

Mirjana Filipović<sup>1</sup>, Dragana Kragulj<sup>2</sup>, Miloš Parežanin<sup>3</sup><sup>1</sup> PE EMS, Belgrade (Public Enterprise – Serbian Transmission System and Market Operator)<sup>2,3</sup> University of Belgrade, Faculty of Organizational Sciences

# Perspectives of Single Energy Market in SEE Countries

UDC: 620.91:339.13(4-12)

DOI: 10.7595/management.fon.2013.0018

Energy sector, as one of the most important sectors of economy, represents an accelerator of economic growth and sustainable development in the contemporary society. Likewise, the energy sector has, for the Southeast European countries, the key role in the process of EU integration. Conducting and implementation of reforms in this area is also clearly manifested through the processes of ratification and implementation of the Energy Community Treaty of the Southeast European countries. In this way, contracting parties have assumed responsibility to harmonize their legislation with the demands of the European Union Directives that refer, primarily, to energy and environment protection from a negative influence of energy activity. This would provide a full participation of the Southeast European countries in the internal energy market of the EU. The aim of this paper is to present in brief the importance and amenities of the integration to the Energy Community and the prospects for development of the energy sectors of the region and of the Republic of Serbia.

**Keywords:** European Union, Southeast European Countries (SEE), Energy Community, single energy market, energy efficiency, renewable energy sources

## 1. Introduction

On the basis of the Energy Community Treaty, signed in October 2005 in Athens, the Republic of Serbia has become a full member of the regional energy community. The same document was also signed by the representatives of Montenegro, Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Romania, Macedonia and the Interim Mission of the UN at Kosovo and Metohija in accordance with the Resolution 1244 of the Security Council of the UN. This international legal document represents an obligation for the Republic of Serbia to open completely the market of electric energy and gas until 2015. The assembly of the Republic of Serbia adopted the Law on Ratification of Establishing Energy Community Treaty on 14 July, 2006.

The importance of establishing the Energy Community of the Southeast European countries is reflected in the creation of a market and regulative framework for production of electric energy and transmission network, which is necessary for a stable and continuous supply. The advantages of establishing the Energy Community are reflected through a continuous supply of electric energy, as well as through the creation of a single market and improvements in environment protection (Filipović, 2009).

The energy sector is of paramount importance in the accession process of the Republic of Serbia and other countries of the region to the EU. In that sense, efforts for the realization of the Energy Community Treaty of the Southeast European countries are necessary, as are reforms within the existing legislation that would provide harmonization and application of energy directives in force on the European energy market. The requests that the Energy Community of the Southeast Europe puts to member countries are known. They have to fulfill these requests if they want to obtain an equal status and conduct successful business in the energy market. The achieved levels of reforms differ both in Europe and in individual Southeast European countries. In addition to the EU Directives, deregulation of the electro-energy sector is treated to a significant extent in the local legislations of individual countries. Developing countries, that is, the Republic of Serbia and other countries of the region, conduct market oriented reforms and liberalization of the energy market (Gabriele, 2004). In that sense, demonopolization, price policy, restructuring and privatization processes, increasing energy efficiency and production of electric energy from renewable sources are the key problems.

## 2. Similarities between the member countries of the Energy Community

Regarding the development of the electric power industry of the Southeast European countries, several basic problems can be noted that are similar to the problems existing in the Republic of Serbia, such as (Filipović, 2009):

- Insufficiency of energy sources and shortness of energy resources of the whole region are reflected in a deficiency in production;
- Globalization and liberalization of the world market require changes in electroenergetic sectors of the Southeast European countries and integration into the world processes;
- Increased pollution of environment impose the necessity of discovering new energy sources and adequate usage of the existing energy sources;
- Strong influence of the state through this sector to macroeconomic development.

The development of the electric power industry in the majority of the Southeast European countries was parallel and similar. State governments were providing development programs. Almost all countries face the similar problems that are reflected in an insufficient utilization of natural potentials, an almost insignificant use of alternative sources of energy and of renewable sources of energy. Some earlier research led to a conclusion that it is not easy to establish the single European market due to differences in development, as well as due to local players in certain regions. Therefore, Europe is divided into three gaseous and eight electric power regions. Establishment of the Energy Community is the result of all previous activities regarding the support to the countries in the accession process to the European Union and assisting their efforts in that way. The EU's goal is to encourage regional development in member countries and those countries that are on track to join the Union (Kragulj & Parežanin, 2011a).

Coal, primarily lignite, will remain the main energy source in the countries of the western Balkans according to the experts of the World Bank (balkanenergy.com). The consumption of energy obtained from fossil fuels is high in all the member countries of the Energy Community (Table 1). It is most common in Bosnia and Herzegovina (over 90%) and Serbia (over 86%), somewhat less pronounced in Albania and Montenegro (below 70%). Savings are much more substantial through the use of renewable energy sources in comparison with the use of fossil fuels, since the process of converting the former is much shorter. If we consider that the energy consumption in all the countries of the region (except Albania) is extremely high, a rational energy production gains more importance in the argument.

The greatest challenges that face the countries in the region are a high dependence from import of oil and gas, a low level of energy sources diversification and an insufficient production from renewable sources (Jednak, et al, 2009). Strengthening and connecting energy infrastructure is required in the region, as one of the solutions for a good energy supply. The countries of the region were and still are in the process of gradual liberalization of the market regarding the regional contracts, but also the membership of Romania and Bulgaria in the EU. The region of the Southeast Europe is at the crossroads of all the energy corridors in transit. It is an important, but also the only economical relation between the East and the West. Although it had hard times during the '90s of the last century, a greater part of the region started with recovery and development around the middle of that decade. The countries of this region are today in the final phases or have already completed changes, reallocation and restructuring of capital sectors, especially the energy sectors.

**Table 1:** Energy indicators of member countries of the Energy Community

Country	Energy Indicators	2006	2007	2008	2009	2010
Albania	Energy production (kt of oil equivalent)	1223	1054	1153	1252	1622
	Energy use (kg of oil equivalent per capita)	663	647	656	653	648
	Fossil fuel energy consumption (% of total)	64.06	65.65	63.69	62.38	62.36
Bosnia and Herzegovina	Energy production (kt of oil equivalent)	3908	3684	4236	4426	4374
	Energy use (kg of oil equivalent per capita)	1402	1404	1578	1602	1703
	Fossil fuel energy consumption (% of total)	90.45	91.02	92.26	92.33	91.51
Bulgaria	Energy production (kt of oil equivalent)	11037	9972	10244	9826	10569
	Energy use (kg of oil equivalent per capita)	2664	2626	2596	2306	2370
	Fossil fuel energy consumption (% of total)	72.55	77.72	76.17	73.09	73.26
Croatia	Energy production (kt of oil equivalent)	4152	4061	3955	4068	4218
	Energy use (kg of oil equivalent per capita)	2012	2098	2043	1962	1932
	Fossil fuel energy consumption (% of total)	84.64	86.54	84.97	83.38	81.85

Country	Energy Indicators	2006	2007	2008	2009	2010
Macedonia	Energy production (kt of oil equivalent)	1617	1504	1624	1607	1616
	Energy use (kg of oil equivalent per capita)	1426	1485	1467	1367	1402
	Fossil fuel energy consumption (% of total)	83.78	85.14	83.73	84.16	80.98
Montenegro	Energy production (kt of oil equivalent)	529	461	576	436	702
	Energy use (kg of oil equivalent per capita)	1322	1234	1311	1038	1303
	Fossil fuel energy consumption (% of total)	59.08	52.13	61.41	52.87	66.64
Romania	Energy production (kt of oil equivalent)	27949	27721	28975	28336	27442
	Energy use (kg of oil equivalent per capita)	1848	1842	1838	1620	1632
	Fossil fuel energy consumption (% of total)	85.04	83.15	79.81	76.54	75.13
Serbia	Energy production (kt of oil equivalent)	10565	10571	10792	10248	10595
	Energy use (kg of oil equivalent per capita)	2302	2255	2295	2082	2141
	Fossil fuel energy consumption (% of total)	90.15	89.72	90.03	87.54	86.68

Source: World Bank Indicators, Retrieved from [www.worldbank.org](http://www.worldbank.org)

The result of changes in the Republic of Serbia is the situation that the Electric Power Industry of Serbia (EPS) will face the competition on the wholesale market, which will force the company to improve its business and apply “unpopular” measures necessary for the protection of its position on the market and for achieving sustainability of business. The fact is that energy is the necessary factor for economy development in the countries of the region, consequently for the Serbian economy, but sustainability of such a concept requires complex processes of structural modification. Electric power industries of the Southeast European countries, in addition to the organizational reforms, have directed the main attention to more efficient business and cost reduction of production, transfer, distribution and supply of electric energy.

### 3. Single electricity market of the Energy Community

The treaty on establishing the Energy Community predicts “acquis communautaire” about the energy issues and each contracting party is obliged to perform the implementation according to the standards. “Acquis communautaire on energy” implies the following (Official Gazette of the Republic of Serbia, 2006):

- Directive No. 2003/54/EC of the European Parliament and Council dated 26 June 2003 that refers to the joint regulations for internal electric power market;
- Directive No. 2003/55/EC of the European Parliament and Council dated 26 June 2003 that refers to the joint regulations for internal natural gas market;
- Directive No. 1228/2003/EC of the European Parliament and Council dated 26 June 2003 that refers to the network access for a cross-border exchange of electric power.

There are mechanisms predicted by the Treaty that each contracting party should follow in creating a single market of electric energy. The mechanisms for functioning of the network energy market are the following (Official Gazette of the Republic of Serbia, 2006):

- Mechanism for transfer of network energy to great distance;
- Stability of supply;
- Supply of energy to citizens;
- Harmonization.

Parallel with the process of regionalization and liberalization of the Southeast Europe market of electric energy, it is very important for the whole region that a price analysis of electric energy exists. The price policy for energy and services is relevant from the aspect of investors, consumers and the electric industry itself. Establishing a real parity of the electric energy price is the basic precondition for improving the efficiency of the electric energy sector. Low prices of electric energy prove to be discouraging for investors. Due to low prices, investors are reluctant to invest in projects in the electric energy sector. On the other hand, state authorities hope for lower prices in order to implement a successful deregulation of the electric industry. Likewise, consumers expect lower prices in order that they have lower expenses for electric energy. Finally, experience confirms that there is no ultimate model of energy sector reforms. The process itself of restructuring and liberalization of market is nothing new and is well known. Many countries completed this process successfully a long time ago. Theirs are the experiences that should be used. The chances for success will be much higher.

A positive economic side of establishing the Energy Community is also reflected in the creation of the market where customs duties and quantitative limitations of network energy import and export are forbidden, as well as customs duties of fiscal nature. Within the market, there is a possibility for not preventing quantitative limitations, if these are justified on the basis of the state policy or the public safety, protection of people's health and lives, or protection of industrial or trade property. However, such a mode of limitation or protection must not represent a means of random discrimination or a hidden form of limitation of the trade between the countries. The Energy Community may take suitable measures with the aim to create a single market without internal borders for the network energy. It is important to point out that the measures taken do not refer and are not applied to fiscal measures, the measures that refer to the free circulation of people, nor to the measures that refer to the rights and interests of employees. Likewise, the Energy Community has the task to deal with the foreign trade of energy. The Energy Community may take measures necessary for the regulation of import and export of network energy to and from the third countries regarding the ecological standards and for the safe functioning of the internal market of energy. If the supply of network energy is disturbed, whether a member state of the Energy Community or a third country is involved, the contracting parties are obliged to find a quick solution according to the provisions of the signed Treaty. The Ministerial Council is in charge of adoption and undertaking the necessary measures as a response to the problems (Filipović, 2009). The process of establishing the Energy Community is actually another name for the process of establishing the regional energy market of the Southeast Europe and its later integration into the internal energy market of the European Union. Special interest and benefits from this Treaty may be interest of the neighbouring countries, those that are "adjacent" to the region: Greece, Italy, Hungary and Slovenia. The ratification and successful implementation of the energy Community Treaty are important not only for the successful reforms of the energy sector, but also for the universal process of the European integrations of the complete region.

For a comparison of projections of energy resources, selected countries of the region that are at different stages of accession to the EU and Croatia, which is since 1st of July, 2013 a full member of the EU (Table 2) are selected. Common to all the selected countries is the high level of use of coal, especially lignite in energy production. Also, the potential of RES is mainly related to hydropower and is characterized by a high import dependence of most countries in the region. In a dynamic scenario of development of the energy sector in the near future, the Republic of Serbia and Bosnia and Herzegovina could become a net exporter of electricity. However, unless something is attempted for building new objects and reconstruction of the existing ones, the Republic of Serbia will become like other countries in the region, import power dependent.

**Table 2:** Projections of energy production and export of energy resources for selected countries

Country	Year	Domestic production (GWh)	Structure of domestic production (in GWh)						Energy trade (in GWh)	
			Coal	Gas	Oil	Hydro	RES (other than hydro)	CHP	Import	Export
Albania	2012	5037	-	-	-	4743	-	-	2817	-
	2015	6386	-	-	-	5612	46	-	2272	-
Bosnia i Herzegovina	2012	13817	6663	-	-	7154	-	-	120	-2826
	2015	20220	8094	-	0	11845	280	-	203	-4047
Croatia	2012	21908	6243	7002	179	8334	150	-	2697	-
	2015	21916	5309	6681	1800	7526	600	-	2697	-
Macedonia	2012	9353	4787	1929	1050	1587	-	-	409	-
	2015	10461	4471	3633	496	1861	-	-	4	-
Montenegro	2012	2891	1150	-	-	1741	-	-	1762	-
	2015	3426	1179	-	-	1957	290	-	1804	-
Serbia	2012	37863	26779	-	286	10585	-	213	6410	-6363
	2015	39850	27210	-	-	11840	-	800	-	-803
UMNIK Kosovo	2012	5541	5386	-	-	132	23	-	602	-
	2015	5874	5568	-	-	186	120	-	800	-

Source: Energy Community, 2012. Energy Strategy of the Energy Community. ECB Publication, p. 34-40.

Problems appear when it is required to meet the increasing consumption from the existing capacities which have not been invested into in the past 20-30 years. Likewise, there is no well-established strategy through which the energy sector would develop in the future, and which implies plans for defining and exploitation of strategic resources. The undefined status of Kosovo and Metohia, where the greatest reserves of coal in the Republic of Serbia and the region are situated, considerably complicates the planning of future activities of all electric power companies that do business in this market. Current development plans of energetics are based on the usage of coal reserves from this basin, but a scenario where the Republic of Serbia would not have access to those strategically important raw materials is not being mentioned. Since it is evident that the consumption has surpassed the production capabilities of the Republic of Serbia with the existing capacities, the high energy dependence of the country within the winter period is evident both among electric energy traders and in purchasing from the surrounding electric industries that have the similar problem. Energy policy with average prices of electric energy, which are irrational, only leads to the above mentioned situation.

#### 4. Necessary conditions for functioning of energy market in the Republic of Serbia

The crucial problem of the electricity sector in the Republic of Serbia is the price of electric energy (Jednak, et al, 2009). Real prices are the basis of successful investments and development in the energy sector. The problem of electric energy prices is closely connected to the political and economic situation in the state. Since EPS is a monopolistic company owned by the Republic of Serbia, the problem of profitable business performance and efficient financial management has been transferred for years from a former government to a new one. The question is what are the necessary conditions for establishing, but also for the functioning, of the electric energy market in the Republic of Serbia. It is necessary that there should be a surplus of electric energy in order to establish the market, both internal, in Serbia, and regional, at the level of the Southeast Europe. Regarding the surplus of electric energy that can be offered on the market, it must be noted that in the past decades not a single plant for production of electric energy has been built in the Republic of Serbia, that might become an activator of the market.

The industrial structure of the Republic of Serbia is energy intensive. The country uses an unusually large quantity of energy per unit of product, with low energy efficiency. Before investing into the new production capacities, it is necessary to calculate the real consumption of electric energy that is expected in the next period in Serbia, on condition that the price of electric energy starts to be formed under the market conditions. It is necessary to take into consideration the planned reduction of losses in the distributing network, as well as the planned increase in energy efficiency. The losses must be reduced to a reasonable measure, since the Republic of Serbia cannot afford to build new capacities with the current losses, and unless huge dissipation of electric energy is stopped. If the current increase in the electric energy consumption continues, Serbia will become energy dependent on import, like the majority of the countries in the region. A positive world trend is obvious in understanding that the energy efficiency is potentially the greatest source of energy in the world. Except in the speeches of politicians and at numerous conferences, this trend has no support and no motivation for application is noticed in the Republic of Serbia.

One of the greatest problems of the complete region is the subsidized price of electric energy. Economy must not be in the status of privileged tariff customers, but will have to obtain the electric energy on the open market, as stipulated in the new Energy Law. It is also evident that social cards of consumers must be made in future in Serbia, in order to define the consumers that are not able to pay for electric energy under market conditions. It is sure that the price of electric energy will be increased in the future period, but it would be useful if the increase be in proportion to consumption and not linear for all consumers (the same for the poorest, but also for those that make profit by using cheap energy). The price of electric energy will have to increase due to the financial insolvency of the EPS, the need for building new production capacities and replacing deteriorated power plants that do not fulfill ecological standards, as well as reducing losses in the distributive network of the EPS.

The final long-term goal should be introducing of the "variable price policy" for the consumed electric energy (introduction of several dimensions of collection, such as the exact time of consumption during the day, specific date of consumption, quality and quantity, possibility to buy in advance at more favourable price, etc.). A very modern "smart-metering" system in the distributive network is necessary for such a manner of collection, as well as creative packages of services, both for households and for economic subjects. Only then, households and economy could see the advantages of the contemporary technical system and the



effects of market liberalization, with increased competition among the traders. The more the Republic of Serbia gets to the real market prices, the more it opens for investments, energy efficiency and investing in renewable energy sources. There are liquid stock exchanges in Europe, associations and organizations of traders, whose goal is to create the unique rules and procedures for business performance in this area. Regarding the Southeast Europe region, it must be pointed out that only the OPCOM stock exchange exists in Romania (*The Romanian Power Market Operator*), which is not liquid enough, so that the countries of the region rather refer to the stock exchange in Hungary or in Leipzig.

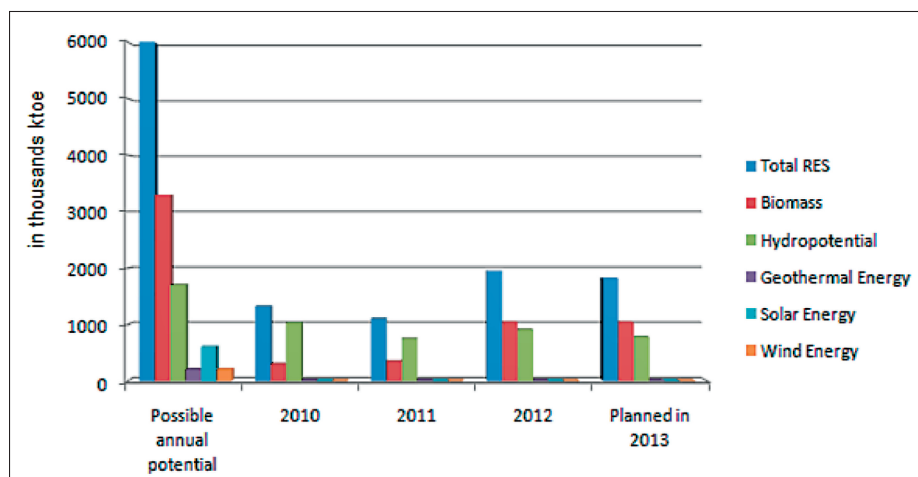
The energy sector, as one of the most important sectors in the Republic of Serbia, is on the path of reforms, reorganization and harmonization with policies and strategies of the European Union (Kragulj & Parežanin, 2011). The decentralization of energy companies is a general phenomenon in the contemporary economy. The new legal environment (the Law on Energetics 2011, the Law on Business Corporations, etc.) is to a large extent harmonized with legal regulations and policies of the European Union in the sector of energetics. Likewise, a series of by-laws is expected to be adopted, which will accelerate and improve the reform of the sector itself. The road map for reforming the sector of energetics in the Republic of Serbia comprises the opening of the market, division of activities (production, distribution, transfer, trade), but also other segments of market liberalization. The previous experience, analyses and comparisons with the region indicate the trend that action plan for complete harmonization will be to a large extent completed until 2017. The Republic of Serbia is on a tight track to carry out the reform of the sector successfully, with an intensification of the reform processes.

## 5. Renewable energy sources

Energy from renewable sources is the energy produced from non-fossil renewable sources (Energy Law, 2011). Exploitation of renewable energy sources (energy of wind, solar energy, energy of biomass and biofuel, geothermal energy and that of heating pump systems) represents the key factor of sustainable development (Kragulj & Parežanin, 2011). Regardless of the everyday availability of the sun, wind or rivers in the world, over 1.5 billion people has no access to electric energy. The world is in a constant energy crisis, the reserves of fossil fuels are being reduced while the number of population is growing, but also the costs due to the consumption of fossil fuels. The renewable energy sources are not sufficient, but are a necessary condition of sustainable energy development of the whole world. A sustainable development of the society requires a new approach to the perception and solving problems in energetics, regarding both the safety of supply and the diversification of options for energy supply, through the increase of using renewable energy sources (RES) followed by the increase in energy efficiency.

Due to its convenient transit location, the Republic of Serbia is an attractive destination for investment into the RES. With the ratification of the Energy Community Treaty, Serbia accepted the obligation to implement the Directive 2001/77/EC on promoting electric energy production from renewable energy sources since 2006. It is also required to comply with the Directive 2003/30/EC of the European Parliament and the Council of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels for transport. Likewise, Serbia has been a member and founder of the *International Renewable Energy Agency* – IRENA since 26 January, 2009, the first intergovernmental organization focused only on renewable energy. The EU Directive No. 28 of 2009 on renewable energy sets the obligatory national goals that the members of the EU are to accomplish through the promotion of renewable energy in the sectors of electric energy, heating and cooling and in the sector of transportation, in order to provide that renewable energy should make at least 20% of the total energy consumption in the EU by 2020. It is expected that the Republic of Serbia, as the future member of the EU, will tend to accomplish these goals with its policy.

The consumption of energy per citizen is one of the most reliable criteria on the development level of material culture. Different levels of correlation between the domestic product and the energy consumption in different countries and regions is conditioned by the change of economy structure, climate conditions, differences in standards of life, as well as in changes in energy structures, regarding their different levels of efficacy. The production of electric energy from renewable sources in the countries of the Southeast Europe is growing, but the Republic of Serbia considerably lags behind. The total annual potential for the use of RES in the Republic of Serbia is significantly higher than the level of use. Used hydro and biomass energy production, but enough of in relation to the available capacity (Figure 1).



**Figure 1:** Potential and use of RES in the Republic of Serbia (RS Government, 2013; Eurostat, 2013; Energy Balances 2012-2013)

In the Energy sector development strategy of the Republic of Serbia by 2015, it is predicted that the participation of the new renewable sources in total final consumption of energy should be increased to 1.5-2% within the period 2006-2015 (Ministry of Mining and Energy/Ministarstvo rudarstva i energetike, 2005). A great problem is the profitability of the new technologies in comparison with the classical energy sources regarding their high starting price. Therefore, the construction of the systems for production of renewable energy sources should be subsidized by the state, so that the state should have a share in such companies, since it would have benefits. The status of a privileged producer of electric energy is established primarily in order to improve the market position of certain types of power plants. Their construction is of strategic interest for the Republic of Serbia and their performance would not be profitable without special stimulations. Since this is the area of energetics with a lot of obstacles, it is required that the problems in the future period be solved through changes of related laws, simplifying the procedure for obtaining permits, implementing facilities for customs duties on import of production equipment. The Republic of Serbia has a great potential in renewable energy sources (Tesić, et al, 2011). Such a potential should be in function, since dependence on import and problems with energy deficit can be relaxed. Likewise, increasing the use of renewable energy sources would be also in accordance with the efforts of the European Union with the goal to increase the share of renewable energy sources in energetic mix to 20% by 2020 (European Commission, 2006).

## Conclusion

The European Commission will consider that all the countries that ratify the Energy Community Treaty and observe its stipulations fulfill all the conditions for accession to the European Union in the area of energetic and access to the EU funds and international financial institutions will be granted to them. Otherwise, sanctions can be imposed in the form of exclusion from the process and limiting the support in international financial institutions. The importance of the referred Treaty for the universal process of European integrations has to be recognized, and keeping this in mind it is clear how high a priority it is for the government of the Republic of Serbia. The most important principles on which the Energy community Treaty is based are the creation of stable and regulatory market framework that is capable of attracting foreign investors for the gas pipeline, the production of electric energy and distribution network, so that everybody should have access to the stable and continuous supply of energy, which is of vital importance for the economic development and social stability (Filipović, 2009).

Cooperation with the countries in the region is inevitable and obligatory for the Republic of Serbia and, as such, it represents a further direction of integrating the energy sector into the European streams. In that sense, it is very important to define the form of cooperation, i.e. state whether it will be technical-economical, personnel or regulatory cooperation. The Republic of Serbia, as part of the Balkans, represents an unavoidable point in all transactions. Therefore, including electric industry in the current energetic flows is almost inevitable. It will provide, apart from the exchange of experience and technology, new investments. Likewise, adequate price policy and an active role of the state will have a profound influence on the

development of the complete energetic sector of the Republic of Serbia. An important future step would be relocating social policy from electroenergetic sector and starting activities that would represent a permanent solution for the complete consumption of electric energy in Serbia. With a realistic development goals and with rational consumption of electric energy, as well as price policy, the energy sector of the Republic of Serbia has a better prospect in the future.

Thirty percent (30%) of the total production of the Serbian Electric Power Industry (EPS) comes from the hydro sector, which has a production deficit and a great financial problem due to a draughty year. Likewise, it must be taken into consideration that the EPS has the obligation to supply customers at regulated prices and in the above mentioned situations it must buy electricity to cover shortages at market conditions. One might say that the key to a successful transition from vertically integrated monopolistic company to a market-oriented company is in providing equal participation of new investors, who will increase production and reduce the total energetic deficit. However, it is necessary that all relevant factors be included in the process that can lead to the positive result for the Serbian energetics. Many companies are interested in investing in the Serbian energetics and realization of joint projects, but the absence of legal and economic frameworks keeps off prospective investors from the beginning. The conclusion is more than clear, that the state should have the key role when creating the conditions and a suitable investment climate.

## REFERENCES

- [1] Action Plan for Energy Efficiency: Realising the Potential, Communication from The Commission COM (2006) 545, Commission of the European Communities, Brussels.
- [2] Balkan energy - Country Reports. Retrieved from: [www.balkanenergy.com](http://www.balkanenergy.com) (last accessed on 30 March, 2013)
- [3] Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC - Statements made with regard to decommissioning and waste management activities, Official Journal of the European Union L 176, (15.7.2003.), p. 36-56.
- [4] Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC, Official Journal of the European Union L 176, (15.7.2003.), p. 57-78.
- [5] Energy balance of the Republic of Serbia for 2012 year, Ministry of Energy, Development and the Environment Republic of Serbia, 2012., Retrieved from <http://www.merz.gov.rs/cir/dokumenti/energetski-bilans-republike-srbije-za-2012-godinu>
- [6] Energy balance of the Republic of Serbia for 2013 year, Ministry of Energy, Development and the Environment Republic of Serbia 2013., Retrieved from <http://www.merz.gov.rs/cir/dokumenti/energetski-bilans-republike-srbije-za-2013-godinu> (last accessed on 20 June, 2013)
- [7] Energy Community (2012). Energy Strategy of the Energy Community. ECRB Publication
- [8] Energy Law, Official Gazette of the Republic of Serbia, No. 57/2011
- [9] Energy Sector Development Strategy of the Republic of Serbia by 2015, Ministry of Mining and Energy Republic of Serbia. Retrieved from: [http://www.ssl-link.com/mre/cms/mestoZaUploadFajlove/Serbian\\_energy\\_strategy\\_fianl\\_EN.pdf](http://www.ssl-link.com/mre/cms/mestoZaUploadFajlove/Serbian_energy_strategy_fianl_EN.pdf).
- [10] Eurostat (2013). Energy balance sheet 2010-2011. Luxembourg: Publications Office of the European Union
- [11] Filipović M., (2009). Perspectives of Electric Power Industry of Serbia Development Within Energy Community of Southeast European Countries, master's thesis, Faculty of Economy, University of Belgrade (in Serbian)
- [12] Gabriele A., (2004). Policy alternatives in reforming energy utilities in developing countries, *Energy Policy*, 32 (11), pp. 1319-1337. doi:10.1016/S0301-4215(03)00099-5
- [13] International Energy Agency. Retrieved from: [www.iea.org](http://www.iea.org) (last accessed on 30 March, 2013)
- [14] Jednak S., Kragulj D., Bulajic M., & Pittman R. (2009). Electricity reform in Serbia. Special issue of *Utilities Policy- Strategy, Performance, Regulation*, Elsevier, 17 (1), pp. 125-133., doi:10.1016/j.jup.2008.02.002
- [15] Kragulj D., & Parežanin M., (2011). Renewable energy as an important component of sustainable development, *Collection of papers/Operation management in function of sustainable economic growth and development of Serbia from 2011 to 2020/VIII gathering of entrepreneurs and scientists*, Faculty of Organizational Sciences, Belgrade, ISBN 978-86-7680-244-9; pp. 439-446 (in Serbian).
- [16] Kragulj D., & Parežanin M., (2011a). Structural and Cohesion Fund - Projects of Regional Development European Union, *Management*, 61, pp. 15-23., UDC: 332.1:336.1.07(4-672EU)



- [17] Law on ratification of the Treaty establishing the Energy Community between the European Union and the Republic of Albania, the Republic of Bulgaria, Bosnia and Herzegovina, the Republic of Croatia, the former Yugoslav Republic of Macedonia, the Republic of Montenegro, Romania, the Republic of Serbia and the United Nations Interim Administration Mission in Kosovo pursuant to the United Nations Security Council Resolution 1244, Official Gazette of the Republic of Serbia, No. 62/2006.
- [18] National Renewable Energy Action Plan of the Republic of Serbia. Belgrade: NL Agency, Republic of Serbia, 2013.
- [19] Regulation (EC) No 1228/2003 of the European Parliament and of the Council of 26 June, 2003 on conditions for access to the network for cross-border exchanges in electricity, Official Journal of the European Union L 176, (15.6.2003), p. 1-10.
- [20] Renewable Energy Road Map – Renewable energies in the 21st century: building a more sustainable future, Communication from the Commission to the Council and the European Parliament COM (2006) 848, Commission of the European Communities, Brussels.
- [21] Tesic M., Kiss F., & Zavargo Z. (2011). Renewable energy policy in the Republic of Serbia. *Renewable and Sustainable Energy Reviews*, 15 (1), p. 752-758., doi:10.1016/j.rser.2010.08. 016
- [22] World Bank Indicators. Retrieved from: [www.worldbank.org](http://www.worldbank.org) (last accessed on 20 June, 2013).

Received: March 2013

Accepted: September 2013.

## About the Author

### Mirjana Filipović

PE EMS, Belgrade (Public Enterprise – Serbian Transmission System and Market Operator)  
[filipovicj@ikomline.net](mailto:filipovicj@ikomline.net)



Mirjana Filipović (Valjevo, 1978) completed her bachelor and master studies at the Faculty of Economics, University of Belgrade, Serbia. She is the Head of the Center for treasury management in the PE "Elektromreža Srbije." Previously she served as Deputy Minister of Energy, Development and the Environment and was responsible for the electricity sector. She has also worked in the PE "Elektroprivreda Srbije" and in the Ministry of Finance of the Republic of Serbia - Treasury Department. Her main research interest is domestic electricity market and its integration into the regional and European markets.

### Dragana Kragulj

University of Belgrade, Faculty of Organizational Sciences  
[kragulj@fon.bg.ac.rs](mailto:kragulj@fon.bg.ac.rs)



Dragana Kragulj, Ph.D., is a full professor at the Faculty of Organizational Sciences, University of Belgrade. She was a Chair of the Department of Economics, Business Planning and International Management. She has published several editions of different textbooks on Economics, two monographs of her own and over 100 scientific papers published in reputable national and international journals and conferences. She has been involved in several research projects. In addition to her teaching, she is occupied with research of macroeconomic problems, prices, market, inflation, economic development, investment, international trade, agriculture, energy economics, process of transition, international economic integrations, the European Union.

### Miloš Parežanin

University of Belgrade, Faculty of Organizational Sciences  
[milos.parezanin@fon.bg.ac.rs](mailto:milos.parezanin@fon.bg.ac.rs)



Miloš Parežanin was born in Skopje in 1985. He graduated from the Faculty of Economics, University of Belgrade in 2009. Currently he is a Ph.D. student at the same faculty. Since 2011, he has been employed at the Faculty of Organizational Sciences in Belgrade, as a teaching associate for the scientific area of business economics and macroeconomics.

Miloš Parežanin has participated in several scientific national conferences.