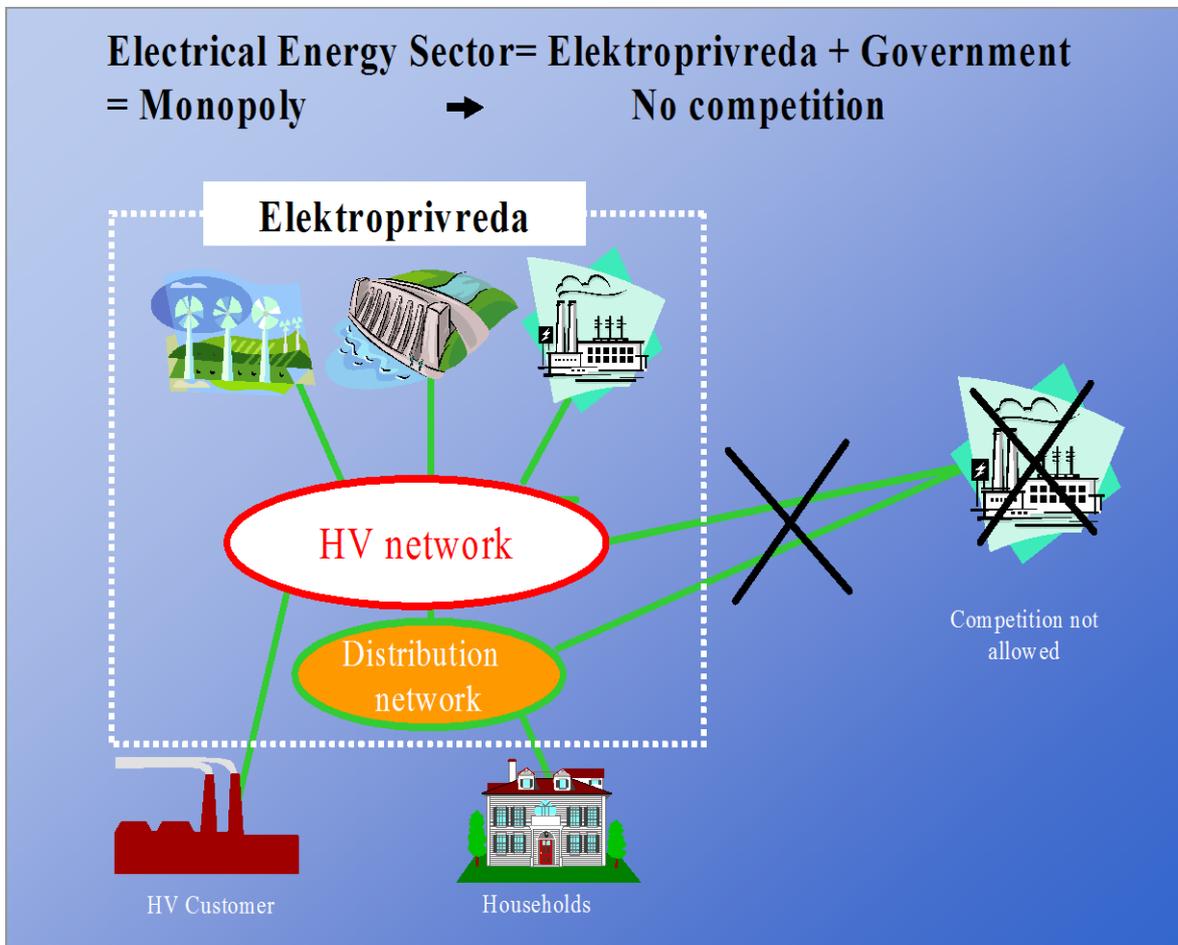




ELECTRICITY MARKET

1. Why have we not had an electricity market so far? How did the electricity sector function before? Who were the key stakeholders in the electricity sector before and what was their role?



Competition in the sense of an independent electricity generator and/or electricity import or supply is not possible.

The key stakeholders in the electricity sector are: the Elektroprivreda (vertically integrated), whose business policy is defined by the owner (the state), Customers on high, medium and low voltage, and households. All customers pay for electricity according to a tariff system. Through the tariff system the government creates a part of the conditions for operation of public utilities and a standard level of service for citizens.

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Vertical integration means that all functions are inside one company: functionally, legally, accounting and corporative connected divisions for generation, transmission, distribution and supply for electricity customers. The price of their service shall be determined by the State and the owner (if it is not the State.)

2. Why an electricity market?

The European Union (EU) establishes a unified market for electricity and gas for the purpose of ensuring the future of energy and improvement of completeness of their own industry in the world market. Through the unified market, the EU expects realization of technically/economically optimal development/construction of new generation and transmission capacities, establishment of operation efficiency of EP companies and overall development and supply of electricity to the EU customers.

Southeast Europe region: In the function of optimization of electricity sector development and utilization of energy resources in the SEE Region, and in the function of optimization of provision of supply of the Region with electricity and gas, the EU initiated establishing the Energy Community in SEE and through that, created the preconditions for integration of the sector in the wider European Market.

Establishing a regional market that is fully legally and regulatorily defined, with a minimization of risks for investments and the reduction of total costs of its operations represents the interest for both countries of the Region and investors, potential investors in energy sector.

The reasons for establishing a market and in particular the regional market are as following:

- The market “encourages” construction of technological-economical optimal generation capacities and with that, the optimization of costs for electricity generation.
- The market provides for the optimization of utilization of generation capacities different by their structures (hydro and thermal) and optimization of costs for operation of electricity system.
- From the Regional standpoint, consumption of electricity during the day and during the year does not have same characteristic in all countries/areas so optimization of consumption and costs of operation of the system can be performed.
- The market “drives” enhanced efficiency of power utility’s operation.
- A well organized and attractive market attracts investors.
- Safety and reliability of supply with electricity in a larger, well organized system is better, the costs of reserve capacities are lower, and so the costs of operation of a larger electricity sector are lower.
- An organized and functional regional market provides for enhancing total political and economy relationships between countries.
- A market based on optimization of constructing new capacities enables optimization/cost saving of natural resources and higher level of system for environment protection that is based on EU Directives.

3. Assumptions for establishing electricity market. Who are electricity market stakeholders and their roles?

The establishment of the electricity market requires radical electricity sector reform which, apart from establishing the market, has the goal to ensure reliable delivery of electricity for all customers, a clear regulatory regime for functioning of the sector, attracting new investors and economically healthy and sustainable development of electricity sector aimed to supply customers with electricity in the most favorable manner both today and for the longer time period.

Realization of reform and establishing of the market means:

- Establishing regulatory body(ies) which will independently and transparently establish and supervise the system for the functioning of monopolistic functions as well as functions for the direction of the electricity system and determining the price for utilization therein by other participants. Monopolistic functions are functions of electricity transmission and distribution. The Regulator should ensure the transparent and non-discriminatory utilization of transmission and distribution network for all those who meet conditions that are defined in advance as well as to ensure appropriate tariff for functioning of the Independent System Operator.
- Establishing the Transmission Company which will ensure functioning and developing the network in a manner as to meet the needs of electricity sector (and customers) both by quality and capacity.
- Establishing a Distribution System Operator that will ensure the functioning of the distribution network in a manner as to meet the demand of the electricity system (and customers) both by quality and capacity.
- Establishing an Independent System Operator that will ensure direction of electricity system.
- Ensuring the presence of competition in the segment of electricity generation and supply.
- An electricity supplier may directly and/or through traders ensure needed quantities of electricity from domestic generators and/or from import and supply customers with needed quantities.
- An electricity trader may contract with domestic generators and/or from import needed quantities of electricity for eligible customer.
- The existence of eligible buyers/customers that are entitled to buy electricity directly from generators/traders at prices which are not defined by the tariff system.
- Fulfilling technical preconditions for the functioning of the market.

The implementation of reform and establishing the new structure and relationships in the sector will be realized through issuance and implementation of appropriate legislation and regulations and rules of each newly established entity.

4. Market models

There are different models of markets and combinations thereof that function in the world. They are commonly referred as the following basic modes:

Pool: One way to introduce competition in an electricity sector is the establishment of a Pool. That is a wholesale market that functions according to the principle of offers. Generators give their offers/capacities in such a manner to offer them for covering consumption planned by the pool operator for defined time periods (usually a day ahead). Offers are ranked in such a manner that power plants with lower prices are given priority. Buyers get electricity prices based on individual offers and produced electricity based on these offers.

Single buyer: One of the models is Single Buyer model. In that model the rule is that all generation in the system has to be sold to a single buyer who further sells electricity to customers (distributors and eligible customers). This is implemented through power purchase agreements (PPA) that are signed by producers and a single buyer.

TPA (Third Party Access): According to the Third Party Access Model producers and traders/suppliers compete to sell electricity to buyers through bilateral contracts. Conditions for access and utilization of the transmission network are usually specified in the Grid Code. Access and utilization of the transmission and distribution network is regulated with tariff that is specified by the Regulator(s) and that is public. In order for the customers to gain maximum benefit from competition, prices for access should be regulated, otherwise liberalization may result in increase of profit for the Transmission Company. The advantage of third party access model comparing to pool model is that the former enables direct contacts between producers and customers.

However, two models are often combined to a certain degree in order to resolve a problem with regard to regulation of deviations of consumption and production in relation to contracted quantities. In this case, a so-called Balancing Market may be created which may function similarly to the pool model.

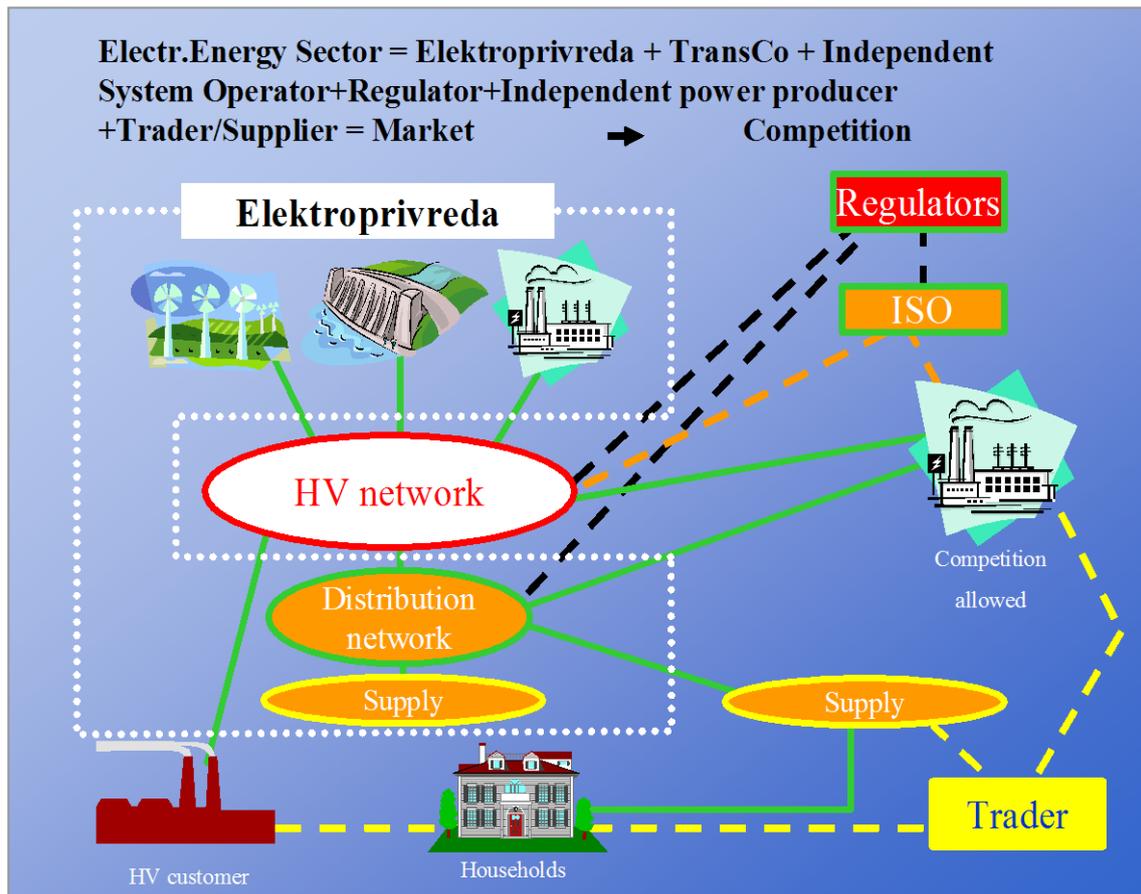
5. How does the electricity market function?

Participants in the electricity market are: eligible customers, producers, traders and suppliers. A difference should be made between the above-mentioned electricity market participants and participants that produce and consume electricity under regulated tariff prices.

In the first case, regulated prices are only for transmission and distribution services and system operation costs for market participants, while prices for generation, supply and balancing of consumption and production are freely formed on the market.

In the second case, tariff buyers buy and producers and suppliers deliver electricity to end users according to prices that were approved by competent regulatory commissions not only for transmission, distribution and system operation but also for generation and electricity supply and the balancing of the electricity system. Both a markets and a tariff system can function at the same time.

Electricity market participants



An eligible buyer is a buyer that meets conditions and criteria prescribed by special acts of a competent regulatory commission for electricity and that is free to buy electricity on the market according to its own choice.

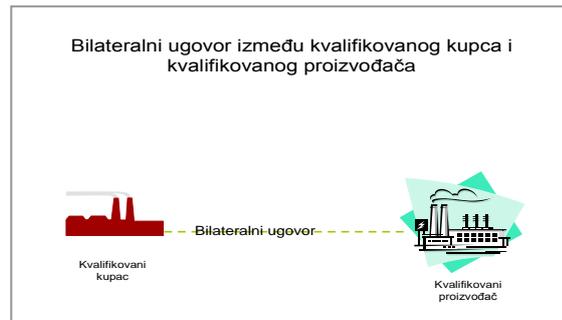
A generator for an eligible buyer is a generator that is not obliged to deliver its whole production through public service obligation (on regulated, tariff prices).

An electricity trader is a trader that possesses an appropriate license for electricity trade and supply.

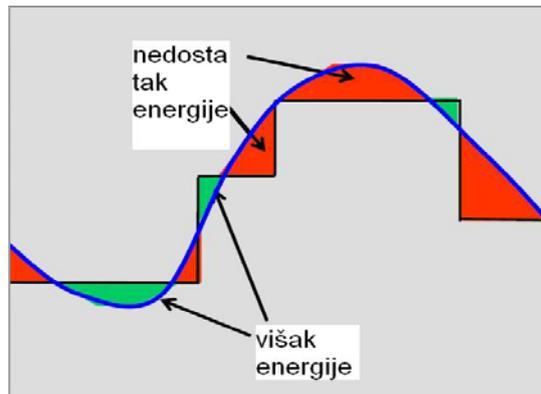
A supplier for eligible buyers is a supplier that possesses an appropriate license for providing electricity supply to eligible customers.

In a bilateral market, an eligible buyer buys and eligible producer/trader/supplier sells electricity based on bilateral contracts between two parties. This contract is realized in accordance with its provisions. Given that neither generation nor consumption can be precisely planned and realized, during a certain time period, deviations from bilaterally contracted quantities may occur when more or less electricity is consumed than contracted.

This imbalance may be covered through a so-called Balancing Market for procurement and sale of electricity, which may be formed for the purpose of maintaining continuous balance between generation and consumption of electricity in real time. A balancing market operator may manage a balancing market in order to provide balance in real time between generation and consumption and with that to ensure reliability and safety of operation of electricity sector as a whole.



Need for compensation/covering deficit/surplus of electricity during observed period on the picture may be covered through a Balancing Market. Generators that have technical capabilities may offer their services on Balancing Market.



6. EU Directives

The global aim of the EU energy policy may be defined as ensuring the energy future of the EU. Thus, it is required not only to meet demand for energy but also to reduce the level of energy dependence of EU countries and to significantly improve the situation in the field of environmental protection. Therefore, the EU prepared the concept for long term energy policy that includes opening the electricity market. Establishing a single electricity market is defined with enactment and implementation of:

- Directive 2003/54/EC (as replacement for Directive 96/92/EC) that defines the formation of a common electricity market and manner for organizing entities of electricity sector;
- Regulations (EC) number. 1228/2003 that defines access to gas and electricity networks for need of cross border exchange of energy.

By implementing the above-mentioned documents conditions are created for full electricity market opening for customers on high, medium and low voltage from the category “other consumption” (commercial), while market opening for customers in the EU from household category was planned to happen by July 1, 2007. Naturally, there are rules on exemption from this for certain EU countries.

Opening of the market is also followed by a simultaneous separation of Transmission System Operator and Distribution System Operator from other electricity related

activities (generation and supply), through legal and managerial unbundling of these activities. Lately, specific EU institutions are considering the need for dividing Transmission System Operator into an Independent System Operator and Transmission Company in order to further develop the market through ensuring transparency and the elimination of the possibility for discriminatory relationships with those who are not owners of the transmission network. The basic characteristics of the electricity market are reviewed based on indicators on its openness (number of customers with the possibility to choose their suppliers), unbundling of the transmission system from other participants on the market, the main model of the market and the manner of balancing, level of market power of existing generation companies and interconnection capacities, unbundling of distribution system from supply, access to the network, and degree of development and level of independence of regulatory agencies and issues pertaining to public service obligation.

7. Energy Treaty for SEE

The EU created its energy policy towards the Balkan Region countries with the intention to establish the internal market of the Region, built on the principles of EU Directives for gas and electricity so that the whole region is integrated into the wider European market. The key concept is to develop conditions for development of infrastructure in the Region and connection therein with the wider market, but also to mutually connect countries in the Region. Establishing a regional market that is legally and regulatorily fully defined, with minimizing risk for investments and reducing total costs for its functioning, represents the interest both of countries in the Region and investors, potential investors in energy sector. For the EU, the process of inclusion of countries from the Region in the energy market is much more than a simple market opening; rather, it is the process of creating a real integrated market, free from any barriers, based on laws and regulations, safe for traders and investors. Milestones which EU is led by while creating policy towards electricity sector of the Region are the following:

- Individual markets of the West Balkans are too small to be able to support significant investments in gas and electricity sector without a firm legal basis for export and transit;
- Individual markets are also small from the standpoint of implementing institutions of European market, and thus the creation of a regional market institution on legal basis is required;
- Since countries of the Region are in the process of transition, political risks for entering investors to this area are still present; thus, it is required to issue laws that will protect both investors and creditors;
- Mutual energy dependence of countries of the Region is obvious; but in order to stabilize relationships between countries, it is necessary to create firm legal basis for those relationships under the umbrella of authorities out of the Region. This will enable transfer from national to regional policy of development of the energy sector in the Region, i.e., using all advantages that result from establishing a wider electricity market (as explained earlier).
- The countries of the Region, after the events in the last 15 years, are not ready to put their energy and financial future in the hands of their neighbors without legal guarantees and guarantors: single political declarations can not suffice.

For the above-mentioned reasons, the European Union on the one hand and following parties on the other hand (the Republic of Albania, the Republic of Bulgaria, Bosnia and Herzegovina, the Republic of Croatia, the former Yugoslav Republic of Macedonia, the Republic of Montenegro, Romania, the Republic of Serbia, and the United Nations Interim Administration Mission in Kosovo pursuant to the United Nations Security Council Resolution 1244), signed a Treaty on establishing the Energy Community.

8. Electricity market in BiH

The reform of the electricity sector in BiH commenced with the issuance of the Entity Electricity Policy Statements and Amendments on the Statement. After that, it continued with enactment and implementation of:

- Entity harmonized Action plans for restructuring electricity sector,
- Act on Transmission, Regulator and Operator of the Transmission System in Bosnia and Herzegovina,
- Law on Electricity in Federation BiH,
- Law on Electricity in Republika Srpska,
- Law on Establishing the Independent System Operator for the Transmission System in BiH, and
- Law on Establishing the Transmission Company for the transmission of electricity in BiH.

Based on issued documents new institutions of electricity sector in BiH are formed and established:

SERC: State Electricity Regulatory Commission has jurisdiction and responsibilities for issuing tariffs and tariff methodologies for services of transmission, Independent System Operator and other system services, licenses for transmission, Independent System Operator (ISO) and other licenses pursuant to the Law, Rules and regulations within its jurisdiction including revision and adopting market rules and grid codes prepared by the ISO, norms and conditions for connection and realizing access to transmission network, rules related to fair and non-discriminatory third party access to transmission network, international exchange of electricity and development of competitive electricity market in BiH and regional electricity market, coordination and adoption of investment plans of the Transmission Company, including plans related to transmission network and the quality of transmission services. It was established and commenced operations in 2003, with its headquarter in Tuzla.

ISO: The Independent System Operator is authorized for direction of operation and dispatching of the transmission network in BiH and managing, planning and coordinating of maintenance and expanding the network with the Transmission Company. The ISO is non-profit body, independent from any other participant in the market and from activities of generation, distribution and supply of electricity. The ISO headquarters is in Sarajevo.

ELEKTROPRENOS BIH: The single Transmission Company of BiH is authorized for transmission, maintenance, construction and expanding the transmission network. The headquarters of the Transmission Company is in Banja Luka

FERC and RSERC: Regulatory Commission for Electricity in Federation BiH and Regulatory Commission for Energy in Republika Srpska are authorized in their respective Entities for prescribing the methodology for determining tariffs in power related activities of generation, distribution and supply as well as determining tariffs for distribution system users and tariffs for non-eligible customers and standards for issuing tariffs. Regulatory commissions with their operation should provide transparent work of monopolistic activities of electricity sector, rationalization in electricity consumption, enabling third party access to distribution network in order to gradually introduce the electricity market, all in accordance to the Law. The Regulator is a specialized, independent non-profitable organization in performance of its activities. The task of the Regulator is to provide conditions for market opening for free competition in activities which by its nature are not inherently monopolistic, and to enable in monopolistic activities equal access for all parties, quality of services and fair prices with efficient business operations of participants complying with generally accepted international standards. The headquarters of RSERC is in Trebinje and FERC in Mostar.

Being competent body for establishing electricity market in BiH on June 26, 2006, SERC issued:

DECISION ON SCOPE, CONDITIONS AND TIME SCHEDULE OF OPENING OF ELECTRICITY MARKET IN BOSNIA AND HERZEGOVINA

This decision is related to the activities of generation and supply of electricity and it anticipates the following time schedule for possibility of becoming eligible customer:

- All customers with annual consumption of electricity more than 10 GWh as of January 1, 2007.
- All customers with annual consumption more than 1 GWh as of January 1, 2008
- All customers except households as of January 1, 2009
- All electricity customers as of January 1, 2015

With the same decision SERC defines conditions for market opening:

- Establishment of the transmission network operator, distribution network operator, as well as unbundling of power activities
- Establishment of rules ensuring free and equal access of third parties to the transmission and distribution network (grid rules) and rules ensuring balanced operation of the system in the circumstances of a open market (market rules)
- Establishing and coming into effect of network tariffs (transmission network tariff, distribution network tariff tariffs pertaining to operation of the system)

The status of the process of market opening will be addressed on the Conference.