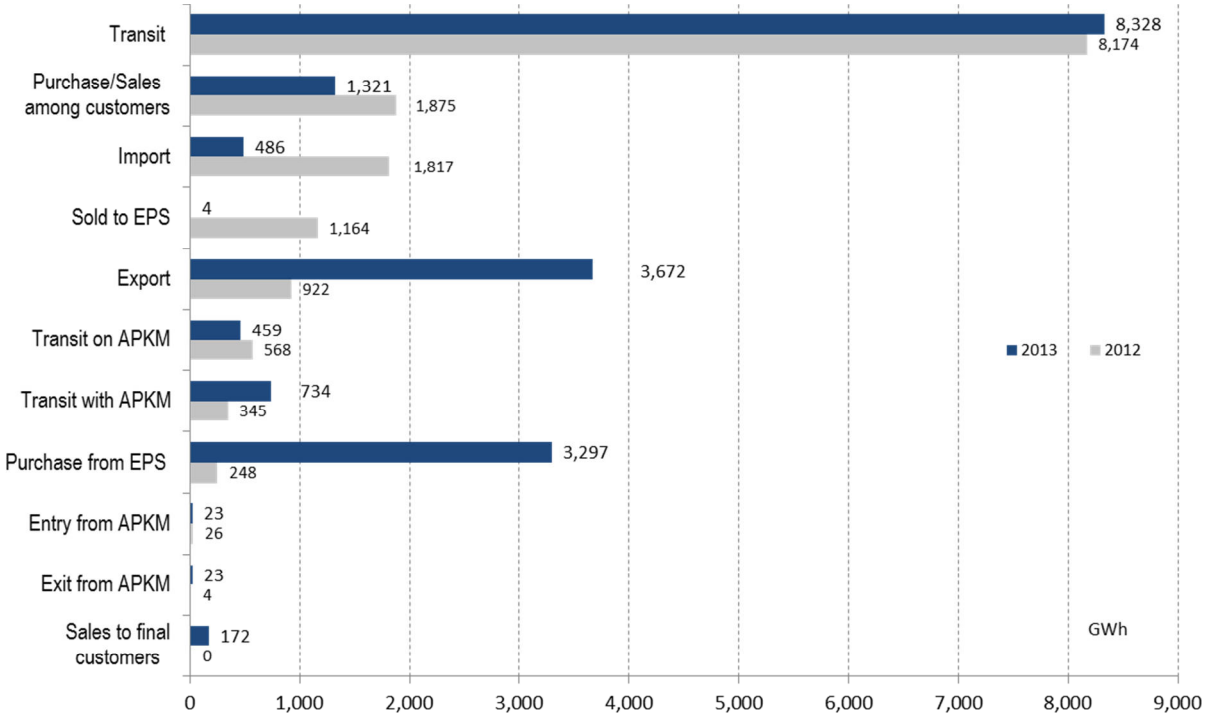


Figure 3-12: Electricity quantities by suppliers' activities during 2012 and 2013

The highest energy quantities were traded by the suppliers listed below. The data are given per most intensive activities:

- Transit: GEN-I LLC Belgrade, EFT TRADE LLC Belgrade, Danske commodities Serbia LLC Belgrade, Rudnap Group JSC Belgrade and EZPADA LLC Belgrade;
- Export: EFT TRADE LLC Belgrade, GEN-I LLC Belgrade, EZPADA LLC Belgrade, PLC INTERENERGO LLC, Belgrade;
- Purchase from PE EPS: EFT TRADE LLC Belgrade, GEN-I LLC Belgrade, EZPADA LL Belgrade, PLC INTERENERGO LLC, Belgrade, ALPIQ ENERGIJA RS, LLC Belgrade and
- Purchase/trade between suppliers: EFT TRADE LLC, Belgrade, ALPIQ ENERGIJA RS, LLC, Belgrade, Rudnap Group JSC Belgrade, GEN-I LLC Belgrade, EVN Trading LLC Belgrade, PLC INTERENERGO LLC Belgrade, EZPADA LLC Belgrade.

The scale of import, export and transit of suppliers for each month of 2013 is indicated in Figure 3-13.

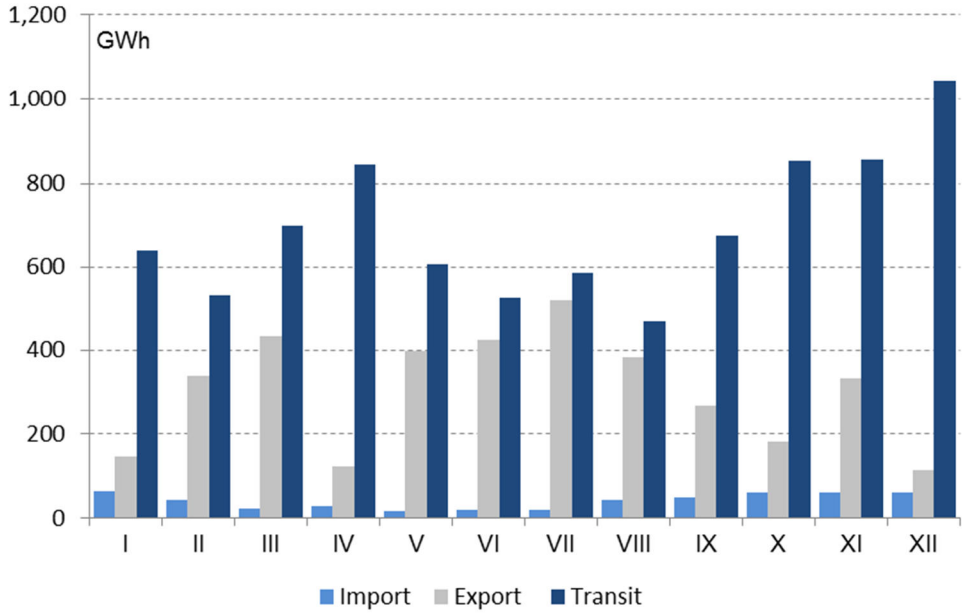


Figure 3-13: Suppliers' import, export and transit in 2013

Figure 3-14 indicates purchase and sales of electricity between suppliers and PE EPS. The figure proves that the purchase from PE EPS was present during the whole year and that it was considerable (over 100 GWh) during all months, except in January and December. It is also indicative that the trade corresponds with the months with high import. PE EPS purchased neglectable electricity quantities (4 GWh) from suppliers in the open market and this was the case only in December. The trade between other suppliers did not prove any season dependence.

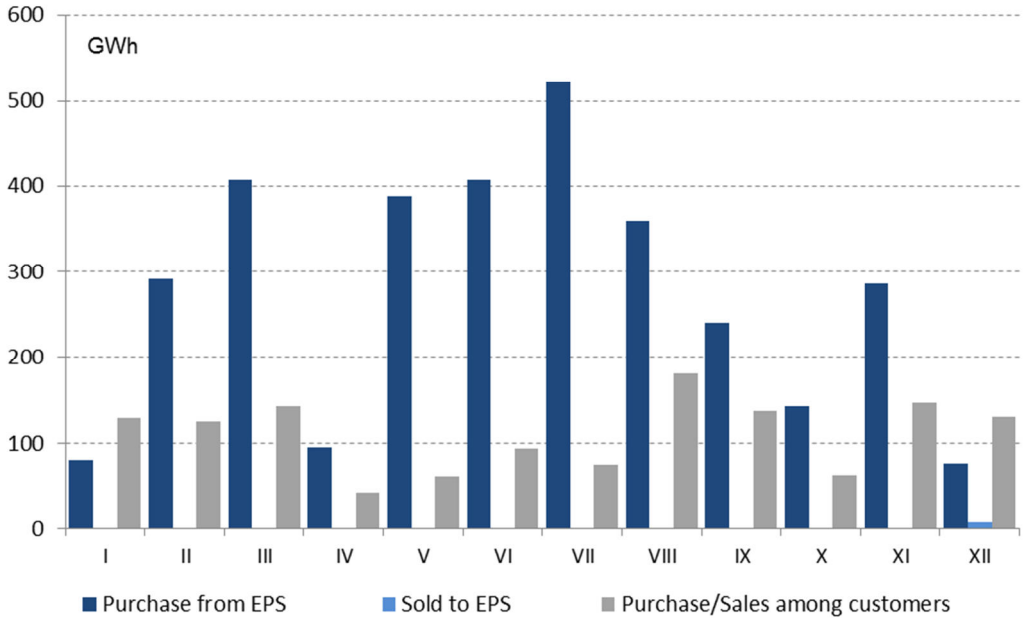


Figure 3-14: Purchase/sales between suppliers in 2013

Relevant indicators of development level and electricity market concentration in Serbia (without APKM) in 2013 are given in Table 3-27. In addition, the change in values of these indicators is given in percentages in comparison to their values in 2012. The following data are given for each of indicated supplier's activities:

- total electricity quantity;
- electricity share traded by three suppliers with the biggest scale of trade activities in total electricity quantity per each activity;
- value of Herfindahl-Hirschman Index (HHI), indicating realised level of market concentration[2] and
- evaluation of market concentration level per individual activities[3].

Table 3-27: Level of electricity market concentration in Serbia in 2013

Supplier's activity	Electricity quantity (GWh)		Share of three suppliers with the greatest trading scale [%]		Herfindahl-Hirschman Index - HHI		Market concentration level
	2013	2013/2012	2013	2013/2012	2013	2013/2012	2013
Trade with PE EPS							
selling to EPS	4	-99.7	100	44.9	7,678	293.7	High
purchase from EPS	3,297	1,229.2	54	-6.9	1,210	-22.0	Moderately high
sales	1,143	-39.2	63	6.8	2,013	6.4	High
purchase	1,298	-31	54	5.9	1,333	8.4	Moderately high
Electricity import and export							
import	486	-73.3	46	-32.4	1,156	-43.0	Moderately high
export	3,672	296.5	52	-13.3	1,210	-18.3	Moderately high
Transit							
transit	8,328	613.6	57	-17.4	1,194		

Market concentration level is still between moderately high and high in all suppliers' activities. (Since there was a very low electricity quantity sold to PE EPS, the 2013 concentration which grew 2.9 times in comparison to 2012 should not be considered as a relevant indicator.) Beside the fact that the market concentration index HHI in the field of electricity purchase from PE EPS reduced by 22%, the market concentration level is still moderately high. In comparison to 2012, the market concentration level between suppliers and for electricity purchase and sales recorded growth. Out of 30 active suppliers, there are 6 suppliers among three dominant ones in each of activities.

In the field of electricity import and export, market concentration reduced, but the concentration level is still moderately high.

3.6.1.2 Retail market

3.6.1.2.1 Electricity quantities delivered to final customers

In 2013, 27,998 GWh were sold and delivered to final customers, which is 5.6% more than in 2005. In comparison to 2012, final customer's consumption growth is negligible. However, in comparison to 2011, when final customers' consumption reached its maximum, 2.1% less electricity was sold. Electricity consumption in Serbia (without APKM) in the period 2005-2013, including electricity producers used to meet their own demand is given in Table 30-28.

[2] Herfindahl-Hirschman Index is defined as the sum of squares of share of a single company in the market. The lower the value, the more developed is market competition.

[3] Market concentration limits are the following:

HHI < 1000 – not concentrated

1001 < HHI < 1800 - moderately concentrated

HHI >1801 - highly concentrated market

Table 3-28: Electricity consumption structure in the period 2005-2013

GWh

Consumption category	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013/ 2012
Households	14,407	14,276	14,145	14,313	14,412	14,645	14,666	14,517	14,147	97.5
Other customers connected to low voltage (0.4 kV)	4,957	5,195	5,379	5,614	5,567	5,534	5,640	5,585	5,580	99.9
Customers connected to low voltage in total (0.4 kV)	19,364	19,471	19,524	19,927	19,979	20,179	20,305	20,102	19,727	98.1
Customers connected to medium voltage (10, 20 and 35 kV)	4,967	5,125	5,247	5,345	5,127	5,317	5,553	5,570	5,856	105.1
Customers connected to high voltage (110 kV)	2,183	2,337	2,430	2,570	2,216	2,555	2,751	2,312	2,415	104.5
Electricity delivered to final customers	26,514	26,933	27,201	27,842	27,322	28,051	28,609	27,984	27,998	100.1
TPP and HPP consumption to cover their own demand	521	662	447	431	492	436	476	473	503	106.3
Consumption category	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**28,501**	**100.2**

Total electricity consumption in 2013 was slightly higher than in 2012. The greatest consumption drop in comparison to 2012 of 2.5% was recorded in the households' category, which was primarily due to extremely warm winter and moderately warm summer. Consumption with customers on high and medium voltage grew by 4.5% and 5.1% respectively.

In the past several years, consumption was slightly increasing in the winter period in households. This did not occur in 2013 due to warmer winter. The Agency will still pay special attention to households' consumption during winter and analyse the need to introduce additional measures, so as irrational electricity consumption for heating purposes could be destimulated.

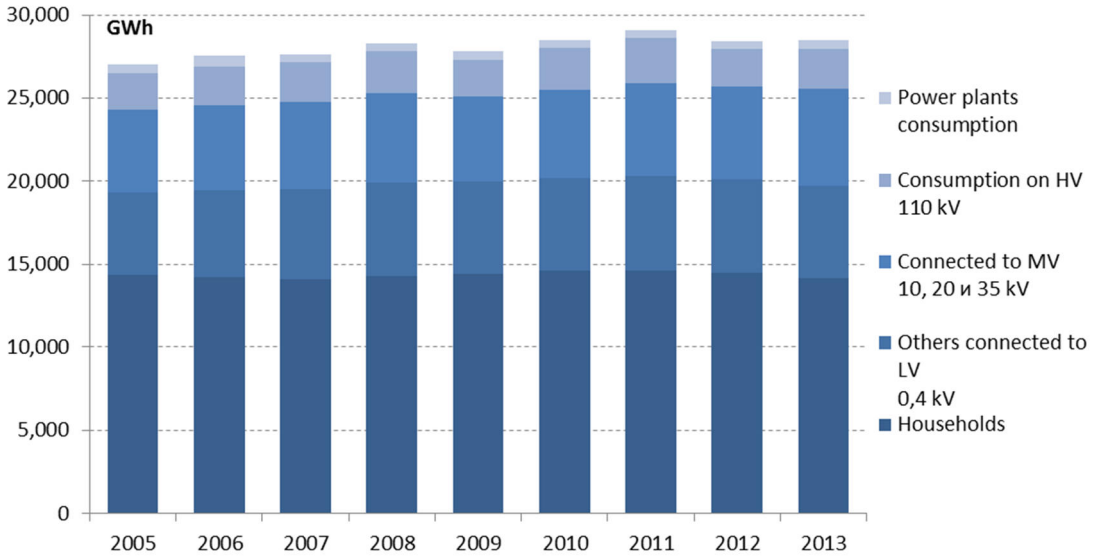


Figure 3-15: Electricity consumption structure in Serbia in the period 2005-2013 (without APKM)

Total number of metering points for customer delivery in Serbia without APKM (without metering points of facilities within Železnice Srbije/Serbian Railroad) at the end of2013 amounted to 3,580,579. Compared to 2012, the number was reduced by 0.3%.

Table 3-29: Number of metering points in 2012 and 2013

Consumption category	2012	2013	2013/2012
Households	3,207,385	3,184,522	99.3
Other customers connected to low voltage (0.4 kV)	380,647	391,712	102.9
Customers connected to medium voltage (10, 20 and 35 kV)	4,182	4,316	103.2
Customers connected to medium voltage (110 kV)	29	29	100.0
Total number of metering points	**3,592,251**	**3,580,579**	**99.7**

3.6.1.2.2 Electricity sales in the open market

In the beginning of 2013, all final customers connected to electricity transmission system, including the facilities of PE EPS and PE EMS, were obliged to purchase electricity in the open retail market. Out of 26 customers like these, only one customer switched his traditional supplier – PE EPS (Daughter Company EPS Snabdevanje was established within PE EPS). Therefore, out of 72 companies which were licenced to perform electricity supply in the open market at the end of2013, apart from EPS Snabdevanje, only one company was active – GEN-I LLC Belgrade.

Customers in the open market were supplied with 2,238 GWh of electricity, which is 8% of the total final customers' consumption. Out of the quantity, 172 GWh were supplied to a customer supplied by GEN-I, while 2,066% GWh were delivered to other customers who were supplied by EPS Snabdevanje.

3.6.2 Electricity balancing market

Being the transmission system operator, PE EMS is responsible for system balancing and provision of system services within the power system in the Republic of Serbia. Since the entry into force of the Electricity Market Code in January 2013, balancing responsibility concept has been introduced in the electricity market in Serbia. Pursuant to the Code, customers who are no longer entitled to public supply for all exchange points within the transmission grid transferred their balancing responsibility to a supplier. They did it by signing a contract on electricity sales, by rule, for full supply. Thereby, two balancing groups with the right to nominate day-ahead which also include electricity consumption were formed.

In 2013, PE EMS also lost its right to purchase electricity for the purposes of loss recovery in transmission grid at regulated prices. PE EMS purchased necessary electricity quantities in the open market, in line with public procurement procedure by signing a contract with PE EPS on full supply.

In line with the Contract on Participation in the Balancing Mechanism signed with PE EPS, for the purpose of keeping balance between the total electricity generation , consumption and nominated exchange blocks within their control area, PE EMS as the transmission system operator activated his balancing entities of secondary and tertiary regulation. Tertiary regulation was activated in line with the schedule for activating balancing entities which was submitted by PE EPS to the transmission system operator. Emergency exchange was performed in line with the contracts signed between PE EMS and the neighbouring transmission system operators. In 2013, activated energy for system balancing purposes amounted to 778 GWh, for which the total weighted settlement price amounted to 30.91 €/MWh. Bearing in mind the direction of activated balancing entities, it amounted to 51.99 €/MWh for upward activation and 13.85 €/MWh for downward activation.

Since the customers whose facilities are connected to the medium and low voltage distribution network, except for households and small customers were obliged to enter the open market as of January 1, 2014, there were 38 electricity market players who signed the Contract on Balancing Responsibility and became a balancing-wise responsible party until December 31, 2013 inclusive.

3.6.3 Organised electricity market

Pursuant to the Energy Law and the obligations arising from international agreements, organisation and administration of the organised electricity market and making connection between it and organised electricity markets of other countries is performed by the market operator. Market operator's organisation and operation, conditions and the manner of business operation of players within the organised electricity market and other conditions which provide for electricity market functioning in line with the law is regulated in more detail by the Government of the Republic of Serbia. Until the day the regulations on this enter into force, PE EMS as the energy entity holding the licence for electricity market organisation continues preparing for the beginning of operations of this market.

3.6.4 Common activities on the regional market development

A set of activities relevant for the whole region are organised within EnC, with active participation of the Agency representatives. The most important of them are given in following categories:

Wholesale market

In 2013, EnC launched a study for market coupling simulation in order to see the advantages of that model for the Eighth Region.

In 2013, upon the initiative of the electricity working group, ECRB presented a recommendation on the enforcement of the Regulation (EC) 543/2013 to the Permanent High Level Group. The recommendations are related to the transparency in the Energy Community Contracting Parties, with special reference to the status of Moldova and Ukraine. The objective of this Regulation is to provide a sufficient level of information for market players so as they could make efficient decisions on production, consumption and trade.

ECRB concluded that transmission system operators in the SEE countries do not implement the activities defined by the Regional Action Plan within deadlines. ECRB highlighted the need to remove the obstacles which prevent transmission system operators from compliance with these deadlines. There was an initiative to harmonise the deadlines of the Regional Action Plan and the conclusions of the Florence Forum and the activities on the realisation of the targeted EU market model.

Within the cooperation between the ECRB and ACER, ECRB still reports on the Eighth Region[4] in the official quarterly ACER report, as an addendum which includes the report on the progress of the Eighth Region on realisation of the Regional Action Plan which relates to cross-border issues.

In 2013, on the regional level, the activities of the Project Team for the establishment of the Auction Office for coordinated cross-border capacity allocation in the Southeastern Europe were continued. The allocation will be organised in line with the mechanism which, in the initial phase, will be based on the calculation of the value of available transmission capacity. Seated in Podgorica, the Project Team made a draft of auction rules based on existing auction rules of the Auction Office for Central East Europe. The draft was sent to transmission system operators which announced participation in the Project so as they could make comments to it. The ECRB was a mediator in the analysis of Auction Rules made by regulatory bodies by giving recommendation for Rules adoption. The objective of the Project Team is to help the Auction Office to start implementing monthly auctions in mid-2014 and annual auctions at the latest in 2015. Most of regional transmission system operators will participate in the work of the Office, as well as the Turkish transmission system operator. Serbian, Romanian and Bulgarian operators have not participated in the work of the Project team yet. However, PE EMS announced that upon the moment the Auction Office starts working, they will agree on joint auctions on relevant borders will the Office.

A multi-year Pan-European contract between the transmission system operators on mutual cost compensation for the use of neighbouring transmission grids (ITC Agreement) was valid during 2013, too. It was signed on February 9, 2011 by 40 transmission system operators originating from 34 countries, among which is the Serbian transmission system operator PE EMS as well, with unlimited duration period and in line with the Guidelines for mutual cost compensation to TSO for the use of neighbouring transmission grids.

Market of balancing energy

In 2013, ECRB made an analisys of existing balancing mechanisms in the region. Together with the EnC Secretariat, ECRB made an initiative for the creation of a regional balancing mechanism in the SEE region, in line with network code for balancing and regional initiatives of ACER. They realised that the production is still regulated in most of EnC Contracting Parties which represents an obstacle for the establishment of a market-oriented balancing mechanism. The first phase of balancing initiative includes regulatory support to transmission system operators so as they could draft contracts on the level of control block on joint purchase of balancing reserve which is in line with the network codes of ACER. Transmission system operators of the control block Slovenia-Croatia-BiH made an agreement at the end of2013 to conclude a contract in the beginning of 2014, while the transmission system operators of the control block Serbia-Macedonia-Montenegro started negoitations on signing a contract on joint purchase of balancing reserve in 2013.

Market monitoring

In 2013, ECRB considered the amendments to the Guidelines for regulatory market monitoring in the Southeastern Europe in terms of introduction of generation indicators. The Guidelines include a detailed description of the indicators based on which one can estimate whether the market is functioning in line with the adopted rules and based on the principles of transparency and non-discrimination. In the beginning, these guidelines would only include the recommendations to the regulators in the region for the collection of necessary sets of data for the supervision of cross-border parameters in our region. Afterwards, these recommendations would also include other parameters for market monitoring, in line with the achieved level of market openness and development and the availability of the data. The enforcement of these Guidelines is aimed at the establishment of a harmonised approach to regulatory tasks and the introduction of an option for regional market monitoring. Guidelines would not be legally binding. In 2013, the members of the ECRB Electricity Working Group had a role of a regional electricity market monitoring administrator, using a software for internet platform, rotating every month. The objective of this trial was to familiarise the software users with its functions as well as with the possibilties of different reporting models and detection of indicators' deviations. This software will serve for regulatory needs of monitoring national operators, as well as for regional monitoring, for different time horizons. Upon the completion of the software trial period for all participants on rotation principle, this trial will be continued. At the end of2013, ECRB Electricity Working Group agreed with the text of Guidelines for Electricity Market Monitoring and prepared the document to be approved by the ECRB in early 2014. The entity that will monitor the regional market, the administrator and the location of the market monitoring software have not been defined yet. This issue will be discussed in 2014 as well as the expansion of the validity of the Guidelines for the Operation of the Auction Office.

3.7 Monitoring and regulation of the quality of delivery and supply

In line with the obligations prescribed by the Law, the Agency adopted Rules on Monitoring Technical and Commercial Indicators and on Regulating Quality of Electricity and Natural Gas Delivery and Supply (Rules on Quality) in 2013. Rules on Quality were adopted on the basis of the five-year experience hitherto in data collection and monitoring electricity delivery and supply quality indicators as well as of international practice in the quality monitoring of services provided by energy entities. The Rules were established in order to harmonise the method of data registering and calculation of quality indicators which enables the establishment of a base of complete, reliable and comparable data on the indicators in order to compare and regulate them. The collected data and calculated indicators will enable the definition of demanded indicators' values in future phases and the method of assessment of the quality that has been reached. Upon

[4] 8th region includes the Energy Community Contracting Parties, together with six neighbouring countries to the Parties (Bulgaria, Greece, Hungary, Romania, Slovenia and Italy for interconnection overhead lines with Adhering Contracting Parties). It was established so as to implement a common procedure for congestion management and allocation of transmission capacities on the regional level.

that, the procedure in case of deviation from demanded indicators' values, depending on the deviation level will be also defined afterwards.

In the electricity field, the collection of data on delivery and supply quality was initiated five years ago. This is when Info Code was defined. Info Code prescribed the type, scale and format of the data on technical and commercial aspects of quality which have to be collected by energy entities. The Code also defined the deadlines for the submission of the data to the Agency. These data served for the calculation of indicators of technical and commercial aspects of quality in electricity delivery and supply field. Having the requirements of Info Code as a basis, most distribution companies have improved their practice and infrastructure necessary for data register, calculation of indicators and provision of the data on quality, especially in the field of registering continuity of delivery.

3.7.1 Continuity of electricity delivery

The continuity of electricity delivery which is characterised by the number and duration of electricity delivery interruptions is regularly monitored by the energy entities dealing with electricity transmission and distribution. The entities submit monthly reports to the Agency for each unplanned and planned interruptions within the transmission and distribution grid which lasted more than 3 minutes. Based on the submitted data, the Agency calculates the indicators of delivery continuity. This is how the annual indicators of delivery continuity in the transmission and distribution grid for unplanned and planned interruptions 2009-2013 were calculated.

3.7.1.1 Transmission network delivery quality indicators

Indicators of discontinuity of delivery in the transmission network which are monitored and calculated are the following:

- Power failure – undelivered power [MW] – total failed power on all measuring points where supply was interrupted;
- ENS [MWh] – total undelivered electricity which amounts to total undelivered electricity during all interruptions;
- ENS [%] – a share of undelivered electricity in total delivered electricity;
- AIT [min] – average interruption duration in minutes, a quotient of undelivered electricity and average power.

Indicators of discontinuity in delivery within the transmission network calculated in such a manner for the period 2009 - 2013 are given in Table 3-30.

Table 3-30: Indicators of discontinuity in delivery within the transmission network in the period 2009 - 2013

Interruptions		Power failure – undelivered power	ENS	ENS
		MW	MWh	%
2009				
	Planned	189	984	0.002
	Unplanned	3,589	1,525	0.004
	Total	3,778	2,509	0.006
2010				
	Planned	131	473	0.001
	Unplanned	2,790	1,418	0.004
	Total	2,921	1,891	0.005
2011				
	Planned	392	1,875	0.005
	Unplanned	3,212	3,364	0.008
	Total	3,604	5,239	0.013
2012				
	Planned	129	757	0.002
	Unplanned	2,390	1,395	0.004
	Total	2,519	2,152	0.005
2013				
	Planned	161	618	0.002
	Unplanned	1,770	747	0.002
	Total	1,931	1,365	0.004

Based on the data in the Table, it is obvious that the number of power failures and cases of undelivered electricity quantities due to unplanned interruptions was drastically reduced. It resulted from investments in transmission grid maintenance and development as well as from the upgrade of transmission system operation.

The values of the most frequent indicator of discontinuity within the transmission network AIT are given in Figure 3-16, separately for planned and unplanned interruptions and in total.

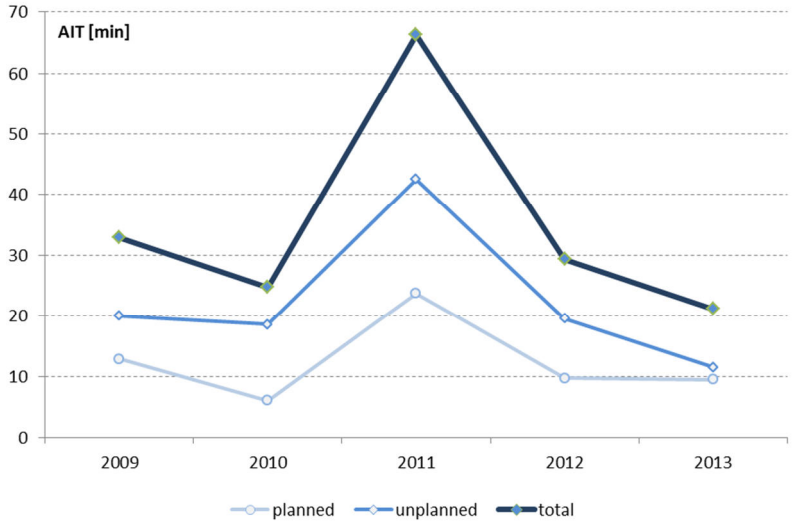


Figure 3-16: Average interruption duration

The diagram shows that there was a reduction of average duration of unplanned interruption in 2013. It amounted to 11.57 minutes and this is the lowest value in the past five years. Average duration of the planned interruption was still on the 2012 level and it amounted to 9.57 minutes. Values of unplanned interruption indicators are affected by PE EMS and, to a considerable extent, the interruptions which were caused by other energy entities, i.e. distribution system operators. The share of these interruptions increased by 16% in comparison to 2012. On the other hand, the share of vis major in unplanned interruptions was reduced by almost 50% in comparison to 2012. The decrease in the share of interruptions of unknown origin indicates that there has been an improvement of identification of interruption cause. Figure 3-17 indicates all the causes of unplanned interruptions and their share in the quantities of undelivered energy due to unplanned interruptions in 2013.

Considerable increase in the value of average duration of supply interruption in 2011 was caused by the increased number and duration of interruptions caused by vis major. The greatest affect was that of a storm wind in June 2011, when the undelivered electricity quantities amounted to 54% of total undelivered electricity in 2011. The duration of planned interruptions in 2011 is a consequence of investment works in the transmission grid, which resulted in considerable improvement of delivery quality in the following two years.

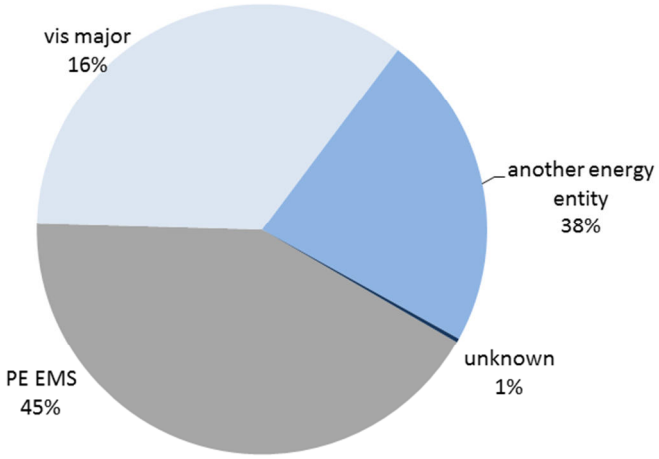


Figure 3-17: Causes of unplanned interruptions and their share in undelivered energy quantities due to unplanned interruptions in 2013

3.7.1.2 Distribution network delivery quality indicators

The indicators for the estimation of discontinuity of delivery in the distribution network are the following:

- SAIFI [number of interruptions/user] – average frequence of interruptions per each user, calculated as a quotient of the cummulative number of interruptions and total number of users and
- SAIDI [min/user] – average duration of interruptions in minutes per user, calculated as a quotient of cumulative duration of interruption and total number of users.

Indicators of discontinuity of delivery in the distribution network for the period 2009 - 2013, calculated in this manner, are given in Figure 3-18, both for planned and unplanned interruptions and in total.

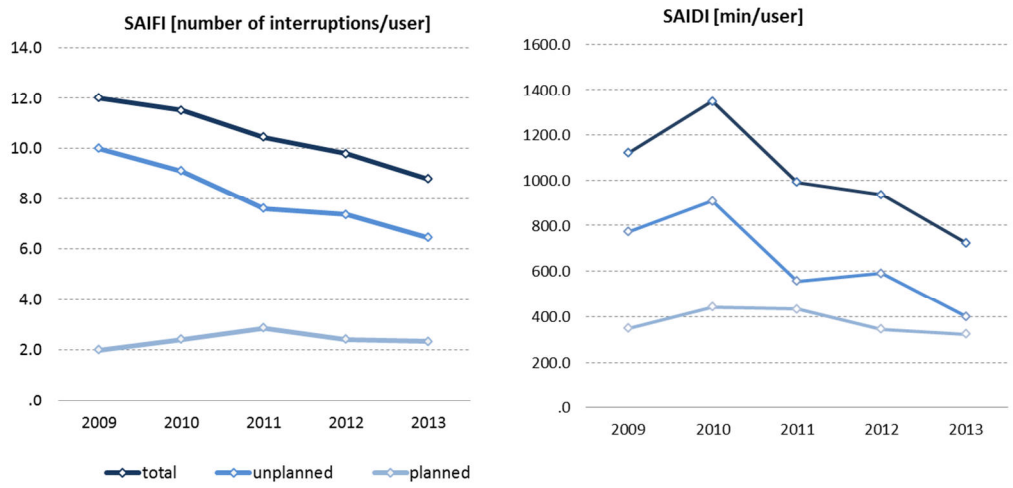


Figure 3-18: SAIFI and SAIDI for the period 2009 - 2013

There was considerable improvement with continuity indicators for unplanned interruptions in the distribution grid in 2013 in Serbia. The average frequency of unplanned interruptions was reduced by 1 interruption per customer, while the average duration of unplanned interruptions was decreased by almost 200 minutes per customer, which represents a huge improvement in comparison to 2012. This may indicate improvements in the activities of distribution companies in development planning and grid maintenance, distribution system management and interruptions management. However, it may also be the result of much favourable meteorological circumstances and more stable electricity consumption in 2013 than in 2012. Since all these values are still much higher than those in the European Union member states[5], it is necessary to take further measures in order to reduce the number of supply interruptions and reduce their duration. The average frequency and duration of planned interruptions were still on the high level in comparison to international practice.

The reasons for unplanned interruptions and their ratio in the total number and duration of interruptions are indicated in the Figure 3-19.

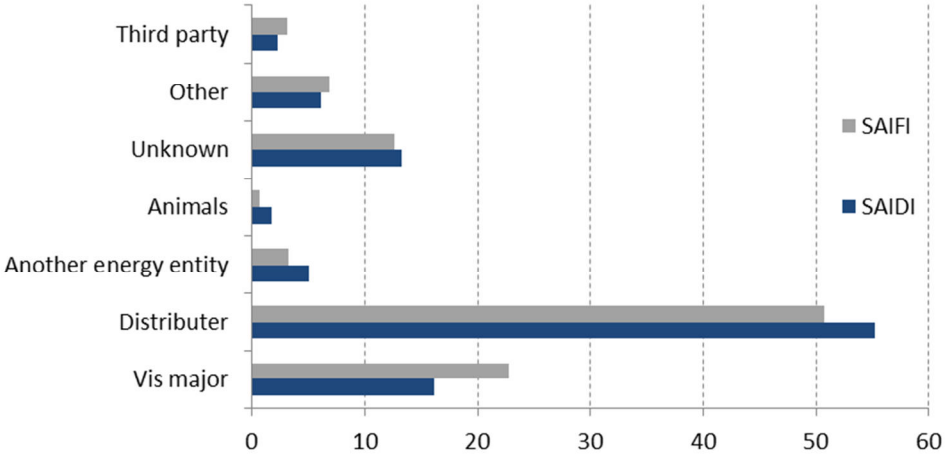


Figure 3-19: Share of causes of unplanned interruptions in SAIFI and SAIDI for 2013

[5] 5th CEER Benchmarking Report on the Quality of Electricity Supply 2011

The share of certain interruption causes within the number and duration of unplanned interruptions has not been considerably changed in comparison to 2012. The share of vis major, as well as of unknown and other causes are still very high and they amount to around 20%. If there were better identification of interruption causes, one could take adequate measures for the removal of causes of these interruptions and for the reduction of their number and duration.

The share of interruptions of certain duration in the total number of interruptions, as well as the share of occurrences causing interruptions of certain duration in the total number of occurrences causing supply interruption are given in Figure 3-20 for unplanned interruptions and in the Figure 3-21 for planned interruptions.

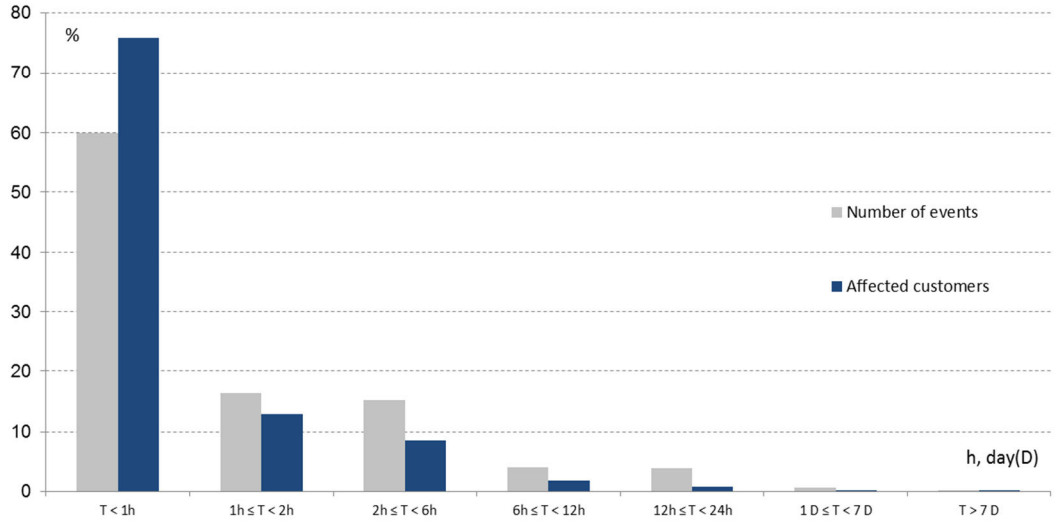


Figure 3-20: Share of occurrences/interruptions depending on the interruption duration – for unplanned interruptions

As it was the case last year, the greatest number of unplanned interruptions lasted shorter than 1 hour, and for each longer interruption, the number of unplanned interruptions was decreasing.

In case of planned interruptions (Figure 3-20), there is a strikingly great number of occurrences causing interruptions which lasted between 2 and 6 hours as well as the number of these interruptions. This indicates that it is necessary to implement measures so as to reduce the number of interruptions which last longer than two hours, primarily by the improvement of the interruptions management system and better planning of maintenance works, as well as by investments into the distribution system.

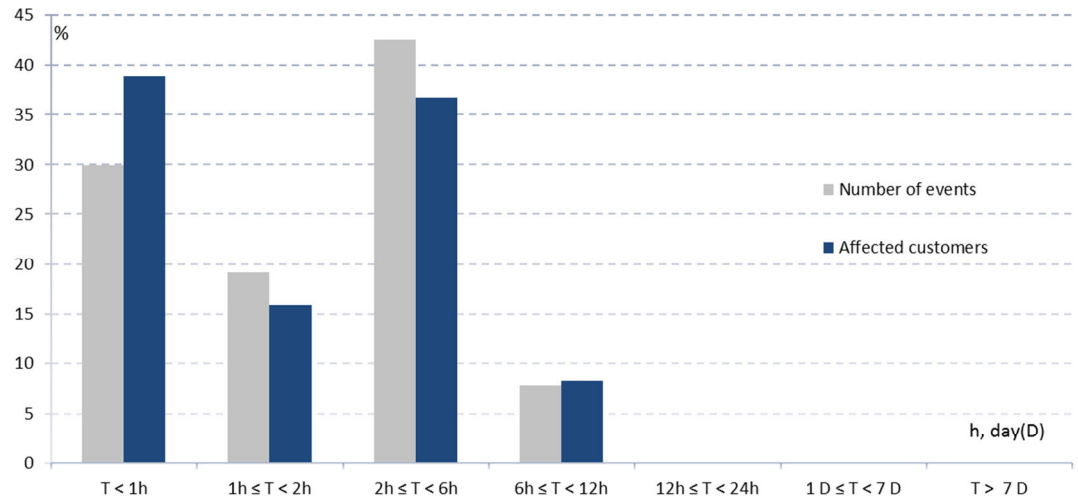


Figure 3-21: Share of events/interruptions depending on the interruption duration – for planned interruptions

3.7.2 Quality of electricity

The quality of electricity is the other aspect of technical quality, along with delivery continuity, which the system operators are obliged to monitor in line with the newly-adopted Agency Rules. The Rules defined the obligation of the system operators to record disruptions in the operations which cause the voltage and frequency to exceed the limits prescribed by the Decree on Delivery and Supply Conditions and Transmission, i.e. Distribution System Code. In the practice

hitherto, system operators did not submit the reports on bad voltage conditions within the grid to the Agency, except from the aspect of users' appeals which are being monitored within commercial quality area.

3.7.3 Commercial quality

Rules on Quality which were adopted by the Agency define the data which system operators, i.e. suppliers are obliged to register so as to enable commercial quality monitoring, i.e. monitoring compliance with the prescribed obligations as regards an energy entity's treatment of customers, i.e. services users.

Based on former Info Code, the entities started developing practice of regular submission of the report on commercial aspects of quality to the Agency. That provided the data for the calculation of some indicators of commercial quality on national level in 2012 and in 2013. Despite considerable engagement of distribution companies in this field, registering data on commercial quality has not still reached the expected level of reliability and accuracy which could provide a relevant analysis of the indicators in the national and international framework.

In 2013, for the purpose of monitoring commercial quality, public enterprises for electricity distribution submitted quarterly reports as well as the annual report to the Energy Agency on regular basis with all the data given in the scale and format as defined by the Agency.

For analytical purposes, the collected data were grouped in four main categories of biggest importance for customers which describe commercial quality. They include:

1) connection, load shedding and disconnection;
2) metering and billing;
3) removal of technical obstacles in delivery and
4) customer services.

The given data, especially those on average time for the performance of certain obligation are of indicative character since they were calculated on the basis of the available groups of data which were incomplete as some energy entities were still not in a position to submit the relevant data.

3.7.3.1 Connection, loadshedding and disconnection

The data registered by system operators on applications for system connection are grouped and given Table 3-31.

Table 3-31: Connection applications by voltage levels

Connection applications			MV	LV	Total
Number	of submitted applications		287	31,281	31,568
	Settled applications	Approving connection	245	22,557	22,802
		Denying connection	0	451	451
		Settled differently	25	5,376	5,401
		Total	270	28,384	28,654
		Within 30 days	168	22,366	22,536
%	Settled applications in comparison to the submitted ones		94	91	91
	Applications approving connection in comparison to the number of settled ones		91	79	80
	Settled applications within 30 days		62	79	79
Average time	Necessary for settlement – given in days		21	19	20

In comparison to 2012, the number of submitted applications for connection as well as the number of decisions approving connections is somewhat lower, while the number of applications which were denied was considerably higher. The average time necessary for the adoption of the decision is reduced by around 5 days in comparison to 2012.

Table 3-32: Connection of facilities by voltage levels

Connection		MV	LV	Total
Number	of connected facilities	161	38,537	38,698
	of facilities connected within 15 days' period	76	24,926	25,002
%	of facilities connected within 15 days' period	47	65	65
Average time – given in days	Necessary for connection since the day all the conditions are met	13	9	11

The indicators describing the connection of a facility (Table 3-33) remained almost the same as in 2012, including the average time necessary to perform connection as of the day the conditions for connection are met which amounts to 11 days.

In 2013, there were over 300,000 disruptions registered due to unsettled liabilities as regards electricity in the prescribed deadline, which is 20% more than in 2012. The average time of reconnection upon the removal of causes of disruption/disconnection, i.e. upon unjustified disruption/disconnection differs in different DCs for electricity distribution. It is between 1 and 3 days and it is corresponds to the values in 2012.

3.7.3.2 Metering and calculation

Regular controls of meters were planned for 313,327 meters in 2013 and 303,542 customers had their meters checked, i.e. 97% of them. Out of them, 31,495, i.e. around 10% had irregularities. There were 23,384 extraordinary checks of metering points requested by customers, and checks were organised for 20,856 points (around 90%) and there were irregularities in 47% of extraordinary checks (9,776). The irregularities were removed in 9,740 cases.

Upon registering the disappearance, restraints or damage of meters, in 97% of cases, proper metering was provided within 2 days upon registration. Average time necessary to provide proper metering since the moment of disappearance, restraints or damage of meters within the categories of high, medium and low voltage amounted to between 2 and 4 days, while in mass consumption category average time period was longer, different in different distribution company - 8 days at most.

In 2013, around 1% out of total number of bills – 42,098,194 was corrected. More than half of them were corrected due to improper reading. The reasons for billing corrections and their share in the total number of corrected bills are given in Figure 3-22:

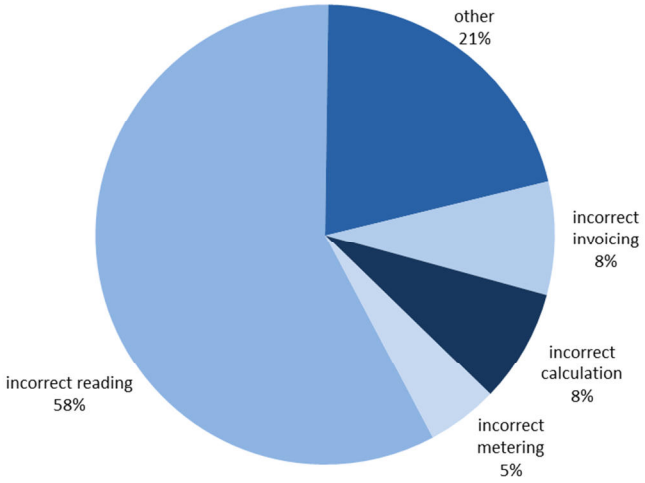


Figure 3-22: Reasons for bills correction and their share in the total number of corrected bills

Average time for settling complaints against bills was different in different distribution companies and amounted to 8 days at most.

3.7.3.3 Removal of technical disturbances in delivery

Out of the total number of customers' requests for the removal of voltage disturbances which are repeated in a long time frame (1281), more than 74% of requests (949) were justified. Voltage disturbances were removed in 712 cases, i.e. 75% of justified cases, which represents several percent lower performances than in 2012.

The average time during which the distributor removed the voltage disturbances upon customer's request, i.e. the time since the submission of the request until the moment the voltage is checked on the spot and the customer is informed amounted to around 5 days, while the average time since the voltage disturbances are registered till their removal amounted to between 16 and 17 days, as the data submitted by some distribution companies say.

The register of the data on average time necessary for a distributer to address the request of a customer for the removal of voltage disruptions, i.e. the time since the submission of the application until voltage is checked on the spot and informing the customer as well as on the average time since the voltage disruption establishment till its removal should be improved so as one could get a more realistic picture of the quality of such service.

3.7.3.4 Customer services

Despite the progress that has been made on the improvement in providing services to customers in customers' and contact centers (call centers), data which could serve for the assessment of the quality of services in these centers are still unavailable in most cases due to the lack of adequate information support for data monitoring and registration. In their future activities on customer services quality monitoring, energy entities will have to improve, i.e. start registering these data.

3.8 Security of electricity supply

Since 2000, through investments in revitalisation and modernisation, reliability and efficiency of units in thermal power plants and lignite mines which provide fuel for thermal power plants and partly for hydro power plants were increased. In the transmission network, too. In addition, revitalisation of some power plants contributed to the increase in the power on the transmission threshold (maximum power that could be delivered to the grid). It all lead to the increase of production in thermal power plants and their reliability reached 96.2% in 2013, which is comparable to the reliability and usage rate of such plants in the EU. The reliability of thermal power plants amounted to 99.7%. Thereby, in comparison to 2000, even without new production capacities, security of electricity supply was drastically increased while the import demand was decreased.

It is generally assessed that the security of supply in 2013 was on a satisfactory level. Apart from the reliable work of the power plants, favourable meteorological circumstances and inflows above the average level on hydro power plants entrances.

Transmission network did not present a limit to the security of supply.

There are occurrences of occasional low voltage cases and electricity interruption on lower voltage levels, in the high distance of the distribution grid. However, since cold weather was not recorded, it contributed considerably to a more reliable work of the distribution system than it was the case in the previous period. Nonetheless, even along with these improvements, this part of the power system has much lower quality of performance than other parts. It is partly due to the lack of investments in the distribution grid during the last decade.

The Government of RS adopted a draft Energy Sector Development Strategy of the Republic of Serbia for the period until 2025 with projections until 2030. PE EPS does not have an updated long-term development plan.

3.8.1 Consumption forecast

Until 2025, one can expect electricity consumption growth in Serbia of below 1% by average per year. These assumptions take into account consumption growth in the industrial sector as well as the implementation of measures for energy efficiency increase in all consumption sectors. The unknown tempo of the economic growth makes the development of the consumption forecast more difficult and increases the risk for potential investors.

3.8.2 Generation adequacy

New power plants are necessary so as to cover the electricity consumption growth and so as to replace the power plants which, due to their long lifetime and inability to comply with environment protection requirements, will be shut down. PE EPS is either preparing or announcing further revitalisation and modernisation of existing power plants and the construction of new ones, which would be organised either independently or with strategic partners. Some other investors also announced the construction of new power plants. Ever greater share of the demand in the future will be covered by the use of renewable energy sources in line with the National Action Plan for the Use of Renewable Energy Sources of the Republic of Serbia - around 3,100 GWh until 2020.

The Decision of the Ministerial Council of EnC allowed the postponement of the enforcement of the EU Directive on Large Combustion Plants, i.e. on the emission of sulphur and nytrogene oxides until 2023 with special conditions. The result of this is that over 1,100 MW to which this Directive refers and which provide more than 15% of the total production at the moment, can be still operating until that deadline in line with a certain operating regime. The urgent construction of new power plants is postponed to the extent provided by the Directive.

Thermal power plants

The revitalisation and modernisation of thermal units which have not gone through that procedure is planned in the future. The first unit which will be revitalised and modernised is TPP Kostolac B1 of 350 MW capacity.

Due to its age, low efficiency, high production costs and environment protection, the oldest thermal power plant Kolubara, generator A4 of 32 MW is practically out of operation while the generators A1 and A2 with total installed capacity of 64 MW will be also out of operation in nearby future.

A new thermal capacity that is most likely going to be constructed among other facilities is the third unit in TPP Kostolac B, of 350 MW capacity fuelled by lignite. In 2013, there was a follow-up of activities which should lead to the best modalities for the construction of power plants which will be constructed afterwards in order to provide long-term security of supply, including the replacement of thermal power plants which will be out of operation eventually. The candidates include thermal power plants fuelled by coal and thermal power plants fuelled by gas with gas-steam combined cycle.

Capacities in lignite mines should be timely harmonised with the demand of thermal power plants. New mines need to be opened and exhausted mines replaced by them.

Hydro power plants

Revitalisation and modernisation of hydro power plants Đerdap 1 of 1,058 MW capacity, Zvornik of 96 MW and other hydro power plants is either planned or already initiated.

Apart from the revitalisation and modernisation of existing hydro power plants, the construction of hydro power plants on Ibar, Morava and Drina rivers as well as of the pumped-storage hydro power plant Bistrica of 4x170 MW is either considered or being prepared.

3.8.3 Use of renewable energy sources

The Decree on Incentive Measures for Electricity Generation through the use of renewable energy sources and combined electricity and heat energy generation prescribes incentive measures for electricity generation through the use of renewable energy sources and for energy purchase – feed-in tariff in more detail. Incentive measures include setting procurement prices based on power plant type where electricity is produced through the use of renewable energy sources and based on installed capacity.

The conditions for obtaining the privileged producer status are prescribed in the Decree on conditions for obtaining the privileged electricity producer status and criteria for evaluation of these conditions. The implementation of the given decrees is in the jurisdiction of the ministry in charge of energy issues.

Final prices for privileged electricity producers are given in the Table 3-33. These prices were valid in 2013.

Table 3-33: Final prices for privileged electricity producers in 2013

No.	Type of power plant	Installed capacity (MW)	Incentive measure – final price (c€/ kWh)
1	Hydro power plants		
1.1		Up to 0.5 MW	9.7
1.2		From 0.5 MW to 2 MW	10.316 – 1.233*P
1.3		From 2 MW to 10 MW	7.85
1.4	Existing infrastructure	Up to 2 MW	7.35
1.4	Existing infrastructure	From 2 MW to 10 MW	5.9
2	Biomass fired power plants		
2.1		Up to 0.5 MW	13.6
2.2		From 0.5 MW to 5 MW	13.845 – 0.489*P
2.3		From 5 MW to 10 MW	11.4
3.	Biogas fired power plants		
3.1		Up to 0.2 MW	16.0
3.2		From 0.2 MW to 2 MW	16.444 – 2.222*P
3.3		over 2 MW	12.0
4.	Power plants fired by landfill gas from plants for municipal waste water treatment		6.7
5.	Wind power plants		9.5
6.	Solar power plants		23
7.	Geothermal power plants		7.5
8.	Combined cycle power plants fired by fossil fuels		
8.1		Up to 0.2 MW	C_o =10.4
8.2		From 0.2 MW to 2 MW	C_o = 10.667–1.333*P
8.3		From 2 MW to 10 MW	C_o = 8.2
8.4	Existing infrastructure	Up to 10 MW	C_o = 7.6
9.	Waste power plants		
9.1		Up to 1 MW	9.2
9.2		From 1 MW to 10 MW	8.5
	Correction of final price for CHP plants fired by natural gas	$C = C_o$ *(0.7* G/27.83 + 0.3) C – new final price of electricity Co – reference final price set based on natural gas price for energy entities dealing in natural gas retail for tariff customers purposes which does not include the charge for PE Srbijagas Novi Sad natural gas transmission system in line with the tariff rate “energy source” amounting to 27.83 RSD/ m3 G (RSD/ m3) – new natural gas price for energy entities dealing with natural gas retail for tariff customers purposes which does not include the charge for PE Srbijagas Novi Sad natural gas transmission system in line with the tariff rate “energy source” and P – (installed) power.	

In 2013, a new Decree on Final Prices for Privileged Power Producers was adopted and these prices will be valid in 2014, as given in Table 3-34.

Table 3-34: Final prices for privileged power producers in line with the new Decree – valid as of 01/01/2014

No.	Type of power plant	Installed capacity (MW)	Incentive measure – final price (c€/ kWh)
1	Hydro power plants		
1.1		up to 0.2 MW	12.40
1.2		from 0.2 MW to 0.5 MW	13.727-6.633* P
1.3		from 0.5 MW to 1 MW	10.41
1.4		from 1 MW to 10 MW	10.747-0.337* P
1.4		from 10 MW to 30 MW	7.38
1.4	on the existing infrastructure	up to 30 MW	5.9
2	Biomass-fired power plants		
2.1		up to 1 MW	13.26
2.2		from 1 MW to 10 MW	13.82 – 0.56*P
2.3		over 10 MW	8.22
3.	Biogas-fired power plants	from 5 MW to 10 MW	11.4
3.1		up to 0.2 MW	15.66
3.2		from 0.2 MW to 1 MW	16.498 – 4.188*P
3.3		over 1 MW	12.31
3.4	Fired by biogas of animal origin		12.31
4.	Power plants fired by landfill gas and gas from municipal waste water treatment plants		6.91
5.	Wind power plants		9.20
6.	Solar power plants		
6.1		On the facility up to 0.03 MW	20.66
6.2		On the facility from 0.03 MW to 0.05 MW	20.941 – 9.383*P
6.3		On the ground	16.25
6.4		from 0.2 MW to 2 MW	C_0 = 10.667–1.333*P
6.5		from 2 MW to 10 MW	C_0 = 8.2
7.	Geothermal power plants		
7.1		up to 1 MW	9.67
7.2		from 1 MW to 5 MW	10.358-0.688*P
7.3		over 5 MW	6.92
8.	Waste fired power plants		8.57
9.	Coal-fired combined heat and power plants	up to 10 MW	804
10.	Gas-fired combined heat and power plants	up to 10 MW	8.89
	Regular annual correction of incentive final price s due to inflation in the Euro zone is done in February every year, starting from 2014, in the following manner:	$C_1 = C_0 * (1 + P_{inf}/100)$ where: C_1 – new incentive final price , C_0 – former incentive final price , P_{inf} – annual inflation in the Euro zone published by the competent European Union institution and given in %.	
	Final price correction for natural gas-fired combined heat and power plants	$C = C_o$ *0.36 +0.64* Г/35.59 where: C – new purchase electricity price Co – incentive final price set on the basis of the tariff “energy source” of 35.59 RSD/m^3, from the natural gas price at which a supplier which supplies public suppliers sells natural gas to public suppliers and which does not include the natural gas transmission use-of-system charges with the Public Enterprise “Srbijagas” Novi Sad, P - (installed) power G – new tariff “energy source” from the natural gas price at which a supplier who supplies public suppliers sells natural gas to public suppliers and which does not include the natural gas transmission use-of-system charges with the Public Enterprise “Srbijagas” Novi Sad, given in RSD/m^3.	

Electricity quantities withdrawn from privileged producers in 2013 are indicated in the Table 3-35.

Table 3-35: Electricity withdrawn from privileged producers in 2013

MWh, %

Renewable energy sources/ Fuel for combined generation	2012	2013	2013/2012
Water flows	50,962	61,664	121.0
Fossil fuels (coal, fuel oil and natural gas) – combined production	15,498	21,063	135.9
Biogas	6,335	14,052	221.8
Biomass	0	5,052	-
Waste	0	14	-
Solar energy	81	1,490	1,839.5
Wind	207	682	331.1
TOTAL	**73,083**	**104,017**	**142.3**

In line with the EnC Treaty, Contracting Parties are obliged to reach certain percentages of increased share of renewable energy in gross final energy consumption until 2020. Therefore, Serbia assumed the commitment to have 27% of gross energy final consumption provided from renewable energy sources.

The Agency has no specific authority in the field of renewable energy sources, except for licence issuance for the facilities with installed capacity of 1 MW or more.

3.8.4 Construction of new transmission capacities

In 2013, there were regular maintenance and overhaul activities as well as facilities reconstruction within the transmission system. The activities were in line with the adopted plans to the greatest extent. There was a follow-up in the activities in newly-established investment projects, but there were no large facilities which were constructed and commissioned. To name important investment activities, one should mention the completion of the reconstruction of 110kV of overhead line and securing two-direction supply for car factory in Kragujevac. In addition, three new transformer stations 110/x kV/kV were connected to the transmission system. The reconstruction of transformer stations TS 220/110 kV Belgrade 3, TS 400/220 kV Obrenovac, TS 220/110/35 kV Belgrade 5 and switching station RP 400 kV Drmno were continued.

Transmission system operator is obliged by the Energy Law to prepare a transmission system development plan every year for the following 10-year period. The development plan is based on the amended version of the former one, in line with new insights and requirements, bearing in mind the experience in transmission network operation and maintenance. The plan is being harmonised with the plans of neighbouring distribution and transmission system operators. The position of the Serbian transmission system within a synchronised area of “Continental Europe” is considered and there is active participation in the preparation of a Ten Years Network Devleopment Plan as well as the Regional Investment Plan within ENTSO-E.

The transmission system development plan for the period from 2014 till 2024 which was prepared by PE EMS and submitted to the Agency for approval is basically harmonised with the provisions of the Energy Law. In comparison to the previous plan, some of its elements have been improved and further harmonised with the ENTSO-E criteria. The plan was drafted in compliance with the Pan-European Ten Years Network Devleopment Plan and regional investment plans. This document has been significantly improved in comparison to the previous one.

Analyzing the state of play in the transmission network within the Transmission System Development Plan, taking into consideration consumption forecast and expected commission of new generation units, PE EMS proposed the construction of new elements of transmission network, i.e. rehabilitation or upgrade of existing ones. Thereby, existing and expected congestions could be removed and the efficiency of transmission system operations could be increased.

The plan defines several projects which jointly represent a unique project known as the Trans-Balkans Corridor. The most important activities within this Project include:

- construction of a new two-direction overhead interconnector line of 400 kV TS Pančevo 2 – TS Rešica (Romania) which will contribute significantly to the security of supply in the whole region;
- a follow-up of the construction of TS 400/110 kV Belgrade 20 of installed capacity of 2x300 MVA which is a condition for secure supply of central Belgrade zones;
- construction of a new overhead line of 400 kV TS Kragujevac 2 – TS Kraljevo 3;
- upgrade of the grid from 220 kV to 400 kV voltage level in the western Serbia region – increasing the hub voltage level Bajina Bašta to 400 kV voltage level and the construction of a new two-direction 400 kV overhead line between TS Obrenovac and TS Bajina Bašta and
- construction of 400 kV interconnection overhead lines between Serbia, Montenegro and Bosnia and Herzegovina.

Bearing in mind planned demand, construction of new sources, planned development of regional and European grid, and these projects will contribute to the security of supply and reliability of system operations. The conditions and tempo of

realisation of the interconnection between Serbia, Montenegro and Bosnia and Herzegovina will be considered in more detail upon the completion of additional study documents.

In terms of the transmission network of 220 kV voltage level, the PE EMS has a strategic plan to withdraw this network gradually, i.e. to increase its voltage level to 400 kV. However, until this is completed, there is a plan to construct TS 220/110 kV Bistrica and to increase the installed capacity in some of 220/110 kV transformer stations.

In terms of the development of the 110 kV transmission network, the Development Plan offers solutions for the existing areas with insufficient security of electricity supply, first of all, for the area of Raška and south Banat. The Plan also includes the solutions for connection diagram of overhead lines coming along the new transmission facilities, as it is the case of the cities of Belgrade and Niš. The Development Plan was harmonised with the distribution system operator's development plans, in compliance with the data submitted by electricity distributors to the PE EMS during the preparation of the Plan.

3.8.5 Distribution system operators' measures

In line with the new Energy Law, distribution system operator is obliged to adopt ten-year network development plans, harmonised with the transmission system development plan and connection applications. In 2013, distribution system operators prepared of ten-year development plans and most of them submitted them to the Agency. The plans were hamornised with the transmission system development plans and the plans of neighbouring distribution systems.

In order to compensate for the delay in investments, remove the drawbacks and improve system operations, a set of measures for an increase of security of energy supply of customers connected to the distribution network are planned. First of all, these measures include the completion of initiated investments and new investments in network expansion, revitalisation or replacement of existing old-fashioned equipment in the distribution network as well as other activities in terms of modernisation of operations and business activities. A plan for transfer of metering devices, switchboards, connection lines, installation and equipment in the switchboard and other devices within the connection in the facilities of existing customers or producers is an integral part of the plan.

In 2013, the following works were either completed or initiated within the distribution systems:

- On OHLs:
  - Construction and reconstruction of a set of OHL within the distribution network;
  - Construction of low voltage network, in line with the local growth in electricity consumption and transmission capacities development as well as with the need to upgrade quality of supply;
- On TSs:
  - Completed construction of 3 new TS 110/x kV/kV and these connected to the transmission system;
  - Reconstruction and expansion of capacities was done on a certain number of existing TSs;
  - During 2013, 53 transformer stations of 110/x kV which were owned by PE EMS have been overtaken and their reconstruction and modernisation is planned in the following ten-year period, although the legal procedure of overtaking has not been completed yet. It is expected in 2014;
- Metering and management:
  - Upgrade of metering devices and further development and introduction of remote reading system has not been done to the expected scale primarily due to unsuccessful tenders which prevented launching more numerous procurement procedures for new electricity meters. However, progress has been made since technical conditions which should be complied with by metering equipment, primarily electricity meters are harmonised.

3.8.5.1 Smart grids

The replacement of meters in the distribution companies with more modern models is planned. PE EPS is preparing a project on the modernisation of the system for electricity distribution and supply so as to provide monitoring, protection and automatised optimisation of the work of all system parts and installations between system users, power plants, network and connected facilities. In 2011, a credit was approved for the realisation of this task. The tender for the procurement of necessary equipment, primarily new meters, was being prepared. It was also decided to replace the meters in those areas with significant level of losses in electricity distribution first. In 2012, a tender was launched, but it was suspended because of appeals which were filed. For this reason, the procurement of a substantial number of new meters was postponed for the future. In 2013, a feasibility study on meters replacement was done again so as to continue the procedure of metering equipment procurement.

Well advanced network and measurement systems will enable high reliability and quality level of delivered electricity. They will stimulate better consumption management and more dynamic electricity market, as well as considerate reduction of technical and commercial losses.

3.8.5.2 Reduction of electricity losses in the distribution grid

By organising some of investment activities in 2013 (increased grid capacity, replacement of meters, dislocation of metering points) and increasing of the collection rate, the distribution system operators initiated the trend of reduction of energy loss in grids.

However, the scale of these activities was not sufficient and they did not match the level of losses and the need to cut the losses to an acceptable level in technical terms.

Future investment measures which should contribute to electricity loss reduction in distribution grid to a much greater extent include:

- construction of new network facilities, overhead lines and transformer stations;
- transfer of metering devices, switchboards, connection lines, installation and equipment in the switchboard and other devices within the connection in the facilities of existing customers and their operation in line with technical regulations and distribution system code;
- procurement and installation of new meters with most of customers;
- modernisation of the remote measuring system and consumption management;
- improvement of technical and business system for calculation and collection of electricity bills and
- activating existing devices and construction of new ones for reactive power compensation.

4. NATURAL GAS

4.1 Sector structure and capacities

4.1.1 Organisational and ownership structure

The basic structure of the natural gas sector of Serbia is established upon the adoption of the Energy Law in 2004 and division of the Public Enterprise Petroleum Industry of Serbia (Naftna industrija Srbije) into three companies. Gas sector structure at the end of2013 is given in Figure 4-1.

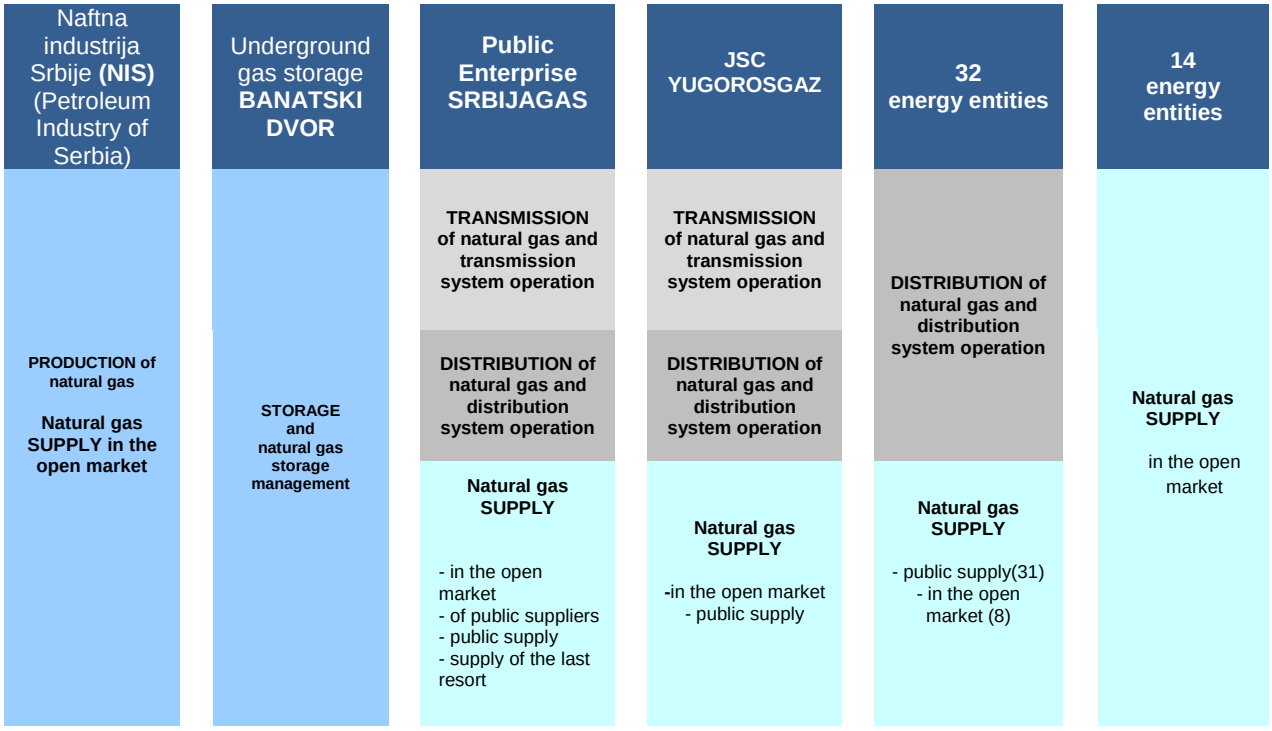


Figure 4-1: Organisational structure of the natural gas sector

Natural gas production is performed solely by Petroleum Industry of Serbia JSC (Naftna industrija Srbije a.d.) (hereafter: NIS). Natural gas production is not a regulated activity.

Natural gas transmission and transmission system operation are performed by natural gas transmission system operators: PE Srbijagas and Yugorosgaz JSC.

Distribution system operators perform the activities of distribution and distribution system operation. Apart from PE Srbijagas and Yugorosgaz JSC, there are 31 companies performing these activities. Most of them are owned by municipalities and towns, some of them are public-private partnership, and some of them are private companies. Since all distribution system operators have less than 100,000 connected final customers, they are also entitled to perform supply, in the regulated market and in the open market and they are not obliged to unbundle the system operator and supplier (pursuant to the Article 18 of the Law). At the end of2013, 33 distribution system operators held public supply licences. Licence for supply in the open market was held by 10 distribution system operators as well as by 14 energy entities which deal in supply solely. In 2013, there were only three suppliers active in the open market: PE Srbijagas, Russian – Serbian Trading Corporation, JSC, RST and Elgas Energy Trading, llc.

Yugorosgaz JSC was established in 1996. Yugorosgaz JSC activities include procurement of natural gas from Gazprom for all customers in Serbia, as well as natural gas transmission, distribution and supply. Current shareholders are Gazprom Moskva - 50%, PE Srbijagas - 25% and Central ME Energy and Gas, Vienna - 25%.

Storage operator performs natural gas storage and storage operation. There is only one storage, Natural Gas Underground Storage Banatski Dvor, llc, founded and owned by PE Srbijagas (49%) and Gazprom Germania (51%). This was defined on the basis of the Agreement of the Republic of Serbia and the Government of the Russian Federation on Cooperation in Oil and Gas Industry (Law on Confirmation of the Agreement of the Republic of Serbia and the Government of the Russian Federation on Cooperation in Oil and Gas Industry “Official Gazette of RS – International Agreements, No. 83/08) concluded in January 2008, while the agreement on the realisation of the joint project was signed in October 2009.

PE Srbijagas is the dominant market player with 64% of share in total natural gas sales in 2013.

On 23/07/2013, based on a public tender procedure, the Government of RS adopted a decision on appointing PE Srbijagas as a supplier which will supply public suppliers with gas in the period between 01/09/2013 and 01/01/2015. The price at which public suppliers are supplied was established in line with tender conditions and it was adopted by the Government of the Republic of Serbia. The methodology of the application of the price was defined by tender conditions.

4.1.2 Unbundling of energy activities and operator's independence

All distribution companies in Serbia unbundled distribution, supply and other energy related or non-energy related activities in terms of accounting.

In 2013, being a vertically-integrated company, Yugorosgaz, JSC Belgrade legally unbundled a transmission system operator from its company. Upon this and upon the confirmation of compliance with prescribed conditions, in September 2013, upon the request of a new company – Yugorosgaz-Transport LLC Niš, the Agency issued a licence for transmission and transmission system operation. Thereby, the condition prescribed by the Law as regards the unbundling of the operator Yugorosgaz-Transport llc Niš in the legal form from the vertically integrated company Yugorosgaz llc, Belgrade was met.

The new transmission system operator Yugorosgaz-Transport llc Niš did not submit the Program for Non-Discriminative Behaviour until the end of 2013 for the Agency's approval. This is an obligation in line with the Law which regulates the guarantees of independence in decision-making procedures and organisation from the vertically-integrated company.

Transmission system operator within PE Srbijagas has not been unbundled from the vertically integrated company. For this reason, the conditions for the exercise of the Agency's competence as defined by the Law were not met.

Table 4-1: Unbundling of energy activities

	Transmission/ Production	Transmission/ Supply	Distribution/ Supply
Ownership unbundling	YES	NO	NO
Unbundling in terms of legal form	YES	NO	NO
Separate headquarters	YES	NO	NO
Separate website	YES	NO	NO
Unbundled accounts	-*	YES	YES
Audit of unbundled accounts	-*	YES	YES
Publishing separate financial reports	-*	NO	NO
Separate management bodies without managers from other energy activities	-*	NO	-**
Program for Non-Discriminatory Behaviour	-*	NO	-**
Appointed person for Program implementation	-*	NO	-**
Annual report on Program implementation	-*	NO	-**

* Transmission and production unbundled in terms of ownership
** This obligation is not applicable for distribution system operators with less than 100,000 final customers

4.1.3 Natural gas transmission, distribution and storage capacities

Natural gas transmission and distribution systems are developed in line with strategic documents and programmes of the Republic.

4.1.3.1 Transmission

At the end of2013, the length of the transmission system of PE Srbijagas amounted to 2,273 km in north and central Serbia, while the length of the Yugorosgaz JSC transmission system amounted to 125 km in southern Serbia (table 4-2). PE Srbijagas owns 95% of the gas transmission network, while Yugorosgaz JSC owns the remaining 5% of gas transmission lines.

Table 4-2: Length of the transmission network in Serbia in 2010 - 2013

Year	2010	2011	2012	2013
Network length (km)	2,258	2,321	2,391	2,398

Around 5 million people live in the area with developed transmission grid which provides for the potential for further development of the gas system and natural gas consumption growth.

Table 4-3 indicates the most important technical characteristics of transmission systems of PE Srbijagas and Yugorosgaz JSC.

Table 4-3: Important technical characteristics of the transmission system

Important technical characteristics of the transmission system	PE Srbijagas	Yugorosgaz JSC
Capacity	≈ 18 mil m^3 / day	≈ 2.19 mil m^3 / day
Pressure	16 - 75 bar	16 - 55 bar
Length	2,273 km	118 km
Diameter	DN 150 - DN 750	DN 168 - DN 530
Lifetime – average	30 years	10 years
Compressor station, power	4,4 MW	-
Number of entries into the transmission system	12	1
From another transmission system	1	1
From production fields – domestic gas	10	-
From the storage	1	
Number of exits from the transmission system	265	5
Metering and regulating stations on transmission system exit	262	5
Overtaking stations	2	-
Entry into Yugorosgaz transmission system	1	-
Interconnector towards Bosnia and Herzegovina	1	-
Natural gas storage	1	

Gas transmission systems are not equipped adequately with metering and data collection devices which is necessary for market development. Transmission system operators were obliged as early as of 2011 to provide automatic collection and processing of the data on natural gas flows with collection interval of 24 hours or shorter for all delivery points from the transmission system. However, this has not been completed yet.

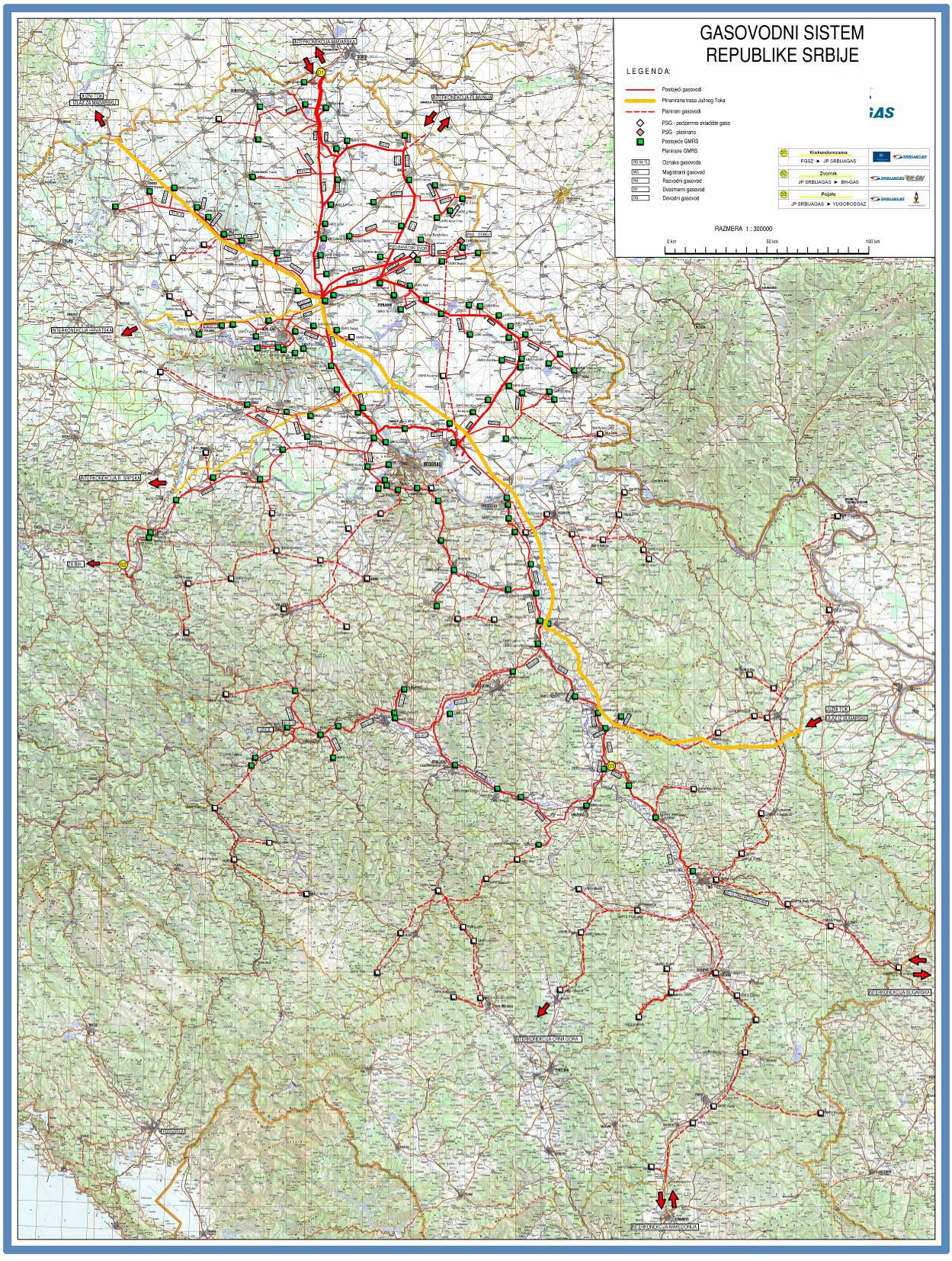


Figure 4-2: Natural gas transmission system of the Republic of Serbia

4.1.3.2 Distribution

The length of the distribution network has increased from 2010 to 2012 by 10.8%, i.e. to 15,839 km thus creating the conditions for the connection of new customers.

Table 4-4: Length of the distribution network in Serbia in 2010 - 2013

	2010	2011	2012	2013
Length of distribution network (km)	14,299	14,628	15,348	15,839

The total length of the distribution network (without connections) at the end of2013 amounted to 15, 839 km. There are over 261,000 active connections.

Table 4-5: Length of distribution network and number of delivery points on December 31, 2013

No.	Natural gas distributor	Legal form	Distribution grid length (m)	Number of active connections
1	7. Oktobar, Novi Kneževac	PUC	49,652	1,559
2	Beogas, Belgrade	LLC	211,326	8,394
3	Beogradske elektrane, Novi Beograd	PUC	330,710	3,877
4	Boss petrol, Trstenik	LLC	24,084	26
5	Čoka, Čoka	PUC	27,190	809
6	Drugi oktobar, Vršac	C	198,040	12,780
7	Elgas, Senta	PE	58,980	1,762
8	Gas – Feromont, Stara Pazova	JSC	565,399	16,647
9	Gas – Ruma, Ruma	PE	448,735	6,977
10	Gas, Bečej	LLC	192,840	1,643
11	Gas, Temerin	PE	266,500	6,612
12	Graditelj, Srbobran	PUC	150,200	2,277
13	Grejanje, Zrenjanin	C	510,564	20,404
14	Ingas, Inđija	PE	357,464	9,404
15	Interklima, Vrnjačka Banja	LLC	103,050	957
16	Komunalac, Novi Bečej	PE	121,158	2,307
17	Kovin – Gas, Kovin	PE	333,094	3,994
18	Loznica - Gas, Loznica	LLC	125,640	1,309
19	LP - Gas, Belgrade	LLC	38,050	1,731
20	Novi Sad – Gas,Novi Sad	C	2,362,175	44,684
21	Polet, Plandište	PUC	239,300	3,592
22	Resava Gas, Svilajnac	LLC	48,220	298
23	Rodgas, Bačka Topola	JSC	204,704	1,260
24	Sigas, Požega	LLC	19,987	283
25	Sloga, Kanjiža	JSC	171,300	4,013
26	Sombor – Gas, Sombor	LLC	172,000	1,750
27	Srbijagas, Novi Sad	PE	7,033,227	82,429
28	Srem - Gas, Sremska Mitrovica	PE	262,428	4,615
29	Standard, Ada	PUC	41,939	988
30	Suboticagas, Subotica	PUC	402,310	8,822
31	Toplana – Šabac, Šabac	PUC	170,271	2,275
32	Užice – gas, Užice	LLC	120,003	262
33	Vrbas – Gas, Vrbas	PE	182,664	1,618
34	Yugorosgaz, Beograd	JSC	296,116	657
	TOTAL		**15,839,320**	**261,015**

* LP Gas has the network and customers, but its status is not settled.

The share of the distribution network of PE Srbijagas in total length of distribution network amounts to 44%.

4.1.3.3 Storage

Underground gas storage Banatski Dvor is located on the depleted gas deposit whose capacity used to amount to 3.3 billion cubic meters of natural gas. Total area of the storage amounts to around 54 square kilometers. There is currently 450 million cubic meters of available capacity while maximum productivity in the withdrawal process amounts to 5 million cubic meters per day. After the second phase of construction is completed, the storage will have the capacity of 800 million cubic meters. Banatski Dvor is 22 km east to the Zrenjanin city and 44 km from the main gas pipeline junction point in Gospođinci. The underground storage is connected by two gas pipelines to the gas pipeline junction point in Elemir.

Banatski Dvor storage was commissioned in November 2011. If the demand in storage capacities arises, the storage capacity may be extended to 800 million m^3. Bidirectional gas pipeline Gospođinci – Banatski Dvor enables unhindered and full connection of the underground gas storage with the transmission system. The basic data on this gas pipeline are the following:

- length 42,5 km
- nominal diameter DN 500
- maximum working pressure: pmax=75 bar
- maximum gas flow:
  - withdrawal UGS B. Dvor Q=415,000 m^3/h (10 million S m^3/day)
  - injection UGS B.Dvor Q=230,000 m^3/h (5.5 million S m^3/day)

This storage contributes to security of natural gas supply in Serbia.

In 2013, maximum technical capacity of injection was 2.6 million m^3/day and maximum withdrawal capacity was 5 million m^3/day. With reference to realised flows, maximum daily injection quantities in 2013 amounted to 2.5 million m^3/day and maximum daily withdrawn quantities recorded 4.2 million m^3/day.

In 2013, the cushion gas quantities in the storage did not change and they amounted to 530 million m^3 during the year. Storage users injected 342 million m^3 of commercial gas and withdrew 268 million m^3 from it.

347 million m^3 of gas were injected from the transmission system into the storage, and 266 million m^3 were withdrawn into the transmission system.

The difference between the quantities injected into the storage and the quantities withdrawn from the storage, as compared to the quantities delivered and overtaken from and into the transmission system represent the quantities necessary to cover storage system consumption.

4.2 Natural gas consumption and supply sources

In 2013, 2,465 million m^3 of natural gas were available from import, local production and underground storage.

Most of natural gas quantities are provided through import from the Russian Federation based on the long-term contract. Annexes are added to the contract every year. In 2013, natural gas import amounted to 1, 884 billion m³, out of which 1,155 million m³ from the Russian Federation in line with a long-term contract, while 729 million m³ were imported via other contracts (from Kazahstan).

Local production amounted to 468 million m^3 did not change greatly in comparison to 2012 production (it is 3% lower) and its share in total consumption amounted to 19%.

Table 4-6: Natural gas supply sources and consumption in 2012 and 2013

	2012 million m^3	2013 million m^3	2013/2012
Production delivered to transmission system	466	451	97
Production delivered to distribution system	18	17	94
Total production	484	468	97
Import from the Russian Federation – via long-term contract	705	1,155	164
Import from other sources – via other contracts	813	729	90
Total import	1,518	1,884	124
Quanities withdrawn from the underground storage	161	113	70
TOTAL AVAILABLE QUANTITIES	2,163	2,465	114
Injected into the storage	120	251	209
Gross consumption	2,043	2,214	108
Transmission system losses and consumption	2	6	300
Distribution network losses	19	16	84
For final consumption	2,022	2,192	108

In 2013, 2,192 million m^3 of natural gas were consumed – 8% more than in 2012. Consumption decreased by 11% in households, 8% in district heating companies, while it increased by 22% in the industrial sector. In comparison to 2012, when around 5 million m^3 of natural gas were used from line pack, natural gas from line pack was not used to cover the demand in 2013.

The number of natural gas customers in 2013 was increased by 2,044 in comparison to 2012. At the end of2013, it amounted to 261,015. Out of it, households accounted for 249,006 or 95.4%. This implies that only 10% of all households in Serbia have a gas connection.

Table 4-7: Number of customers at the end of 2012 and 2013

Consumption category	Број купаца		Difference 2013-2012
	2012	2013	
Households	247,387	249,006	1,619
District heating companies	68	73	5
Industry and other	11,516	11,936	420
Total	258,971	261,015	2,044

Consumption structure for customer categories is given in Table 4-8.

Table 4-8: Consumption structure in 2012 and 2013

Consumption category	2012 million m^3	2013 million m^3	– 2013/2012
Households	245	218	89
District heating companies	570	526	92
Industry and other	1,189	1,448	122
Total	2,004	2,192	108

Households consumption accounts for 10% of final natural gas consumption in 2013. Disctrict heating companies consumption accounted for 24%, while industry and other customers covered 66%.

The structure of the final natural gas conusmption in 2013 is given in Figure 4-3.

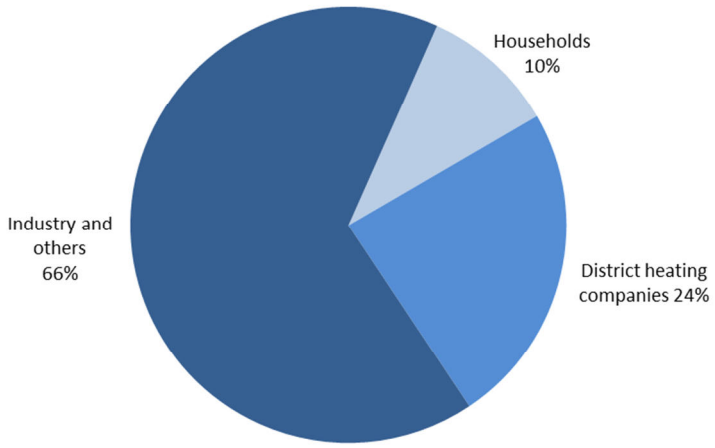


Figure 4-3: Structure of natural gas consumption in Serbia in 2013

Average annual natural gas consumption per household amounted to 873 m^3 in 2013.

4.3 Regulation of transmission system operator

PE Srbijagas and Yugorosgaz JSC are transmission system operators holding the licence for transmission and transmission system operation.

Transmission system operator is responsible for:

- secure and reliable transmission system operation and the quality of natural gas delivery;
- safe transmission system operation;

- transmission system operation;
- transmission system development providing for long-term capability of the transmission system to comply with rational requirements in terms of natural gas transmission;
- coordinated operations of the transmission system with other transmission systems, with distribution systems and natural gas storage;
- system balancing;
- non-discriminatory access to the transmission sytem;
- accuracy and reliability of natural gas metering on delivery points from and into the transmission system and
- organisation and administration of natural gas market.

The most important activities of the transmission system operator in 2013 which provide the compliance of its work with the commitments arising from the Law and natural gas market opening are as follows:

- preparation of the Transmission Network Code (network code);
- preparation of the 10 years' transmission system development plan and its harmonisation with the applications for the connection of producers' facilities and customers' facilities;
- monitoring security of supply and submission of the data which are to be incorporated into the report on security of natural gas supply prepared by the Ministry;
- exchanging information necessary for safe and secure operations of the system with other system operators;
- submission of the data and documentation necessary for price regulation to the Agency and
- other activities which improve the security, efficiency and transparency of the transmission system operations.

Natural gas transmission system operator is obliged to submit the development plan to the Agency every year. The plan is approved by the Agency.

4.3.1 Natural gas Transmission Network Code

Upon the positive opinion of the Agency, PE Srbijagas published the Natural Gas Transmission Network Code in August 2013. This Code also includes the rules for capacity allocation and natural gas market code. The enforcement of their provisions was planned to start in 2014, but it was delayed until 2015 since capacity allocation requires legal unbundling of natural gas transmission from supply. Yugorosgaz JSC submitted its Natural Gas Transmission Network Code draft in October 2013. It is planned to adopt it in 2014.

4.3.2 Regulation of the transmission use-of-system charges

Regulated transmission use-of-system charges have been applied for the first time on October 15, 2008.

In 2013, natural gas transmission use-of-system charges were not modified and the charges which were assessed positively by the Agency prior to being approved by the Government in 2011 were applied in 2013. Transmission use-of-system charges which were applied in 2013 are given in Table 4-9.

Table 4-9: Transmission use-of-system charges in 2013

Natural gas transmission system operator	Tariff rate		
	Commodity RSD/m^3	Capacity RSD/m^3/day/year	Commodity for system operation RSD/m^3
PE Srbijagas, Novi Sad	0.79	54.98	0.00
Yugorosgaz, JSC, Belgrade (Yugorosgaz-Transport, LLC, Niš)	1.13	75.52	0.00

Average PE Srbijagas transmission use-of-system charge amounts to 1.13 RSD/m^3, while average Yugorosgaz (Yugorosgaz-Transport) charge amounts to 1.62 RSD/ m^3.

Table 4-10: Trend of approved natural gas transmission use-of-system charges on the annual level

RSD/m^3

	Sep 2008	Aug 2011
PE Srbijagas	1.10	1.13
	Nov 2009	Sep 2011
Yugorosgas	2.29	1.62

4.3.3 Harmonisation with EU directives

Transmission system operator's activities are harmonised with the Directive 2003/55/EC, as indicated in table 4-11.

Table 4-11: Harmonisation of PE Srbijagas and Yugorosgaz JSC activities with requirements of Article 8 of Directive 2003/55/EC

Tasks of the system operator (Article 8 of Directive 2003/55/EC)	Tariff system	Methodology (connection price)	Code	Development plan
Operate, maintain and develop under economic conditions secure, reliable and efficient plants, with due regard to the environment	-*	-*	YES	NO
Refrain from discriminating between system users and classes of system users, particularly in favour of its related undertakings	YES	YES	YES	-**
Provide any other transmission system operator, distribution system operator or storage operator with sufficient information to ensure that the transmission and storage of natural gas may take place in a manner compatible with the secure and efficient operation of the interconnected system	-*	-*	YES	-**
Provide system users with the information they need for efficient access to the system.	YES	YES	ДА	-**

* Not covered by methodologies
** Not covered by development plan

4.3.4 Transmitted natural gas quantities

In 2013, 2,734 million m^3 of natural gas were delivered to Srbijagas transmission system. These quantities were transmitted so as to meet the demand on the side: customers, transmission for Bosnia and Herzegovina, storing, transmission and distribution system operators for gas losses recovery and compressor operations, while 95 million m^3 were transmitted into the storage for Gaspromexport, in line with the long-term contract with PE Srbijagas. Transmission was reliable and safe, with remote control and control of parameters of transmission system situation from control centers which are in Belgrade and Novi Sad.

Table 4-12: Transmitted natural gas quantities in 2012 and 2013

	2012	2013	2013/ 2012
	million m^3	million m^3	
Production	466	451	97
Entry into Serbia from Hungary to meet Serbia's demand	1,861	1,823	98
Entry into Serbia to meet Bosnia and Herzegovina's demand	261	194	74
Total	2,588	2,468	95
From storage	161	266	165
Transmitted quantities	2,749	2,734	99

4.3.5 Use of cross-border transmission capacities

The Republic of Serbia has two interconnections with other gas pipeline systems (one entry and exit point):

- Hungary – Serbia (Kiskundorozsma) – entry point
- Serbia – Bosnia and Herzegovina (Zvornik) – exit point.

Both interconnections are a part of Srbijagas transmission system, while there are no gas pipelines connected with the transmission systems of neighbouring countries within the Yugorosgaz JSC transmission system.

4.3.5.1 Rules on cross-border transmission capacity allocation

The rules on cross-border transmission capacity allocation and congestion management are defined by the natural gas Transmission Network Code. This code also defines the mechanism for capacity allocation and congestion management on interconnectors. The first allocation of capacities is expected to be organised in 2015.

4.3.5.2 Capacity allocation on interconnection lines and congestion management

Being the operator of the transmission system interconnected with other countries, PE Srbijagas is entitled to award capacities on interconnection gas pipelines. In 2013, capacities were allocated on the entry point Hungary – Serbia (Kiskundorozma) so as to meet the demand of PE Srbijagas, Russian – Serbian Trading Company, PCT and the Company for gas production and transmission BH – Gas LLC Sarajevo. Exit capacity towards Bosnia and Herzegovina

was allocated only so as to meet the demand of BH Gas. In 2013, there were no congestion problems, i.e. there were available capacities on the interconnectors even during winter months.

In 2013, the utilisation rate of the entry firm capacity on Serbian-Hungarian border amounted to average 42.5% with 540,000 m^3/hour (13 millions m^3/day). In 2012, it amounted to 45.6%, but it is important to bear in mind that natural gas consumption depends on the season and therefore, it is uneven. For this reason, capacity utilisation is considerably lower during summer. The highest daily quantity withdrawn into the transmission system on the Serbian-Hungarian border in 2013 amounted to 11.44 million m^3/day. 10.15 million m^3/day were used by customers in Serbia, while 1.29 million m^3/day were intended for Bosnia and Herzegovina. Bearing in mind the available interconnector capacity for natural gas customers in Serbia of 11 million m^3/day and interconnector utilisation rate of 90%, it is possible to have 3.6 billion m^3 imported which is greatly higher than annual import in 2005-2013.

4.3.6 Balancing

Pursuant to the Law, transmission system operators are responsible for natural gas system balancing in the Republic of Serbia. The operator is obliged to procure gas for balancing purposes and so as to provide secure system operation and recover losses in the transmission system, in line with the principles of minimum costs, transparency and non-discrimination.

In 2013, system balancing is realised by changing nominated imported gas quantities and by using the line pack during the day, as well as using natural gas from the storage. When natural gas demand on exit points exceeds the capacity contracted on entry points, the transmission system operator may interrupt a part of capacity on the exit points to the customers who have an option to use alternative fuel so as to reach balance in the system. However, there was not need to interrupt exit capacities in 2013.

Natural gas market players have to regulate their balancing responsibility by conclusion of a transmission contract which defines financial responsibility for the discrepancy between natural gas quantities delivered at points of entry into the transmission system and quantities withdrawn on points of exit from the transmission system. Natural gas transmission system operator is responsible for the establishment and realisation of balancing responsibility of market players and for keeping balancing responsibility registry, in line with the Transmission Network Code and Supplier Switching rules. The PE Srbijagas Natural Gas Transmission Network Code prescribes the conclusion of an annual contract between the transmission system operator and a supplier who will provide the balancing service, i.e. who will withdraw extra natural gas within the system and deliver natural gas in case of shortage. Once the natural gas market is developed on daily level in Serbia, the transmission system operator will purchase the balancing service in the market. The application of balancing responsibility for transmission system users is supposed to start in 2015.

4.4 Regulation of distribution system operators

In 2013, 33 companies performed energy activities of distribution and distribution system operation (the licence is also still held by Public Utility Enterprise EKOS Žitište which does not perform this activity anymore and whose customers are supplied by PE Srbijagas). Natural gas distribution sector has one dominant feature, i.e. great fragmentation. For this reason, there is no economy of scale and therefore, customers pay higher network charges. In some cases, PE Srbijagas took over some small distribution companies which could not survive, but the initiatives that would lead to enlargement are not strong enough. Upon price regulation, developed European countries faced the reduction of number of distribution companies, especially in natural gas sector.

A great number of small distribution companies with low personnel capacities take huge time and engagement of the Agency in terms of data preparation and control so as to control the data necessary for price regulation.

Natural gas distribution system operator is responsible for:

- secure and reliable distribution system operation and the quality of natural gas delivery;
- safe operation of the natural gas distribution system;
- distribution system development providing for long-term capability of the distribution system to comply with rational requirements in terms of natural gas distribution in a way which is justified in economic terms;
- non-discriminatory access to the distribution system;
- distribution system operation and
- accuracy and reliability of natural gas metering.

The most important activities of the distribution system operator in 2013 which provide the compliance of its work with the commitments arising from the Law are as follows:

- development of the price list for standard connections in the distribution system;
- taking prescribed safety measures during the use of distribution system;
- submision of the data which are to be incorporated into the report on security of supply to the Ministry in charge of energy;
- submission of the data and documentation necessary for public supply price regulation to the Agency and
- other activities which improve the security, efficiency and transparency of the system operation.

4.4.1 Distribution Network Code

The legal deadline for the submission of Distribution Network Codeto the Agency for approval is six months upon the publication of the Transmission Network Code. Natural Gas Transmission Network Code of Srbijagas was published on 21/08/2013. Natural Gas Transmission Network Code of Yugorosgaz is in harmonisation stage. Distribution system operator Srbijagas submitted to the Agency the Distribution Network Codedraft which is in harmonisation stage. By the end of 2014, all distribution system operators are expected to have the Distribution System Codes adopted.

4.4.2 Regulation of the distribution use-of-system charges

In line with the Energy Law, regulated distribution use-of-system charges have been applied for the first time on October 15, 2008.

Table 4-13: Average approved distribution use-of-system charges

No.	Natural gas distribution company	Average approved charge RSD/m³	
		2008-09	Sep 2011
1	7. Oktobar, Novi Kneževac	3.54	3.90
2	Beogas, Belgrade	3.74	3.28
3	Beogradske elektrane, Novi Beograd		5.06
4	Boss petrol, Trstenik		
5	Čoka, Čoka	5.61	6.16
6	Drugi oktobar, Vršac	3.61	6.21
7	Elgas, Senta	3.13	6.57
8	Gas – Feromont, Stara Pazova	1.43	5.10
9	Gas – Ruma, Ruma	3.88	5.52
10	Gas, Bečej	5.34	5.68
11	Gas, Temerin	3.37	5.57
12	Graditelj, Srbobran	3.44	6.38
13	Grejanje, Zrenjanin	6.52	7.85
14	Ingas, Inđija	2.44	5.35
15	Interklima, Vrnjačka Banja	5.36	6.31
16	Komunalac, Novi Bečej	4.05	6.41
17	Kovin – Gas, Kovin	1.64	3.25
18	Loznica - Gas, Loznica		4.85
19	Novi Sad – Gas,Novi Sad	2.57	5.51
20	Polet, Plandište	5.70	7.02
21	Resava Gas, Svilajnac		
22	Rodgas, Bačka Topola	4.18	4.21
23	Sigas, Požega		11.28
24	Sloga, Kanjiža		5.47
25	Sombor – Gas, Sombor	6.11	6.16
26	Srbijagas, Novi Sad	1.97	1.21
27	Srem - Gas, Sremska Mitrovica	5.30	5.76
28	Standard, Ada	4.12	8.62
29	Suboticagas, Subotica	5.28	6.39
30	Toplana – Šabac, Šabac		
31	Užice – gas, Užice		5.13
32	Vrbas – Gas, Vrbas	2.75	4.74
33	Yugorosgaz, Beograd	1.85	2.66
	TOTAL	**2.33**	**2.25**

In 2013, natural gas use-of-system charges were not modified and the charges which were assessed positively by the Agency prior to being approved by the Government in 2011 were applied in 2013. Average distribution use-of-system charge for all distribution networks in Serbia amounts to 2.3 RSD/m^3 (with the PE Srbijagas network), while it is 5.2 RSD/m^3 for all the other networks which do not include PE Srbijagas network. A big difference between expenses of

certain distribution companies arises from different structure and number of customers, the size of the system, conditions for financing, correction element arising from more or less acknowledged costs from the previous period and other factors. However, the network use-of-system charges are much lower in Serbia than in European countries (see Figure 4-6).

The current natural gas distribution system use-of-system charges are available on the Agency's website (www.aers.rs).

4.4.3 Distributed natural gas quantities

Natural gas quantities are withdrawn into the distribution systems mostly from the natural gas transmission system. Certain natural gas quantities are delivered from the distribution system of Srbijagas to other distributors. Only small quantities are provided from natural gas production facilities connected to the distribution system. Table 4-14 indicates natural gas quantities distributed to natural gas distribution in 2013.

Table 4-14: Distributed natural gas quantities in 2013

	2012 million m^3	**2013** million m^3	**2013/2012**
Total distributed quantities	1,360	1,366	100
withdrawn from the transmission system	1,244	1,260	101
from distribution systems	97	89	92
from production facilities	19	17	89
losses	19	14	74
	1.4%	1.0%	71

4.5 Regulation of prices of regulated natural gas supply

Pursuant to the Law, regulated natural gas final customers prices were applied on October 15, 2008 for the first time. In 2013, natural gas public supply prices were modified three times: in February, September and December, due to modifications in the final price of natural gas meant for public supply. In February, average household price increased by 8.6%, while it amounted to 9.5% for all public supply customers. In September, average household price increased by 4.4% and by 5.7% for all public supply customers. In December, average household prices were decreased by 2.9-3.4% and 2.7-3.5% for all public supply customers. The range accounts for different prices with different suppliers.

Table 4-15: Average level of approved natural gas tariff for tariff customers

RSD/m^3

No.	Natural gas distribution company	Average approved price – all customers					Average price for households				
		2009	Sep-11	Feb-13	Sep -13	Dec-13	2009	Sep -11	Feb-13	Sep-13	Dec-13
1	7. Oktobar, Novi Kneževac	36.10	40.49	44.01	45.01	43.55	36.04	40.43	43.95	45.09	43.63
2	Beogas, Belgrade	36.32	40.59	44.11	45.24	43.78	36.35	41.00	44.52	45.56	44.10
3	Beogradske elektrane, Novi Beograd		41.39	44.91	45.85	44.39		42.00	45.52	46.31	44.85
4	Boss petrol, Trstenik										
5	Čoka, Čoka	36.83	42.08	45.60	47.86	46.40	37.64	42.96	46.48	48.76	47.30
6	Drugi oktobar, Vršac	34.18	41.43	44.95	47.29	45.83	35.63	43.61	47.13	49.32	47.86
7	Elgas, Senta	34.92	43.35	46.87	47.84	46.38	35.06	43.22	46.74	47.78	46.32
8	Gas – Feromont, Stara Pazova	31.56	40.44	43.96	46.07	44.61	31.76	40.92	44.45	46.51	45.05
9	Gas – Ruma, Ruma	33.87	40.46	43.98	46.39	44.93	34.89	41.84	45.36	47.65	46.19
10	Gas, Bečej	37.76	42.15	45.67	46.80	45.34	38.03	42.44	45.96	47.11	45.65
11	Gas, Temerin	33.98	41.14	44.66	46.84	45.38	34.09	41.19	44.71	46.90	45.44
12	Graditelj, Srbobran	35.67	43.69	47.21	48.28	46.82	36.32	44.65	48.17	49.09	47.63
13	Grejanje, Zrenjanin	36.85	44.72	48.24	49.66	48.20	37.00	44.86	48.38	49.81	48.35
14	Ingas, Inđija	32.91	40.08	43.60	45.94	44.48	34.02	41.15	44.67	46.92	45.46
15	Interklima, Vrnjačka Banja	34.90	40.30	43.78	46.25	44.81	35.52	41.04	44.52	46.92	45.48
16	Komunalac, Novi Bečej	34.78	41.65	45.17	47.46	46.00	35.19	41.94	45.46	47.76	46.30
17	Kovin – Gas, Kovin	32.10	38.51	42.04	44.44	42.98	33.87	40.86	44.38	46.62	45.16
18	Loznica - Gas, Loznica		39.30	42.82	45.30	43.84	34.01	40.34	43.86	46.28	44.82
20	Novi Sad – Gas,Novi Sad	34.25	41.31	44.83	46.39	44.93	34.96	41.97	45.49	46.98	45.52
21	Polet, Plandište	36.05	42.82	46.34	48.69	47.23	36.51	44.08	47.60	49.95	48.49
22	Resava Gas, Svilajnac		36.31	39.83	41.34	39.88	34.01	37.58	41.11	42.49	41.03
23	Rodgas, Bačka Topola	34.21	39.00	42.49	44.90	43.44	35.53	40.42	45.19	47.49	46.03
24	Sigas, Požega		47.90	51.42	54.09	52.63	34.01	49.30	52.82	55.51	54.05
25	Sloga, Kanjiža		40.76	44.28	46.36	44.90	39.12	41.72	45.24	47.26	45.80
26	Sombor – Gas, Sombor	36.46	40.87	44.39	46.77	45.31	36.69	43.59	47.11	49.37	47.91
27	Srbijagas, Novi Sad	30.70	35.40	38.92	41.64	40.18	34.01	37.80	41.32	43.70	42.24
28	Srem - Gas, Sremska Mitrovica	35.33	40.68	44.20	46.51	45.05	35.98	42.60	46.12	48.21	46.75
29	Standard, Ada	35.68	45.93	49.45	50.41	48.95	36.48	46.74	50.26	51.10	49.64
30	Suboticagas, Subotica	35.32	41.05	44.57	46.91	45.45	36.19	41.98	45.50	47.76	46.30
31	Toplana – Šabac, Šabac										
32	Užice – gas, Užice		39.52	42.96	44.75	43.32		40.74	44.18	46.00	44.57
33	Vrbas – Gas, Vrbas	32.44	39.15	42.67	45.07	43.61	34.51	41.59	45.11	47.41	45.95
34	Yugorosgaz, Beograd	31.53	36.24	39.69	41.99	40.56	34.68	36.83	40.28	42.96	41.53
	TOTAL	**31.24**	**36.91**	**40.55**	**43.23**	**41.77**	**34.54**	**40.87**	**44.39**	**46.32**	**44.86**

The costs of natural gas purchase represent the dominant share, i.e. over 80% within natural gas public supply tariff with all public suppliers. Figure 4-4 indicates the structure of average regulated natural gas public supply tariff of PE Srbijagas which has been applied as of December 1, 2013.

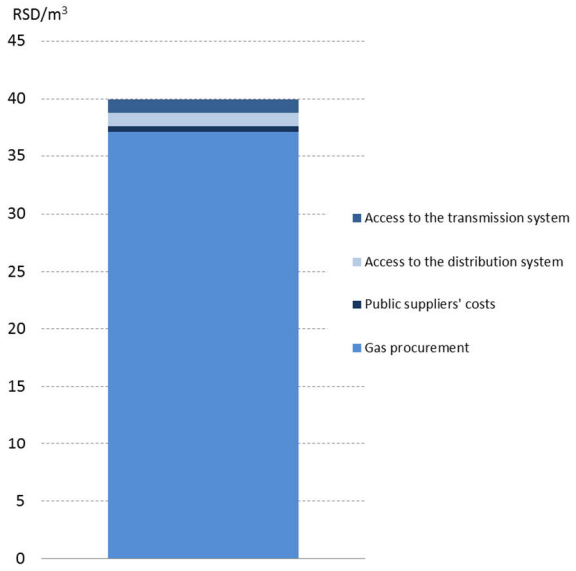


Figure 4-4: Structure of average public supply natural gas tariff for PE Srbijagas as of December 1, 2013

Figure 4-5 indicates the comparison between natural gas household price in Serbia and in other EU countries and in the region. The price is given for a reference household customer for the second half of 2013. Only customers in Romania have a lower household price than those in Serbia.

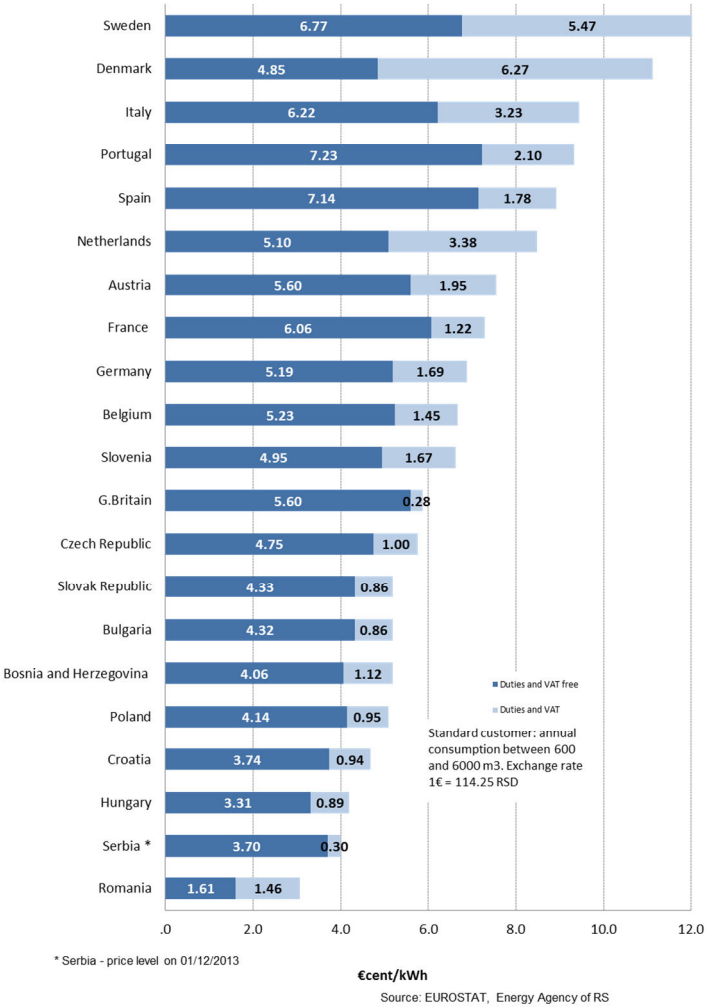


Figure 4-5: Natural gas prices for households – second half of 2013

Figure 4-6 indicates a more detailed structure of elements of the natural gas household prices in some of European capitals in December 2013.

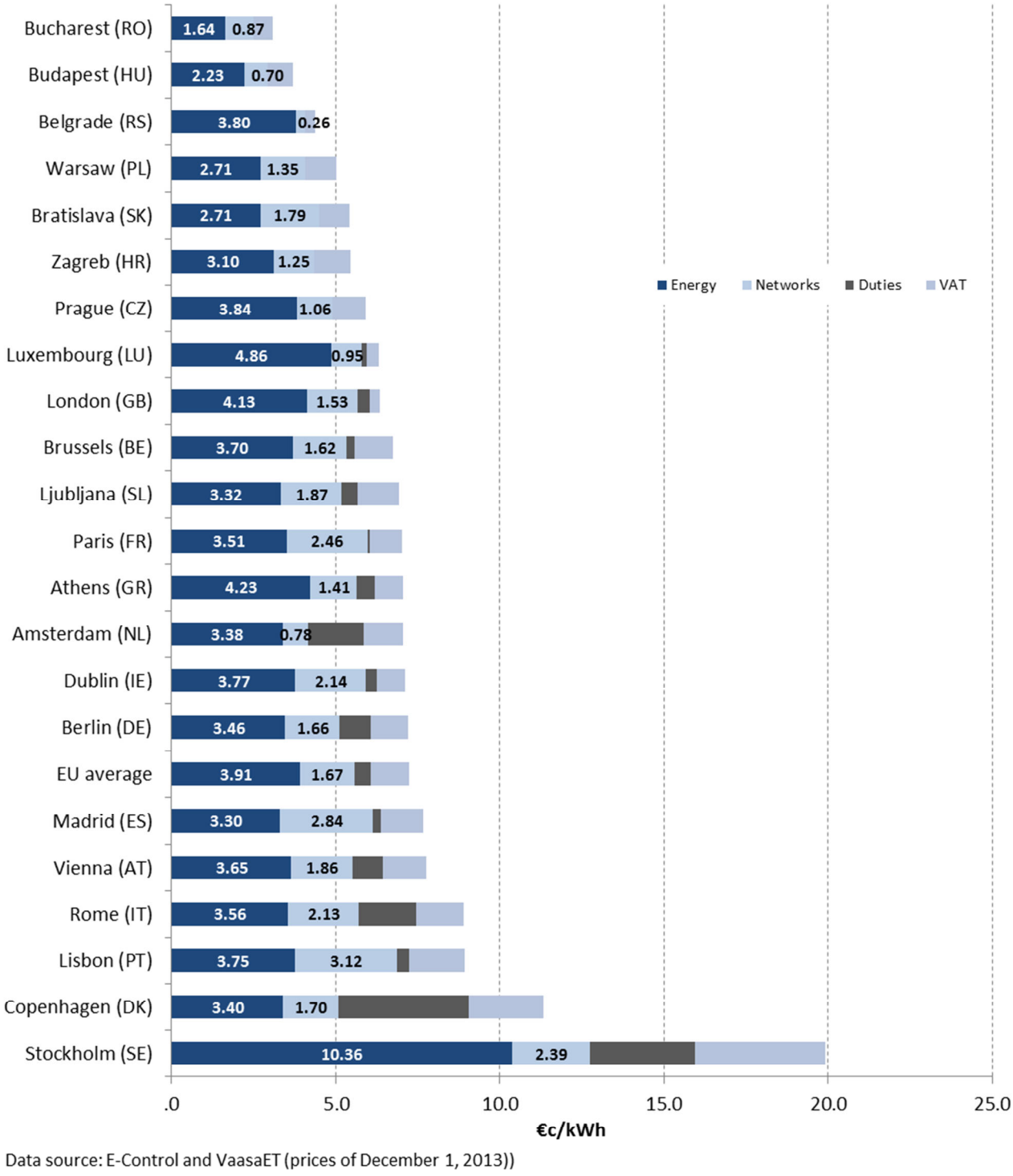


Figure 4-6: Structure of natural gas household prices in some of European capitals in December 2013

Figure 4-7 indicates the comparison of PE Srbijagas prices and those in other countries in the EU or in the region for standard customer from the industry category in the second half of 2013. In comparison to those in Serbia, lower prices are paid by industry in Romania.

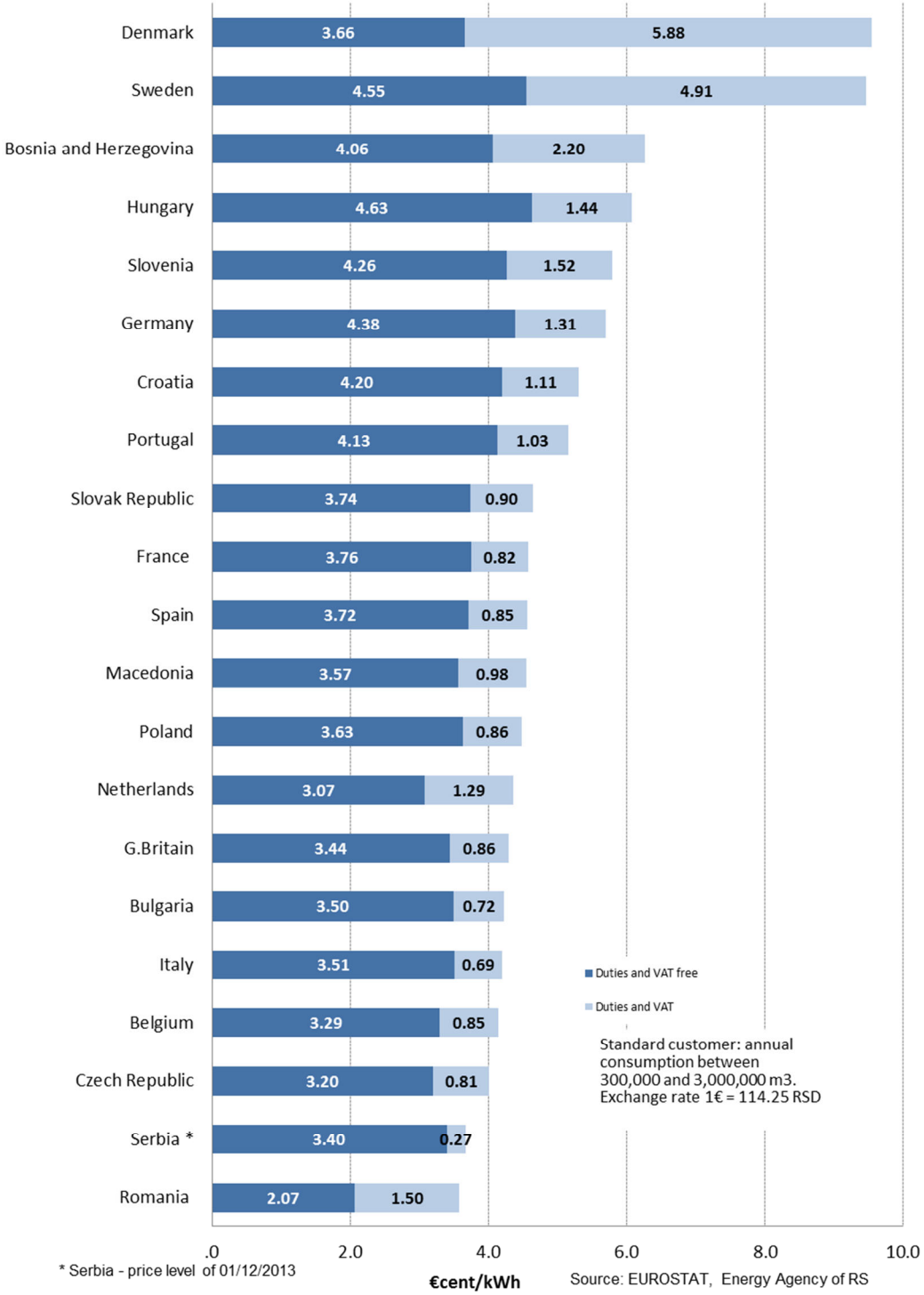


Figure 4-7: Natural gas prices for industry – second half of 2013

The current natural gas public supply prices are available on the Agency website (www.aers.rs).

In August 2013, the Agency adopted a Decision on the Amendment of the Methodology for Setting Natural Gas Public Supply Price. The adoption of the amendment is aimed at the establishment of the criteria for the modification of natural gas public supply price in case of final price modification. The Agency monitors the compliance with the established criterion regularly and synchronises the activities on timely price modification with all public suppliers.

4.6 Natural gas market

In the natural gas sector, only bilateral market will be developed.

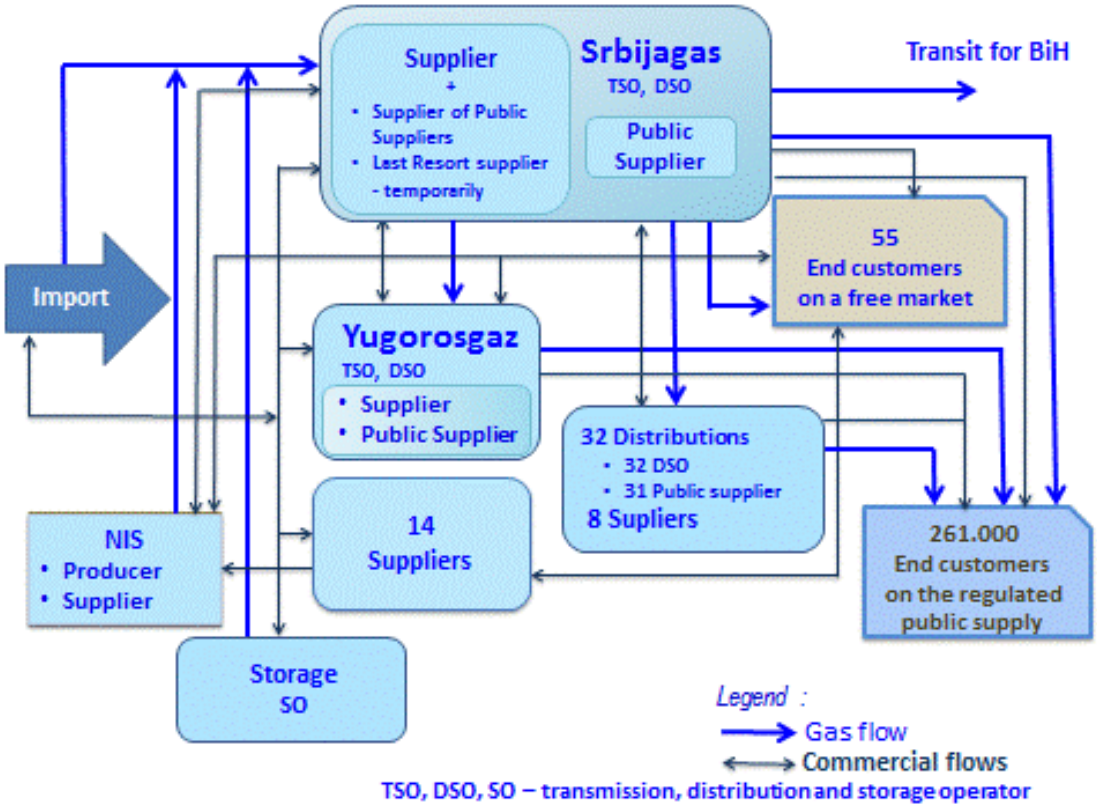


Figure 4-8: Natural gas market scheme

Natural gas market players are the following:

- producer (1);
- suppliers (24);
- public suppliers (33);
- supplier of public suppliers – upon their request (1);
- final customers (261,000);
- transmission system operators (2);
- distribution system operators (34, and one of them does not perform the activity) and
- storage operator.

The Government of RS appointed PE Srbijagas to be the supplier of natural gas public suppliers in the period 01/09/2013 – 01/01/2015 and it is obliged to supply all the public suppliers demanding it, supply under the same conditions and at a same price which was approved by the Government of RS and which can be modified in a manner approved by the Government. The same conditions are valid for PE Srbijagas as a public supplier.

4.6.1 Wholesale market

Wholesale natural gas market is based on bilateral contracts between producers and suppliers. In 2013, there were three companies trading between themselves and the gas producer in the wholesale market. Out of these three companies, two companies operated as natural gas importers in 2013.

Final price changes and US dollar exchange rate have the greatest influence on natural gas wholesale market. Based on the long-term contract with Yugorosgaz as a dominant Serbian market supplier, the final prices are established based on a formula which includes as basic elements three oil derivatives whose prices are established on the international market (when calculating gas price for the following quarter, one takes into consideration average price in nine months from the previous three quarters). Local gas price is connected to imported gas price.

Wholesale gas price is greatly influenced by the price of transit through Hungary which exceeds the ruling price for local customers in Hungary, as well as the price for customers from Croatia and Romania. The ECRB has established that neither does the Hungarian transmission system operator treat all system users equally, nor it fully implements the regulated access. Transmission prices for Serbia are set by long-term contract between the Hungarian and Serbian

transmission system operators, independently from the Hungarian regulatory energy authority, which is not in line with the provisions of the EnC Treaty. The Agency addressed the EnC Secretariat in order to make further steps in line with the mechanism for dispute settlement defined by the EnC Treaty. There are ongoing consultations between the Agency, EnC Secretariat, European Commission and ACER in order to collect all the relevant information and define modalities for dispute settlement.

Wholesale natural gas price for tariff customers was regulated in the period from October 2008 till September 2013. Approved purchase natural gas price for tariff customers which was approved by the Government of RS was lower than the contracted final price from 2010 till September 2013. Therefore, PE Srbijagas was operating with negative financial result in the area of natural gas supply of tariff customers. As of September 2013, wholesale natural gas price is established on the basis of tender procedure for the selection of the supplier of public suppliers and it covers all justified costs of natural gas purchase.

Joint activities on regional market development

The most important initiatives related to the development of the regional market include drafting Network Codes which have already been adopted in the EU. Their mandatory enforcement in the EnC is expected. In 2013, ECRB Natural Gas Working Group, which also includes the representatives of the Agency, analysed the Network Codes and made comments on them related to balancing and interoperability.

4.6.2 Retail market

In 2013, 55 customers procured gas in the open market. 649 million m^3 were delivered to those customers, i.e. 34% of total gas quantities delivered to final customers.

In 2013, customers were supplied by 33 suppliers holing energy supply licence.

Table 4-16: Structure of natural gas sales in the open and regulated market

	2012 million m^3	**2013** million m^3	**2013/2012**
Sold in the open market	324	649	200
Sold in the regulated market	1,680	1,243	74

In 2013, customers connected to the transmission system withdrew around 33% of total natural gas quantities sold to final customers at unregulated prices. Remaining quantities were sold to the customers connected to the distribution system.

In 2013, only 3 distributors delivered more than 30 million m^3 to tariff customers, while 23 of them less than 10 million m^3.

The greatest share of natural gas, i.e. over 1,203 million m^3 or around 64% of total quantities was sold to customers by PE Srbijagas in 2013. The second greatest share was sold by Russian-Serbian Company for Trade (RCT) whose quantities amounted to over 270 million m^3, i.e. around 14% while Novi Sad Gas sold 67 million m^3 of gas, i.e. around 3.5% and Elgas Energy Trading sold 59 million m^3, i.e. 3.1% of total quantities in 2013. Individual share of other traders amounts to around 2% or below 2% of total quantities.

Table 4-17: Natural gas sales to final customers in 2012 and 2013

No.	Trader	2012 (000 m^3)				2013 (000 m^3)				2013/2012 (%)			
		Househ.	DHC	Industry and other	Total	Househ.	DHC	Industry and other	Total	Househ.	DHC	Industry and other	Total
1	7. Oktobar, Novi Kneževac	791	0	510	1,301	711	0	504	1,215	90	0	99	93
2	Beogas, Belgrade	12,725	0	1,659	14,384	12,241	0	1,610	13,851	96	0	97	96
3	Beogradske elektrane, Beograd	3,241	0	1,143	4,384	2,786	0	1,137	3,923	86	0	99	89
4	Boss petrol, Trstenik	6	0	1,016	1,022	6	0	1,000	1,006	100	0	98	98
5	Čoka, Čoka	331	0	412	743	285	0	367	652	86	0	89	88
6	Drugi oktobar, Vršac	8,808	2,188	13,326	24,322	7,512	1,870	12,919	22,301	85	85	97	92
7	Ekos, Žitište	1,450	190	663	2,303	0	0	0	0	/	/	/	/
8	Elgas, Senta	1,455	0	679	2,134	1,224	0	616	1,840	84	0	91	86
9	Gas – Feromont, Stara Pazova	17,482	752	7,573	25,807	15,353	679	8,168	24,200	88	90	108	94
10	Gas – Ruma, Ruma	5,674	753	9,240	15,667	5,055	845	9,573	15,473	89	112	104	99
11	Gas, Bečej	1,536	0	1,225	2,761	1,434	0	1,299	2,733	93	0	106	99
12	Gas, Temerin	6,086	0	1,332	7,418	5,545	0	1,223	6,768	91	0	92	91
13	Graditelj, Srbobran	1,277	0	1,361	2,638	1,128	211	1,404	2,743	88	0	103	104
14	Grejanje, Zrenjanin	14,802	9,785	4,224	28,811	12,697	10,342	3,861	26,900	86	106	91	93
15	Ingas, Inđija	8,286	0	7,843	16,129	7,283	0	9,322	16,605	88	0	119	103
16	Interklima, Vrnjačka Banja	888	0	1,669	2,557	746	0	1,669	2,415	84	0	100	94
17	Komunalac, Novi Bečej	1,328	0	759	2,087	1,153	0	835	1,988	87	0	110	95
18	Kovin – Gas, Kovin	2,927	1,090	5,789	9,806	2,750	1,132	5,942	9,824	94	104	103	100
19	Loznica - Gas, Loznica	1,446	2,472	3,194	7,112	1,341	3,732	3,934	9,007	93	151	123	127
20	LP - Gas, Belgrade	2,304	0	102	2,406	2,049	0	157	2,206	89	0	154	92
21	Novi Sad – Gas,Novi Sad	46,074	355	25,951	72,380	40,880	839	25,559	67,278	89	236	98	93
22	Polet, Plandište	1,909	0	2,767	4,676	1,678	0	2,728	4,406	88	0	99	94
23	Resava Gas, Svilajnac	457	0	1,472	1,929	422	0	1,318	1,740	92	0	90	90
24	Rodgas, Bačka Topola	1,189	0	7,790	8,979	1,063	0	7,709	8,772	89	0	99	98
25	Sigas, Požega	257	0	39	296	221	0	56	277	86	0	144	94
26	Sloga, Kanjiža	1,845	0	2,127	3,972	1,614	0	1,838	3,452	87	0	86	87
27	Sombor – Gas, Sombor	1,867	3,848	5,717	11,432	1,734	3,413	4,371	9,518	93	89	76	83
28	Srbijagas, Novi Sad	77,732	517,510	795,205	1,390,447	70,349	456,954	675,980	1,203,283	91	88	85	87
29	Srem - Gas, Sremska Mitrovica	5,156	543	10,230	15,929	4,662	493	8,937	14,092	90	91	87	88
30	Standard, Ada	898	0	974	1,872	780	0	979	1,759	87	0	101	94
31	Suboticagas, Subotica	9,175	0	15,680	24,855	8,406	0	16,151	24,557	92	0	103	99
32	Toplana – Šabac, Šabac	3,106	0	460	3,566	2,950	0	541	3,491	95	0	118	98
33	Užice – gas, Užice	110	0	3,091	3,201	193	4,126	941	5,260	175	0	30	164
34	Vrbas – Gas, Vrbas	1,895	0	6,167	8,062	1,623	0	4,222	5,845	86	0	68	73
35	Yugorosgaz, Beograd	649	30,412	11,655	42,716	579	26,322	16,367	43,268	89	87	140	101
36	RST, Novi Sad	0	0	236,132	236,132	0	0	270,634	270,634	0	0	115	115
37	Elgas Energy Trading, Beograd	0	0	0	0	0	15,247	44,000	59,247	0	/	0	/
	Total	**243,747**	**569,898**	**1,189,129**	**2,004,236**	**218,453**	**526,205**	**1,147,871**	**1,892,529**	**90**	**100**	**93**	**94**

4.7 Monitoring and regulating quality of delivery and supply

As the Energy Law prescribes, the Agency adopts the Rules on Monitoring Technical and Commercial Indicators and on Regulating Quality of Electricity and Natural Gas Delivery and Supply. The Agency Council adopted these rules in December 2013 and they entered into force in early 2014. Above all, the aim was to prescribe the method and deadlines for the collection of data from energy entities operating in the field of natural gas transmission, distribution and supply, in order to establish the system of delivery and supply quality regulation.

Reliability of system operations and natural gas quality are defined as technical indicators of quality, while timely compliance with prescribed obligations which affect the quality of natural gas delivery and supply was set as commercial indicators of quality.

These rules define that the data related to the quality of natural gas delivery and supply are collected in a systematic and uniform way.

Data collection will be organised quarterly, semi-annually and annually so as to create conditions for the Agency to monitor the quality of delivery and supply and compare energy entities which perform the same energy activity based on submitted data and reports.

4.8 Security of natural gas supply

PE Srbijagas submitted a Ten-Year Development Plan for approval and the Plan is undergoing harmonisation.

4.8.1 Natural gas consumption forecast

After economic crisis consequences are mitigated, it is expected that natural gas consumption will continue to grow in the years to come. Growth rate will surely depend on gas price as well. Consumption growth will be also a result of construction of new distribution grids in those areas which have not been gasified yet. First of all for the industries using natural gas as a raw material, but for industry with high natural gas consumption in general, consumption will depend on natural gas price and the efficiency of the industry.

Considerable consumption growth is possible in case there are new cogeneration plants constructed which would use natural gas as a fuel for combined heat and power production.

4.8.2 Projects on increased security of supply

The security of supply is considerably increased by commissioning the operation in the underground storage Banatski Dvor with withdrawal capacity of 5 million m^3/day.

The construction of the South Stream gas pipeline will be even more important for the long-term security of natural gas supply. The construction has been initiated and it is planned to have the first delivery in Serbia by the end of 2016. The gas pipeline route through Serbia is 470 km long.

There are ongoing preparations for the construction of a interconnector with Bulgaria. It is planned on the basis of the Agreement on the Construction of Gas Pipeline Niš-Dimitrovgrad-Sofia and it will contribute greatly to the increase in the security of supply. The Agreement was signed in 2012. The gas pipeline is expected to be around 150 km long and the first phase capacity should amount to 1.8 billion m^3 annually.

In addition, connections with gas pipeline systems with other neighbouring countries will be also important for the increase in the security of supply, especially with those countries which have a highly developed gas infrastructure such as Romania and Croatia.

5. OIL AND OIL DERIVATIVES

5.1 Sector structure and capacities

5.1.1 Organisational and ownership structure of the oil sector

Pursuant to the Law, licenced energy activities in oil and biofuels field include:

- oil derivatives production;
- oil transport through oil pipelines;
- oil derivatives transport through product lines;
- trade in oil, oil derivatives, biofuels and compressed natural gas;
- trade in motor fuels and other types of fuels on petrol stations;
- storage ofoil, oil derivatives, biofuels and compressed natural gas and
- biofuels production.

Only NIS, llc is licenced for oil derivatives production, i.e. for refinery processing.

PE Transnafta transports oil through oil pipelines.

In Serbia, there is no infrastructure for public transport of oil products through product lines except in those companies which use this means of transport for their own purposes.

NIS JSC, the company dealing in oil, oil derivatives and natural gas exploration, production, processing and sales is the dominant oil and oil derivatives market player in Serbia. Vertically integrated company NIS JSC has been on the stock exchange since 2010. It is owned by the Russian company “Gasprom Njeft” with around 56% of shares, by the Republic of Serbia with around 30%, while 11% are owned by a great number of small shareholders and 3% by others. In 2013, NIS JSC provided for around 78% of total Serbian demand in oil derivatives. The company has the greatest retail network which covers around 25% of the market in terms of number of stations, i.e. over 40% of the trade. In retail of motor fuels and other types of fuels, a considerable share is also held by Lukoil, OMV, MOL Serbia, ECO-Serbia, Petrol, as well as small independent chains Eurogas, Europetrol, Knez Petrol, AMSS Gas Petrol, AVIA, etc.

5.1.2 Unbundling of energy activities

Oil transport by oil pipelines and oil derivatives transport by product lines, being regulated activities of general interest and separate from other energy-related and non-energy-related activities are performed by the public enterprise Transnafta at regulated prices.

5.2 Production and transport capacities

5.2.1 Oil and oil derivatives production

Crude oil production, import and processing in Serbia are performed exclusively by NIS – Gaspromnjeft. Total crude oil and semi-products consumption in 2013 in Serbia amounted to 2.9 million tons. Crude oil production is performed by NIS Naftagas (Daughter Company of NIS – Gaspromnjeft) both in Serbia and in Angola. In 2013, around 1.234 million tons (43.65%) were produced in Serbia, around 54 thousand tons were produced in Angola, and 1.593 million tons (56.35%) were imported, primarily from Russia (Ural type). Crude oil processing is performed in oil refineries in Pančevo and Novi Sad.

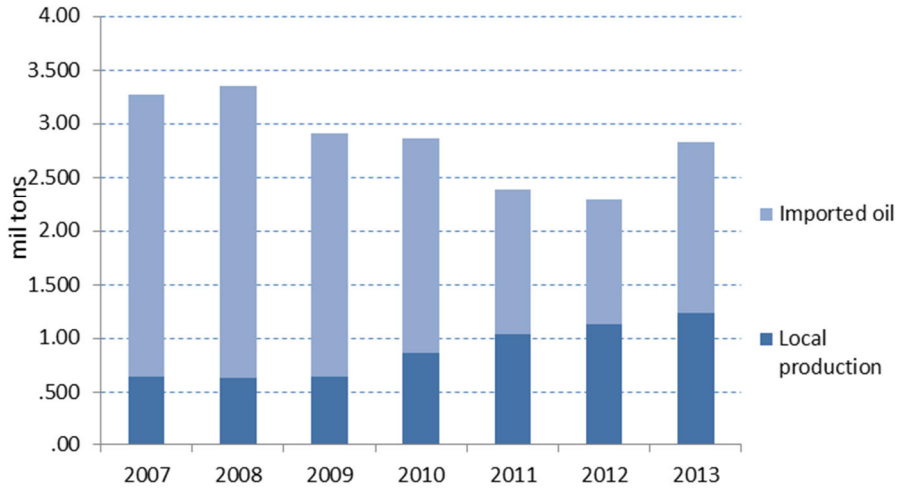


Figure 5-1: Crude oil refinery processing in Serbia in 2007 - 2013

Upon the completion of modernisation of Pančevo Refinery, refinery crude oil processing in 2013 grew to a great extent in comparison to 2012 (23.8%). It happened after a permanent drop trend. Local production of crude oil grew permanently during the whole period. In 2013, it was practically doubled (92.8%) in comparison to 2007, while crude oil import also recorded considerable growth (38.2%) after a six-year trend of decrease. The share of local crude oil in the total refinery processing quantities amounted to 18.6% in 2008. In 2013, it amounted to around 44% while in 2012; import and local production were practically on the same level. In comparison to 2012, local crude oil production grew by 9.2% in 2013.

In 2013, in the oil derivatives production structure, diesel production holds the share of 31%, motor fuels 14%, heating oil 7%, liquid petroleum gas (LPG) 4% and other derivatives (naphtha, fuel oil, bitumen, etc.) 44%. Within the oil derivatives production structure, in comparison to 2012, diesel share was decreased by 3%, heating oil share was decreased considerably by 7%, while petrol and LNG production had the same market participation as in 2012.

Oil derivatives, as final products, except from refinery processing (2.8 million tons) are imported as well. In 2013, around 1 million tons of derivatives were imported (around 27% less than in 2012). Import mainly included Euro diesel (EN 590) and LPG, as well as small quantities of unleaded motor fuel. In 2013, around 0.637 million tons of derivatives were exported which is almost 80% more than in 2012.

Total oil derivatives consumption in 2013 amounted to around 3.1 million tons.

Requirements in terms of quality of oil derivatives which are in the market, as well as the procedure for assessment of harmonisation of quality with the prescribed one are defined in the Rules on Technical Requirements and other Requirements for Liquid Fuels of Oil Origin, i.e. in the Rules on Technical Requirements and other Requirements for Liquid Petroleum Gas (“Official Gazette of RS”, No.97/2010, 123/2012 and amendments from No. 63/2013 and 75/2013). These Rules also define labeling of installations used for oil derivatives trade. The Decree on Oil Derivatives Authentication (“Official Gazette of RS”, No. 46/13) closely prescribes the conditions, methods and procedure of authentication of oil derivatives which are traded with in the market.

5.2.2 Oil and oil derivatives transport

Oil is transported mainly through the oil pipeline between the Adriatic Sea port Omisalj through Sotin in the Republic of Croatia. The connection point of the pipeline in Serbia is in Bačko Novo Selo on the River Danube and it goes to the refinery in Pančevo through Novi Sad. The total length of the oil pipeline in the Republic of Serbia is around 150km. In 2005-2013, i.e. from the establishment of PE Transnafta, around 22 million tons of oil was transported in total. In 2013 around 990 thousand tons of local oil and 1.61 million tons of imported oil were transported. PE Transnafta is the company licenced for oil transport through oil pipelines which is a regulated energy activity. A smaller scale of imported crude oil is transported by barges by the River Danube, while the local oil is also transported by road tankers from the local fields to oil refineries (these types of transport are not licenced energy activities).

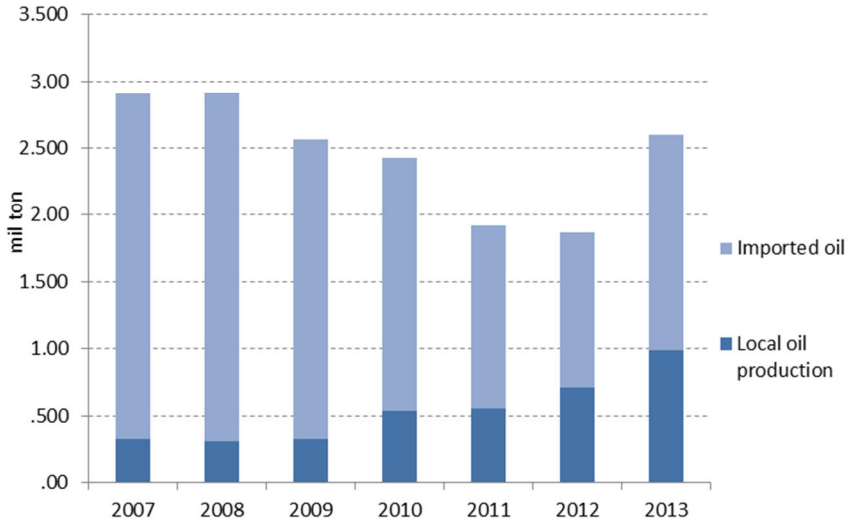


Figure 5-2: Crude oil quantities transported by oil pipeline of PE Transnafta

In 2013 (Figure 5-2), almost 40% more crude oil was transported than in 2012, including both local crude oil quantities and imported crude oil. This indicates a considerable recovery of this activity after a four-year successive drop. Therefore, realised transport was on almost the same level as in 2009.

5.3 Regulation of oil and oil derivatives transport

5.3.1 Transport System Code

Transport System Code was adopted in 2010 by PE Transnafta and approved by the Agency. The Transport System Code includes: technical requirements for safe TS operations; rules for procedure in case of TS accidents; rules on TS use; metering, functional requirements and energy meters accuracy class. The Code is applied even upon the entry into force of the new Law and no considerable amendments and supplements should be made.

5.3.2 Development plan

In its five-year development plan, PE Transnafta envisaged product line construction in several phases. After the completion of the final phase, oil derivatives will be transported from Sombor, through Novi Sad, Pančevo, Smederevo and Jagodina to Niš including an independent branch towards Belgrade. The construction of the line would enable pipeline connection between Serbian refineries with storage installations and create conditions for safer, more secure and more environment friendly supply of the market in motor fuels.

International project pipeline Constanza – Trieste (PEOP) is currently on standby.

5.3.3 Regulation of the transport use-of-system charges

In line with the Energy Law, regulated transport use-of-system charges were applied on April 11, 2007 for the first time. In 2013, oil transport use-of-system charges did not change and the prices which were assessed positively by the Agency and approved by the Government in 2011 were applied in 2013. Table 5-1 indicates the transport use-of-system charges applied in 2013.

Table 5-1: Transport use-of-system charges

PE Transnafta, Pančevo	Oil pipeline branch	Tariff rate "fuel" (RSD/tons/100 km)	Government of RS approval
2013	Sotin – Novi Sad	316.05	"Official Gazette of RS", No.90 as of 30/11/2011
	Novi Sad – Pančevo	210.69	

5.4 Oil and oil derivatives market

There is free import of oil derivatives and the volume, as well as the necessary structure of storage capacities for each of oil derivatives and biofuels type which are imported or traded within the Serbian market by traders are

defined by regulations which arise from the law regulating trade (Rulebook on Minimum Technical Conditions for Oil Derivatives and Biofuels Trade (“Official Gazette of RS”, No. 68/13). These regulations also regulate the trade in motor fuels and other fuels on petrol stations. There is full liberalisation of all energy activities in Serbia.

The development of oil and oil derivatives market was greatly influenced by the new Law on Commodity Reserves (“Official Gazette of RS”, No. 104/13) which entered into force at the end of2013 and which enabled the implementation of the directives 2006/67/EC and 2009/119/EC in the local legislation. These directives relate to eh provision of minimum mandatory oil and oil derivatives reserves.

The directive 2009/28/EC which regulates the mandatory content of biofuels in motor fuels, aimed at the reduction of greenhouse gases, has not been implemented in the local legislation yet. The renewable energy sources action plan prescribes the obligation to reach 10% of biofuels share in motor fuels by 2020, but the share of biofuels in oil derivatives market in 2013 is still negligible.

5.4.1 Wholesale market

The Law expanded the meaning of energy activity, i.e. oil and oil derivatives trade, to biofuels and compressed natural gas trade. Until the beginning of 2014, the licence for trade in oil, oil derivatives, biofuels and compressed natural gas was held by 162 energy entity, i.e. around 5% less than in the past two years and, thereby, the reduction trend is followed. The main reasons for the reduction of the number of licenced energy entities for this energy activity are more strict regulations established in 2011 in the first stage and then in 2013 in the field of trade which regulate the minimum technical requirements for this activity.

In addition, licenced energy activities include oil and oil derivatives (gases, patrols, diesels and fuel oil) storagewhich, in line with the 2011 Energy Law, also includes biofuels and compressed natural gas storing. The number of licence holders in Serbia has not changed since 2009. Namely, there are 14 of them and the biggest one is NIS.

5.4.2 Retail market

Similarly to the case of wholesale, the Law expanded oil derivatives trade and included retail in motor fuels and other fuels on petrol stations. Except for oil derivatives, the term motor fuels also implies biofuels and compressed natural gas, while the term “other fuels” mostly relates to extra light heating oil and gaseous oils. There were 370 energy entities licenced for retail by the end of 2011, while there were 428 of them at the end of2013. An increase of the number of licenced energy entities is due to a several-year trend of the lease of a greater number of petrol stations from NIS and Lukoil system to new leaseholders. Thereby, the number of market players was increased by using practically the same number of petrol stations (around 1,450 of them).

6. ACTIVITIES OF GENERAL INTEREST AND CUSTOMER PROTECTION

6.1 Activities of general interest

The legal framework for public supply in the energy sector of Serbia is stipulated by two major laws: Law on Public Enterprises ("Official Gazette RS", No. 119/12) and the Energy Law.

The Law on Public Enterprises regulates the activities of general interest in several branches of economy, energy being one of them. On the other hand, definition of an activity of general interest in the energy field and the public supply commitment are stipulated by the Energy Law, in line with the Directive of the European Parliament and Council 2003/54/EC and 2003/55/EC, i.e. the Directive of the European Parliament and Council 2009/72/EC and 2009/73/EC from the so called "Third Energy Legislative Package", is regulated by the Energy Law. The Law on Public Enterprises defines that an activity of general interest can be performed by a public enterprise founded by the Republic of Serbia, autonomous province or local self-government unit or economic entity, i.e. some other company type, one branch of a company and entrepreneur, in line with the law regulating their legal status, when these activities are entrusted to them by the competent body.

The main objective of the establishment and operation of public enterprises is to secure continuous performance of activities of general interest and to meet the demand of customers in terms of products and services, improve the performance of activities of general interest, secure technical and economic harmonisation of the system and its sustainable development, with adequate profit and gaining any other interest prescribed by the law.

On the other hand, the Energy Law defines 22 energy activities with 10 of them defined as the activities of general interest in the field of electricity, natural gas and oil. In the field of electricity, they include the following: electricity transmission and transmission system operation, electricity distribution and distribution system operation, public supply and electricity market organisation. In the field of natural gas, they include: natural gas transmission and transmission system operation, natural gas storageand natural gas storage operation, natural gas distribution and distribution system operation and natural gas public supply. In the oil field, they include: oil transport by oil pipelines and oil derivatives transport by product lines.

Energy activities defined in the Energy Law as activities of general interest are performed pursuant to the Law regulating the status of public enterprises.

The Energy Law also defines electricity and natural gas public supply as an all-purpose service at regulated prices which should be provided by the public supplier to those households and small customers who do not select the supplier in the open market. Bearing in mind that, in line with the Law, the public supplier is appointed by the Government of RS, and that the electricity and natural gas markets are being opened in several phases, as of 01/01/2014, in the electricity field, only households and small are entitled to public supply. In the natural gas field, as of 01/01/2015, only natural gas households and small customers will be entitled to it. In the second half of 2012, by the amendments to the statute of PE Srbijagas and by the conclusion of the contract on entrusting natural gas public supply with several companies, the Government of RS appointed energy entities in the field of natural gas which can perform this activity. All 33 of them complied with the conditions and were awarded with the natural gas public supply licence by the Agency at the end of2012 and in the beginning of 2013.

In March 2013, the Government of RS adopted a decision on approving the Decision of PE EPS on the establishment of a company for electricity final customers supply – EPS Supply (EPS Snabdevanje) LLC. Upon compliance with the Agency's conditions, this company was awarded with the electricity public supply licence in June 2013.

6.2 Customers protection

In more general terms, electricity and natural gas customers' protection within services of general economic interest is enabled through the mechanisms prescribed by the Law on Customer Protection ("Official Gazette of RS", No. 73/2010).

More precisely, electricity and natural gas customers' protection is provided through the Energy Law and the bylaws regulating general terms for electricity and natural gas delivery. In particular, customer protection is provided by regulating prices of electricity transmission and distribution, i.e. natural gas transmission and distribution and the prices of public supply in electricity and natural gas. It is also provided through the decisions adopted by the Agency upon appeals of the customers against the acts adopted by system operators on both dismissal and failure to adopt the decision on submitted application for connection or access to the system. Another mechanism includes the definition of special types of protection of vulnerable customers, i.e. "energy vulnerable customers".

The Decree on Conditions for Electricity Delivery and Supply ("Official Gazette of RS", No. 63/13) and the Decree on Conditions for Natural Gas Delivery and Supply ("Official Gazette of RS", No. 47/06, 3/10 and 48/10) define the rights and obligations of customers, suppliers and energy delivery entities more closely as well as the conditions under which some customers may be disconnected from the network in case of unsettled bills.

The Law, apart from stipulating general norms related to protection of all electricity and natural gas customers, also introduces the category of the so called "energy vulnerable customers" for the first time. The Law defines the term "energy vulnerable customer" since "energy vulnerable customer" does not imply the same as vulnerable customer.

This term is much broader since it includes both the customers exercising rights in social care regime and those who need not belong to this category but whose life or health may be subject to danger by electricity or natural gas supply interruption. Adopting the Decree on Energy Vulnerable Customer, i.e. Heat Energy Vulnerable Customer ("Official Gazette of RS", No. 90/13), in order to protect these customers adequately during market opening, the Government of RS defined the criteria, protection method, conditions, deadlines and the procedure for the confirmation of the status of such a customer, as well as the method and sources to provide funds for the delivery of certain quantities of electricity and natural gas under special conditions and the method of keeping record of these customers.

The project on protection of energy and social-wise vulnerable customers (customers with low income, disabled people, people facing health problems, etc.) was initiated even before the adoption of the Law, in cooperation between several ministries, organised by the Ministry of Labour and Social Policy. The Agency participated in this project. "Comparative Analysis of Protection of "Energy Vulnerable Customers"" was drafted by the Agency.

Competent institutions from the EU and the EnC strive to establish some common elements which could serve as the basis for the definition of energy vulnerable customers and the ways of protection (financial support, protection from disconnection from the network due to unsettled liabilities for consumed energy in case the disconnection may affect health or survival of the customer, etc.). The protection of energy vulnerable customers will be based on the instruments acceptable for the market, while the funds for financial support will be based on the state level, not within energy entities.

In order to have a broad customer protection, at the end of2013, the Agency adopted the Rules on Monitoring Technical and Commercial Indicators and on Regulating Quality of Electricity and Natural Gas Delivery and Supply. The Agency is also involved in the definition of the mandatory content of the electricity and natural gas bills which should provide all the necessary data to the customers in terms of their consumption and costs structure, as well as the instructions on how they could exercise their rights.

6.2.1 Assistance to the most energy vulnerable customers in Serbia

The assistance to the most energy vulnerable customers in Serbia is provided on the basis of the Decree on Energy Vulnerable Customer which was adopted by the Government of RS in March 2013 ("Official Gazette of RS", No. 27/2013) and which entered into force on 01/04/2013. In October 2013, the provisions of the Decree were expanded to heat energy customers. Thereby, the discount institute which existed so far was replaced by a new institute which transferred the obligation to protect energy vulnerable customers from energy entities to the state. The adoption of this Decree creates conditions for further energy market development since the obstacles which result in discriminatory treatment of energy suppliers are removed. In addition, these obstacles had a social aspect which represented a limiting factor for further energy sector development which will secure reliable supply of customers on the territory of Serbia.

The above mentioned Decree defined that the status of energy-wise protected customer is awarded to a household (individual, family) living in one housing unit with one metering point where electricity, i.e. natural gas is metered i.e. heat energy is delivered. The main criteria for obtaining the status of the energy-wise protected customer are the following:

- total monthly income of the household
- number of household members and
- financial status.

The following range of total monthly income is the condition for the award of the energy-wise protected customer status:

1) up to 13,222.00 RSD for a one member household;
2) up to 19,251.00 RSD for a two and three members household;
3) up to 25,276.00 RSD for a four and five members household and
4) up to 31,786.00 RSD for a six and more than six members household.

Given total monthly incomes of households are harmonised twice a year – on April 1 and October 1 of the given year. They are harmonised with the customer price index in the last six months. In addition to the given incomes, in order to be awarded with the energy-wise protected customer status, a customer must not own any other living space except the space corresponding to the household needs.

Beneficiaries of financial social assistance and children allowance who were awarded with that right in line with the regulations on social care are awarded with the status of energy-wise protected customer without filing an application, i.e. on the basis of the data available to the ministry in charge of social care issues.

Energy-wise protected customer is awarded with a right to reduced monthly bill for certain electricity, i.e. natural gas, i.e. heat energy quantities, by the number of m^2 of the living space in the following manner:

1) for electricity, for all months:
   (1) for a one-member household by 120 kWh monthly;
   (2) for a two-member and three-member household by 160 kWh monthly;

(3) for a four-member and five-member household by 200 kWh monthly;

(4) for a six-member household and a household with more than six members by 250 kWh monthly.

2) for natural gas, for January, February, March, October, November and December:

(1) for a one-member household by 35 m³ monthly;

(2) for a two-member and three-member household by 45 m³ monthly;

(3) for a four-member and five-member household by 60 m³ monthly;

(4) for a six-member household and a household with more than six members by 75 m³ monthly.

3) for heat energy, for January, February, March, October, November and December:

(1) for a one-member household by 25 m2 monthly;

(2) for a two-member and three-member household by 35 m2 monthly;

(3) for a four-member and five-member household by 45 m2 monthly;

(4) for a six-member household and a household with more than six members by 55 m2 monthly.

The reduction of the monthly bill is presented as the reduction of the principal of the monthly electricity bill for the amount set by multiplying the given quantities with the established higher daily tariff from the green zone for customers from the category Mass Consumption with Two-Tariff Metering increased by 10% from the price list for public supply of DC EPS Supply.

The reduction of the monthly bill is presented as the reduction of the principal of the monthly natural gas bill for the amount set by multiplying the given quantities with the tariff "source" for customers from the category Households which are supplied by PE Srbijagas increased by 5% from the price list for public supply of PE Srbijagas.

The reduction of the monthly bill is presented as the reduction of the monthly heat energy bill by the amount set by multiplying the given quantities per m^2 by 60.00 RSD/m^2.

Energy-wise protected customer is entitled to the reduction of the monthly bill if the monthly consumption is below the double electricity or natural gas quantities mentioned in the Decree.

In case the realised monthly electricity or natural gas consumption amounts to 2 or 2.5 times more than the quantities mentioned in the Decree, energy-wise protected customer is entitled to half the amount of the reduction of the monthly bill.

Energy-wise protected customer whose realised monthly electricity or natural gas consumption amounts to more than 2.5 times more than the quantities mentioned in the Decree is not entitled to monthly bill reduction.

Table 6-1: Review of realised reductions for energy vulnerable customer (VC)

	Number of VC from the data base (end of the year)	Customers entitled to reduction	
		Number of customers (end of the year)	Annual amount 000 RSD
Electricity	85,295	66,221	342,175
Natural gas	176	88	388
Heat energy	115	115	682
Total	85,528	66,366	343,245

Based on their registry, the Ministry of Labour and Social Policy has a data base with individuals and households which could be awarded with the status of energy-wise protected customer on the basis of adopted criteria.

ANNUAL AND FINANCIAL REPORT

7. AGENCY REPORT

7.1 Basic data about the Agency

7.1.1 Establishment of and the scope of work of the Agency

The Energy Agency of the Republic of Serbia (Agency) was established pursuant to the 2004 Energy Law, which provided for the harmonisation of our legislation with the EU regulations at that time.

The Agency was registered at the Commercial Court in Belgrade on June 16, 2005 and started working on August 1, 2005 when the conditions for financing its work were met.

Pursuant to the 2011 Energy Law, the Agency continued its work of a regulatory body, established so as to improve and guide energy and natural gas market development based on principles of non-discrimination and efficient competition, through the establishment of a stable regulatory framework, as well as so as to perform other activities stipulated by the law.

At the same time, the role of the Agency was strengthened and its jurisdiction was expanded. Pursuant to the Law, the Agency performs the following activities:

- adopts the following methodologies for setting:
  - electricity transmission use-of-system charges;
  - electricity distribution use-of-system charges;
  - natural gas transmission use-of-system charges;
  - natural gas distribution use-of-system charges;
  - natural gas storage use-of-system charges;
  - electricity public supply tariffs;
  - natural gas public supply tariffs;
  - oil transport use-of-system charges and oil derivatives via oil pipelines and product lines respectively;
  - costs of connection to electricity transmission and distribution system and
  - costs of connection to natural gas transmission and distribution system;
- adopts rules on:
  - Supplier Switching;
  - monitoring technical and commercial indicators and regulating electricity and natural gas quality of delivery and supply;
- issues licences for the performance of energy activities and adopts an act on licence withdrawal, under the conditions prescribed by the Law, except for the activities related to heat energy, and keeps the register of issued and withdrawn licences (entrusted procedures of the state administration, hereafter: entrusted activity);
- adopts an act defining the criteria and parameters for the definition of the licence fee;
- specifies:
  - system services prices and publishes them;
  - licence fee;
- approves:
  - electricity Transmission Network Code;
  - rules on the cross-border transmission capacity allocation;
  - electricity distribution system code;
  - electricity market rules;
  - organised electricity market rules;
  - natural gas Transmission Network Code;
  - natural gas distribution system code;
  - natural gas storage system code;
  - oil transport (through oil pipelines) system code;
  - oil derivatives transport (through product lines) system code;
  - electricity transmission and distribution system development plan;
  - natural gas transmission system development plan;
  - programme for non-discriminatory practice;
- approves regulated tariffs, as of October 1, 2012;
- adopts decisions on an appeal against:
  - an act of the system operator on dismissal, i.e. failure to adopt the decision upon an application for connection to the system;

- an act of the system operator on dismissal of the access to the system;
- an act of an energy entity for oil transport through oil pipelines or an energy entity for oil derivatives transport through product lines on dismissal of the access to the system (entrusted activities));

- adopts an opinion upon application for exemption from the regulations stipulating regulated access to the system and
- decides on other issues stipulated by the law.

In addition, the Agency is authorised to:

- supervise the implementation of methodologies and approved regulated tariffs;
- adopt instructions and recommendations and give guidelines for the implementation of methodologies and other acts for which the Agency is responsible;
- specify the manner, procedure and deadlines for the submission of the data and documents relevant for Agency's activities;
- specify the manner, procedure and deadlines for bookkeeping aimed at regulation and implementation of the procedure for accounts unbundling and other procedures defined by the law;
- demand amendments to the system code and market rules as well as to other acts in line with the Law and
- demand submission of the data and documents relevant for Agency's activities from energy entities, within the deadline which may be shorter than eight days upon the day of demand submission.

Issuance and withdrawal of licences and deciding upon appeals are entrusted activities.

The Agency provides non-discriminatory access to the systems through effective competition and efficient operations of electricity and natural gas markets.

Within its scope of work, the Agency monitors:

- efficient accounts unbundling in licenced energy entities;
- compliance with the commitments of licenced energy entities;
- application of the rules for cross-border transmission capacity allocation in cooperation with regulatory bodies from other states;
- application of the mechanisms for removal of congestion in transmission and transport system;
- time necessary for system operators to connect an entity to the system, i.e. time for repair work in case of interruptions;
- publishing the data on cross-border transmission capacities and on system use by transmission and transport system operator;
- system reserves use;
- conditions and costs for the connection of new electricity producers to the transmission or distribution system, so as objectivity, transparency and non-discrimination could be guaranteed, in particular having in mind the costs and benefits from different technologies for electricity generation from renewable energy sources and combined electricity and heat energy production;
- manner in which system operators and energy entity dealing in oil transport through oil pipelines and oil derivatives transport through product lines perform their duties defined by the Law and
- transparency and competition level, in cooperation with the bodies authorised for competition issues.

In addition, the Agency participates in the activities of international institutions responsible for the development of regional and European electricity and natural gas market. The Agency is also responsible for the implementation of adopted recommendations and decisions.

From all the above given, the scope of work of the Agency includes the activities in four energy sectors:

- electricity,
- natural gas,
- oil and oil derivatives and
- combined electricity and heat energy production;

Regulatory activities of the Agency, determined by the Law, can be divided in five basic groups:

- price regulation;
- licencing of energy entities for energy activities;
- monitoring electricity and natural gas market;
- deciding upon appeals and
- implementation of international agreements within the Agency's competence.

7.1.2 Organisation of the Agency

The Energy Agency of the Republic of Serbia is independent in performing organisational activities and other activities which enable the performance of the activities stipulated by the law. Pursuant to the Law, the Council of the Energy Agency (hereafter: the Council) adopts all the decisions on the issues under the jurisdiction of the Agency by majority of votes among Council members, except if it is otherwise stipulated by this law or Statute.

Within the Council, there is the President and four members. The Council President stands on behalf of the Agency and represents it, decides on the issues within the scope of work of the Agency as defined in Article 46, paragraph 1, item 8) of the Law, organises the activities of the Agency and manages the Agency, proposes decisions and other acts adopted by the Council and monitors their implementation, has the director's authority in activities related to exercising rights and obligations of the personnel and performs other activities in line with the law, Statute and Council authorisation.

The Council adopts the Statute which regulated internal Agency organisation and procedures, Rules of Procedure and other general acts pursuant to the law. Agency Statute is approved by the National Assembly of the Republic of Serbia.

In 2013, the Agency Council held 43 sessions during which decisions, approvals, certificates and other acts in the field of price regulation, energy market establishment and monitoring, licences issuance, internal organisation and the method of operations of the Agency and other issues within the jurisdiction of the Council were adopted.

Organisational structure of the Agency was established based on elaborate made by the consulting house KPMG and approved by the Ministry of Mining and Energy. Organisation of the Agency is set so as to comply with the requirements in terms of efficiency and rationality in its work. To that end, Agency operates through four departments with a defined scope of work, with necessary level of coordination during the performance of complex duties for which more than one department is responsible. These departments are the following:

- Energy and Technical Department;
- Economics and Finance Department;
- Legal Department and
- Organisational and General Affairs Department.

7.1.3 Independence and responsibility

Agency is an independent legal entity and its functions are independent from any state bodies or organisations and persons dealing in energy issues.

The Council President and members are responsible for their work to the National Assembly. At least once a year, the Agency submits the financial report and the report on the energy sector to the Assembly. The annual report includes the data on the Agency's work during the previous year, its financial operations and the situation in the energy sector of the Republic of Serbia which is within the Agency's competence.

The Agency has its own financing sources, defined by the Law, separate from the state budget.

The Agency is financed from the funds provided through energy licence fees, part of use-of-system charge as set by methodologies as well as from other revenues collected by the Agency through the performance of the activities within its scope of work. The Agency may obtain funds from grants as well, except from grants given by energy entities or persons connected to those.

In the first two years of operation, the Agency was financed from the EU funds, through the European Agency for Reconstruction, pursuant to the agreement - Grant Agreement Establishment and Operation of the Energy Regulatory Agency (grant agreement) which was concluded on July 29, 2005. This grant agreement defined the scope and the structure of Agency's expenditure in the two-year period (lease of offices, employees' costs and other costs). During the six year period, their growth was considerably lower than corresponding expenditure in the economy and the energy sector of Serbia. Even after the two-year period, the EU provided support to the Agency through grants so as to improve its professional capacities. To the same end, USAID supported the Agency between 2007 and 2011.

Pursuant to the Article 48 of the Law, the Agency adopts a financial plan defining total revenue and expenditure, including contingency funds and elements for full insight into the compensation and employment policy. The financial plan is approved by the National Assembly. The financial plan is submitted to the National Assembly at the latest by the end of October of the current year for the following year. Upon the approval of the National Assembly, it is published in the "Official Gazette of the Republic of Serbia". The Agency regularly submitted financial plans to the Assembly. The National Assembly approved the Agency Financial Plan for 2011. Until the day this Report was drafted, the National Assembly has not considered the 2012, 2013 and 2013 Financial Plan of the Agency which were submitted to the Assembly in line with the deadlines prescribed by the law.

Annual calculations of revenue and expenditure of the Agency are audited by an authorised auditor. The auditor's report is submitted to the National Assembly. If one determines that the annual revenue of the Agency exceeds total expenditure, the discrepancy amount is transferred into the financial plan as revenue for the following year.

However, the sources and the amount of revenue for the following year are harmonised with realistic expenditure of the Agency for that year.

Independence of the Agency from executive authorities also reflects in the fact that, pursuant to the Law, the President and members of the Agency Council are appointed by the National Assembly of the Republic of Serbia. Neither the members of the parliament of the National Assembly of the Republic of Serbia, nor the members of the parliament of the autonomous province, members of the boards, other persons appointed by the state or officials of the political party bodies can be elected Council President or member. The following persons cannot be elected as the President and members of the Council: members of the National Assembly, MPs of the Assembly of the Autonomous Province, members of boards, other elected or appointed persons, as well aspolitical parties' officials; owners or co-owners of energy entities, as well as persons whose spouses, children or direct relatives, regardless of degree of consanguinity, or collateral relatives, including second degree of consanguinity, owners or co-owners of energy entities; persons lawfully convicted for criminal offenses against official duty, corruption, fraud or other criminal offences rendering them unfit to discharge the functions they are elected to.

Pursuant to the law and other regulations, the Agency is obliged to keep commercial and other confidential business data which were submitted to it for the purpose of its scope of work as classified.

The Agency leases its offices and pays for the lease from its own funds. The Agency addressed responsible state bodies so as state-owned offices could be provided for the Agency so as to rationalise the expenditure. So far, this issue has not been settled.

7.2 Activities of the Agency in 2013

7.2.1 Price regulation

In 2013, in terms of price regulation, the Agency Council adopted the following methodologies:

- Amendment to the Methodology for Setting Electricity Distribution Use-of-System Charges;
- Amendments to the Methodology for Setting Electricity Distribution Use-of-System Charges;
- Methodology for Setting Electricity Public Supply Charges;
- Amendment to the Methodology for Setting Electricity Public Supply Charges and
- Amendment to the Methodology for Setting Natural Gas Public Supply Charges.

The Agency Council adopted:

- Decision on electricity trading price at which PE EMS and PE EPS trade in order to cover compensation programs and
- Decision on setting system services price for 2014.

The Agency Council issued:

- Approval of the decision on electricity transmission use-of-system charges in February 2013;
- Approval of the decision on electricity distribution use-of-system charges for 5 distribution system operators in July 2013;
- Approval of the decision on electricity public supply tariffs in July 2013;
- Approval of the decision on natural gas public supply tariffs in for 32 public suppliers in January and February 2013;
- Approval of the decision on natural gas public supply tariffs in for 33 public suppliers in August 2013 and
- Approval of the decision on natural gas public supply tariffs in for 33 public suppliers in November 2013.

All the given acts are available on the website of the Agency.

Permanent Agency activities in terms of price regulation include:

- cooperation with energy entities and provision of expertise in the field of impelentation of methodologies for setting prices as well as monitoring their adequate implementation;
- monitoring implementation of methodologies for setting costs for connection to electricity transmission and distribution systems, natural gas transmission and distribution systems and deciding upon customers' appeals, thereby providing for a necessary level of customer protection and directly contributing to adequate implementation of methodologies in practice;
- provision of expertise to energy entities in unbundling and insight and control of unbundled funds and costs for their different activities;
- monitoring and analysing the data submitted by energy entities on realised costs and regulated tariffs;
- semi-year monitoring and comparison of realised electricity and natural gas prices in the region and Europe;
- monitoring costs of appartment heating taking into account the prices of fuels in a certain period of the year;

- analysis of solutions and draft solutions for price regulation and preparation of draft amendments and improvement of existing legislation and
- cooperation with the EnC Secretariat, European Commission and ACER on settling disputable issues in terms of high costs of transit through Hungary for customers in Serbia.

7.2.2 Licencing of energy entities

Activities related to licencing of energy entities for energy activities are administrative procedures, performed by the Agency as entrusted activities, pursuant to the Law. These include:

- issuing licences for energy actvities;
- amendments to issued licences;
- withdrawal, revoking and adoption of decision on withdrawal of the licence by virtue of law;
- monitoring the fullfilment of prescribed requirement by energy entities during the validity period of the licence and
- keeping registry of issued and withdrawn licences.

Requirements for issuance and withdrawal of licences and keeping registry of issued licences are prescribed by the Law and the rules regulating the conditions for issuing licences for energy entities and which is adopted by the ministry in charge of energy issues. These are the main regulations the Agency implements within the licencing procedure. The Rulebook which regulates the conditions for issuing energy licences was published (with prescribed forms and proofs which are necessary for the submission of application for energy licence) on the Agency website.

The registry of issued licences is a public document and it is both available in the written form and kept in the Agency registry and in the electronic form available on the website of the Agency (www.aers.rs).

So as to perform these duties, in line with its legal authorisation, the Agency also adopts the Criteria and Standards for Determining Energy Licence Fees and sets the coefficient value for the calculation of the licence fee for each calendar year. A separate decision is adopted for this and it is published in the “Official Gazette of RS”.

The Agency adopted the Criteria and Standards for Determining Energy Licence Fees (“Official Gazette of RS”, No. 76/2011) thus harmonising the titles of energy activities with the titles stipulated by the Law.

Within the 30 days deadline upon the submission of orderly application, within the administrative procedure, the Agency adopts a decision on issuing energy licence for a certain energy activity. Upon the moment the decision on issuing the energy licence becomes final, the Agency registers it in the licence registry.

The Agency issues licences for 19 energy entities established by the Law:

- electricity generation (electricity generation of total allowed connection power of over 1 MW);
- combined electricity and heat energy production (combined cycle - combined electricity and heat energy production in thermal power plants-district heating companies in facilities of over 1 MW of total connection power and over 1 MWh of total heat power);
- electricity transmission and transmission system management;
- electricity distribution and distribution system management;
- electricity public supply;
- electricity market organisation;
- oil derivatives production;
- oil transport through oil pipelines;
- oil derivatives transport through product lines;
- storage ofoil, oil derivatives and biofuels;
- trade in oil, oil derivatives, biofuels and compressed natural gas;
- trade in motor fuels and other types of fuels on petrol stations;
- natural gas transmission and transmission system operations;
- storage ofnatural gas and natural gas storage management;
- natural gas distribution and natural gas distribution system;
- natural gas supply;
- natural gas public supply and
- biofuels production of over 1,000 t per annum.

In 2013, there were 116 applications for licence issuance submitted to the Agency. Since there were 1,491 applications in the period 2006-2012, there were 1,607 in total.

In 2013, unorderly applications from previous years and applications submitted in the previous years were processed. By the end of 2013, 95 new licences were issued. 66 issues ended in permanent withdrawal of licence, its annulment, and suspension by virtue of law or dismissal of incomplete (unorderly) application. At the end of2013, there were 851 ruling licences in total.

In most cases, the applications were sent back to energy entities for further supplements and corrections to be made. Some of them were sent back several times. Upon the removal of deficiencies and documentation completion, these applications were considered again, so as to check the compliance with energy licence conditions. For the given reasons, there are more than 90 applications being considered.

As of 2008, there were several applications for the amendments of the decisions on issuance of energy licences, especially in the oil sector – for trade in motor fuels and other types of fuels on petrol station. Most applications were submitted due to the change of facilities where energy activity is performed. In 2013, the Agency adopted 69 decisions on amendments on decisions for the issuance of licence for this activity.

The Agency is not responsible for energy entities that did not comply with the conditions for issuing licence. In 2013, competent market inspectors did not find basis for filing against economic offences against legal persons performing energy operation without licence. The list of licences issued in 2013 per each activity is given in Table 7-1.

Table 7-1: Submitted applications and approved licences in 2013 per each activity

No.	Activity	Submitted applications	Approved licences
1.	Electricity generation (electricity generation of total approved connection power of over 1 MW)	3	0
2.	Combined electricity and heat energy production (combined electricity and heat energy production in combined heat and power plants in facilities of over 1 MW of total electrical power of the connection and over 1 MWt of total heat power)	2	0
3.	Electricity transmission and transmission system management	0	0
4.	Electricity distribution and distribution system management	0	0
5.	Electricity supply	19	18
6.	Electricity public supply	1	1
7.	Electricity market organisation	0	0
8.	Oil derivatives production	1	1
9.	Oil transport through oil pipelines	0	0
10.	Oil derivatives transport through product lines	0	0
11.	Storage ofoil, oil derivatives and biofuels	3	3
12.	Trade in oil, oil derivatives, biofuels and compressed natural gas	6	2
13.	Trade in motor fuels and other fuels on petrol stations	66	39
14.	Natural gas transmission and transmission system operations	1	2
15.	Natural gas storageand storage system management	0	0
16.	Natural gas distribution and distribution system management	2	0
17.	Natural gas supply	2	2
18.	Natural gas public supply	10	27
19.	Biofuels production of over 1000t per year	0	0
	Total	**116**	**95**

The updated register of licenced energy entities for each energy activity is available on the Agency's website (www.aers.rs).

7.2.3 Monitoring electricity and natural gas market

So as to create conditions for proper market functioning, the Law stipulates the adoption, i.e. harmonisation with the new Law, of all the rules prescribed by the Law. There are 12 of them. The Agency adopted the Supplier switching rules ("Official Gazette of RS", No. 93/12). At the end of2013, the Rules for Monitoring Technical and Commercial Indicators and Regulation of Quality of Electricity Supply were adopted.

The remaining 10 rules are being developed and adopted by energy companies, upon the Agency's approval.

In 2013, the Agency approved the following documents:

- Natural Gas Transmission Network Code ("Official Gazette of RS", No. 74/13);
- Rules on Cross-border transmission capacity allocation for the Period 01/01/2014 – 31/12/2014;
- Rules on Cross-border transmission capacity allocation on Serbian – Hungarian Border for 2014 ("Agreement between Transmission System Operators of the Republic of Hungary – MAVIR ZRt. and the Transmission System Operator of the Republic of Serbia – PE EMS on the Procedure and Manner of Allocation of Rights to Cross-Border Capacities and Access to Cross-Border Transmission Capacities for 2014");
- Rules on Cross-border transmission capacity allocation on Serbian – Romanian Border for 2014 ("Agreement between Transmission System Operators of the Republic of Romania CCCN TRANSELECTRICA – S.A.–. and the Transmission System Operator of the Republic of Serbia – PE

EMS on the Procedure and Manner of Allocation of Rights to Cross-Border Capacities and Access to Cross-Border Transmission Capacities for 2014");

- Rules for the Cross-border transmission capacity allocation on Serbian-Bulgarian Border for 2014 ("Agreement between the Croatian Transmission System Operator LLC and the Transmission System Operator of the Republic of Serbia – Public Enterprise "Elektromreža Srbije" on the Procedure and Method of Cross-border capacity allocation and on the Access to Cross-Border Transmission Capacities for 2014") and
- Rules for the Cross-border transmission capacity allocation on Serbian-Croatian Border for 2014 ("Agreement between the Transmission System Operator of the Republic of Croatia – Croatian Transmission System Operator HOPS and the Transmission System Operator of the Republic of Serbia – Public Enterprise "Elektromreža Srbije" on the Procedure and Method of Cross-border capacity allocation and on the Access to Cross-Border Transmission Capacities for 2014").

The development of the Natural Gas Transmission Network Code is in the final phase. It is being developed by JSC Yugorosgaz as well as the Natural Gas Distribution Network Codeof PE Srbijagas. The Agency approves these documents.

There is an ongoing harmonisation of the adopted electricity Transmission Network Code, electricity Distribution Network Codeand oil transport system code with the Law which will be adopted upon the Agency's approval. Oil derivatives transport system code is not adopted and will not be adopted until product lines meant for public supply are constructed.

In 2013, the Agency supervised the implementation of the adopted rules through the analysis of needs and initiatives for amendments and supplements to these rules and through its participation in the work of commissions in charge of their supervision. In line with the rules, the commissions were established between PE EMS – for transmission system and PE EPS – a single commission for all the five distribution companies. There is one Agency representative in each of these commissions. The commissions were not yet established by PE Transnafta – for monitoring oil transport system code and PE EMS – for electricity market rules.

7.2.4 Deciding upon appeals

Pursuant to the Law, deciding upon appeals (second instance administrative procedure) which is performed as entrusted activities includes deciding upon the following appeals:

- against operator's acts on dismissal, i.e. failure to adopt a decision on the application on system connection;
- against operator's acts on dismissal of access to the system;
- against acts of energy entities dealing in oil transport through oil pipelines or energy entity deling in oil derivatives transport through product lines on dismissal of access to the system.

Within the procedure of deciding upon appeals of customers, i.e. system users, a necessary level of customer protection is provided. In addition, there is direct contribution to adequate implementation of methodologies and other regulations.

In 2013, there were 307 appeals in total against the activities and behavior of energy entities in different areas of their operations. 202 of them are under the jurisdiction of the Agency, while 105 of them are different petitions and complaints.

The Agency processed all the submitted petitions and complaints and submitted responses to the applicants while forwarding the issues to responsible state bodies for further procedure.

As far as the appeals for which the Agency is responsible within the second instance procedure are concerned, all 202 appeals submitted for reasons stipulated by the Law were processed in 2013. The appeals were submitted:

- against failure of a responsible energy entity within the first instance procedure upon application on connection of the facility of the customer or producer to electricity or natural gas distribution system (the so called "administrative silence") – 52 appeals;
- against decision of electricity or natural gas distribution system operator dismissing application on connection to the system – 50 appeals;
- against electricity distribution system operator's decision approving connection to the system, but customers complain against connection costs, technical conditions for connection, or against procedural decision of energy entities dealing in electricity distribution on suspension of procedure or dismissal of application – 100 appeals.

The greatest number of appeals was filed against decisions of electricity distribution companies – 185 appeals, while there were 17 of them filed against a decision adopted by a natural gas distribution company.

So as to reduce the number of appeals and harmonise the practice of electricity distribution system operators in procedures implying applications on connection of facilities of both legal and natural persons to the power grid, the Agency made an analysis of all appeals submitted to it and of the most common reasons for annulment of decisions on connection within the procedure related to the appeal. In 2013, so as to reduce the number of unlawful decisions

adopted by electricity distribution companies, upon Agency's request, several joint meetings with these energy entities were held. During these meetings, the Agency identified the most common breaches of procedural and material-legal regulations which lead to adoption of unlawful decisions and stressed legally binding commitments of energy entities within connection procedure.

The appeals number growth trend was stopped in 2011. However, it continued in 2013 and therefore, the activities of the Agency concerning training experts who work for electricity and natural gas distribution operators and decide on applications on connection to the system will be continued in the years to come.

7.2.5 International activities

An important segment of Agency activities implies the implementation of international agreements signed by Serbia. First of all, these refer to the participation in the work of the institutions of the EnC. Signing internationally legally binding "Treaty establishing the Energy Community" on October 25, 2005 in Athens, the Southeast Europe countries (and UNMIK for APKM) and the EU initiated the process of creation of the EnC aiming at the expansion of the common EU energy market to the Southeast Europe region.

The main tasks of the EnC are the following:

- establishment of a stable regulatory and market framework in the Southeast Europe and in the EU aiming at attracting investments in power and natural gas sectors, so as to enable stable energy supply crucial for economic development and social stability;
- creation of a common legal framework for electricity and natural gas trade in the Southeast Europe and in the EU;
- improvements to security of supply via the creation of a stable investment climate in which connections could be developed with Caspian, north African and Middle East gas reserves and local reserves of natural gas, coal and hydro potential could be exploited;
- improvements to environment, increased energy efficiency and use of renewable energy sources in the region and
- development of a competitive energy market and using benefits from the economy of scale.

The Treaty establishing the EnC provides for the establishment of regional institutions necessary for the Pan-European energy market functioning: Ministerial Council, Permanent High Level Group, Energy Community Regulatory Board, EnC Secretariat, Electricity Forum and Gas Forum. Subsequently, Oil Forum and Social Forum were founded.

Figure 7-1: Energy Community institutions

The Agency participates in the work of the EnC Regulatory Board (advisory body to the Energy Community Ministerial Council with possible executive functions), as well as of the Electricity Forum, Gas Forum and Social Forum.

The Agency also contributes to the compliance with the obligations assumed by our country within the Stabilisation and Association Agreement and European Partnership (the chapters dealing with energy and regional cooperation).

The Agency is a full member of the Energy Regulators Regional Association (ERRA), a professional regulators association which aims at the upgrade of cooperation, exchange of experience and capacity building within member states.

7.2.5.1 The Athens process and the Energy Community Regulatory Board (ECRB)

Pursuant to the commitments arising from the Treaty establishing the EnC, the Agency participates actively in the work of EnC institutions, at the same time taking into account customer interests protection, as well as the position and goals of both power and gas economy of the Republic of Serbia. Cooperation is developed in coordination with state bodies within the Agency's competence defined by the Law.

The Agency has considerably contributed to the development of organisation and procedures for the functioning of regional and Pan-European electricity and natural gas markets through an active participation in the work of EnC institutions and their expert teams. The President of the Agency Council was elected president of the EnC Regulatory Board (ECRB) in late 2008. He held the position until March 2010. An Agency representative has been the chairman of the EnC Regulatory Board Working Group for Electricity (ECRB WG-E) since the beginning of 2007, while several representatives of the Agency chair some ECRB sub-groups.

In 2013, the Agency participated in the following activities of the EnC institutions:

Electricity

- analysis of regulatory aspects of technical, economic and legal basis for the establishment of the Coordinated Auction Office as well as for the implementation of coordinated auction mechanism for the allocation of transmission capacities on interconnection lines;
- analysis of existing balancing mechanisms in the Southeast Europe region;
- analysis of proposals for regional balancing mechanism which would optimise the procurement of balancing energy and make it more efficient, taking into consideration limited production capacities in the whole region;
- elaboration of the proposals for the organisation (design) of the regional electricity market in the Southeast Europe;
- identification of options for the simplification of the licencing regime for electricity traders in the region;
- identification of options for regulatory incentives for the construction of new transmission capacities and initiating cooperation between regulatory bodies in the region in terms of regional investment projects;
- preparation of mechanisms for electricity market monitoring in the Southeast Europe and
- renewable energy sources (RES) – exchange of experience in terms of the influence of regulatory regimes to the scale and tempo of RES plants construction in the region.

Natural gas

- analysis of regulatory issues important for the construction of EnC gas ring; provision of foundations for the identification of projects of interest for the Energy Community; analysis of the impact of new developments in the gas market to the realisation of the "Energy Community Gas Ring" and
- comparative analysis of the role of regulatory bodies in the development and in monitoring of performace of ten-year development plans of transmission system operators.

Protection of energy vulnerable customers

- participation in updating 2011 EnC documents on the position of energy energy vulnerable customers and methods for their protection;
- analysis of contracts on electricity and natural gas supply in the context of customers' protection and the development of recommendations for improvements in line with the best regulatory practice;
- comparative review of tariff elements for transmission and distribution grid as well as for final customers and the method of calculating them;
- overview of conditions, mechanisms and procedures for the connection to the grid in the region and recommendation for impovements in the field and
- comparative review of small electricity producers in the region, analysis of conditions of operation and recommendations for improving those conditions.

EnC Energy Strategy Task Force

Directly and via support to the ministry in charge of energy, the Agency participated in the activities of the (Strategy Task Force). The activities aimed at the identification of project of regional importance (PECI – Projects of Energy Community Interest) which will be promoted by the European Commission, EnC and international financial institutions.

7.2.5.2 Energy Regulators Regional Association (ERRA)

The Agency is a full member of ERRA (Energy Regulators Regional Association), an expert association of regulators aiming at the improvement of cooperation, exchange of experience and capacity building in member states. ERRA links the regulators from Southeast and East Europe, former USSR, NARUC – USA regulators association, as well as the regulators of certain countries in Asia and Africa. So as to identify the best regulatory mechanisms in several fields of regulation theory and practice (price regulation, competition and energy market, licencing, etc.), insight into options for their implementation in Serbia and capacity building in the Agency. In 2013, the Agency participated in the following ERRA activities:

- Licensing and Competition Committee (an Agency representative has been the vice president of the Committee since 2011)
  - methodologies for setting prices of connections of new production facilities and systems of incentives for renewable energy sources;
  - regulatory incentives for the improvement of competitiveness of renewable energy sources in the market;
  - regulatory mechanisms stimulating energy efficiency in energy production and consumption sectors; new EU directive on energy efficiency;
  - analysis of green certificates' practice in the market;

- use of income arising from allocation of capacities on interconnectors;
- regulatory incentives for distribution grids' development;
- regulatory support to the creation and functioning of regional electricity market and monitoring mechanisms;
- legal basis and practical implementation of priority access of renewable energy sources in regional markets and to internal and cross-border transmission capacities;
- provisions of the decree on Trans-European Networks (TEN-E) in the process of issuing energy permits;
- experience of European transmission system operators in the fields of unbundling and certification;
- development of the system of monitoring wholesale electricity market in the Energy Community;
- analysis of the EU experience in the process of approving rules for the cross-border transmission capacity allocation within a mechanism coordinated on the regional level;
- analysis of experience of the Coordinated Auction Office in the development and approval of common rules for the allocation of capacities and
- presentation of a targeted model of daily electricity market in the EU.

- Tariff/Pricing Committee (an Agency representative has been the vice president of the Committee since 2011)
  - introduction of a model of long-term average incremental costs in the energy sector;
  - regulatory accounting (unbundling different costs elements);
  - regulatory practice of approving profit as an element of tariff setting procedure;
  - regulatory incentives for infrastructure development;
  - comparative analysis of practice in setting prices of connection to distribution grids; incentives for distributed production;
  - identification of indicators of quality of delivery in tariffs for distribution; incentives and penalties;
  - comparative analysis of distribution costs in member states;
  - data base on electricity and natural gas prices in member states and
  - direct and indirect (via tariffs for the use of grids) impact of incentive prices for renewable energy sources to final customers' tariffs.
- Legal Regulation Working Group (an Agency representative has been the chairman of the Committee since 2008)
  - analysis of requirement of new EU regulations on energy efficiency;
  - presentation and analysis of market monitoring mechanisms of the Agency for Cooperation of Energy Regulators (ACER), requirements and implementation of the EU regulation on energy market integrity and transparency (REMIT);
  - preview of procedures for the approval of joint auction rules for transmission capacities on interconnectors, procedures and cooperation between independent regulatory bodies in ERRA;
  - exchange of experience on measures taken by regulatory bodies in order to improve energy efficiency (incentives, subsidies, etc.) and on administration models (state, company, third party);
  - analysis of legal aspects of energy market establishment, operation and monitoring;
  - comparative analysis of the role of regulatory bodies in the processes of the issuance of permits and energy infrastructure licences;
  - transfer of responsibilities between regulatory bodies competent for energy and competition;
  - market integration and interoperability of natural gas transmission systems and
  - legal aspects and procedures for distributed electricity generation .

7.2.5.3 European integration

The Agency participated in several meetings on "Enhanced Permanent Dialogue with the European Union" on energy, during which the Agency presented the level of implementation of commitments within its competence, related to regulatory issues in the energy sector and regional integration. Activities of the Agency – adoption and approval of regulations on energy market and their full enforcement contributed significantly to the positive assessment of the progress made by the Republic of Serbia in the field of common energy market within chapter 15 (energy) of the 2013 European Commission Serbia Progress Report.

The Agency's representatives participate actively in the work of the Negotiation Group 15 – Energy which is in charge of negotiations with the EU in the energy field.

Within the subgroup for energy of the Expert group of the coordination body for the preparation and negotiations on Serbia's accession to the European Union, the Agency contributed to the preparation of the National Program for Integration of Serbia into the European Union 2013-2016 (NPAA) and participates in the Program implementation and monitoring.

7.2.6 Other activities

The Agency actively participated in the preparation of bylaws which are important for the Agency's jurisdiction. We were even active in the drafting procedure for other bylaws (Decree on conditions for electricity delivery and supply, Decree on Energy-Wise Protected Customer, decrees regulating the use of renewable energy sources, regulations on mandatory share of biofuels in the field of transport and measures for obtaining that level, incentive measures for biofuels production and the criteria for sustainable biofuels production, bylaws in line with the Law on Rational Use of Energy, National Action Plan for Renewable Energy Sources). In addition, the Agency was actively involved in the development of amendments to the Energy Law.

The Agency submitted its positions and suggestions to the drafts of the Energy Law and other important systemic laws, such as the Law on Planning and Construction and the Law on Rational Use of Energy to responsible ministries. The Agency also participated in the activities related to the accession of Serbia to the World Trade Organisation.

The Agency participated in the work of the Working Group for Analysis and Monitoring of the Situation on Security of Supply with Energy and Energy Sources of the Ministry.

From the very beginning, the Agency was involved in the work of the Working Group within the competent Ministry which is preparing and drafting the Serbian Energy Sector Development Strategy until 2030. The Agency is analyzing the texts which were prepared and proposing amendments and supplements so as to improve and create a comprehensive, consistent and good-quality document.

The Agency assisted to the Ministry in the development of the Decree on setting maximum and minimum average heat energy prices in the heating season.

The Agency is strongly dedicated to further professional training of the Agency staff to a great extent. To that end, in 2013, there was a set of trainings in the areas which are important for further improvement of the work of the Agency in the field of price regulation and energy market establishment.

A twinning project between the Agency and the Slovak regulatory body Regulatory Office for Network Industries – financed by the EU through the IPA program was launched in 2012 and continued in 2013. The objective of the project is the improvement of regulatory mechanisms related to price regulation, market monitoring, security of supply and the Agency's capacity building so as to enable the Agency to address an increased scale and complexity of activities arising from the new Energy Law, competitive electricity market development and the Third package of legislation on common EU energy market.

8. AGENCY'S FINANCIAL REPORT

Financial operations of the Agency in 2013 were in line with the financial plan. The financial plan defines total revenues and expenditures of the Agency and contingency reserves as well as the elements for comprehensive insight into the income and employment policy. The Agency's financial plan for 2013 was submitted to the National Assembly for approval in line with the obligations arising from the Law. This report illustrates the utilisation of funds per each purpose from the revenue which, in line with the Law and financial plan arises from the licence fee, part of tariff for access to and use of the system, grants and reimbursements and financial revenues and other revenues.

Table 8-1: Total Agency's revenues in 2013

RSD

No.	Revenues	Plan	Realised
1	Revenue from licences	46,535,100	64,024,090
2	Revenue from regulatory fee	128,116,896	134,161,978
3	Separate income from 2012	4,592,515	
4	Revenue from grants and reimbursements	1,500,000	1,667,395
5	Financial revenues and other revenues, settled corrected liabilities for licences and regulatory fee	1,150,000	26,983,243
	TOTAL REVENUE	**181,894,511**	**226,836,707**

***Notes** related to Table 8-1*:

In the past several years, the licences were issued in line with the 2004 Law and bylaws on licences with the 10 year validity period. However, the Criteria and Standards for Setting Energy Licence Fee the fee for the 12 month period upon its issuance define the amount for each year. Therefore, in line with international accounting standards, based on the data of their issuance, it is necessary to defer the relevant revenue to the one originating from the current year and the one which is transferred to the following year. This is how the proportional part of licence fee for 2012 was calculated to the amount of 32,554,370 RSD which is transferred to 2013 and which presents a part of total revenue arising from licences in 2013. In 2013, in line with the 2011 Law, new Criteria and Standards for Setting Licence Fee were adopted. They prescribe that the fee is set as a one-of fee and it is set at the same time the licence is issued. The fee has the same validity period as the licence – 10 years. In line with the new Criteria, relevant revenue from licences for 2013 is calculated. It amounted to 31,469,720 RSD.

The revenue from the regulatory fee, i.e. from the part of tariff for access to and use of electricity and natural gas transmission system amounting to 134,161,978 RSD is calculated quarterly and it depends on the amount of maximum allowed revenue of energy entities. This revenue exceeded the one that was planned for 2013 by 5%. It resulted from the tempo and activities of regulated energy entities on filing applications for price approvals in 2013.

The revenues from grants and reimbursements amount to expenditures. In this case, they amount to the value of costs of depreciation of equipment financed from grant funds for 2013, in the amount of RSD 82,000 which debits purchase value of equipment obtained from the grant in 2005 and 2006. Both that amount as well as reimbursements of a part of expenses for business trips abroad from the EnC Secretariat (pursuant to the Treaty establishing the EnC, which covers accommodation and travel costs for the participants of certain meetings of this association) in the amount of RSD 1,585,395 are presented as a revenue. Since the grant funds are mostly depreciated, the share of depreciation of these funds in revenues is reduced to a great extent. On the other hand, regular participation of the Agency's employees in the activities of the EnC working groups, Euro increase trend and effect of foreign currency – RSD calculation caused slightly higher revenues than expected by the Plan, while being on the level of 2012.

Financial and other revenues include revenues arising from *a vista* interest rates which are charged by the bank and attributed to RSD business account, positive foreign currency differences via settling foreign currency differences on foreign currency account and non-operational and extraordinary revenues. All the three mentioned revenue sources amount to total 453,406 RSD.

In 2013, settled corrected liabilities from 2011-2012 represent a considerable source of revenue, first of all, regulatory fee which amounted to 25,131,044 RSD and licence fee amounting to 453,406 RSD.

In line with the Law, all extra revenues in accounting 2013 is transferred to 2014 and, in line with that amount, basic revenues of the Agency in 2014 are reduced and adjusted. Table 8-2 on total revenues, extra revenues are presented as reserve for unexpected expenses/contingency and for equipment procurement reserves – extra revenues. This was done so as to keep records on them and compare them with expenditures.

Table 8-2: Total Agency's expenditure in 2013

RSD

No.	Expenditure	Planned for 2013	Остварено у 2013.
1	**Material**	**3,798,023**	**2,987,106**
1.1	- material (operating cost, office, miscellaneous)	1,801,745	1,347,210
1.2	- fuel and energy	1,996,278	1,639,896
2	**Salaries and allowances**	**126,172,361**	**114,991,625**
2.1	- salaries and allowances (gross)	101,642,740	91,031,347
2.2	- levies paid by employer	17,532,878	16,293,930
2.3	- fees in line with other contracts		56,873
2.4	- other personal expenditure and fees	6,996,743	7,609,475
3	**Production services**	**23,091,323**	**21,753,783**
3.1	- transport	2,087,370	1,938,986
3.2	- maintenance	1,708,067	1,535,984
3.3	- lease	16,201,728	15,425,897
3.4	- marketing and propaganda	218,732	163,846
3.5	- other services	2,875,426	2,689,070
4	**Depreciation and reserves**	**4,526,933**	**4,217,519**
5	**Non-material expenditure**	**9,874,837**	**4,635,779**
5.1	- non-production services	8,002,923	2,539,629
5.2	- costs of representation	285,444	286,624
5.3	- insurance premium	470,376	349,536
5.4	- payment operations	189,864	228,880
5.5	- membership	408,000	391,770
5.6	- taxes and fees	472,735	828,039
5.7	- other non-material expenditure	45,494	11,300
6	**Financial expenditure and other expenditure**	**10,000,000**	**12,780,816**
	TOTAL EXPENDITURE	**177,463,476**	**161,366,627**
7	**Reserve for unexpected expenses/contingency and for equipment procurement – extra revenue**	**4,431,035**	**65,470,079**
	TOTAL EXPENDITURES = REVENUES	**181,894,511**	**226,836,707**

***Notes** related to Table 8-2:*

In 2013, total expenditures were covered by revenues. Total expenditures were 10% lower than the total planned expenditures.

All main items of expenditures are either below the level of the planned ones or equal to them. Costs of material and energy altogether are around 20% lower than those planned due to the fact that the existing stocks from 2012 were used and due to extremely rational spending and savings.

The costs in terms of wages and allowances are 9% lower than the planned ones, primarily due to the enforcement of the limit to salaries to maximum allowed salary during 2013. It was also due to the fact that new employees were not hired since the National Assembly did not assess the 2013 Financial Plan of the Agency. In 2013 and in the beginning of 2014, the trend of "brain drain" of highly-qualified personnel of the Agency was continued (in total, nine employees have left the Agency since its establishment which represents almost 25% of the total number of employees). For certain, this is due to multiannual fairly slow salaries growth in the Agency in comparison to the public and private sector in the energy field. This fact, along with the limited employment procedures, on different levels, may have a negative effect to the quality and dynamics of activities within the competence of the Agency.

Non-material expenditures were on the level of 50% in comparison to the planned ones. First of all, it was due to the fact that although it was planned to engage consultants, the Agency tended to complete all the activities by using its own sources. In 2013, a Twinning Project which was financed by the EU as mutual exchange of experience and training for both personnel of the Energy Agency of the Republic of Serbia and the Regulatory Office for Network Industries of the Slovak Republic was realised in 2013. The aim of the project was to assist in the implementation of reforms and in structuring energy sector of Serbia in line with the requirements of the Treaty establishing the Energy Community.

A greater costs increase in comparison to the plan is recorded with other personal expenditures and fees. The increase amounts to 9%. The increase in these costs is primarily due to the increase of costs in terms of business trips abroad. They exceeded the planned limit mainly due to unplanned engagement of employees of the Agency in state bodies' activities on the implementation of the provisions of the Brussels Agreement relevant for the energy sector.

Financial expenditure and other types of expenditure record considerable growth in comparison to the plan, i.e. of 28%. The main reason for this is the correction of unsettled liabilities in terms of licences and regulatory fee (unsettled liabilities for more than 60 days) as well as the liabilities in terms of licences which is mostly due to financial crisis effects, reduced solvency and considerable fluctuation of energy entities. Namely, a great number of them either stopped operating and their licence was temporarily or permanently withdrawn due to the fact they did not pay the fee.

Total liabilities of the Agency on all bases on December 31, 2013 amounted to 50,921,621 RSD. 8,265,794 RSD are liabilities for issued licences and 42,655,827 RSD for regulatory fee.

Based on the Rules on Accounting and Accounting Policies, unsettled liabilities amount was corrected for 10,050,775 RSD on December 31, 2013. This correction includes correction of 5% of the total revenue arising from licence fee and regulatory fee. These data indicate that there is always a risk in collecting liabilities due to non-stop changes in the operations of energy entities and one can expect that this will be the case in the future as well. Therefore, so as to provide for unhindered and reliable operations of the Agency, extra revenues present an adequate reserve which would serve not only for replacement of fixed assets but to provide for additional safeguard basis for Agency's activities when there are no other financing sources to be provided within legal framework in the Agency's operations.

The Agency procured equipment from its own funds in the period 2007 – 2012 as indicated in Table 8-3. In addition, procurements were made in 2013 from contingency funds and equipment procurement section, always in line with the procurement plan and the public procurement plan. This was done mainly so as to replace a part of fixed assets which were written down, first of all computer equipment.

Table 8-3: Purchase value of fixed assets of the Agency

RSD

	2007 - 2009	2010	2011	2012	2013
Cars	0	1,893,554	3,019,655	2,126,167	0
Computer equipment, software, network	3,706,112	2,720,731	5,228,694	2,544,052	2,478,749
Office furniture and equipment	1,672,714	64,883	414,978	392,217	239,964
Telephone devices, telephone switchboard	318,339	224,090	337,582	120,694	137,525
Video surveillance, network	1,060,207	0	0	0	0
TOTAL	**6,757,372**	**4,903,258**	**9,000,909**	**5,183,130**	**2,856,238**

The value of assets which were not written down until December 31, 2013, amounts to 11,908,725 RSD, i.e. 34% of gross purchase value of assets, which indicates a high level of write-down and need to regular procurement of equipment that is to replace the existing equipment.

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Abbreviations and foreign phrases

ACER	Agency for the Cooperation of Energy Regulators
APKM	Autonomous Province of Kosovo and Metohija
Benchmarking	Comparative analysis of similar (indicators, companies, activities, etc.)
CEER	Council of European Energy Regulators
BiH	Bosnia and Herzegovina
DAMAS	Information system in PE EMS
DS	Distribution system
EnC	Energy Community
ECRB	EnC Regulatory Board
ECRB WG	EnC Regulatory Board - Working Groups
HHI	Herfindahl-Hirschman Index – indicator of market concentration level
ITC Agreement	Multi-year Pan-European agreement between transmission system operators on compensation of costs for the utilisation of neighbouring transmission networks
SEE	Southeastern Europe
PE EMS	Public Enterprise Elektromreža Srbije - TSO
PE EPS	Public Enterprise Elektroprivreda Srbije (Electric Power Industry of Serbia)
mtoe	Million tons of equivalent oil
NTC	Net Transfer Capacities
REMIT	Regulation on wholesale energy market integrity and transparency, No. 1227/2011, adopted by the European Parliament and the European Council of Ministers
Smart Grid	"Smart" power grid with digital meters, remote collection and distribution of data and information on the behaviour of all system users and with management system, so as to improve system reliability and efficiency
MERZZS	Ministry of Energy, Development and Environment Protection
NIS JSC	Petroleum Industry of Serbia
DC	Daughter Company
RS	Republic of Serbia
RST	Russian – Serbian Trading Company
UNMIK	United Nations Interim Administration Mission in Kosovo, established by the Security Council by Resolution 1244 (1999)

Conversion factors for energy equivalents

	kJ	kcal	kWh	kg oe*
1 kJ	1	0.2388	0.000278	0.000024
1 kcal	4.1868	1	0.001163	0.0001
1 kWh	3,600	860	1	0.086
1 kg oe	41,868	10,000	11.63	1

* kilograms of equivalent oil

11000 Београд
Теразије 5/V
Tel: + 381 11 3033 829;
Fax: + 381 11 3225780
E mail: aers@aers.rs
www.aers.rs
www.aers.rs