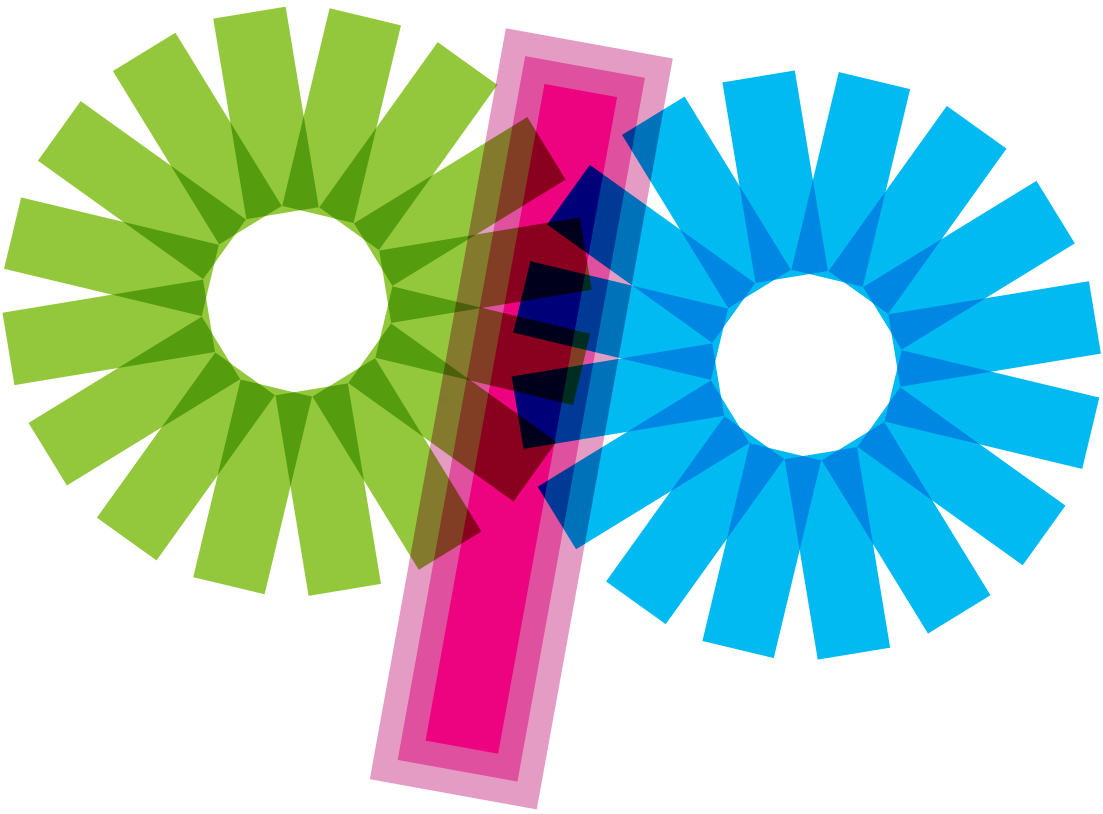
3|2017

FORUM

FORUM ZA ETNIČKE ODNOSE | FORUM FOR ETHNIC RELATIONS

Policy Paper

ENERGY SECTOR OF SERBIA AND KOSOVO: PRELIMINARY ANALYSIS



ENERGY SECTOR OF SERBIA AND KOSOVO: PRELIMINARY ANALYSIS



HEINRICH BÖLL STIFTUNG

Belgrade/Prishtina, July 2017

ENERGETSKI SEKTOR SRBIJE I KOSOVA: PRELIMINARNA ANALIZA

Beograd/Priština, jul 2017. godine

FORUM ZA ETNIČKE ODNOSE
FORUM FOR ETHNIC RELATIONS

Kraljice Natalije 45/VII
11000 Beograd, Srbija
+381 11 36 20 804
forumbgd@gmail.com • www.fer.org.rs

The views expressed in this Preliminary Analysis are those of the author(s) and should not be attributed to the Heinrich Böll Stiftung

CIP - Каталогизација у публикацији
Народна библиотека Србије, Београд

323.1

FORUM : the magazine of FER / editor in chief Nenad Đurđević. - Year 1, iss. 1 (2002)-year 2, iss. 4 (2003) ; 2013, no. 1- . - Belgrade : Forum for Ethnic Relations, 2002-2003; 2013- (Belgrade : Dosije studio). - 30 cm

Povremeno. - Ima izdanje na drugom jeziku: Forum (Forum za etničke odnose) = ISSN 2335-0490
ISSN 1451-6357 = Forum - Forum for Ethnic Relations
COBISS.SR-ID 25690639

FORUM

Year 7, issue nr. 3

Publisher
Forum za etničke odnose, Beograd

Editor in chief
Nenad Đurđević

Translation
Agencija TOUCH TWO

Prepress
Atelje, Beograd

Printing
Dosije studio, Beograd

Published periodically

Contents

Summary 5

Introduction 7

PART I:
SERBIA AND KOSOVO RELATIONS – BETWEEN NORMALIZATION AND SUSTAINABILITY 11
Dušan Janjić, PhD

PART II:
SERBIA-KOSOVO ENERGY SECTOR 51
Milan Radunović, PhD and Sabri Limari, PhD

PART III:
RECOMMENDATIONS:
POSSIBLE COOPERATION
BETWEEN SERBIA AND KOSOVO
IN THE ENERGY SECTOR 69

Summary

The dialogue between Serbia and Kosovo (the Brussels dialogue) moves along the path of normalization with the aim of achieving peace, security and stability in the Western Balkans, and promoting cooperation and European integration to improve living conditions for all people. In reality, it is a long journey made of many steps that need to be taken by both sides for normalization of relations *between* Serbia and Kosovo, but also for normalization of Serbia *and* Kosovo themselves.

The normalization process facilitates political decisions on cooperation in the field of energy, and thus promotes further strengthening of such cooperation. For its part, energy security and cooperation between Serbia and Kosovo is one of the pillars of economic, political and overall normalization of Kosovo and Serbia, including their mutual relations.

Energy systems of Serbia and Kosovo were developed within the setting of a unique state of Yugoslavia, and even today there are many areas of cooperation and inter-dependence between these two energy systems. This cooperation should be based on: economic interests of equal partners; commercial contracts on the exchange / purchase / transit of electricity, commercial contracts on the development of gas lines and use / transit / sale of gas, as well as providing security of both systems.

Introduction

The subject of the preliminary analysis is the condition and development possibilities of the energy systems of Serbia and Kosovo, the history and current state of their relations, as well as potentials for future cooperation.

Securing future energy supplies and development of energy systems are key factors for the development of Serbia and Kosovo and their mutual cooperation. The normalization of relations and resolution of the final status of Kosovo place the cooperation between Serbia and Kosovo in the context of their common European future.

The main goals of the analysis are:

- Gaining a more comprehensive insight and understanding of the relations between energy power systems and security, as well as social circumstances in Serbia and Kosovo;
- Reviewing the impact of the progress in the process of normalization on the activation of the energy sector and energy cooperation between Serbia and Kosovo;
- Identifying the areas of possible cooperation and projects for the improvement of the energy sector and energy security in Serbia and Kosovo;
- Identifying projects for possible cooperation in the field of energy between Serbia and Kosovo.

The analysis under this project will present in broad strokes the current situation in the field of energy. The analysis will:

- Take into account the official data from various sources (comparative analysis and data triangulation);
- List the missing data and explore how these can be (mis)used;
- Emphasize the specific political and economic interests behind certain political options (in Serbia, Kosovo, an on the international level);
- Make assumptions as to how the future negotiations should be organized, which areas it should cover, and areas in which the transparency of the negotiation process can be improved;

- Describe the obstacles for a more transparent negotiation process and public participation in these processes;
- Offer a framework for more sustainable energy sector in Kosovo, in the context of Energy community and EU accession process, taking into account environmental, economic and sensitive social aspects of sustainability;
- Propose activities which should assist civil society organizations to partake in the negotiation process.

The applied methodology framework in this analysis was as follows:

<table>
<tr><th></th><th>Research stage</th><th>Matters of interest</th><th>Method</th><th colspan="2">Location</th></tr>
<tr><td rowspan="4">1</td><td rowspan="4">Preliminary analysis</td><td>- Existing studies and strategies (national + EU);
- Energy balances of Kosovo;
- Compatibility between energy sectors of Kosovo and Serbia and identification of possibilities for cooperation;
- Geographic and demographic characteristics and use of land;
- The use and potentials of renewable energy resources (especially the use of biomass);
- Distribution network;
- Ownership structures in production and distribution of electricity and heat energy;</td><td>Quantitative (triangulation)</td><td colspan="2">BG
PR</td></tr>
<tr><td>- The history and current status of negotiations, with special focus on the energy;</td><td rowspan="3">Quantitative</td><td rowspan="3">Field work</td><td>BG (+onsite)</td></tr>
<tr><td>- Analysis of political / social / economic actors in Kosovo and in Serbia with impact on the energy policy;</td><td rowspan="2">North Kosovo</td></tr>
<tr><td rowspan="2">2</td><td rowspan="2">Workshops</td><td rowspan="2">- Local actors with focus on civil society organizations;
- Formal and informal structures in energy production and distribution;
- Political tensions;
- Local economic interests and power structures;</td><td>Prishtina</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td>3</td><td>Analysis</td><td>- Sustainability of the energy system;
- Perspectives of the energy sector in the negotiation process between Serbia and Kosovo and transparency;
- The possibility of cooperation in the field of energy, existing infrastructure and possibility of use of energy resources in development projects;
- Possible catalysts of “green“ change.</td><td></td><td colspan="2">BG</td></tr>
<tr><td>4</td><td>Review</td><td></td><td></td><td colspan="2">BG + international</td></tr>
</table>

For the purposes of the preliminary analysis, the following team of experts was formed:

- Dušan Janjić, PhD, Senior Associate, Institute of Social Sciences, Center for Social Research, Belgrade, Serbia
- Prof. Sabri Limari, University of Prishtina, Kosovo,
- Prof. Milan Radunović, ESI, Belgrade.

The following publically available sources were used in the preparation of the preliminary analysis:

- The Energy Regulatory Office (ERE), the Transmission System Operator and Market Operator (KOSTT), Kosovo Energy Corporation (KEK), the Ministry of Economic Development (MED), the International Energy Agency (IEA).
- Energy data from Serbia were obtained from published annual reports of PE "Electric Power Industry of Serbia" (EPS), JSC "Elektromreža Srbije" (EMS), Energy Agency of the Republic of Serbia (AERS), Ministry of Mining and Energy of the Republic of Serbia (MRE), International Energy Agency (IEA), Energy Community (EC).

The used sources were systematized and processed according to EUSTAT methodology.

Professional literature was used for analysis of the social and historical context (monographs, articles, policy papers, analysis etc.); relevant domestic and international documents; data from empirical research, as well as relevant media sources (electronic and printed). A multidisciplinary approach was used in reviewing these sources, mostly political, legal and social research methods.

The preliminary analysis was prepared with the support of the Henrich Bőhl Foundation, Regional Office for Southeast Europe.

The views expressed in this analysis do not represent the views of the Henrich Bőhl Foundation, Regional Office for Southeast Europe.

PART I:

SERBIA AND KOSOVO RELATIONS – BETWEEN NORMALIZATION AND SUSTAINABILITY

Dušan Janjić, PhD

1. A summary of the recent history of relations between Serbia and Kosovo (1999–2016)

Kosovo's area is 10,908 km2 and it is populated by over two million people, of whom 82 percent are Albanians.

The same as Serbia, Kosovo is an area where people and communities of different ethnic backgrounds, cultures and religions live, work and clash with one another. Kosovo is marked by a distinctive process of ethnic homogenization, reflected on a territory level by the concentration of ethnic minorities living in territorial enclaves.

Milošević's regime tried to establish direct jurisdiction over Kosovo by restricting the rights of Albanians through a methodically pursued campaign for their marginalization, as well as discrimination and provision of social, economic and political "motives" for moving Albanians out of Kosovo. On the other hand, the Albanian leader Ibrahim Rugova and the *Democratic League of Kosovo (LDK)* made an effort to achieve independence for the Republic of Kosovo by building institutions of the Albanian "parallel state".

The war in Kosovo, which began on 28 February 1998, was yet another in the long line of armed conflicts waged on the soil of the former Yugoslavia. These wars were part of the process of disintegration of the former Yugoslavia and the inception of new states. The war of 1998 - 1999 aggravated the unresolved problems from the past, and added the status of Kosovo as a new problem, including

killings, dislodging and war devastation; further weakening of economy; the public sector in Kosovo is worse off after the war than it was before; opening up of the Albanian issue as both a regional issue and in terms of the possible unification of Albanian territories.

The war and Belgrade's control over Kosovo came to the end in June 1999 with the arrival of UNMIK, under the control of the Special Representative of the UN Secretary-General (hereinafter: UNSG), thereby creating a "new reality" in Kosovo, while the UN Security Council Resolution 1244 created a new legal framework for managing the Kosovo crisis.

In the case of Kosovo, the State-Building Process was not the proclaimed goal of the NATO intervention against Serbia (FRY). However the presence of the international peace keeping mission and the enforcement of UNSCR 1244, *de facto* separated Kosovo from Serbia and oriented towards building Kosovo as an independent and autonomous country. But, the international community's proclaimed goal of having stable, democratic and multiethnic Kosovo has not yet been achieved (*Janjić, 2005:4)*.

In recent years, Kosovo has experienced a fast-growing modernization of economy and society, but it has still remained the least developed area in the Balkans. Social-economic structures and micro-economic trends do not give reasons to be optimistic about Kosovo's future, while the social-economic uncertainty has a special place in a general feeling of uncertainty. There was very little success in attempts to increase production capacities and engage more work force. Production in Kosovo is very low, so the economy is based on trade and import of goods, and fiscal stability is based on over-dependence of the Kosovo budget on custom tax (70%). Kosovo faces lack of direct foreign investment and direct investment in the public sector, and a weak financial sector with expensive loans, low savings rate, etc. Kosovo's economy is dependent on international assistance. The inflows of cash remittances coming from the Kosovo Diaspora are also significant. Kosovo is poor and unstable. More than 50 percent of the population is poor, out of which 10 percent are barely subsisting. Kosovo has been extremely prone to emigration. Kosovo is a source country for immigrants, both for those with high and low level of education, but mostly young people in search of jobs and a "better life".

There has been an exodus of the population from villages into towns; from agriculture into industry. The towns, with their growth, have not been able to absorb the increase in population and have been especially unable to influence the change of ingrained habits and life styles (*Janjić, 2003*). The end of 2014 and beginning of 2015 were marked by mass immigration of Albanians from Kosovo to the EU, via Corridor 10, through Serbia to Hungary. This had opened the route for hundreds of thousands of refugees from central Asia and North Africa, who have made attempts to reach the EU in 2015.

However, as long as there is a dispute among the global and regional actors regarding the status of Kosovo there cannot be any significant progress in

terms of energy developments in Kosovo and its immediate vicinity, including Serbia and Albania.

In the late 1980s and later in 1990s, the circumstances for the establishment of two "parallel societies" in Kosovo were created. The building and the existence of "parallel structures" (Albanian and Serb) were instigated by the official government policies and facilitated by the ethnic structure of the population of Kosovo and the large ethnic distance between Albanians and Serbs. This explains why the "parallel structures "in north Kosovo have been accepted as one of the options for many Serbs. Although a relatively small, in terms of area and population, northern Kosovo has become one of the most complicated issues in the Western Balkans at the beginning of 21st century, in addition to relations between Serbia and Kosovo (*Janjić, 2014).*

There are around 130,000 Serbs in Kosovo today. They populate over 250 enclaves with Serbian-majority, distributed across the northern, central and southeastern part of Kosovo (see image: *Territorial distribution of the remaining Serbian population in Kosovo*). The largest concentration of Serb population is in northern Kosovo, where 59,000 Serbs comprise 45 percent of total Serb population in Kosovo. The Serbs who make numerical majority live south of the Ibar river in villages, in scattered rural settlements (*Janjić, 2005*:9).

Economic, political and social life of Serbs in Kosovo is made more difficult by low level of development and progress of the environment in which they reside, the lack of systemic development programs and sources of financing. This contributed to the efforts of Serbia and ethnic Serbs to organize a "parallel life" of Serbs in Kosovo, by enforcing the legal system and institutions of the Republic of Serbia in the part of Kosovo inhabited by the Serb majority, which has not resulted in a sustainable solution. As time went by, the reality started to change in favor of strengthening Kosovo's state institutions supported by the international organizations present on-site. The commitment of Serbia to seek a future in the EU had a decisive influence on setting relations between Serbia and Kosovo towards the normalization and abolishment of parallel institutions. This commitment directs the Serb community towards integration into the Kosovo structures. Thus, northern Kosovo has become one of the most complicated issues for integration of Serbs in the Kosovo system.[1]

1 Northern Kosovo is a status question. For Albanians, it is about the completion of independence and establishment of effective sovereignty over the entire territory, and for Serbs living in northern Kosovo, it is about citizenship and their national status. A vast majority of Serbs in northern Kosovo regard themselves as citizens of Serbia and an integral part of the Serbian nation, whereas Kosovo offers them the status of "national community" or ethnic minority and acceptance of Kosovo citizenship. This leads them to fear that they will lose identity and present rights and freedoms. According to such radically opposed political aims, a significant influence of the extreme streams from both sides and high level of armed population, northern Kosovo and Mitrovica presents a serious security challenge. Therefore, it is no longer desirable to keep things the way they are (Perspektiva, 2013).

One of the most important elements of the crises in relations between Serbs and Albanians – Serbia and Kosovo is related to deep and bitter division about the Kosovo status issue – including the status of the Albanian and Serb communities in Kosovo: the Serbs and Serbia claim that Kosovo is a part of their territory and ask for the full observance of the UN SC Resolution 1244, by virtue of which the UN Security Council has a decisive say in determining the status. On the other side, the Albanian leaders are not withdrawing from their request for Kosovo independence.

After many years, since 2005, the UN, US and EU have taken the view that Kosovo should become an independent state rather than keeping some form of connection with Serbia.[2] The Decision adopted by the United Nations Security Council (UN SC) on 24 October 2005 to initiate the "Kosovo status process" has marked the beginning of a new phase in the Balkans. In addition to the talks, this stage of the Kosovo status process is also made up of a series of diplomatic, political and propagating and other activities of the key participants in the process.[3] This process *de facto* ended following the negotiations on the future Kosovo status in Vienna on 10 March 2007, and Ahtisaari's decision to send "the best proposal so far", as he himself described it, to the UN (Ahtisaari's *Comprehensive Proposal* was not accepted by Serbs).[4] From April 2006, when

2 There is no uniform opinion in the EU. The main reasons for differences are: fear of EU member countries that "Kosovo virus" might spread; doubt that Kosovo institutions are able to contribute to stability of Kosovo and the region. At the same time, the international community, especially the EU, cannot escape this tangled situation, which it (for the most part) created. Kosovo is a unique case in the history of international interventions or "peace missions" in that the situation and its status are the result of a process which took place under international leadership, and approved and confirmed by the UN Security Council.

3 Talks about the future status which were lead in Vienna, conducted by Martti Ahtisaari in concerted efforts with UNOSEK and his deputy Albert Rohan and assistant Frank Wisner. In November 2005, the Special Envoy visited Prishtina, Belgrade, Tirana, Podgorica and Skopje. 15 rounds of direct talks were held between the negotiating teams of Belgrade and Prishtina during 2006. The talks dealt with decentralization, protection of cultural and religious heritage in Kosovo, economic issues and protection of community rights. From 26 January 2006, representatives of the expert mission from the United Nations Office of the Special Envoy for Kosovo (UNOSEK) visited Belgrade and Prishtina in order to hold talks with the sides on various issues separately. Also from November 2005, Ahtisaari and his deputy Albert Rohan had a number of meetings with other key players in the process: reporting to the Security Council (on 4 March, 13 July and 22 September 2006); meetings with the Contact Group (CG), EU diplomats and other international stakeholders, including NATO and the Organization for Security and Co-operation in Europe (OSCE). Apart from that, Ahtisaari presided over direct talks with the leaders of Serbia and Kosovo in Vienna on 24 July 2006. After a meeting with the UN Secretary General on 25 January 2007 in Paris, at which he informed him about the latest development of events in the process of solving Kosovo's status and submitted a proposal to him, Ahtisaari met with members of the Contact Group on 26 January 2007 in Vienna and presented the content of his proposal.

4 At the beginning of the talks on the future status, Ahtisaari announced that when they come to the end, both sides will be able to see themselves as winners. However, his *Comprehensive Proposal* is as such, that both sides rather see it as their loss, although the Albanians accept it with less trouble then Belgrade and Serbs, and primarily because they belive in Washington's guarantees that Kosovo will be independent. All in all, instead of facilitating the agreement, Ahtisaari created a problem by becoming actively involved, together with his deputy Rohan, in the fight against "Serbian – Russian obstruction". This is in line with his decision to (in addition to his obvious dissatisfaction expressed in public speeches

Ahtisaari was forced to ask the Contact Group for assistance with his *Comprehensive Proposal,* which created a "minor war" of resolutions between the US and EU on one side and Russia and China on the other. Faced with the risk of Russian-Chinese veto of the *Comprehensive Proposal,* the EU and the US accepted Russia's proposal to establish a UN SC mission that would provide the basis for approximation of positions.[5] Seeing that the Mission did not resolve the blocking of the solution in UN SC, the USA and EU have recognized Kosovo's unilateral declaration of independence. In an effort to overcome the deadlocked situation regarding the Kosovo status settlement in the UN Security Council, the US and EU have decided to recognize the unilaterally declared independence of Kosovo.[6]

after the completion of Vienna talks in February 2007) to leave the mission "with a Big Bang". This is why he changed his 2001 proposal of "conditional independence" into the proposal of "independence for Kosovo under international supervision in initial stage" (Item 1 of the *Report to Secretary General on Progress of Talks*; Janjić, 2007).
Ahtisaari's mission did not ease the process of determining the future status of Kosovo, but it only made it more complicated. Ahtisaari himself took care of that by creating a "take it or leave it" situation (*Janjić, 2007*).

5 At the proposal of Russia, the UN Security Council reached a decision on establishing UN SC mission to "inspect the application of standards in Kosovo", on its session of April 3, 2007.
Between May 25 and 28, 2007, UN SC mission conducted talks with all important participants in the Kosovo's future status process (Belgrade, Prishtina, UNOSEK, NATO and European Commission). This has actually initiated "technical consultations" and gave the UN SC extra time to decide on supporting or rejecting Ahtisaari's Report on Status Talks and attached Comprehensive Proposal. It seemed that there was a consensus that the UN Mission in Kosovo (UNMIK) should close its mandate and the EU should takeover. Thus, the solution should be to adopt new UNSC Resolution on Kosovo, since any unilateral action could destabilize Kosovo and the entire region. But, it turned out that there was no consensus in the UN SC and in the region for amending the UN SC Resolution 1244.

6 In coordination with Washington and Brussels, the *Kosovo Declaration of Independence* was adopted on February 17, 2008 by the Assembly of Kosovo. The declaration reflects the will of Kosovo people and is in full accordance with the recommendations of UN Special Envoy Martti Ahtisaari and his *Comprehensive Proposal for the Kosovo Status Settlement*. Kosovo is declared to be a "democratic, secular and multiethnic republic". The international presence established in Kosovo, and leading role of the EU and NATO, is also welcomed in the declaration.

2. Normalization – the Way toward a Possible Solution

A *Council Joint Action 2008/124/CFSP* on launching the *European Union Rule of Law Mission in Kosovo – "EULEX Kosovo"* was adopted on February 4, 2008. From then on, the EU became a leading player in Kosovo and would seek the solution for Kosovo status and relations between Kosovo and Serbia in the "common EU future". Over time, the idea that the normalization process will bring the solution has been shaped through dialogue and diplomatic, political, economic and security actions carried out by the EU and US.

The process of Serbia's EU accession was launched before the beginning of the normalization process, but these two processes are intertwined. The issue of normalization of relations under *Chapter 35* will open and close the negotiations on Serbia's membership in the EU. In a way, *Chapter 35* is particularly important in the negotiations because it deals with the conditions that need to be fulfilled on the path towards the "European future".

Serbia's first step in the process of approaching EU membership was taken in April 2005, when the State Union of Serbia and Montenegro was positively assessed for its *Feasibility Study on the Commencement of Negotiations with the EU Concerning the Conclusion of the Stabilization and Association Agreement* (SAA). The SAA negotiations that were opened on 10 October 2005 officially began on 7 November and resumed in April 2006. On 10 September 2007 in Brussels, delegations of Serbia and EU signed the text of the *Stabilization and Association Agreement*. In November 2007, the EU initialed the SAA in

Brussels. Serbia signed its SAA in Luxemburg on 29 April 2008. The European Parliament ratified the SAA on 19 January 2011. The ratification process in the EU Member States was completed on 18 June 2013, when the SAA was ratified by Lithuania.[7]

The EU Council of Ministers made a decision in November 2009 to abolish visas for Serbia, Montenegro and Macedonia for travel to EU member states that are part of the Schengen area.

On 12 October 2011, the European Commission recommended that Serbia be granted the status of a candidate country for EU membership, "on the understanding that Serbia re-engages in the dialogue with Kosovo and is moving swiftly to the implementation in good faith of agreements reached to date ". The European Commission recommended that accession negotiations be opened as soon as Serbia achieves "further progress in meeting the one key priority: further steps to normalize relations with Kosovo". In March 2012, the European Council decided to grant Serbia candidate status for EU membership, insisting on improved relations between Serbia and Kosovo before taking the final step. Since then, the process of Serbia's EU accession and the process of normalization have become interconnected and dependant on each other.

The EU facilitated dialogue between Serbia and Kosovo (the Brussels dialogue) moves along the path determined in the UN General Assembly Resolution of October 2013. This path can be described as "normalization with the aim of achieving peace, security and stability in the Western Balkans, and promoting cooperation and European integration to improve living conditions for all people. In reality, it is a long journey made of many steps that need to be taken by both sides"

Normalization of relations itself is seen as an objective. The ultimate goal is "full normalization" of mutual relations that is achieved through negotiations on EU association - through negotiations on a Stabilization and Association Agreement in the case of Serbia, and later through negotiations on EU membership in the case of Kosovo. Both Serbia and Kosovo share the ultimate goal of accession to EU, or "common European future" (*Janjić, 2015:10,11)*.

The first round of dialogue took place on 8-9 March 2011, and until 8 July 2012, it was referred to as "technical dialogue"[8]. After that the "political

7 The SAA between the Republic of Serbia and the EU entered into force on 1 September 2013, eight years after the launch of accession negotiations, and its implementation will be one of the benchmarks for monitoring progress in the accession negotiations. With the entry into force of the SAA, Serbia got the status of the EU-associated state, which is the closest status a country could have which is not a member.

8 The implementation of technical agreements allows the establishment of European standards that support the process of normalization of relations between Kosovo and Serbia. For this reason these agreements play an important role in the context of resolving the issue of the Kosovo status. In addition, they create the prerequisites for the elimination of obstacles for a faster economic development of Kosovo, including northern Kosovo (*A 'Peace Treaty', 2012: 6, 8, 10*).

dialogue"[9] of Kosovo and Serbia started at the level of the Prime-Ministers.

The positive trend in the dialogue was reported in January and February 2013. During this period, compared to the previous course of talks, in addition to clarifying a number of issues that are important for the application of the agreements achieved (primarily related to the integrated management of crossings in northern Kosovo), two significant breakthroughs have occurred.[10] A decisive step was made on 19 April 2013, when *the First Agreement of Principles Governing the Normalization of Relations* was initialed by Kosovo's Prime Minister Hashim Thaci and Serbia's Prime Minister Ivica Dačić.[11]

9 The purpose of such political dialogue is the normalization of relations between two countries and the resolution of the disputes in northern Kosovo (*A 'Peace Treaty',2012:6,8,10*). Serbs and Albanians still lead "parallel lives", have bad thoughts about each other and each side regard themselves as victims. They live in "parallel societies," next to each other, rather than together.

10 At the meeting on January 17, 2013, the Prime ministers of Serbia and Kosovo agreed on establishment of liaison offices in Belgrade and Prishtina, exchange of liaison officers and clarified their status. This step has resulted in creating an important institution and channel of communication that will facilitate implementation of agreements and be an important instrument in further normalization of relations between Serbia and Kosovo. The next breakthrough was the meeting between Serbia's President Tomislav Nikolić and his Kosovo counterpart, Atifete Jahjaga, which took place in Brussels on February 6, 2013, under the auspices of EU High Representative. This meeting raised the dialogue to the level that was at the very beginning formulated as a "high political level". During this meeting, they also agreed to continue dialogue with the main objective of normalizing relations between the sides and address outstanding issues, such as northern Kosovo at the next meeting of the two Prime ministers to be held on February 19, 2013.

11 Point 1: There will be an Association/Community Serbian-majority municipalities in Kosovo (CSM). Membership will be open to any other municipality provided the members are in agreement.
Point 2: The CSM will be created by statute. Its dissolution shall only take place by a decision of the participating municipalities. Legal guarantees will be provided by applicable law and constitutional law of Kosovo.
Point 3: The structures of the CSMwill be established on the same basis as the existing statute of the Association of Kosovo municipalities e.g. President, vice President, Assembly, Council.
Point 4: In accordance with the competences given by the European Charter of Local Self Government and Kosovo law the participating municipalities shall be entitled to cooperate in exercising their powers through the CSM collectively. The CSM will have full overview of the areas of economic development, education, health, urban and rural planning.
Point 5: The CSM will exercise other additional competences as may be delegated by the central authorities in Prishtina.
Point 6: The CSM shall have a representative role to the central authorities and will have a seat in the communities' consultative council for this purpose. In the pursuit of this role a monitoring function is envisaged.
Point 7: There shall be one police force in Kosovo called the Kosovo Police. All police in northern Kosovo shall be integrated in the Kosovo Police framework. Salaries will be only from the KP.
Point 8: Members of other Serbian security structures will be offered a place in equivalent Kosovo structures.
Point 9:There shall be a Police Regional Commander for the four northern Serb majority municipalities (northern Mitrovica, Zvečan, Zubin Potok and Leposavić). The Commander of this region shall be a Kosovo Serb nominated by the Ministry of Interior from a list provided by the four mayors on behalf of the CSM. The composition of the KP in the north will reflect the ethnic composition of the population of the four municipalities. There will be another Regional Commander for the municipalities of southern Mitrovica, Srbica and Vučitrn.
Point 10: The judicial authorities will be integrated and operate within the Kosovo legal framework. The Appellate Court in Prishtina will establish a panel composed of a majority of K/S judges to deal with all Kosovo Serb majority municipalities. A division of this Appellate Court composed both by administrative staff and judges will sit permanently in northern Mitrovica (Mitrovica District Court). Each panel of the above division will be composed by a majority of K/S judges. Appropriate judges will sit dependant on the nature of the case involved.

Numerous meetings have produced about 30 agreements, along with many "agreed conclusions", action plans, technical protocols etc. However, the Brussels dialogue has been accompanied by a series of other activities instigated and supported by the EU, already resulting in positive outcomes. These activities are part of the initiative launched with the goal to achieve closer cooperation among the countries in the region, "Western Balkans Six", known as the Berlin Process, or the framework for cooperation of business organizations, SMEs and entrepreneurs with the support of *Eurochambres*.

Despite numerous differences and disagreements, the thing in which both sides agree is that the vast majority of citizens of Kosovo and Serbia want their countries to be part of European integration and are committed to a "European future". Rightfully relying on this commitment, the European Union has temporarily set aside the rule by which the countries have to resolve all open issues including border disputes before their accession to the EU. Serbia's[12] journey towards EU membership will be longer and more demanding than it was for other countries in previous enlargement.[13]

Irreconcilable conflict between Serbia and Kosovo and different approaches among EU Member States regarding Kosovo's status is the main challenge for the dialogue. That is an extremely difficult task because issues such as the freedom of movement or energy security are intertwined with the issue of status

Point 11: Municipal elections shall be organized in the northern municipalities in 2013 with the facilitation of the OSCE in accordance with Kosovo law and international standards.
Point 12: An implementation plan including timeframe shall be produced by 26 April. In implementing this agreement the principle of transparent funding will be addressed.
Point 13: Discussions on Energy and Telecoms will be intensified by the two sides and completed by June 15.
Point 14: It is agreed that neither side will block, or encourage others to block, the other side's progress in their respective EU path.
Point 15: An implementation committee will be established by the two sides, with the facilitation of the EU. The *First Agreement of Principles* looks to arrange a power sharing mechanism in northern Kosovo that would be acceptable to both Kosovo and Serbia authorities. It would grant the Serb-majority municipalities' autonomy over health care, education, culture, as well as their police and judiciary under the formal authority of Kosovo.

12 For example, according to the European Commission Enlargement Strategy, before Kosovo can be granted full candidate status, it will have to comply with the conditions set by the EU, including the Copenhagen criteria. Kosovo is required to continue positive relations with Serbia and to implement all the agreements that were made in the dialogue. Other key priorities Kosovo needs to face include the rule of law, the priorities set out in the visa road map, organized crime and corruption, judicial and public administration reforms, rights of minorities, trade issues, unemployment, weaknesses in the labor market and promotion of democratic rights.
(See: http://ec.europa.eu/enlargement/pdf/key_documents/2013/package/strategy_paper_2013_en.pdf, pg. 7).

13 Serbia's EU accession negotiations started almost ten years before the process of normalizing relations. This makes Serbia an exception or "special case" compared to the countries that have completed the EU accession process, including other Western Balkan countries with the status of candidate country and those that have already started accession negotiations. This is because none of these countries has a problem of secession and division of its territory.
Kosovo could be viewed as a "case for itself" in many aspects, including that its progress towards the "European future" will depend on its willingness to cooperate with Serbia, a country it has separated from.

which is extremely politicized. Progress towards the EU membership proved to be an effective means of creating favorable conditions for the dialogue and normalization of relations between Serbia and Kosovo, but as it turned out, progress has not been linear so far. All in all, the approximation of joining the EU is not a "magic formula" that will resolve the issue of Kosovo's status by fixing Serbia's non-recognition of Kosovo's statehood.[14]

Due to early parliamentary elections held both in Kosovo, and drama about the formation of a new government of Kosovo which lasted until January 2015, and political crisis which occasionally obstructed the work of the Assembly of Kosovo; early parliamentary elections and the formation of a new government from March until mid July 2016, and the upcoming early parliamentary elections in Kosovo, and presidential and possible early parliamentary elections in Serbia, which shall probably occupy public attention and authorities of Kosovo and Serbia from the beginning until autumn 2017, it can argued that half of the time devoted to Dialogue was lost. The results achieved so far is the normalization process are positive, especially with signing the *First Agreement of Principles*, but it does not guarantee success of the final outcome of the dialogue.

14 The issue of Cypress revolves around the fact that the problem of the Turkish Republic of Northern Cypress has not been resolved, and Cypress was accepted to the EU (*Perspektiva*, 2013: 9, 10).

3. Energy security and environment in the process of normalization

3.1. The issue of energy in the Brussels dialogue

The Brussels dialogue is particularly dealing with the issue of energy security, as well as two mutually related issues:

- water, waste, land and environmental management, and
- energy management.

The *Energy Arrangement* (See: *Annex 1*), governing future relations between the Transmission System Operator of Serbia (EMS) and the Electricity Transmission System and Market Operator of Kosovo (KOSTT) was initialed in Brussels on 08 September 2013, within the framework of the political dialogue.

The *Arrangement* provides that the EMS should support the efforts of KOSTT in becoming a member of the ENTSO-E Association and in becoming a separate control area, Priština, in turn, would facilitate registration of two new companies to deal with the wholesale electricity trade and the supply and the distribution services.

After years of a bitter dispute between Serbia and Kosovo over the electricity supplier to northern Kosovo, the two countries reached an agreement reached in 2013. In accordance with this agreement, the company *"Elektrokosmet"* will be transformed into a supplier and distributor of electricity for four

municipalities in northern Kosovo, under Kosovo legal framework. The employees of *"Elektrokosmet"* will either be incorporated into this new company or might be offered employment with KEDS. EMS bound itself to the agreement that KOSST will be recognized internationally as the only Transmission System Operator for the territory of Kosovo and that it will support KOSTT to become a member of the European Network of Transmission System Operators (ENTSO-E). KOSTT will be responsible for the transmission of electric power in the main electric networks, outside and through Kosovo (See: *http://www.balkaninsight.com).* KOSTT will reconnect the 110 kv lines to Valač and take full control over the Valač substation on the border between Serbia and Kosovo. With this, KOSST will gain full control over the transmission system of Kosovo. The regulatory authorities of both sides shall issue licenses covering trade (import, export, transit) and supply to Kosovo Energy Corporation (KEK), Kosovo Energy Distribution and Supply Company (KEDS) and Electric Power System of Serbia (EPS), respectively.

The Framework Agreement Regulating Operation and Market Relations between KOSTT (Kosovo) and EMS (Serbia) was signed on12 February 2014. Based on its provisions, among other things, further arrangements will be made to ensure that KOSTT joins ENTSO-E as an independent control area and participates in the European-wide compensation mechanism among transmission system operators (ITC). This framework agreement signed between EMS and KOSTT was designed to resolve longstanding issues, including the issue concerning electricity distribution and supply in northern Kosovo. (http://www.balkaninsight.com). Then, KOSTT (Kosovo) and EMS (Serbia) signed the so-called *Inter-TSO Agreement for network and system operation management* on 14 September 2014. Among the things, this agreement provides acceptance of KOSTT as a control area and KOSTT membership in ENTSO-E (European Network of Transmission System Operators) (*Brussels Agreement Implementation, 2015: 16, 17*).

On energy, progress has been good in some aspects in general, while on others it has been blocked. (*Brussels Agreement Implementation, 2015:16*). The issue of electricity supply and transmission to northern Kosovo and the assets ownership issue have been the subjects of a long-standing negotiation. At the same time, Serbia is facing a hearing with the regional energy regulator, the Energy Community, concerning what Kosovo claims is the theft of 5 million euro a year from Kosovo in tax revenues. Kosovo also maintains that Serbia's energy operator is leveling illegal fees, costing Kosovo energy consumers 10 million euro a year and raising the price of electricity by 20 percent. According to Kosovo officials only the KEK has licenses to supply electricity across Kosovo's territory, and users of electricity should not be making payments to *"Elektrokosmet"* or EPS. On its part, Serbia and EPS claim that EPS was not breaking the treaty and that it lost 100 million euro in unpaid bills in northern

Kosovo, due to the fact that people had not been paying their electricity bills for 10 years.

The energy sector was one of the topics addressed in the Brussels dialogue, which opened the way to finding solutions for: regulating the relationship between the two operators - EMS and KOSTT, and creating conditions for: cooperation between two transmission systems[15] management of the "*Valač*" snd the substation on Gazivode lake,[16] the control of energy flow in both electricity systems; a new electricity company to supply customers in northern Kosovo, consumption control and billing. Kosovo agreed to register the company "*EPS Trgovina Ltd Kosovska Mitrovica*", and requested additional documentation (*Report, 2015: 9, 10).*

For the purpose of execution of Energy agreements of September 2013, on 25 August 2015 both sides have agreed with the *Conclusions of the EU facilitator on the implementation of the 2013 Energy Agreement (*see: *Appendix 2*). It was agreed that Kosovo will allow EPS to establish a power trade company in Kosovo, in line with its non-discriminatory obligations under the Energy Community and in accordance with the Kosovo legal and regulatory framework. This company will apply for, and be granted a license that covers import, export and transit. The name of the company will be "ElektroSever". It is especially important that under the Disclaimer section, both parties have stated that they do not agree on the issue of property.[17] This was a way to meet the requirement set by Belgrade to open the discussion on the issue of property ownership, as well to reveal Kosovo's claims to property on the territory of Kosovo, and to still reach the Energy Agreement.

In 2016 Serbia has fulfilled all its obligations under the Arrangement: EMS had withdrawn the appeal filed with ENTSO-E and on 1 October 2015, the *Connection Agreement* was signed, which stipulates that the KOSTT shall become a separate control area, but on condition that the company "ELEKTROSEVER"

15 In keeping with this *Arrangement*, the Contract on Interconnection and Contract on Service Provider was signed between the EMS and KOSTT on 15 September 2014. Closure of these contracts, in accordance with the Arrangement, facilitated the initialing of the Action Plan on 19 September 2014, and the latter was then handed over to the EU representatives.
By providing active support, the EMS has fully performed the obligations stemming from both the Agreement and Action Plan and enabled for KOSTT to establish the control area1 as of 1 June 2015, expecting that Kosovo would fulfill its part of obligations elaborated in detail in the Action Plan.

16 A small portion of electricity is produced in "*Gazivode*" HPP (38 KW). It covers about 2 percent of total need. Experts suggest that, in the context of the diversification of supply sources, Kosovo should secure the supply from hydroelectric sources in two ways – through a system of small hydro power plants, in particular in northern Kosovo, and through the construction of a large HPP in the village Žur near Prizren. Its hydropower potential represents about 43 percent of Kosovo's total capacity.

17 "Kosovo considers that, in accordance with Kosovo Constitution and Laws, and international law, namely UNSCR 1244 and respective UNMIK Regulations, the property within the territory of Kosovo is ownership of Republic of Kosovo. Serbia considers that, that in accordance with domestic and international law, namely UNSCR 1244, property within the territory of Kosovo is ownership of Serbia, under specific provincial regulation and in full accordance with the Constitution of Serbia."

first obtains a license for the supply of electricity and that it becomes operational. However, the provisions of the *Connection Agreement* are still not being implemented because Serbia seeks to establish two companies ("EPS Trade" and "ELEKTROSEVER") (*Progress Report*, 2016: 8).

The achieved results in the Brussels dialogue during 2013 – 2016 in the field of energy are making the following common goals achievable:

- Transparent common and regional energy market;
- Joint engagement in terms of construction financing, and obtaining favorable financing from the international financial institutions;
- Optimal cooperation in the construction of gas networks in the region;
- Joint engagement in the review of the application of the Directive of the European energy community regarding the protection of the environment and impact on the drastic increase in electricity prices in this underdeveloped region; An approach to building renewable energy sources from the point of supply stability and the impact on electricity prices and cooperation between regulatory energy agencies (*Janjić, 2015: 45-47).*

3.2. Energy and environment – challenges of normalization of life in Serbia and Kosovo

The Brussels dialogue fully respects the fact both Kosovo and Serbia are members of the Energy community. In 2006 the Republic of Serbia accepted, signed and ratified the Treaty establishing Energy community. By doing this, it made the establishment of regional energy market and its integration with the EU energy market a priority. This is a market with 55 million people, and the basis for the development of energy market in the Southeast Europe and Western Balkans is the *Treaty establishing the Energy Community* (*Verivox, 2006*). Such a market should provide substantial investments in the sector and in the next ten years the modernization of power plants will continue, including their adaptation to European standards. The construction of new energy networks will require investments of EUR 20 billion. This should strongly contribute to the economic development and stability of the country and the region. The market must function based on the implementation of relevant legal framework and the *acquis* in the field of energy, but also in the field of environmental protection, competition, renewable energy sources and energy efficiency.

By ratifying the *Treaty establishing the Energy Community* in 2006, Serbia has committed to the implementation of European directive in the field

of renewable energy. On 6 December 2011 the Working Group of the Energy Community of South East Europe accepted to achieve 21.2% share of energy from renewable sources in total energy consumption in Serbia, which should be the basis for imposing the obligation on Serbia to increase the participation of renewable energy sources in consumption by 2020. Based on this, Serbia has committed to increase the share of renewable energy in total energy consumption by 2020 from the current 21.2 to 27%. Serbian authorities sought to lower the starting point and the increase ratio, and for the issue of energy efficiency to taken into account when determining targets.

Serbian energy policy, including the area of renewable energy sources is defined by the Energy Law of 2011.[18] The new EU directive provides for cooperation measures between the signatories of the Treaty establishing the Energy Community, after they adopt the directive, but even before that there are some incentives available. The Directive enables cooperation between member states in joint projects with third countries and allows them to apply the imported renewable energy towards achieving binding national targets. Since 2009 Serbia has been providing incentives for energy production from renewable energy sources.[19] A special fee for subsidized electricity from renewable energy sources in the amount of RSD 0.44 per kWh has been in place since March 2013. The average electricity bill in Serbia (400 kWh) has been increased by RSD 16.00. The fee is collected on a separate account, and the money will be used for the purchase of electricity from renewable energy sources from privileged producers at subsidized prices, feed-in tariffs. The fee will be determined each year and the fee increase will follow the increase of electricity production from renewable energy sources and by 2020 it is expected that electricity bill will be paying on average RSD 400.00.

Other incentive measures in different countries include tax exemption and participation in investments, primarily investments in technologies.

18 Passing this law was one of the steps that Serbia had to take in order to meet its obligations for gaining the candidate status for EU membership. The law encourages investments in renewable energy sources, by simplifying investment procedures and introduction of privileged producers of energy from biomass, water, wind, solar, and geothermal energy. The Energy Law introduces the guarantee of origin for electrical and heat energy produced from renewable sources, which will allow producers to export "green energy".

19 Regulation on conditions for obtaining the status of privileged producer of electricity from renewable sources and regulation introducing guaranteed purchase prices (feed-in tariffs) for the electricity produced and guaranteed purchase period of 12 years. By amending the Regulation on the *Energy* Sector *Development Strategy Implementation Program*, the Government confirmed that the use of renewable energy sources is one of its priorities.
On 24 January 2013, the Government of Serbia approved the incentive prices for purchase of electricity from renewable energy sources, as well as the Regulation on conditions and procedure of acquiring the status of privileged producer of electricity. The novelty is that incentives, the so-called feed-in tariffs, will be adjusted annually with the inflation in the Euro zone. The new regulation did not change the period of subsidies of 12 years.

The law also provides incentives for the production of thermal energy from renewable energy sources, because according to EU directives this energy is also included in the energy balance. It is anticipated to transfer the incentives for the production of thermal energy to local level, and to leave the decision-making to the local government.

The Action Plan, which was launched in February 2013, stipulates that by 2020 wind power generation plants with the capacity of 500 MW, mini hydro power plants with the capacity of 438 MW, biomass power plants with the capacity of 100 MW are fully operational, along with the production of 30 MW from biogas, 10 MW from landfill gas and solar energy respectively, and 3 MW megawatts from waste power plants and 1 megawatt from geothermal energy.

According to the plan, the share of renewable sources in the electricity sector should be increased from the current 29% to 37% by 2020, in the heating and cooling energy from 26 to 30%, and in the transport sector through the use of biofuels from the current zero to 10 %.

U In order to meet the goals of the EU by 2020 in the field of renewable energy and energy efficiency, in May 2011 EPS published a strategy document, "White Paper", which contains an overview of obligations and planned activities. In the area of renewable energy EPS plans to build and revitalize 35 small hydro power plants and to that end signed with the Ministry of Agriculture a protocol on cooperation in the implementation of energy efficiency and use of renewable energy sources. EPS plans to invest in wind farms and solar power plants.

3.2.1. Kosovo

The poor state of the environment in Kosovo is the result of uncontrolled construction of residential buildings and industrial buildings, the use of outdated technologies, especially in the exploitation of natural resources, pollution of watercourses and complete absence of water treatment systems, and accumulation of solid and industrial waste. The biggest threats to the environment comes from mining - the metallurgical complex "Trepča"[20], Thermal Power Plan "Obilić" and concrete plants in Prishtina.

In relation to the total water demand in Kosovo, reserves are relatively small and territorially unevenly distributed, to the detriment of the eastern and southeastern parts. With the Ibar river and Gazivoda artificial lake, which spreads over the municipality of Zubin Potok (in Kosovo), and municipalities of Tutin and Novi Pazar (Serbia), the north of Kosovo is rich in water resources.

20 The territory of Mitrovica, Zvečan and Leposavić are especially vulnerable after the shutting down of "Trepča", because of the tailings scattered all over the place as well as the accumulated scrap metal and ash in the abandoned plant, directly threatening human health through the pollution of air, soil and the food chain.

There is not enough research on groundwater reserves, which are mainly used for private wells. The drinking water supply network is practically underdeveloped and drinking water is supplied through the old network, which produces significant technical losses and does not reach a large part of the population. At the same time, there is a large number of illegal connections and bill collection rate is extremely low. All this generates commercial losses, while investment needs of the sector are high.

Kosovo lacks wastewater treatment system, and only 40% of the population, and less than 10% of the rural population have access to sewage system. The situation with wastewater treatment is unfavorable, since the sewage water from urban and rural areas flows directly to Ibar river or open channels, without treatment. This is causing contamination to the surface and ground water and increases the risk of flooding. Even the areas that are not connected to public networks, which are supplied from own resources are under increased risk of contamination.[21]

Regarding waste, the increase in urban population and the level of economic activity leads to increased risks to the environment in the territory of Kosovo. Very little is invested, so little was achieved in the field of separation, recycling and waste treatment. The rate of collection of fees for garbage collection has increased slightly in 2010, but is still very low.

In northern Kosovo, solid waste is disposed at the landfill in the Banjska village. Waste sorting and recycling process are at an early stage and it is necessary to do more in order to reach EU standards. Waste management in urban areas has been further hampered due to high population density and increased economic activity. As a consequence of the past mining activities and the existing landfill Trepča, this region is contaminated with lead, zinc, cadmium, arsenic, mercury and other materials.

Land management, land improvement and increased value of land are important conditions for attracting investments and for improving the level of environmental management. Successful land management requires the existence of cadastral records, and as a stop toward resolving that issue is an agreement reached in the Brussels dialogue, whereby Serbia has agreed to surrender to Kosovo authorities the cadastral documents for the territory of Kosovo, which have been in the possession of municipalities in central Serbia since 1999 (*Janjić, 2015: 57, 58*).

Kosovo's current position is very sensitive. Electricity is used as the main source of energy throughout Kosovo. In addition to the significant potential

21 In recent years, Gazivode Lake has been particularly affected by pollution Gazivode. Gazivode lake provides water supply for several neighboring municipalities and the city of Prishtina (via channel which runs through Gračanica), and which is also used for irrigation in central Kosovo. Water from this lake is also used in several municipalities outside of Kosovo.

for the production of electricity[22], Kosovo has serious problems in meeting the growing demand for electricity and is forced to import between 10 and 15% of the total electricity needs.

Of the total electricity produced, 90% is produced in Kosovo Energy Corporation (KEK) plants - "Kosovo A", which is built using Soviet technology in 60s of the last century, and "Kosovo B", built in the 80s of the last century. Both thermal power stations use coal to generate electricity, and since "Kosovo A" is a big polluter some parts are put out of operation. Complete decommissioning is planned for 2017 and the construction of new a power station (TPP "New Kosovo", also known as "Kosovo C").

In order to respond to the requirements of EU standards, Kosovo will have to significantly increase the use of renewable energy. This means that 20% of the energy production must come from renewable sources, energy from wind power must be increased by 20% and emissions of carbon dioxide must be reduced by the same percentage.

Kosovo does not have own sources of gas, nor it has gas pipeline network, and citizens only use butane tanks. Annual imports of oil products are at the level of about half a million tons, there is only one refinery, which covers less than 4% of total needs.

As for the alternative sources of energy, a German investor is building a wind farm on the Goles hill near Prishtina airport. Potentials for wind farms also exist in the central part of Kosovo.

Given the total number of sunshine hours per year, Kosovo should consider solar energy. The same goes for energy from biomass and geothermal sources.

Due to its energy weakness and inability to produce enough electricity, Kosovo is facing serious risks, such as months of power outages (blackouts).

Kosovo has a significant problem with the development of its energy resources due to the very poor condition of the existing infrastructure, shortage of investments in the existing energy sources, and unclear legal status of almost all of its power generating locations and facilities. However, there is a particular interest of foreign companies to invest in mining development, and Macedonia has offered to exchange coal for electricity.

22 Reserves of brown coal (lignite) are estimated at between 11 and 14 billion tons, and are one of the richest reserves in Europe. For that reason, the production of electricity from fossil fuels is an opportunity, a comparative advantage as well as necessity. Namely, in order for Kosovo to develop and ensure energy security it has to rely on what it has, because money for the diversification of energy sources must be earned by relying on own resources. At the same time, this a type of constraint, because the EU and modern living conditions require high investments in technology, including the technology for the environmental protection in the production and exploitation of coal. Coal is, first and foremost, a limited and non-renewable resource, and therefore cannot be the foundation for a long-term strategy of sustainable development and energy security.
Despite the fact that Serbia does not have as much coal reserves, it is in the same boat as Kosovo. This issue will be discussed in more detail later on the analysis, with contributions from Dr. Sabria Limari and Dr. Milan Radunović.

A comprehensive development plan to improve the existing energy sector in Kosovo was prepared, and privatization of the energy sector was proposed as a key solution (Energy, 2011). However, as long as there is a dispute regarding the status of Kosovo there cannot be a meaningful progress in terms of energy developments. Even in the case of the best privatization scenario in Kosovo's energy sector, high investment risks will slow down the restructuring, development and optimization of the energy sector (*Janjić*, 2015: 57-59).

3.2.2. Serbia

Renewable energy sources (RES) account for about 7% of the total energy potential of Serbia. Aside from hydropower, it can be said that the sector of renewable energy sources is in the early development stages. Total available technical potential of renewable energy sources in Serbia is estimated at 5.65 million tons per year, of which 1,054 tons of biomass and 909,000 tons of hydropower is already used.

Biomass is an important energy potential of Serbia, which is estimated at 3,405 million tons and accounts for 60.3% of the total potential of renewable energy. Biomass and agricultural potential (residues in crop production, livestock, fruit, wine and fruit primary processing) account for the most of this potential – 1.53 million tons and 1.67 million tons respectively, while the potential of biodegradable waste is estimated at 205.000 tons. Biodegradable waste (other than municipal) comprises waste edible oils and animal waste (rendering and slaughter house waste) in the total amount of 0.043 million tons / year.

Biomass potential is available on the entire territory of Serbia, namely: wood biomass is mostly located in central Serbia, and agricultural biomass in the territory of Vojvodina. However, while the level of use of timber biomass potentials is relatively high (66.7%), only 2% of the potential of agricultural biomass is used, while the potential of biodegradable waste is not used at all. The potential of biomass (especially agricultural) is a dynamic category and its increase necessitates appropriate actions in the utilization of uncultivated and marginal land/soil to produce biomass for energy purposes (energy crops). The key problem with biomass in Europe and in Serbia is to ensure long-term supply of this raw material.

An additional challenge for Serbia is the deforestation and the current way of biomass utilization, which is very inefficient because old combustion appliances are used (mud brick ovens, stoves, etc.) which are extremely energy inefficient.

Serbia has potentials for the production of bioethanol and biodiesel. The raw materials for the production of bioethanol are various grains, sorghum grains, Jerusalem artichoke (topinambur) and potato. Biodiesel is produced using oilseeds - sunflower, soybean and rapeseed oils and waste edible oils. All

of these raw materials can be considered as a potential for the production of biofuels only after other needs are met. It is estimated that the market surplus of grains is more than one million tons, but their use for the production of bioethanol is economically justifiable only in cases when they cannot be exported and when the production of bioethanol from lignocellulosic biomass is not possible. Also, according to estimates, there are about 100,000 hectares of marginal land in Serbia that can be used for the cultivation of sorghum and Jerusalem artichoke, which could yield about three million tones of ethanol per year. Cultivation of oilseeds for biodiesel production could be carried out on 350,000 hectares, which could yield a production of about 220,000 tons of biodiesel. It is estimated that about 10,000 tons of waste edible oil, which is suitable for biodiesel production, can be collected annually.

A potential problem in this segment could be the position of the EU that only biofuels that comply with the sustainability criteria can included in the realization of the set goal. This means that Serbia will have to develop a certification scheme for biofuels because only certified biofuels will be counted towards determining the degree of achievement of the set goal. Another aggravating factor is that according to the new directive after 2017 the biofuels with influence on the reduction of emissions below 60% will not be allowed on the market. Biodiesel from rapeseed, which is produced in Serbia, falls into this category, which means that after 2017, the biodiesel produced in this way will not be taken into account when assessing the achieved objective.

The total *hydropower potential* and the gross potential of water streams which flow within the territory of the Republic of Serbia was 25,000 GWh / year. The bulk of hydropower potential (over 70%) is concentrated at only a few watercourses with a potential of over 1,000 GWh / year: the Danube, Drina, Velika Morava, Lim and Ibar. On the other hand, hydropower potential of several rivers in Serbia can only be used partially, due to water use and management priorities, since some rivers are planned as a source of regional water supply systems: Toplica, Crni Timok, Rasina, Studenica, Veliki Rzav, Mlava, Lepenac, etc.

Technically usable potential in Serbia is around 19.8 TWh / year, of which about 17.5 TWh / year on facilities larger than 10 MW. So far, 16 hydropower plants were built and on average around 10.5TWh is produced per year. The total technical potential of hydropower up to 10 MW is estimated at approximately 1,800 GWh per year.

In Serbia, the *wind energy* can be used in Košava wind areas, south Banat, areas in eastern Serbia, the east side of Kopaonik mountain, areas around Zlatibor and Pešter mountains, and mountain passes at altitudes above 800 m.

Technology for the production of electricity from wind include small household windmills, hybrid systems that combine wind and solar or hydro systems, as well as batteries, small systems with connection to the distribution

network and wind power plants, as well as large number of wind turbines that function as a power plant.

Construction of wind farms is not cheap, but the wind is currently the most economical renewable energy source used. However, wind power plants have unstable and unpredictable production, which is why additional capacities are necessary to ensure the functioning of the electric power system. The variable power of wind turbines requires efforts to balance electricity systems, and connecting large capacity wind farms requires expansion and reconstruction of the transmission system.

Another disputable issue is the integration of wind farms into Serbia's transmission system. Technically usable potential of wind power and solar energy is determined based on the existing technical capabilities of the electric power system to accept this energy.

Additional assumptions in determining the potential of this energy source are that the maximum variations in electricity production from wind energy will not coincide with the maximum variations in the production of electricity from solar power, and that the maximum variation will not exceed 90% of total installed capacity. This means that with the current size of tertiary reserves it is possible to have an installed capacity of 500 MW. Bearing in mind the maximum production capacity of the wind turbine with such the installed capacity of 500 MW, their maximum technically usable potential would be 1200 GWh / year, that is, 0.103 Mtoe / year.

Solar energy is an energy potential of Serbia, which can be used for the production of thermal or electric energy. The number of sunshine hours across much of the territory of Serbia is significantly higher than in many European countries (between 1,500 and 2,200 hours per year). The average intensity of solar radiation on the territory of Serbia ranges from 1.1 kWh / m2 / day in the north and 1.7 kWh / m2 / day in the south during the month of January, and from 5.9 to 6.6 kWh / m2 / day during July. Annually, the average value of the radiation energy is 1,200 kWh / m^2 / year in northwest Serbia, up to 1,550 kWh / m^2 / year in southeastern Serbia, and about 1,400 kWh / m^2 / year in central parts.

Technically usable energy potential for the conversion of solar energy into thermal energy (for hot water and other purposes) is estimated at 0.194 million tons per year assuming application of solar thermal collectors to 50% of the available facilities in the country. However, since the price of electricity is not economic price, the population in Serbia is not motivated to install solar panels.

As for the production of electricity, the main technical limitation is the ability of the electricity system to accept this energy in the summer months, due to the variable output. Based on the current capacities of the electricity system of the Republic of Serbia, for providing tertiary reserve the maximum technically usable capacity of solar power plants is set at 450 MW i.e. their technically exploitable potential is 540 GWh / year (0.046 Mtoe / year).

The construction of new conventional power capacities (coal, large hydroelectric power plants), and in particular pumped storage (Bistrica and Iron Gate 3) could significantly increase the available technical potential of intermittent renewable energy sources - wind and solar energy for the production of electricity.

The Republic of Serbia is located in the zone of favorable geothermal resource potentials. Geothermal energy involves petrothermal and hydro energy sources in which Serbia abounds. Using geothermal energy for heating and other energy purposes is in the initial stage and is very modest compared to the potentials. Geothermal potentials in Serbia include a significant number of spas and natural water sources with temperatures above than 30 ° C, and with different degrees of natural munificence. Based on the current measurements of heat, this is above the European average (60 mW / m2), ranging from 80 to 120 mW / m². Natural and artificial sources of thermal waters have been identified in the territory of more than 60 municipalities. The water temperature is usually in the range of up to 40 °C, and in the territory of six municipalities (Vranje, Šabac, Kuršumlija, Raška, Medveđa, Apatin) water temperature is above 60 °C.

Average water flows from existing sources and the boreholes are up to 20 l/s on average. In several localities yields exceed 50 l / s (Bogatić, Kuršumlija, Priboj Spa, Niš spa), while only at one location the yield exceeds 100 l / s (Koviljača Spa).

The total thermal power that could be obtained from utilization of the existing sources of thermal waters is about 216 MWt, with thermal energy production of 180,000 Mtoe. A significant but unexplored geothermal potential lies in using watered oil and gas wells in Vojvodina which are not being exploited anymore (*Kostić, 2014).*

For the exploitation of the geothermal potential in Serbia, whether subgeothermal resources that can be in heating / cooling systems for buildings, heating of greenhouses, etc. or possibilities of cogeneration, dedicated researches are required and production of feasibility studies for sites that prove to be promising. This is the only possible way to have a true picture of geothermal potentials and promising locations for exploitation projects and dedicated use of geothermal energy in the future.

4. Recommendations

Agreements reached in Brussels dialogue are, by their nature, primarily political, although they also produce legal consequences. It is expected that negotiations between Belgrade and Prishtina will last a long time. So far the Brussels dialogue had a positive trend but final success is still not guaranteed. The complexity of the normalization process obliges parties to identify and manage risks that could jeopardize the success of the process. In particular, the parties should keep in mind that in ethnically divided society integration causes deep emotional reactions, in this case among Albanians and Serbs. In such circumstances, even small misunderstandings can easily cause violence.

The implementation of the Brussels agreement can significantly contribute to a long-term improvement of mutual relations and cooperation. In the future, cooperation should be based more on the economic interests of equal partners rather than on political calculations and conditioning; in the process of realization of the agreed points, the priority should be given to concrete measures and implementation of the direct dialogue between Belgrade and Prishtina; business agreements, commercial contracts on the exchange / purchase / transit of electricity, construction of gas lines and the development of cooperation in all fields of green energy, exchange of knowledge and technology, as well as cooperation in the management of sustainable energy sources should be given advantage over politics.

It is certain that Kosovo and Serbia need significant investments and that they should work on clarifying the legal status of almost all sites relevant for greater investments in the energy sector. In terms of environment, the key problems are air pollution, water shortage and water pollution, land degradation and loss of the role of ecosystems.

In order to nurture energy-ecological culture it is necessary to change the behavior of energy consumers and producers. This can be achieved by means

of a targeted and well thought-out system for educating the public and training of operating personnel, engineers and workers, as a key development factor of today's economy and sustainable development of the country.

It is also important to achieve the energy development that is socially tolerable i.e. sudden changes in the energy market must not cause social consequences that are too severe for the majority of the population. There are many advantages and opportunities provided by the dynamic development of the energy sector in terms of rational redistribution of costs and benefits at the state level. Key positive social consequences of such energy development are employment, higher living standards and improvement of human rights and opportunities to enjoy public goods. New technological solutions, based on market incentives, should guarantee that a more efficient and cleaner renewable energy will be socially sustainable.

It should be borne in mind that energy-efficient and environmentally-oriented behavior requires non-selective and strict enforcement of the law in practice.

The existing and new plans for development of the energy sector should be harmonized. It is obvious that the key is in the privatization of the energy sector (*Energy, 2011*). However, clear and relatively harmonized conditions for public-private partnerships and concessions for the use of energy resources that are nationally beneficial should be introduced.

Currently, the energy systems of Kosovo and Serbia are not able to meet the challenges of safe and secure energy supply and the reduction of uncertainty in the upcoming period. Therefore, Serbia and Kosovo have a common need for modernization and development of their electric power systems, primarily in terms of new technologies and funding. Serbia and Kosovo can ensure their energy security only through cooperation in the Western Balkans region. This requires a common professional and political effort to identify possible forms of cooperation of energy systems of Serbia and Kosovo.

At this time, there is a strong need in both systems to purchase electric energy. That is why the establishment of the 400 kV Serbia-Kosovo transit line is a priority. Currently, this line is important for Kosovo because it represents the possibility of energy supply from the market. As for Serbia, this route will become more significant upon the completion of the 400 kV Kosovo-Albania transmission line. By linking Kosovo and Albania, the Kosovo system will become important for Serbia as transit potential. At that point most of the transit for the electricity supply in Kosovo and Albania will run through the Serbian network, which brings transit payments.

Achieving sustainable energy development in Serbia in the period up to 2030 in accordance with the possibilities of the economy and society and achieving the set goals will require further development of the energy sector of the Republic of Serbia based on the following activities:

- Intensive research of the energy potentials;
- Development of the energy market, with the application of principles of competition, transparency and non-discrimination;
- Construction of new energy capacities and revitalization and modernization of the existing ones;
- A comprehensive coordinated approach to the rationalization of energy consumption and overall increase of energy efficiency;
- Creating adequate regulatory and organizational conditions and enabling simplification; and
- intensive use of renewable energy resources, and inclusion of promotion of renewable energy resources into energy plans of cities and local communities as part of local enegy strategies.

Reorganization and restructuring of companies in the energy sector:

- Creating economic, organizational and legal conditions to enable public utility companies (electric power industry) to independently operate in the market and to become capable to ensure greater participation of own resources in development, environmental protection, recultivation of space, and acceleration of procedures for obtaining approvals and permits;
- Introducing the principle of corporate management in public enterprises;
- Considering the possibility of synergetic link between companies which manage network infrastructure systems (oil, gas, electricity).

Further harmonization of the existing regulation with EU regulations and standards, with mutual harmonization and development of national regulations in order to:

- Harmonize technical regulations as a support to safe and unified technical management of energy infrastructure;
- Ensure permanent protection of energy sources deposits, hydro accumulation basin and energy corridors from further construction;
- Introduce obligation for investors to always use the best available technologies in the construction of power and other facilities, and ensure optimal use of the available energy, energy efficiency and environmental protection.

It is necessary that these activities are accompanied by adequate organizational and other measures which are based on:

- Increasing capacities of financial organization for financing energy efficiency measures i.e. financing the development of production and placement of the best available technologies and energy equipment;

- Development of innovative financing mechanisms of the energy sector services (ESCO concept);
- Encouraging the development of domestic industry so as to follow the anticipated development of the energy sector;
- Careful analysis of the effects of climate changes on the energy sector in Serbia and adoption of adequate measures;
- Systematic increase of capacities of scientific and educational institutions for work in the energy sector;
- Providing comprehensive and timely information to public on the situation in the sector;
- Education and awareness about the possibilities and effects of saving, rational consumption and substitution of energy, as prerequisites for the sustainable development of society and state. All of the above objectives, activities and measures are in line with EU policy in the field of energy and fully comply with objectives of the future Regional Energy Strategy of the Energy community, which assume the creation of a competitive, integrated energy market, attracting investments in the energy sector and ensuring secure and sustainable energy supply. However, these objectives are related with the need for economic development and technological modernization, and sustainable economic and social development of Serbia. In this sense, they are consistent with the National Strategy for Sustainable Development, a document relevant for the harmonization of developmental, economic, social, and environmental objectives.

The conference on the Western Balkans and the priorities of its future development in light of EU accession, which took place in Berlin on 28 August 2014, had initiated the so-called Berlin process that focuses on investment, infrastructure and a series of extremely important investment projects in energy security.[23] The chief importance of regional cooperation for the national energy security means to ensure security of transport routes and energy transfer.

Due to many risks present, such as ethnic distance, hostility, extremism, organized crime, despite the strong presence of NATO in the region, it is necessary that relevant actors cooperate on the development and implementation of comprehensive plans (including intelligence and security activities and the establishment of early warning systems) in the case of terrorism or organized crime activities against key energy facilities (*Janjić, 2015a: 355, 356*).

Energy security in the Western Balkans is an important element in the stability of each of the countries in the region, including Serbia and Kosovo. This

23 An especially important result is the establishment of the common Western Balkans Forum of chambers of commerce for the programming of regional projects in the field of infrastructure, energy, and energy efficiency; investment in green technologies, anti-corruption, availability of the financing sources etc.

stability can be ensured by establishing a regional energy cooperation that respects the freedom of trade, reconstruction, development and management of energy production and transmission systems. This aim can only be assisted by the establishment of the *Western Balkans Electro Energy Production and Transmission Network* (*Janjić, 2013*). This initiative fully corresponds with the WB6 concept – the Western Balkan Six supported by the Berlin Initiative and the Vienna Forum.

Steps to be taken in this direction include:

- Intensification of projects of modernization of hydro, thermal and gas plants in order to increase the production in each country, with cooperation in the exchange of information relevant for these projects, and harmonization of standards of all these projects to the greatest extent possible;
- It is necessary that each national government promotes its strategies, plans, programs and projects in the field of electricity production and transmission; fights corruption among decision-makers in state energy enterprises and government institutions, which can be achieved through the privatization of state enterprises, with respect for private property rights as the rights of foreign investors; standardization of concession requirements should be harmonized across the countries of the Western Balkans; prevention of private and commercial monopolies over national energy resources and transmission systems;
- In any case, Serbia, Kosovo and other Western Balkan countries are in need of long-term plans of energy efficiency, and since commercial banks are not interested to finance this type of activity, it would be useful for the financing, and the work itself on these plans, to be provided through regional financial cooperation, as well as to include the development of a plan of cooperation at the regional level (*Janjić, 2013: 238*).

Attachments

Attachment 1

Energy related agreements

1. Both parties confirm their commitment to meeting all their obligations under the Energy Community Treaty, and to apply the EU energy *acquis*. These arrangements are fully compatible with both.
2. KOSTT and EMS will sign a bilateral operational agreement within 3 months, establishing and regulating relations between the two Transmission System Operators. In addition, the former Temporary Energy Exchange Agreement and Temporary Technical Agreement will be repealed.
   KOSTT will be recognized as the Transmission System Operator for the territory of Kosovo for the purpose of participation in all relevant mechanisms (ITC, Congestion Management, etc.).
   EMS will support KOSTT to become a member of ENTSO-E.
3. The energy regulatory authorities of both parties will open direct channels of communication to discuss subjects of mutual interest.
   The regulatory authorities of both sides shall, upon application, without delay, and in line with the requirements of the existing licensing framework in their jurisdiction, issue licences covering trade (import, export, transit) and supply to KEK, KEDS and EPS, respectively.
4. Both parties will accelerate the process of market opening by July 1 2014, in accordance with the timetable fixed by the Energy Community Treaty, therefore allowing a new electricity company to supply customers to be established. Both parties also agree that such a company will be established under the Kosovo legal and regulatory framework.

5. This new company will supply electricity and may provide distribution services (such as billing, collection, maintenance and physical connection of new customers) to customers in the four northern Serb majority municipalities, and will be able to buy and sell power on the open market. This new company, in order to operate as per point 4 will sign agreements with KOSTT in order to participate in the Kosovo power market and to become balance responsible party.
   Immediately after the establishment of this new company, it will enter into discussions on all other issues of mutual interest with KEDS and KOSTT, including to ensure third party access.
   The employees of JP Elektrokosmet will either be incorporated into this new company or might be offered employment with KEDS.
   KOST will reconnect the 110 kv lines to Valac/q. The current operators at the Valac/q substation will respect instructions from the Kosovo dispatch centre.
6. Both parties agree to try to find a common settlement solution as regards KOSTT's claims and EMS claims. KOSTT considers that these claims are for unpaid transit and interconnection allocation revenue and EMS's claims for secondary regulation. EMS considers that these claims are for services for secondary and tertiary regulation. Should it not be possible to reach a common settlement within 6 months, both parties agree to submit these claims to international arbitration.
7. An implementation group will be formed in order to draft a full Action Plan for the implementation of the future Agreement. The full implementation process will commence upon receipt of written acceptance of Action plan.

(Source: http://www.kim.gov.rs)

Attachment 2

Conclusions of the EU facilitator on the implementation of the 2013 Energy Agreement

In order to implement obligations under the 'Arrangements regarding energy', signed by the two Prime Ministers in September 2013, both parties agree to the following:

- Establishment of new trade company
  1. Kosovo will allow EPS to establish a power trade company in Kosovo, in line with its non-discriminatory obligations under the Energy Community and in accordance with the Kosovo legal and regulatory framework.
  2. EPS will deposit documents to the Kosovo Business Registration Office to apply for a business registration certificate before the end of August 2015.
  3. In line with Kosovo's own rules and deadlines, this business registration certificate will be granted within 7 days.
  4. This company will apply for, and be granted a license that covers import, export and transit.
- Establishment of new supply and distribution services company
  5. Kosovo will allow EPS to establish a supply company in Kosovo, in line with its non-discriminatory obligations under the Energy Community and in accordance with the Kosovo legal and regulatory framework.
  6. EPS will deposit documents to the Kosovo Business Registration Office to apply for a business registration certificate before the end of August 2015.
  7. In line with Kosovo's own rules and deadlines, this business registration certificate will be granted within 7 days.
  8. The name of this company will be 'ElektroSever'.
- Supply license
  9. This company will apply to the Energy Regulatory Office (ERO) for the necessary license to supply customers, to buy and sell power in the open market and to import and export electricity. This license will be delivered in accordance with Kosovo's own legal and regulatory framework.
  10. The supply license will be operational when KOSTT becomes a member of the ENTSO-E.

11. ElektroSever will sign agreements with KOSTT in order to participate in the Kosovo power market and to become balance responsible party.
12. ElektroSever will be entitled to carry out billing and collection, since these are the normal activities of a supply company.
13. Access to KOSTT, KEDS and ERO to the transmission and distribution infrastructure as well as customer data will be provided. This data will be provided via the EU.
14. ElektroSever will enter into discussions with KEDS and KOSTT, to ensure third party access.

- Distribution services
  15. Both parties will continue to work, with EU facilitation, with a view to allowing ElektroSever to provide distribution services based on the principles of 'Arrangements regarding Energy'.
- Other issues
  16. Serbia, and EMS, will support KOSTT's application to sign an interconnection agreement with ENTSO-E, including in the appeal process.
  17. Both parties agree that all points of these Conclusions will be implemented independently of progress on point 15.

Disclaimer

- Kosovo considers that, in accordance with Kosovo Constitution and Laws, and international law, namely UNSCR 1244 and respective UNMIK Regulations, the property within the territory of Kosovo is ownership of Republic of Kosovo.
- Serbia considers that, that in accordance with domestic and international law, namely UNSCR 1244, property within the territory of Kosovo is ownership of Serbia, under specific provincial regulation and in full accordance with the Constitution of Serbia.

(Source: http://www.kim.gov.rs)

Bibliography

1. A "Peace Treaty" for Sustainable Peace: A new beginning for Kosovo and Serbia (2012) Kosovo Institute of Peace, Policy Study, Pristine, No. 1/2012, December.
2. Brussels Agreement Implementation State of Play 1 October 2014–20 March 2015 (2015)
3. Report submitted to the European Union/European External Action Service by the Government of the Republic of Kosovo, Prishtina, 23 March.
4. Cani, Bahri (2004) Na Kosovu cvetaju siva ekonomija i kriminal, DeutscheWelle, Bon/Priština, 23. februar.
5. Energetska zajednica jugoistočne Evrope na delu, Evropski pokret u Srbiji i KIPRED, 2008.
6. Environmental management in Kosovo – Heavy Metal Emissions from Trepca, Teksam,Insitut for Miljo, Technologi og Samfund, Roskilde Universitet, Danska, 2003-2004,http://www.rucsdigitaleprojektbibliotek.dk.
7. Farnam, Arie (2003) Duboka podela oko budućnosti Kosova, The Cristian Science Monitor, Boston, 14. oktobar.
8. Report on the current process of political and technical dialogue with provisional institutions of self-government in Prishtina with the mediation of the European Union, including the process of implementation of the agreements reached (2012), the Government of the Republic of Serbia, Belgrade.
9. Progress report on the dialogue between Belgrade and Prishtina (2015), the Office for Kosovo and Metohija, the Government of the Republic of Serbia, Belgrade, April.
10. Progress report on the dialogue between Belgrade and Prishtina (for the period October 2015- April 2016) the Office for Kosovo and Metohija and the Office for the Coordination of Affairs in the negotiating process with the provisional institutions of self-government in Prishtina, the Government of the Republic of Serbia, Belgrade, April.

11. Janjić, Dušan (2003) Kosovo between Conflict and Dialogue. Ethnic Conflict and the Crisis of Identity: The Case of Serb–Albanian Relations, Forum for Ethnic Relations, Beograd.
12. Janjić, Dušan (2005) Kosovo između sukoba i dijaloga. Etnički sukob i kriza identiteta: Srpsko–albanski odnosi, Forum za etničke odnose, Beograd.
13. Janjić, Dušan (2013) The Western Balkans Network for Electro Energy Production &Transmission, in: A Future Security Architecture for Southeast Europe, The Aspen Institute Germany, Berlin, pp. 233-238.
14. Janjić, Dušan (2014), Solving the Issue of Northern Kosovo and Regional Cooperation, in: Civic and Uncivic Values in Kosovo. History, Politics and Value Transformation, edited by
15. Sabrina P. Remeta, Albert Simkus and Ola Listhaug, CEU Press, Budapest–New York.
16. Janjić, Dušan (2015) Challenges of normalization (Analysis of negotiations and application of the Brussels agreement), Forum for Ethnic Relations, Belgrade, page 140.
17. Janjić, Dušan (2015a) Serbia and Bosnia – Herzegovina: Prospective Markets for Gaspian Gas, in: Azerbaijan and the New Energy Geopolitics of Southeastern Europe, Margarita Assenova and Zaur Shiriyev, Editors, The Jamestown Foundation, Washington, DC, pp. 323–356.
18. Kammen D., Mozafary, M., Prull, D (2012) Sustainable Energy Options for Kosovo, Goldman School of Public Policy, University of California, Berkley, http://rael.berkeley.edu.
19. Kosovo Environment and Climate Analysis (2008) Environmental Economics Univt,Department of Economics, University of Gothenburg.
20. Kosovo Country Environmental Analysis (2013) World Bank, http://www-wds.worldbank.org.
21. Kosovo između obnovljivih izvora energije i uglja (2011) Energy Observer, http://www.energyobserver.com.
22. Kosovo namerava da ostvari ciljeve vezane za obnovljivu energiju (2011), SEE Times, 24.februar.na: http://www.setimes.com.
23. Kosovo 2014 Progress Report. Accompanying the document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Enlargement Strategy and Main Challenges 2014-2015, European Commission, Brussels, 8.10.2014, SWD (2014) 306 final.
24. Kosačev, Konstantin (2009) Is there a common future in the energy, In: Pipelines, politics and power. The future of EU energy relations EU - Russia, the Centre for European Reform, Belgrade.
25. Kostić, Suzana (2014) Analiza cena i troškova proizvodnje energije iz obnovljivih izvora u Srbiji, Radni tekst, Elektrotehnički institut "Nikola Tesla", Beograd, str. 10.

26. Lehne, Stefan (2012) Kosovo and Serbia: Toward a Normal Relationship, "PolicyOutlook", Carnegie Endowment for International Peace, Washington D.C., March.
27. Perspectives of North Kosovo in the process of normalization of relations between Belgrade and Prishtina (2013) Policy Paper, Forum for Ethnic Relations, Belgrade, no. 1.
28. North Kosovo and local elections. A research (2013) Policy Paper, Forum for Ethnic Relations, Belgrade, no. 2.
29. State of Play in Implemetation of the Brussels Agreements (2014) Kosovo government, January, available at: http://www.peacefare.net.
30. Verivox - Hajdeberg (2006) Energy market in Southeast Europe, Transitions Online – Prague, 9. May.

PART II:
SERBIA-KOSOVO ENERGY SECTOR

Milan Radunović, PhD
and Sabri Limari, PhD

1. Energy sector and energy security of Serbia, (Milan Radunović, PhD)

The energy sector in Serbia is regulated by the Law on Energy. The responsible ministry is the Ministry of Mining and Energy, which represents the Government. Regulatory function of the energy sector is carried out by the Energy Agency of the Republic of Serbia (AERS).

The following are the companies operating in the Serbian energy sector:

- Public enterprise "Elektroprivreda Srbije" (EPS);
- Public enterprise "Elektromreže Srbije"(EMS);
- NIS a.d.;
- Public company for underground coil mining;
- Company for underwater coal mining "Kovin";
- Public enterprise "Srbijagas".

1.1. Main characteristics of the energy sector

Energy sector of Serbia can be observed through the following segments:

- Primary energy sources (coal, oil, gas, biomass);
- Electricity;
- Renewable sources.

1.1.1. Primary energy sources

Coal

Serbia relies on coal production as the main energy source for electricity production, industrial production and households.

Coal production is organized within:

- Public enterprise "Elektroprivreda Srbije" (EPS);
- Public enterprise for underground coal mining;
- Underwater coal mine Kovin.

In the field of coal production, the main sources are located in the Kolubara, Kostolac and Kovin coal basin, as well as in the mines for underground exploitation. In the Kolubara coal basin open-pit coal mining is carried out primarily for electricity generation in thermal power plants Kolubara, Lazarevac and thermal power plant "Nikola Tesla" in Obrenovac. A small part of the coal is processed into dried coal for the market. Open-pit mine in Kostolac mostly supplies power plants Kostolac and Drmno.

Within the MB "Kolubara", Ltd. Lazarevac, there are four active pits:

- "Field B"
- "Field D"
- "Tamnava East"
- "Tamnava West".

Within the "TE - KO Kostolac" Ltd. Kostolac there are three active open-pit mines:

- "Drmno"
- "Ćirikovac"
- "Klenovnik".

Underground mining is carried out through the Public Enterprise for Underground Coal Mining "Resavica". "Resavica" includes the following mines:

- "Vrška čuka"
- "Ibarski rudnici"
- "Bogovina"
- "Soko"
- "Jasenovac"
- "Štavalj"
- "Lubnica"
- "Aleksinac".

Coal from underground mines coal used in power plants, thermal power plant "Morava", the industry and households.

Underwater mining is carried out in the Kovin coal basin. Exploitation of coal in Kovin is experimental, until a decision is made on the method of coal mining in the flood protected part of the coal basin. This coal is used in the industry (sugar), households and a certain amount for electricity production in EPS power plants and for export to Romania. New mine and thermal power plant is planned at Kovin mining site.

Oil

Based on a research, there are reservoirs with a total of 400 million tons of oil reserves on the territory of Serbia. The largest deposits of "black gold" are located in:

- Banat: Mokrin, Kikinda, Boka, Elemir, Janošik, Jermenovci and Lokve;
- Bačka: Kelebija, Velebit and Palić.

Potential reserves of oil and gas have been established and the west Pomoravlje, between Cacak and Kraljevo, Kosovo valley and in eastern Serbia around Timok river, Wallachia-Pontian basin, in Geotska depression.

The exploitation and processing of oil as well as distribution and sales are carried by of NIS. The owners of this oil company are "Gazprom", Russia, and the state of Serbia. In addition to oil exploitation NIS also deals in electricity production through cogeneration by using the heat from the petroleum refining and transferring electricity to the network.

Liquid fuel is used for the electricity production in Serbia.

NIS has a refinery with two plants - in Pančevo and Novi Sad, and a plant in Elemir for preparation and transportation of gas. Conditional oil and gas output of NIS is around 1.7 million tons a year, operating on the territory of Serbia, Angola, Bosnia and Herzegovina. The total volume of oil refining - about 3 million tons per year. The retail network of the company entails over 350 facilities: petrol stations, filling stations and the network of oil warehouses. NIS is the leading supplier of petroleum products in Serbia.

"Gazprom" owns 56.15% share capital of NIS, while 29.88% is owned by the Republic of Serbia. The rest belongs to the citizens, employees, former employees and other minority shareholders, and the company currently has approximately 2.3 million shareholders (as at 31 December 2013). NIS shares are traded on the Belgrade Stock Exchange.

Gas

Gas related activities in Serbia are carried out by the public enterprise "Srbijagas". Srbijagas is a company for transportation, distribution, storage and trading of natural gas. It leads the gas market in Serbia and draws its strength

from tradition and decades of experience, significant human and material resources, knowledge and commitment to promote, develop and connect the gas infrastructure in Serbia with neighboring countries.

JP "Srbijagas", was established on 1 October 2005 by the Government of the Republic of Serbia, with head office in Novi Sad. Modern Srbijagas was created in the restructuring process of NIS, from the organizational units of NIS-Gas, NIS Energogas and NIS Jugopetrol (Gas plant and RJ Gas, Pancevo), which have been developing the gas sector for over fifty years.

JP "Srbijagas" also operates the underground gas storage Banatski Dvor with gas pipeline DV 04-18 Gospođinci – Banatski Dvor. The two-way pipeline DV 04-18 GRE Gospođinci - PSG Banatski Dvor is an integral part of the underground gas storage facility and as such should enable smooth and fully connected underground gas storage with the transport system of Serbia.

Natural gas reservoirs are:

- Banat: Mokrin, Kikinda, Elemir, Torda, Međa, Begejci, Plandište, Velika Greda, Tilva;
- Bačka: Srbobran.

Oil shale

Rich deposits of this energy source were identified in Serbia, estimated at two billion tons, which means that the processing of would yield about 210 million tons of oil. Oil shale are located in the following areas: Ponisavlje (Timok Valley), west and south Pomoravalje, Podunavlje, Podrinje, Kolubara, Sumadija. The most promising site is near Aleksinac.

For now there is no exploitation of oil shale in Serbia.

1.1.2. Electricity

Electricity production is mainly organized through the Public Enterprise "Electric Power Industry of Serbia" (EPS). EPS is a vertically organized company that has the foundation rights in two subsidiary companies:

- Distribution system operator "EPS Distribution" doo, and
- "EPS Supply" Ltd.

The company "EPS Trade" Ltd. Ljubljana, Slovenia, was established to conduct trade in electricity.

EPS performs the production, processing and transport of coal for thermal power plants, power generation from thermal and hydro power, steam and hot water production in combined processes.

Due to the decommissioning of the oldest production blocks and increased demand for electricity, it is necessary to find strategic partners to invest around 620 million EUR per year.

The electric power system of Serbia is mixed hydro-thermal system.

Thermal power plants (CHP)

Total power of eight thermal power plants with 25 blocks is 5,171 MW. They are fueled by lignite. The list of power plants with main characteristics is given in the appendix.

Hydropower plants (HPP)

Total power of sixteen hydropower plants with 50 turbine units is 2,835 MW, accounting for almost 34 percent of the total electric power potential of EPS. Electricity is produced in hydro power plants, the list of which along with their main characteristics is given in the appendix.

Distribution of electricity

Electricity distribution is performed by the subsidiary distribution operator "EPS Distribution", while the supply of consumers and payment collection for consumed electricity is carried out by the subsidiary company "EPS Snabdevanje".

Transmission of electricity

Electricity is transmitted via power lines with voltage levels of 110kV, 220kV and 400kV.

Public Enterprise "Elektromreze Srbije" (EMS) is in charge of electricity transmission and power system management.

Transmission power lines with 400kV voltage are used to connect the largest and most important production and consumption centers in Serbia, but, this voltage level is also primarily used to connect the entire electric power system of Serbia with power systems of neighboring countries, allowing international trade in electricity. In this way, the transmission system makes Serbia a part of the pan-European system for electricity transmission and its special significance lies in the fact that it directly connects nine countries and enables transmission of electricity from north to south, from east to west and from north-east to south-west Europe.

In addition to transmission lines and transmission system the system consists of other accompanying systems (telecommunications system, remote control system, own power consumption, etc.), making it one of the most complex infrastructure systems.

By means of the Agreement on system services, the transmission system operator provides capacity for all types of regulation, as well as for the establishment of the system after a collapse.

In order to facilitate international exchange of electricity, transmission system operators calculate the cross-border transmission capacity. These capacities are allocated in accordance with specific rules. Consumption and technical losses forecast is the first step in making daily plans of the power system. These data are added to the data from the work plans of the balancing groups related to the consumption, production and exchange of electricity. Work plan and necessary reserve for frequency control and power exchange must be foreseen as well. To ensure system security, models of our transmission system are produced based on these plans on daily basis and exchanged with models of other European operators. Security calculations are implemented on the common model for the region of Southeast Europe. If analyses show unfulfilled security criterion, work plans are changed, or dispatchers are given recommendations for real-time operations.

The exchange of information that is necessary for system security and the operational management are carried out mainly via a telecommunication system based on the OPGW technology (optical fiber cords embedded in protective lines). This system is integrated in the European communications network, the so-called Electronic Highway. In addition to the transmission system management at the national level, JP EMS is also coordinating the SMM (Serbia-Macedonia-Montenegro) control block. Based on the rules of procedure of interconnection, transmission system operators of Serbia, Montenegro and Macedonia have agreed to set up a SMM control block, which has three main functions: work program administration, monitoring work program realization in real time (secondary regulation), and calculation of exchanged electricity.

1.1.3. Biomass

The most significant renewable energy potential in Serbia is biomass, which is estimated at 3,405 million tons, of which the potential of timber accounts for 1.53 million tons, the potential of agricultural biomass 1.67 million tons (residues in crop production, cattle breeding, fruit-growing, viticulture, primary processing of fruit), while the potential of the primary organic waste is estimated at 205 Mtoe; edible waste oils and animal waste are estimated in a total amount of 0,043 million tons per year. Biomass potential is available in the entire territory of the Republic of Serbia. Wood biomass is mostly available in central Serbia and its usage level is very high (66.7%), and agricultural biomass is mostly available in Vojvodina but its use is negligible (only 2%). Potential of the biodegradable municipal waste is currently not utilized.

The quotas prescribed by the Government of the Republic of Serbia by the end of 2020 are as follows:

- biomass power plants: 100MW,
- biogas power plants: 30MW,

- landfill gas plants: 10MW,
- waste-to-energy plants: 3MW

1.1.4. Wind energy

The 2013 action plan provided for the construction of 500 MW wind power plants. For most of them, investment and technical control has been prepared, and after the adoption of incentive tariffs, the installed capacity quotas were rearranged. In the meantime, the construction of wind farms has been initiated at some locations.

1.1.5. Solar energy

There are plans to construct solar power plants of total installed capacity of 500 MW in Serbia. Investment and technical locations have been prepared for some locations, and on some locations the construction is already underway. Incentive quotas have been allocated.

1.1.6. Biofuels

Bioethanol can be produced from the following raw materials: grains and potatoes, sorghum and Jerusalem artichoke, which can be cultivated in Serbia on about 100,000 hectares of marginal land. It can be produced from oil plants: sunflower, soybean and rapeseed, which can be planted on 350,000 acres allowing the annual production of about 220,000 tons of biodiesel. It is also possible to collect about 10,000 tons of waste edible oils suitable for biodiesel production.

1.2. Challenges of energy security

Significant production capacities in the energy system of Serbia are based on the generation of electricity from low rank coals. Another important fact is that these capacities were built in the first half and the beginning of the second half of the last century. The main characteristic of these capacities are low efficiency and considerable pollution. According to EU decisions production capacities on coal with low efficiency and significant pollution must be decommissioned at

some point. The closing of these facilities is constantly being postponed but this will have to happen eventually. Meanwhile, only the construction of 350MW in Kostolac is being carried out. The construction lasts from four to five years so it is clear that the energy system will depend on imports for some time. Therefore, this represents a great challenge for energy security. Current plans are based on the current price of electricity, but all indicators are pointing to a gradual growth.

On the other hand, there is no possibility to self-finance the construction of production capacities and there are neither state guarantees nor guarantees for long-term sale of electricity. For that reason the issue of energy security challenge can be resolved only by means of agreements on strategic partnerships, concession or public-private partnership with the potentially interested companies. This refers to the construction of new thermal as well as hydro power plants and especially the construction of a pumped storage plants.

It can be concluded that there is a possibility that the security of the energy system in Serbia is at risk due to delays in the implementation of new production capacities and the abandonment of the South Stream gas pipeline project. The basis of energy development lies partly in the hydro potential and in the utilization of coal resources with the use of modern technologies of coal combustion.

1.3. Main development projects in the field of energy and energy security

Development projects in the field of energy and energy security in Serbia can be grouped as follows:

- Planned projects within the existing production capacities,
- Planned projects for the construction of new capacities,
- Planned projects within the distribution system,
- Planned projects pertaining to the protection and improvement of the environment,
- New projects

Planned projects within the existing production capacities

- Projects that must be completed in the coming period in order to maintain the achieved level of production:
  - within the mining production capacities
    - » procurement of the missing equipment and facilities to achieve coal production of 12 million tons per year at "Tamnava West Field" mine;

  - » procurement of equipment to compensate a part of the coal production in MB "Kolubara" in "Tamnava West Field" mine;
  - » project of improvement of coal mining technology in MB "Kolubara" to increase efficiency and to reduce the environmental impact;
  - » procurement of equipment for replacement capacities at open pit mines PK "Polje C", PK "Polje E" and PK "Polje G".
- within the existing thermal and hydro capacities
  - » revitalization of HPP "Iron Gates 1", "Bajina Bašta", "Zvornik" and "Vlasina HPP",
  - » finalization of revitalization of blocks B1 and B2 at TPP "Nikola Tesla", with increased capacity;
  - » finalization of the revitalization of blocks B1 and B2 at TPP "Kostolac", with possible increase in power;
  - » construction of the fifth turbine at HPP "Bajina Bašta";
  - » revitalization of the existing small hydro power plants.

Planned projects for the construction of new production capacities

- According to the current analyses, the increased demand for electricity by 2025 can me met to great extent by construction of new production capacities – strategic projects:
  - finalization of the construction of TPP "Kolubara B";
  - construction of the new block at TPP "Nikola Tesla B3" and TPP "Kostolac B3",
  - reconstruction of the existing natural gas cogeneration plants by means of installation of gas turbines, specifically the reconstruction of CHP "Novi Sad" – development of projects of commissioning PK "Radljevo";
  - construction of at least five HPPs on Velika Morava, 10 cascade HPPs on Ibar River, four HPPs on the upper course of the Drina River, three HPPs on the mid-course of the Drina River , HPP "Iron Gates 3" and HPP "Bistrica";
  - construction of small HPPs and electricity production form other renewable energy sources.

Planned projects within the distribution system

- Special investment activity is planned for the modernization of the entire distribution system, which broadly includes:
  - construction of substations, as well as overhead and cable lines of all voltage levels to meet the growing demand for electricity, and to improve the voltage profile and quality of delivered energy;
  - revitalization, reconstruction or replacement of the existing outdated equipment on a number of power stations;

- reconstruction of the existing network of lower voltage levels (35, 20, 10 and 0.4 kV), which is in line with local electricity consumption growth and increasing the quality of supply - improvement i.e. technological modernization of the measuring equipment of consumers in order to establish the SMART GRID concept - the development and procurement of the necessary equipment and modern software tools for automation and facilities management in HV and MV distribution companies;
- modernization of the electricity payment collection system, telecommunication system etc.

Planned projects in the framework of environmental protection

- According to the package of laws on environmental protection, which entered into force in late December 2004, as well as a package of sector related laws and regulations, EPS is obliged to harmonize the work of its facilities with provisions of the law by 2015.. This means that even under national legislation, which is harmonized with EU legislation, modern security measures must be applied to new facilities and to those being revitalized. This implies:
  - for new TPPs and those being revitalized – installation of desulphurization facilities and high efficiency electric filters, application of measures for the reduction of nitrogen oxide emissions, installation of waste water treatment facilities, introduction of new transport solutions and ash disposal, which are favorable in terms of environmental protection;
  - for coal mines – continued recultivation of tailing disposal sites by introducing new methods, including selective excavation and disposal of humus;
  - for HPPs – realization of projects envisaged under measures for the protection of reservoirs and coastal areas;
  - efforts must be made to maximize the use of secondary raw materials such as ash, clay, gravel, sand, oils, rubber, etc., which are the by-products of EPS activities;
  - operational application of flexible mechanisms of the Kyoto protocol, the use of possibilities of the Clean Development Mechanism (CDM) and development of greenhouse gases trade (GHG).

New projects

- Activities for the preparation of construction of thermal power units at the existing or new locations are planned in order to determine the possibilities for long-term development of thermal capacities "Electric Power Industry of Serbia". The basis for long-term plans for the construction of thermal power plants are coal reserves available in the Republic of Serbia in Kolubara and Kostolac basins.

- In the following period, the planned activities in EPS include continuation of construction of TPP "Kolubara B" (2h350 MW) and the third block of TPP "Nikola Tesla B" (700 MW), which are supplied with coal from Kolubara. Investment analysis was prepared for the construction of new thermal power plants i.e. three blocks in "Kostolac B" (350 MW), which would be supplied with coal from PK "Drmno". In addition, it is planned to build a new block (gas operated) at the location of CHP "Novi Sad" (450 MW).
- EPS is carrying out activities on the analysis of different scenarios and optimization of development of the Drina system and preparation of investment-technical documentation for the construction of new hydro power capacities on the upper and middle course of Drina and Sutjeska rivers, through a strategic partnership with the mixed holding company "Elektroprivreda Republike Srpske" and its subsidiary "Hydro power plants on the Drina". Currently, project documentation is being completed for the construction of 10 small hydro power plants on the Ibar River, with total capacity of around 105 MW, and other activities are being carried out on the development of a system of at least five hydropower plants on the Velika Morava River (150 MW).

2. Energy sector and energy security of Kosovo (Sabri Limari, PhD)

Kosovo energy sector is regulated by the Energy Act. On behalf of the government of Kosovo, the Ministry for Economic Development is responsible for the energy sector. Regulatory function of the energy sector is carried out through the Energy Regulatory Office (KRE) of Kosovo.

Energy sector of Kosovo is also governed by the operation of:

- Kosovo Electricity Transmission, System and Market Operator (KOSITT);
- Kosovo Energy Corporation (KEK) Public company "Elektromreže Srbije"(EMS);
- Independent Commission for Mines and Minerals (NKRM);
- District heating company.

2.1. Main characteristics of the energy sector

Kosovo energy sector can be observed through the following segments:

- Primary sources of energy (coal, oil, gas, biomass);
- electricity
- renewable sources

2.1.1. Primary sources of energy

Coal

Ležišta uglja nalaze se u basenima:

- "Kosovo"
- "Dukagjini"
- "Drenica"
- "Sibovac".

Kosovo coal is brown coal (lignite) with a low sulfur content and relatively favorable lime concentration to absorb sulfur during the combustion process. The ratio of tailings and coal is favorable, making coal reserves competitive for electricity generation. The existing open pit mine supplies coal power plants, households and industry. In the field Sibovac and Dukagjin there are large reserves for future exploitation and construction of significant capacities for generating electricity. Coal reserves in the basin of Drenica cannot be used for electricity generation, but only for the industry.

The current organization of coal production within KEK is achieved through the coal production sector, consisting of the following three sectors:

- Existing mines or east and west sectors
- Sitnica sector
- New mine pit "Jugozapadni Sibovac"

2.1.2. Electricity

Thermal power plant "Kosovo A" consists of five working blocks known as A1, A2, A3, A4 and A5. Block A1 was put into operation in 1962 with the power of 65MW; A2 in 1965 with an output of 125 MW; A3 in 1970 with an output of 200MW; A4 in 1971 with an output of 200MW, and A5 in 1975 with an output of 210MW. Blocks A3, A4 and A5 are functional. According to the current production plan, two blocks are in use, while one of them in the "hot" reserve due to their low readiness and age. Block A1 and A2 are not operational and without a defined status, and according to current plans they will remain non-operational until their decommissioning together with other units.

Annual production of electricity from TPP "Kosova A" is about 1500 GWh.

Thermal power plant "Kosovo B" consists of two working units (blocks) known as B1 and B2. The first block (B1) was put into operation in 1983 with an output of 340 megawatts, while the second block (B2) in 1984 with the same power, 339 MW. Both blocks are functional with good time readiness. Due to

regular maintenance and investments in this thermal power plant, the working units of this plant are in a good condition with high level of technical readiness, despite being operational for 25 years. In 2008 and 2009, this power plant has achieved a record production since its commissioning. Annual electricity production in TPP "Kosovo B" is about 3650 GWh.

In the energy balance sheet, the consumption is calculated according to the EUROSTAT methodology as a primary energy from import and export. Net calculated import in 2012 was 13.09 Ktoe (import-export).

HPP production outputs

Data on production of hydropower plants for hydropower plants connected to the distribution network in 2012 are taken from the annual reports of KEK: HPP "Lumbardh" (ex Kozhnjer), HPP "Radavc" HPP "Dikanc" and HPP "Burim" (ex East), while the production data for HPP "Ujman / Gazivoda", which is connected to the transmission network, was taken from KOSTT report. The data was further verified with the data published by the Energy Regulatory Office of Kosovo (ERO). The total electricity generated in all hydro power plants in Kosovo in 2012 was 22.08 Ktoeje 8.22 ktoe.

2.1.3. Biomass

Total firewood consumption in 2012 was estimated at 247.49 Ktoe. Compared with the previous year (2011) this was an increase of 2.3%, which is associated with the increase in the number of families.

Data on consumption of firewood with a special emphasis on consumption in the household sector was analyzed in the biomass study "Biomass Consumption Survey for Energy Purposes in the Energy Community, CRES, UNMIK, National Report, 2011 for the period 2009/2010 and 2010/2011".

2.1.4. Wind energy

In 2010, three wind turbines have been built and put into operation with a total installed power of 1.35 MW (construction using old equipment) which were operational in 2010 and 2011. In 2012 wind turbines were not in operation due to undefined incentive tariffs for electricity generation in wind power plants with old equipment (*incentive tariffs of ERO relate to the cost of electricity produced by wind farms which use new equipment*).

2.1.5. Solar energy

The growth of solar energy use has been estimated on the basis of the last three-year average increase in production.

2.1.6. Biofuels

In 2012 there was no import or consumption of biofuels in energy production/consumption.

2.2. Challenges of energy security

Kosovo energy system is based on the generation of electricity from thermal capacities of low energy coal. The old facilities with poor maintenance, high pollution, and a very low coefficient are not the sound basis for ensuring energy security. The system is highly dependent on the import of electricity. Therefore, it is necessary to urgently secure funds for the construction or reconstruction of the existing capacities.

2.3. Basic development projects in the field of energy and energy security

The main development projects concern the construction of new production capacities based on available coal deposits. Considering the fact that a future investor who wishes to build power plants and expand mine capacities will seek to have a return on investment through the sale of energy, he will have to invest in new interconnection lines at high voltage. In addition, one of the major development projects in the field of energy security is the construction of 400 kV ring, as well as modernization of low voltage distribution network.

PART III:

RECOMMENDATIONS: POSSIBLE COOPERATION BETWEEN SERBIA AND KOSOVO IN THE ENERGY SECTOR

1. Introduction

Energy systems of Serbia and Kosovo were developed within the setting of a unique country of Yugoslavia. Serbian energy system is characterized by available natural energy sources: coal, oil, gas, water; energy systems of Kosovo and Serbia also share the geographical position of Serbia in the field of transit of electricity, oil and gas. Kosovo's energy system is characterized by significant reserves of coal, low energy coal, and a certain amount of water - hydropower. Only by connecting the power system of Kosovo and Albania by a 400 kV transmission line the system will gain in importance as a transit potential. The energy system of Kosovo is not on the transit route of the planned gas and oil pipelines and the construction of South Stream or TAP creates a possibility for building a gas pipeline for the purpose of gas usage.

Both electric power systems are characterized by the fact that they are based on thermal production, specifically lignite, but with capacities that are significantly outdated, with unfavorable characteristics in terms of environmental protection, so the pressure from the EU to close these production facilities can be expected. Apart from "Kostolac" 350MW, the construction of new, except capacities has not been initiated, suggesting that they will be dependent on import, regardless of their natural reserves of coal.

Short and midterm cooperation between the two energy systems can be realistically expected in the following two areas:

- Electric power industry
- Ecology

The implementation of Brussels agreements can significantly contribute to the regulation of mutual relations and long-term cooperation. However, cooperation should be primarily based on:

- economic interest of equal partners;
- commercial contracts on the exchange / purchase / transit of electricity;
- commercial contracts, construction of gas lines and use / sale / transit of gas.

1.1. Electric power industry

Both Serbia and Kosovo are signatories of the Treaty establishing the Energy Community and are obliged to honor the agreement. The presence of common issues, outdated power plants, the need for the construction of new transmission and production capacities, as well as significant reserves of coal and lignite, are issues that can be better resolved and implemented through a common approach.

The EU's position on the electricity production from lignite, stringent requirements regarding pollution and energy efficiency are discouraging potential investors. Common approach can create conditions for a more favorable climate for the realization of capital investments through the use of new technologies, as well as conditions for establishing a strong local partnership. All this can facilitate new investments, create new jobs, and increase energy security. Common implementation creates space for the application of the currently only available model of financing which is a public-private partnership, creates a more favorable climate for access to funds and at the same time it prevents the application of dirty technologies in the region.

The common approach will create the possibility for faster economic development of the region and will receive support from the international community because it brings better quality of life for people, it prevents brain drain, and encourages international relations, which are all preconditions for inspiring trust and gaining good reputation with the EU.

In terms of stability of investments, it would be possible to attract significant investments for the construction of new production capacities if the region is seen as energy basin for the supply of electricity, using modern technology an image is created of the region.

1.2. Gas

The planned construction of the South Stream gas pipeline and TAP gas pipeline (Trans-Adriatic Pipeline) requires the study of optimal network of natural gas supply in the region. To this end, it is a common interest to provide

funds for the development of these studies, which would take into account these two important projects and ensure greater application of the gas.

1.3. Areas of cooperation

Cooperation based on economic interests of equal partners:
- Sectors for cooperation of mutual interest;
- Cooperation on development projects;
- Contribution to establishing better relations.

Brussels agreements:
- Realization of the Brussels agreements can contribute to a long-term regulation of mutual relations;
- Cooperation in the field of electric power systems based on commercial terms;
- Cooperation on future commercial projects (gas…).

Areas of cooperation in the field of energy (1):
Cooperation based on the economic interests of equal partners:
- Both countries are signatories of the Treaty establishing the Energy community and are obliged to honor the related agreements;
- Common approach in the financing of development energy projects in the region through various donors' funds from abroad;
- Creating a positive climate for favorable capital development projects in the field of energy.

Areas of cooperation in the field of energy (2):
Electricity - Issues
- Negative experiences from the previous period (J. Truchler);
- Lack of transparency in the electricity market in the region, which is still present;
- Actors on the market in the service of current private interests;
- Failure to honor the agreements from 2000. (UNMIK/Serbia, starting from 2004);
- Failure to honor recommendations / decisions of the Energy community.

Cooperation and transparency in the period 2000-2004
- Good cooperation and honoring the signed agreements between UNMIK/Kosovo and Serbia; Import / export in the period 2000-2004 for the purpose of regulating relations in electric power systems;

- Realization of two agreements, good and positive experiences from that period.

Electricity
Construction in the period 1985-2014:
- There were no new construction project after 1985 in the region;
- Existing facilities are near the end of their useful life;
- There are no new significant energy sources in the region.

Old facilities:
- Consumption on the rise;
- Technical and environmental rehabilitation of old facilities is very expensive (not new facilities);
- Requirements from EC directives concerning old facilities are very costly for regional countries;
- Common requests to lower the EC requirements / postpone the application of certain EC directives.

New facilities:
- All countries in the region are incapable of supporting capital investments;
- Very high investments for the application of EC directives related to environmental protection (BAT/BREF's-2013) and TPP efficiency;
- Costly investments from commercial banks for capital facilities;
- Common requests to lower the requirements from EC directives for new facilities;
- Common requests for better terms of financing loans for poor regions.

Natural gas sector
Natural gas:
- Seeking funds for the production of one study of optimal natural gas network for the regional supply, related to the South Stream project and TAP (Trans-Adritic Pipeline).

Social and political reasons for non-payment of electricity bills in Kosovo
- Political motives for not paying electricity bills in Kosovo;
- Systemic solution – donations for socially vulnerable families;
- Paying electricity bills based on consumption and tariff system;
- Influence on the operations of privatized Electricity distribution company

Petroleum products
Kosovo
- Kosovo imports all petroleum products;
- There is a mutual interest for cooperation in this area based on market conditions.

3 | 2017



www.fer.org.rs