

# **Electricity Market - Observatory**

# Mujčinagić Alija, march 2007

### Importance of Electricity and Sector

Electricity is critically important to modern societies and represents a set of complex challenges and dilemmas. This is true for all countries, but particularly for those undergoing a process of significant economic and social change, such as Bosnia and Herzegovina. Prior to the war, the energy sector played a key role in the economy, producing eight percent of GDP in 1992. After the war the power sector has a leading role in the economic and social progress in Bosnia and Herzegovina.

#### Sector structure and details

In the BIH there are three majority state-owned companies engaged in electricity generation, distribution and supply. The characteristic of these companies is that they supply areas with Bosniak, Croat and Serbs ethnic majorities.

The first and the biggest company is the Public Utility "Elektroprivreda BIH" (EPBIH), EPBIH is based in Sarajevo, and serves a customer base of approximately 646.000 customers<sup>1</sup>, over 90% of which are household customers. The second company in the Federation of BIH, the Public Utility "Elektroprivreda of the Croatian Community of Herzeg-Bosnia (HZ-HB)", Stock Company Mostar is considerably smaller with regard to installed capacity and the number of customers. It serves around 168.000 customers, approximately 152.000 of which are household customers Unlike the first company, this company does not have sufficient electricity to meet the needs of its customers, consequently, it has to import electricity. In the other entity, the Republika Srpska, there is one company the Public Utility "Elektroprivreda Republike Srpske" (ERS) Stock Company Trebinje, which is majority state-owned and also has a monopoly

on the whole territory of this entity. ERS has a customer base of 436.000, over 400.000 of which are household customers. Just like JP "Elektroprivreda BIH" this company also has sufficient capacity to fully meet the consumption of its customers and to export one part of electricity.<sup>2</sup>

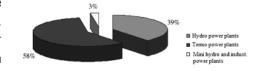


Chart 1. Structure of electricity production in BIH

Total production of electricity 2006 was 12.770,24 GWh while total consumption was 12.006,60 GWh and it is obvious that BIH can meet the needs of domestic customers from its own resources however, due to non-existence of a single market a paradox is created whereby electricity is imported for one part of the customers. The same category of customers in the area supplied by JP EP HZ-HB pays considerably higher electricity than the same customers supplied by JP ERS and JP EP BIH. Although JP EP HZ-HB supplies its customers with electricity generated in hydro power plants producing "cheap" electricity, the end-customer price is much higher due to a high price of electricity that is imported in order to meet the need of all customers.

#### Reform's results and new structure

The primary goal of restructuring is to develop electricity trade beyond the national and entity borders to the benefit of the society.

The adopted legal framework during 2004, treating the power sector is divided into two levels- the entity level (the Federation of BiH and the Republic of Srpska) and the state level. The three Regulatory Commissions have been

#### **SUMMARY**

Bosnia and Herzegovina has not created functional electricity market. Social and political environment as well as a whole range of circumstances has slowed down the process of the electricity market creation, which is part of the energy sector reform in BIH. The creating of an internal market in accordance with European directives and its joining the regional electricity market of South-East Europe is the process that Bosnia and Herzegovina has to implement in order to accede the European Union. The concept of abolishing the exclusive rights of the publicly owned, vertically-integrated monopolistic utilities, and introducing competition in the energy sector has started to occupy the minds of European and US policy makers since the 1980s. By the 1980s it has become apparent that in order to achieve higher efficiencies and the improvement of the quality of services, it was necessary to introduce competition in the sector as a concept, which during the 1990s was accelerated due to the fact that competition was the base for the creation of a single European Market. The creation of a Regional Energy Market in South East Europe has been addressed as a priority and a challenge for regulatory and economic institutions in the area.

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<sup>&</sup>lt;sup>1</sup> Source www.elektroprivreda.ba <sup>2</sup> "The Energy Balance for 2006", ISO BIH



Alija Mujčinagić, born on December 4, 1973 in Gračanica. Graduated at the Faculty of Electrical Engineering in Tuzla. Student of the CEFES international postgraduate studies in the field of power systems in Tuzla. Participated in several conferences and workshops in South-East Europe pertaining to electricity markets. Employed by the State Electricity Regulatory Commission as an analyst in the Tariff and Market Department.

The author participates in the project as an independent researcher. The views expressed here in are those of the author and do not necessary coincide with the official views of SERC.

established in accordance with international regulatory standards based on the principles of independence and transparency.

The principal motivation for trying to create an independent regulatory entity is to "depoliticize" tariff-setting and other regulatory decisions by insulating the regulatory entity from day-to-day political considerations.<sup>3</sup>

The Independent System Operator in Bosnia and Herzegovina (ISO BIH) started its operational July 2005. ISO BIH administers the balancing market. It is based in Sarajevo. The Company for Transmission of Electricity in BIH ("Elektroprenos Bosne i Hercegovine", JSC Banja Luka, TRANSCO) started its operations in February 2006 with a considerable delay. TRANSCO is a new single company at the state level which runs transmission activities of the three mentioned companies. TRANSCO is based in Bania Luka. The establishment of TRANSCO and ISO is an important step in ensuring compliance with the EU Electricity Directive (2003/54/EC) as the latter addresses third party access to transmission and distribution networks and unbundling of supply from transmission.

The Council of Ministers established the Energy Department within the Ministry of Foreign Trade and Economic Relations (MOFTER) tasked with the coordination of energy sector activities in BIH. including relationships with international and regional bodies. Application of several laws which regulate the functioning of the power sector in BIH is slowed down due to slow implementation of the Action plans for restructuring of the electric power sector in BIH for Federation of Bosnia and Herzegovina and Republika Srpska. The power sector of BIH is small compared with some developed European countries, the existence of the three regulatory commissions is unnecessary and it creates a bureaucratic environment with unnecessary costs and delays. The experiences of the European countries in transition and EU countries show that changes of national energy legislations are needed after a few years of the application of the initial reform laws. This is necessary for alignment with the "acquis", but should also include provisions that are not directly EU-integration related, but clarify responsibilities of each of the subjects, especially the Government, the Regulators and utilities.

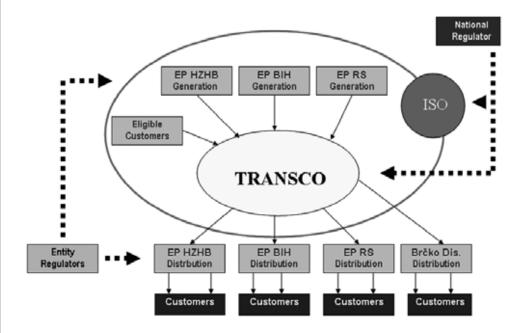


Figure 1. Power sector structure January 2007.

<sup>&</sup>lt;sup>3</sup> Handbook for Evaluating Infrastructure Regulatory Systems, The World Bank, Ashley C.Brown, Jon Stern and Bernard Tenenbaum with Defne Gencer

#### **Basic Principles of Electricity Markets**

The electricity market must deliver reasonably priced energy with the highest service levels to the final customer. A successful fully competitive energy market is the final result of a stage-by-stage approach in each step of which the necessary pre-requisites for formation must exist.

According to the Action plan of the Federation of Bosnia and Herzegovina for restructuring and privatization of the electricity sector and the Action plan of Republika Srpska for restructuring and privatization of the electricity sector<sup>4</sup>, the wholesale market is based on the bilateral trading.

According to the bilateral trading of electricity suppliers and consumers independently arrange power transaction with each other according to their own financial terms.

## **Market opening**

In June 2006, SERC announced the Decision on the Market Opening, which represents a part of that regulation and the beginning of the approach towards realization of the overall obligations of Bosnia and Herzegovina after the signing of the Treaty on Establishment of the Energy Community. The Decision includes the gradual electricity market opening. In line with Decision, SERC chose to introduce an initial threshold of 10 GWh for the acquisition of the eligible customer status<sup>5</sup>. Although large customers with annual electricity consumption higher than 10 GWh have been given a possibility to choose freely their electricity suppliers, i.e. to acquire the eligible customer status, none of 27 of them in Bosnia and Herzegovina has opted to change its supplier.

RSERC<sup>6</sup> set the tariffs for the utilization of the distribution network (35 kV, 10kV and 0.4 kV)

which entered into force on April 1, 2006 thus creating basic prerequisites for new electricity market entrants but only in the territory of the Republika Srpska<sup>7</sup>. FERC<sup>8</sup> has not published the tariffs for the utilization of the distribution network, which means that at the moment there are different trends of the electricity market opening in the two entities.

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The unbundling of the activities (notably of accounts) within the power companies in the Federation of BiH has not been completed yet, while this process in the Republika Srpska has achieved a certain level9. The current situation in the power sector as well as the achieved level of restructuring do not provide conditions for the entry of a higher number of suppliers that would make the electricity market more efficient. If the sector reform, i.e. further re-structuring of the electricity sector does not proceed, and this, in the first place, refers to the unbundling of activities, setting of transparent tariffs for the activity of electricity distribution and deregulation of generation activity, it is uncertain if BIH can meet the requirements put in front of it.

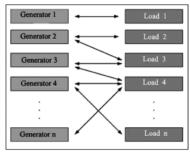


Figure 2: Bilateral Electricity Trading

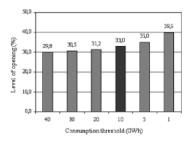


Figure 3. Level of BIH market opening in relation to consumption threshold

<sup>&</sup>lt;sup>4</sup> The Action Plans for the Restructuring of the energy sector along these lines were agreed by Republika Srpska in April 2003 and the Federation in May 2005. These plans set out a time frame for restructuring of the sector by the end of 2007. This involves different stages of 1) reallocation of assets; 2) Corporatisation; and 3) Commercialisation.

<sup>&</sup>lt;sup>5</sup> The eligible customer means the electricity customer who is entitled to buy electricity at its own choice.

<sup>&</sup>lt;sup>6</sup> Republika Srpska Electricity Regulatory Commission

<sup>&</sup>lt;sup>7</sup> REERS Decision No. 01-1437-3/06 of March 22, 2006

<sup>&</sup>lt;sup>8</sup> Federation Electricity Regulatory Commission

<sup>&</sup>lt;sup>9</sup> The distribution activity in the Republika Srpska is divided into five distribution companies that are organized as stock companies

#### Recommendations

The political will at all state levels is of crucial relevance for the success of the continuation of the reform leading to the establishment of a single economic space in BiH and successful European integration. Steps to be taken can be separated into two wide categories. The first one is the creation of a market-based sector, with policies and legal framework compatible with the EU (institutional and legal reform), while the second relates to technical capacities (SCADA system and infrastructure) and increase the reliability and availability of energy system to all consumers. Special attention should be paid to the realization of projects for the establishment of metering systems at all boundary points between market participants. Reliable electricity metering and data processing, as well as their availability to all participants are key technical prerequisites for the establishment of a functional market.

Existing legal gaps (before all, it is adopting "Market Law" at state level which will define rules for the electricity market for the whole country) should be resolved, which requires wide preparation and is closely related with power sector restructuring and energy regulation. The reforms should also encourage investments, since transparent and predictable framework is a necessity for attracting potential investors. A clear and enforceable legal framework is also among the top priorities for investors. They want the "rules of the game" to remain credible and enforceable—not altered at the government's convenience once they have made investment decisions based on those rules.

The activities that should be realized in the process of the creation of an efficient electricity market in BIH may be put in the following order:

- Unbundling distribution and supplying activity
- 2. Establish an authority for the market activity (Market Operator)
- 3. Introduce competition in generation deregulation of generation activity

- 4. Introduce customer choice
- 5. Deal with independent power producer
- 6. Attract private investment
- 7. Entrench universal service obligations

This requires completing the ongoing restructuring of energy companies, and increased credibility of the regulatory system through clear division of responsibilities between the Governments, the Parliaments and the Regulators.



A "Policy Development Fellowship Program" has been launched by the Open Society Fund BiH in early 2004 with the aim to improve BiH policy research and dialogue and to contribute to the development of a sound policy-making culture based on informative and empirically grounded policy options.

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All policy studies are available at www.soros.org.ba