



**REGULATORY COMMISSION FOR ELECTRICITY  
OF REPUBLIC OF SRPSKA**

**ANNUAL REPORT  
FOR 2004**

**Trebinje, July 2005**

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## **Preamble**

Regulatory Commission for Electricity of Republic of Srpska (hereinafter "Regulator") was founded pursuant to Law on electricity of Republic of Srpska ("Official Gazette of Republic of Srpska" number 66/02, 29/03, 86/2003 and 111/04) in order to regulate monopolistic behavior and provision of transparent and non-discriminatory position of all participants at the electricity market in Republic of Srpska.

The Annual Report of the Regulator was prepared pursuant to Article 31 of the Law on electricity of Republic of Srpska which provides that the Regulator is obliged to inform the National Assembly of Republic of Srpska about its work at least once a year.

In the first part of the Report, the activities of the Regulator for 2004, method of financing with the financial report as well as the planned activities for 2005 are presented. In the second part of the Report there are observations which are of importance for the electric power market development, condition of the electric power system and electricity market in Republic of Srpska, Bosnia and Herzegovina and neighborhood.

Pursuant to Article 15 of the Law on electricity of Republic of Srpska, at the proposal of the Government of Republic of Srpska, the National Assembly of Republic of Srpska, in its Ninth session, held on 9 October 2003 appointed the president Milenko Cokorilo and two members of the Regulator: Slobodanka Milasinovic and Milan Baros. Decisions on appointment were published in the "Official Gazette of Republic of Srpska", number 90/03 dated 6 November 2003 and number 93/03 dated 14 November.

After appointment, the Regulator made, in its first regular session, the Statute and established the Budget proposal for 2004. The Statute of the Regulator was published in the "Official Gazette of Republic of Srpska", number 41/04 dated 7 May 2004. The National Assembly of Republic of Srpska made a Decision number 01-208/04 on adoption of the budget of the Regulatory Commission for Electricity of Republic of Srpska for 2004 on 5 March 2004 ("Official Gazette of Republic of Srpska" number 28/04), while the Regulator Budget for 2004 was published on 7 May 2004 ("Official Gazette of Republic of Srpska" number 41/04).

Regulator made Decision on regulatory fee for 2004 on 19 April 2004 ("Official Gazette of Republic of Srpska" number 41/04 dated 7 May 2004).

The Court registration was made end of April 2004.

Pursuant to the provision of Article 13, paragraphs 2 and 3 of the Law, Regular is a legal person and enters the court registration.

Members of the Regulatory Commission have officially undertaken their duties in May 2004.

Contracts of employment with selected candidates were concluded in July 2004. Tenders for procurement of equipment and rent of premises were realized in accordance with the prescribed proceeding, while the staff started to work on 1 August 2004.

Since 1 August 2004, there have been intensive activities of the Regulator related to preparation, making rules and regulations within the legal competences and at the same time there have been intensive trainings along with the staff of the state commission and entity commission of Federation on tariffs, licenses and general issues regarding the electric power sector regulation issues.

Preliminary Annual report of the Regulator in 2004, with estimate of the budget realization was presented to the National Assembly of Republic of Srpska on 28/12/2004 while discussing and adopting the Budget for 2005.

## **A. ANNUAL REPORT OF THE REGULATORY COMMISSION FOR ELECTRICITY**

### **1. REPORT ON ACTIVITIES OF THE REGULATORY COMMISSION FOR ELECTRICITY IN 2004**

#### **Introduction**

In order to harmonize legal regulations with requirements of the European Union directive dealing with the market and development of the electricity market and fulfillment of the undertaken duties resulting from the agreement with international financial institutions, the National Assembly of Republic of Srpska passed the Law on electricity ("Official Gazette of Republic of Srpska" number 66/02, 29/03, 86/03 and 111/04) and other regulations, statements, plans and declarations which impose harmonization of the legislation and promotion of the regulation and competition at the energy market. This process was reinforced by harmonization with appropriate documents of the South-Eastern European countries, promoted through the documents of the Athens process which was attended by BiH.

Bosnia and Herzegovina as a signatory to the Memorandum of Understanding about the Regional Energy Market and its integration into the internal market of the European Community from 2002 and 2003 (The Athens Memorandum) committed itself to establish the common rules and electricity market as stipulated by the Directive on electricity 96/92/EC and 2003/54/EC, and in that way harmonize the policy on energy with the South-Eastern European countries and European Union.

The Athens Memorandum determines the policy and goals aimed at establishment of the regional energy market in the South-Eastern European countries and gradually ensuring its integration into the internal energy market of the European Union. The regional electricity market in the South-Eastern Europe shall be gradually established with promotion of harmonized rules and regulations in the whole region.

Basic assumptions of the electricity market regulation are functional unbundling of the electric power activities in vertically integrated electric power companies in order to un-bundle those activities which are by their nature monopolistic from other ones, with the strategic aim to have monopolistic activities performed under regulated conditions and all other activities under free competition conditions.

The Law on electricity of Republic of Srpska (hereinafter Law) provides that the Regulatory Commission for electricity of Republic of Srpska is founded for regulation of the electric power activities at the market of Republic of Srpska, i.e. regulation of the monopolistic behavior and provision of transparent and non-discriminatory position of all participants at the market.

The task of Regulator is to provide conditions for the market opening needed for free competition in those activities which aren't by their nature inherently monopolistic, and to provide in monopolistic activities, among other things, equal access of all parties, quality of the service and fair price accompanied by profitable running a business of the participants and prevention of the

monopolistic behavior, i.e. provision of transparent and non-discriminatory behavior at the electricity market.

In order to achieve these goals in given circumstances, it is important to get understanding of both, regulated companies and consumers and their representatives.

### **Legal framework of regulation of the electric power sector and electric power activities**

Pursuant to provisions of the Law, Regulatory Commission for electricity of Republic of Srpska was founded as a specialized, independent and non-profitable organization in charge of regulation of the electric power activities in Republic of Srpska.

The following documents were made while implementing the Law:

- Decision on appointment of the president and members of the Regulatory Commission for electricity of Republic of Srpska ("Official Gazette of Republic of Srpska" 90/03 and 93/03)
- Statute of the Regulatory Commission for electricity of Republic of Srpska ("Official Gazette of Republic of Srpska" number 41/04)
- Ethic code for members and staff of the Regulatory Commission for electricity of Republic of Srpska ("Official Gazette of Republic of Srpska" number 49/04)
- Decision number 01-208/04 about the budget adoption of the Regulatory Commission for electricity of Republic of Srpska for 2004 made by the National Assembly of Republic of Srpska ("Official Gazette of Republic of Srpska" number 28/04)
- Decision on regulatory fee for 2004 ("Official Gazette of Republic of Srpska" number 41/04)
- Rule on work, internal organization and job systematization of the Regulatory Commission for electricity of Republic of Srpska ("Official Gazette of Republic of Srpska" number 49/04)
- Procedural Rules ("Official Gazette of Republic of Srpska" number 96/04).

### **Competences of the Regulatory Commission for electricity**

The activities performed by the Regulatory Commission were determined by the Law, Statute of the Regulator and secondary legislation which are made pursuant to the Law on electricity of Republic of Srpska.

Competences of the Regulator are:

- supervision and regulation of relationships between generation, distribution and buyers of electricity including traders of electricity
- prescription of the methodology and criteria for determination of the price of electricity supply for non-eligible buyers
- determination of the tariff rates for distribution systems' licensees and tariff rates for non-eligible buyers
- issuance or revocation of the licenses for generation, distribution and trade of electricity
- determination of general conditions for the electric energy delivery

Realizing its competences and carrying out its functions and pursuant to them, Regulator is also responsible to:

- improve the effectiveness, reliability and cost-effectiveness for generation, distribution and exchange of electricity;
- improve the competitiveness;
- encourage effectiveness, cost-effectiveness and safety in the electricity consumption;
- regulate quality of services and tariffs and profitable prices taking into account the interests of buyers and needs of companies for delivery of electricity;
- provide fairness in the electricity supply;
- provide transparent and non-discriminatory behavior at the electricity market;
- provide that the electric power activity on the territory of Republic of Srpska does not have an adverse impact on health, safety and protection of the environment;
- supervise effectiveness of the mechanisms and procedures which provide system middle and long-term balance between consumption and delivery of electricity;
- create conditions for development of the electric power system (generation and distribution);
- make measures for prevention of misuse of the monopolistic behavior of the licensee issued by the Regulator;

### **1.3.1. Issuance of licenses**

The Law prescribes the competence of the Regulator for issuance and revocation of licensees for electric power activities, for construction of the electric power structures and electric power permits.

Article 58 of the Law provides that all existing legal subjects within generation, distribution, supply and trade of electricity are obliged to submit an application for the license.

Having in mind that Regulator, pursuant to the Law, is in charge of issuance of the licenses for electric power activities, for construction of the electric power structures and electric power permits, it undertook in 2004 immediately after the legal establishment, all measures to make necessary secondary legislation in order to start, as soon as possible, with issuance of licensees to the electric power facilities.

In order to provide rules and clear guidelines regarding issuance of licenses and permits for all facilities in the electric power sector in Republic of Srpska, Regulator made Rule book for issuance of licenses and permits in April 2005.

### **1.3.2. Regulation of the electricity prices and electric power services**

Regulator carries out the tasks related to regulation of the electricity price. The aims of economic regulation in the electric power sector are based on improvement of the market principles pursuant to the Law which is based on the generally-accepted international standards in the area of electricity and it tends to promote gradual liberalization of the national electricity market

whereby, the Law follows the principles of non-discrimination and equalization of persons and property.

The Law on electricity envisages gradual liberalization. That gradual approach in introduction of liberalization is firstly related to the generation function which will be the regulated activity with regulated prices in its first phase. The foundation of market institutions and development of market mechanisms will enable introduction of competition in the electricity generation.

The Regulator is entitled by the Law to the following:

- supervision and regulation of relationships between generation, distribution and buyers of electricity, including traders of electricity (Art 23),
- prescription of methodology and criteria for determination of prices of the electricity supply for non-eligible buyers (Art 23),
- determination of tariff rates for distribution systems' licensees and tariff rates for non-eligible buyers (Art 23),
- structure of the price and total price of electricity at the plant threshold and separately for the price of distribution of electricity (Art 115),
- Pursuant to Article 30 of the Law, Regulator makes tariff system for the electric energy selling.

Article 115 of the Law provides that the Regulator will, within a year from the beginning of its work, determine the price structure and total price of electricity at the plant threshold and separately the price for distribution of electricity. Until the mentioned prices are applied, one will apply provisions of the existing tariff system for the electric energy selling or tariff system and rates made by Government of Republic of Srpska.

In order to make key and real assumptions for consistent application of its competences regarding regulation of the electricity price, Regulator had an intensive work on creation of the draft Rule book on tariff methodology and tariff proceeding in 2004. This Rule defines the process for determination of tariffs in Republic of Srpska i.e. basic theses of the tariff system: tariff elements, categories of consumption and groups of buyers, way of determination of the prices and tariff rates. The Rule proposal was adopted in May 2005 which formally enabled the electric power companies to submit the applications to the Regulator for approval of prices and tariffs pursuant to the adopted legal principles.

Among several approaches for creation of the methodology which provides determination of revenue requirements for the regulated companies and encouragement of competitive conditions, the proposed initial tariff methodology calculates total revenues, i.e. revenue requirement over the regulatory basis of the means increased for business costs combined with usage of the marginal costs for the tariff design.

### **1.3.3. Resolving disputes**

Within the competences of the Regulator, pursuant to Article 27 of the Law, it is to make the rules and procedures and accordingly to resolve disputes between the participants at the electricity market of Republic of Srpska. Regulator determines costs of disputes between the participants and its decision is binding for the parties to the dispute. It resolves the disputes regarding:

- right for the electricity supply,

- right for the access to the distribution network,
- obligation of delivery of the electric energy,
- tariffs on which the electricity will be delivered,
- interruptions in the electricity supply,
- denial of the electric energy delivery,
- quality of the electricity supply;

The electric energy generator, i.e. eligible buyer of electricity, who is denied the access to the network or is not satisfied with the access conditions, can lodge a complaint to the Regulator. The valid regulations define basic conditions under which one can be denied the access to the network which are mostly related to restriction of technical or operational possibilities.

Apart from the above mentioned Regulator makes decisions on complaints for resolving applications for getting the electric power permit for connection of end users to the distribution network.

In 2004, Regulator was dealing with creation of the Rule book on public hearings and resolving disputes and complaints in order to provide framework and clear guidelines for activities related to the proceeding of all kinds of the public hearing holding and the way of acting on the submitted application of the party for resolving disputes and complaints. This Rule was adopted in 2005.

In 2004, Regulator did not receive any complaints regarding the denied access to the network or dissatisfaction on decisions of end users for electric power permit for connection to the distribution network. However, Regulator received several complaints of the tariff buyers related to suspension of delivery of electricity due to the disputed arrears.

#### **1.3.4. Protection of customers**

Protection of customers becomes one of the significant issues of the regulation policy in all countries which face the processes of deregulation and liberalization of the energy sector. For that purpose, regulatory bodies are more and more assigned the obligation and task to discuss and realize, at the open electric energy market, basic aims of protection of the buyers, protection of the electric energy structures and surrounding through the transparent and non-discriminatory way of resolving issues related to the regulation.

Pursuant to the Law, method of work of the Regulator related to protection of consumers and electric power structures is firstly directed to realization of his competences regarding:

- regulation of quality of the service, tariffs and profitable prices taking into account interests of the buyers and needs of the companies for delivery of electricity;
- provision of transparent and non-discriminatory behavior at the electricity market;
- making measures for prevention of misuse of the monopolistic behavior of the licensees issued by Regulator;
- participation in reaching agreement between buyers and suppliers of electricity;
- provision of other indirect aims of protection of customers while prescribing conditions for usage of licenses to perform certain electric power activities;

#### **1.4. Creation and making documents in 2004**

In 2004, Regulator held six regular sessions and ten internal meetings. In the regular sessions there were documents within the regulatory competences discussed and determined pursuant to the prescribed competences assigned by the Law, while the questions and adopted documents of the organizational-administrative nature were discussed at the internal meetings. Apart from the mentioned, Regulator held three public hearings in 2004.

The Rule on work, internal organization and job systematization of the Regulatory Commission for electricity of Republic of Srpska was made on 12 May 2004 and published in the "Official Gazette of Republic of Srpska" number 49/04 dated 3 June 2004.

Members of the Regulatory Commission adopted and published in the "Official Gazette of Republic of Srpska" number 49/04 dated 3 June 2004 Ethic code for members and staff of the Regulatory Commission for electricity of Republic of Srpska.

Beginning of August, having provided the conditions regarding the premises, equipment and staff, there were preconditions created for the real work of Regulator to carry out the activities within its regulatory competence.

In September and October 2004, there was a specialized training of the employees in Regulator, along with employees in the State Regulatory Commission (SERC) and Regulatory Commission for electricity of BiH Federation (FERC) on preparation of regulations for issuance of rules for licenses and tariffs organized by the consulting house Pierce Atwood.

Creation of Procedural Rules of the Regulatory Commission, a general document which determines the work of Regulator, starting from the way the sessions and meetings are called, procedures for creation of rules and regulations of Regulator, making decisions related to tariffs and licensees, until conclusion of subjects and putting them in files, started in August 2004. Draft of this Rule was adopted by Regulator in the Second regular session held on 2 September 2004, and the held session was open for the public. Public notices on holding general hearing with Summary of the draft Rule book was published in the daily newspapers Glas Srpske and at the notice board of Regulator. General public hearings about this document were held in Trebinje and Banja Luka on 28 September and 5 October 2004. Draft Rule book with Statement of Rationale could have been taken in the seat of Regulator until 11 October 2004, when the deadline for submission of written comments expired. Draft Procedural Rules with Statement of Rationale was also submitted to the interested parties independently (to companies dealing with electric power activities, Ministry of economy, energy and development, SERC, Chamber of Commerce, Association for protection of customers). In the III (third) regular session of the Regulator, held on 26 October 2004, Proposal of Procedural rules was discussed and adopted in the text which was published on 5 November 2004 ("Official Gazette of Republic of Srpska" number 96/04). Provisions of these Procedural Rules created the legal framework for acting of the Regulatory Commission and gave guidelines to the public how to engage in the process, in a transparent way, of making rules and regulations, respecting the provision of paragraph 3 of Article 33 of the Law on electricity.

At the same time, there were works on creation and making rules on tariff methodology and tariff proceedings, issuance of licenses and permits and public hearing and resolving disputes, as described in the next sections of this Chapter. The Law did not provide means for foundation and beginning of the work of Regulator, but Article 25 paragraph 1 of the Law defines that the financing of work of Regulator will be provided from fees and charges of companies dealing with generation, distribution and trade of electricity and fees which the license is issued for. These fees will be used only by Regulator and will create a part of the Regulator budget. In paragraph 4 of the same Article of the Law, it was determined that the budget of Regulator is adopted by the National Assembly of Republic of Srpska, before the beginning of the budget year, at the proposal of Regulator. For those purposes, Regulator submitted on time the Budget proposal for discussion and adoption to the National Assembly of Republic of Srpska which adopted the same in its 22nd session held on 28 December 2004. Decision on the budget adoption was published on 22 January 2005 ("Official Gazette of Republic of Srpska", number 6/05).

#### **1.4.1. Tariffs**

For the purposes of the consistent application of all competences and legal authorizations related to regulation of the price of electricity and electric power services, in the second half of 2004, significant activities of Regulator were directed towards creation of the Rule book on tariff methodology and tariff proceeding, key precondition for development and approval of tariffs.

Draft Rule book on tariff methodology and tariff proceeding accompanied with an accompanying set of documents (first draft, tariff methodology, model for the tariff design for tariff buyers, forms for submission of data, chart of accounts for submission of financial data), was discussed and determined by Regulator in its VI regular session held on 24 December 2004. In order to understand the tariff methodology, for the purposes of public encouragement for giving comments, Regulator also prepared the document Concept of the tariff methodology which was available for the public in the set of documents prepared along with the Draft. Public notice on holding public hearings and acceptance of written comments on this document with Summary of draft was published in daily newspapers Glas Srpske on 28 December 2004. Holding of general and technical public hearings as well as the receipt of written comments on this documents lasted until 18 December 2004. Draft Rule with an accompanying set of documents was available for the public in the seat of Regulator, at the web site, while certain number of copies was independently submitted to the interested parties.

In the tariff determination proceeding, the following principles will apply:

- Prices which are recognized to companies per a unit will be fair, justified, non-discriminatory, based on objective criteria and determined in a clear way.
- Tariffs will be based on the cost price which contains justified costs of operation and maintenance, and fair rate of return to the engaged means, including possible additional expenditures for realization of the request according to environmental regulations and putting the means out of operation pursuant to them.

- Companies which perform the regulated activities are obliged to present their costs of work and operation in a uniform way.
- Companies which perform the regulated activities are obliged to establish and keep accounting records and reports separately for each regulated activity, for other activities and common issues.

The Rule book on tariff methodology and tariff proceeding determines the process according to which the tariffs in Republic of Srpska will be determined i.e. basic theses of the tariff system: tariff elements, categories of consumption and groups of buyers and the way the price and tariff rates are determined.

Apart from the mentioned, the Rule also defines: classification of costs, allocation of costs on tariff elements, determination of price and tariff rates on the basis of approved revenue requirements and marginal costs. The prices should be structured in order to be come nearer, to the utmost, to the level of marginal costs, since the regular pricing signals are given, in that way, to consumers and generators. Tariffs should stimulate the business efficiency of the electric power companies. Rule book prescribes the way of determination of total price and structure of the price of electricity at the plant threshold, tariff rates for distribution systems' licensees and tariff rates for electricity for non-eligible (tariff) buyers.

Rules of tariff proceedings prescribe the basis of the proceeding for discussion of the request and all other pleadings related to tariffs and which are necessary for Regulator to meet its obligations pursuant to the law and Procedural rules.

Apart from the Rule book on tariff methodology, Regulator makes documents which describe in details the tariff methodology application, models of the tariff methodology as well as the content and form of the request for tariffs' approval, and forms for submission of data and documents accompanying the request for approval of the tariffs.

During 2005, the regulated electric power companies will, in the first tariff proceeding submit a request to Regulator for approval of tariffs which will be applied in 2006.

#### **1.4.2. Licenses**

Draft Rule book on issuance of licenses and permits, with accompanying integral parts (forms for submission of the application, form for checking the completeness of the submitted documents and similar) was discussed and determined by Regulator in the V regular session held on 13 December 2004 which was open for the public. Public notice on holding public hearing and Summary of the Rule were published in the daily newspapers Glas Srpske on 14 December 2004. Public hearings' holding and acceptance of the written comments finished on 4 February 2005. In 2004 there was one technical hearing on Draft Rule book for issuance of licenses and permits in Trebinje on 28 December 2004. Draft Rule book was available to all interested parties in the seat of Regulator, at the web site of Regulator and it was also submitted to the interested parties independently.

Pursuant to provisions of the Rule book, Regulator issues the following licenses and permits:

- the license for the electricity generation in the hydro-electric power plants, thermal power plants and other plants;

- the license for the electricity distribution in a sense of transmission of electricity at middle-voltage and low-voltage network for the purposes of delivery to consumers;
- the license for the electricity supply for tariff buyers;
- the license for the trade and supply of electricity on the territory of Bosnia and Herzegovina,
- the license for construction or large-scale reconstruction of the existing generation or distribution electric energy capacity (structure),
- Initial electric power permit for connection of distribution and generation electric power structures to the distribution network,
- Permanent electric power permit for connection of distribution and generation electric power structures to the distribution network.

The Rule book determines the procedure for issuance of licenses and permits starting from submission of application with accompanying documents, checking of completeness, public notices about the application, the data checking, development of draft licenses and collection of public comments, until making decision on issuance or refusal to issue the license.

The Rule book prescribes the content of the license application, while the application forms for all kinds of licenses and permits are its integral part.

Criteria for making decisions on issuance of licenses, license conditions and contents have been prescribed separately for each kind of the license and permit.

In the last quarter of 2005, REERS will start issuing the initial licenses for those legal subjects dealing with electric power activities in Republic of Srpska, pursuant to terms stipulated in the mentioned Rule Book.

### **1.4.3. Public hearings and resolving disputes and complaints**

Pursuant to Article 27, paragraph 1 of the Law and Article 51, paragraph 7 of the Procedural rules, Regulatory Commission for electricity of Republic of Srpska is obliged to make Rule Book on public hearing and resolving disputes and complaints which prescribes rules and procedures and pursuant to which it conducts hearings and resolves disputes and complaints between participants at the electricity market. Development of the draft document started in 2004 and after the conducted procedure of public consideration, the proposal was adopted in 2005.

The basic reason for having this Rule Book made was to define the procedure of conduction of all kinds of public hearings and the method of Regulator action upon the submitted request of the party for resolving disputes of those cases mentioned in Article 28 of the Law and complaints in cases determined by Law.

The aim of making Rule book is to determine and provide transparent, effective and cost-effective proceeding of public hearings while making rules and regulations, resolving disputes and complaints and to create the best possible proposal of general document and fair decision.

This Rule Book determines the types of public hearings which are general, technical and formal hearing, as well as the way of the hearings conducting after decision of the Regulator to have it held.

The common characteristic of all hearings is its transparency for the public, i.e. it is allowed to the public to attend it. The public is informed about each hearing

holding in one of the mass media, briefly explaining questions which are to be discussed.

#### **1.4.4. General conditions for supply and delivery of electricity**

Pursuant to Article 23 and 30 of the Law, REERS is obliged to make general conditions for delivery of electricity. Pursuant to the Plan of activities for 2005, the activities related to development of General Conditions for delivery of electricity in RS, public consideration of the draft document and its adoption will be carried out in the second half of 2005.

General conditions for delivery and supply of electricity hereinafter regulate the connecting conditions of end users to the electric power network, the way of their electricity supply as well as mutual rights and obligations of the Distribution and Supply licensee and end users - consumers, and especially:

- Content and method of concluding contracts on conditions for connection, i.e. increase of capacity of electricity-using devices, as well as conditions and way of giving electric power permits for connection of new, i.e. increase of connecting capacity of the existing electricity-using devices and other conditions of connecting too,
- Cases of the capacity increase, i.e. consumption of electricity for which the contract is not needed, i.e. electric power permit,
- Terms and conditions under which the electric power structures are connected to the electric power network,
- Terms and conditions and deadlines of concluding contract on sale of electricity, i.e. obligations of Distribution licensee/Supply licensee on continuous supply of buyers with electricity of high quality and obligations of end user,
- Terms and conditions of delivery of electricity pursuant to the Contract on access,
- Terms and conditions of suspension of electricity delivery,
- Basis, terms and conditions, measures and order of restrictions of electricity delivery in case of general shortage of electricity,
- The way of measuring and determination of consumption of electricity and accuracy of measuring devices,
- The way of calculation and conditions of payment of electricity,
- Measures which are to be undertaken in cases of damages in the electric power system and measures of protection of the electric power system from the over-consumption;
- The way of determination of quantity and capacity of illegally consumed electricity as well as the way of calculation and payment of those quantities of electricity;
- The way of informing buyers in case of suspension or restriction of delivery of electricity;
- Conditions and way of connecting electric power structures in the testing operation, the sites and temporary structures.

#### **1.4.5. Market opening**

One of the basic aims of the energy market opening is to enable equal, transparent and impartial conditions for supplies of electricity to supply the buyers and vice versa, the right of buyers to choose the supplier. This process was initiated by the Law, the Athens Memorandum from 2002 and 2003 and European Union Directives for internal market of electricity.

Activities related to development of regulations which will enable the initial opening of the electricity market and which are related to getting a status of eligible consumer (buyer) of electricity and non-discriminatory access to the network for third parties pursuant to the Plan of activities of Regulator will start in 2005.

In order to determine necessary dynamics of the market opening, Regulator will establish the criteria by the Rule book for getting a status of eligible buyer and determine obligations which are undertaken by getting this status.

Article 49 of the Law prescribed that all buyers with annual consumption of electricity which is more than 10 GWh may gain a status of eligible (privileged) buyer, while Article 115 determines that the buyer who meets the mentioned criteria may get a status of eligible buyer by the Government until the criteria prescribed by Regulator are made. The mentioned criteria for getting a status of eligible buyer will determine further dynamics of the market opening for other buyers following the guidelines and terms from adopted and signed documents within the process of establishing the Energy Community for the South-Eastern Europe.

#### **1.4.6. Renewable sources of energy**

The whole process which was initiated by the Athens Memorandum on Understanding signing about the regional electricity market in the Southeastern Europe as well as the activities related to creation of the Energy Community of the Southeastern Europe which followed, represent significant guidelines which have impacts on development of the electric power system in Bosnia and Herzegovina and Republic of Srpska. The renewable sources of electricity play more and more significant role particularly in that surrounding because the mentioned documents establish the Kyoto Protocol.

Most of European countries have already committed themselves to put plans of significant usage of the renewable resources of energy into their strategies and to adapt the legislation framework in which those plans will apply. According to those initiatives, there was a Directive on renewable resources (2001/77/EC) made, which asks for increase of participation of the renewable resources in the electricity generation.

Usage of renewable resources was put in the Law on electricity of Republic of Srpska. It was prescribed by Article 30 of the Law that the Regulator was obliged to make subsidies for resources which use the waste or co-generation of heat-electricity while Article 37 determines that the company which in its single generation structure generates electricity using the waste or renewable sources of energy in a cost-effective way and pursuant to protection measures of environment, may get a status of eligible generator following the conditions prescribed by the Regulator.

In order to realize the mentioned legal guidelines, Regulator has initiated a range of activities related to development and making Rule book on getting a status of the eligible generator whose adoption is planned for the second half of 2005.

Regulator shall prescribe, with this Rule Book, the following:

- types and status of eligible generators for electricity,
- procedure for making decisions upon request for getting a status of eligible generator of electricity,
- content of the application for getting a status of eligible generator of electricity, with necessary documents and information,
- criteria and conditions for getting a status of eligible generator of electricity,
- the procedure of renewal, transfer and cancellation of status of the eligible generator of electricity,
- register/records of eligible generators of electricity,
- supervising conditions;

The procedure for getting a status of eligible generator of electricity is transparent and it is carried out in accordance with the objective and publicly known criteria in non-discriminatory and transparent way.

## **1.5. Cooperation**

### **1.5.1. ERRA - Energy Regulators Regional Association**

Energy Regulators Regional Association (ERRA) is an association of regulators of Central and East Europe, former Soviet Union Countries and Turkey based in Budapest. ERRA has 22 full members and 4 associated members. Aims of ERRA are improvement of regulating the energy activities in the countries-members, encouragement of development of independent and stable regulators, improvement of cooperation between regulators, exchange of information, research work and experiences between members, better approach to information about the world experience in regulating energy activities. State Regulatory Commission for electricity of BiH (SERC) has been a full member of ERRA since 19 May 2004. Members of Regulator have already had discussions with executive bodies of ERRA and it will timely initiate the procedure for associate membership to this Association having in mind that full members can only be State Regulatory Commissions.

Members and staff of Regulatory Commission for electricity of Republic of Srpska have been actively participating in the work of this association as well as in its permanent committees and working groups through the SERC.

### **1.5.2. ECSEE - Energy Community of the South-Eastern Europe**

Establishment of the Energy Community of the South-Eastern Europe has firstly been initiated by the European Commission for the purposes of strengthening cooperation between the countries of this region within the energy field. This initiative should result in application of rules of the European Union in the South-Eastern European countries that has been in principle accepted by signing Memorandum on Understanding about the Regional Energy Market and its integration into the internal market of the European Community from 2002 and

2003 (the Athens Memorandum) by Bosnia and Herzegovina. Having signed these documents, there have been negotiations between the European Commission and the South-Eastern European countries regarding the Contract on creation of the Energy Community of the South-Eastern European countries whose signing is planned for September 2005. In that way, the political will, expressed in the Athens Memorandum, would be encouraged in the legal obligation of the contracting parties.

The aim of this Contract is creation of stable regulatory and market framework which can attract investments in the electricity and gas sector in the region and provide long-term security of these products supply.

Concluding the Contract, the countries-signatories commit themselves to establish the common electricity and gas market which will function applying the standards and rules of EU electricity market that it will integrate with. The contract established the dynamics of application of appropriate directives and regulations of EU taking care of particularities of some countries.

The work of Regulatory Commission for electricity of Republic of Srpska, within the process of establishment of the energy community of the South-East Europe, was marked in 2004 with appropriate cooperation with the Ministry of Foreign Trade and Economic Relationships of BiH in creating the benchmarking of regulatory activities of the countries-signatories to the Athens Memorandum on Understanding. This analysis is presented twice a year to participants of the Athens forum and for the countries-signatories, it is an excellent tool and offers the possibility to supervise the area of regulatory activity which is necessary to be improved.

Apart from the above mentioned, the members and staff of Regulator have taken part in preparation of different projects for the purposes of establishment of the regional market (REBIS, GIS).

REBIS (Regional Balkans Infrastructure Study - Electricity) is a project financed by the European Commission through the CARDS program for the Balkan region. It was adopted end of 2004 by the European Commission and it envisages two phases of the electricity market organization which are as follows:

- the initial regional market, of unique design, which establishment is expected until the end of 2005 and
- full regional market with application in 2008

GIS (Generation Investment Study) is a project financed by the European Commission and World Bank. It encompasses the period of forecast of construction of the generation and transmission capacities from 2005 to 2020 in which the optimum order of construction of generation and transmission capacities in the region was presented.

### 1.5.3. Cooperation with other regulatory commissions

Regulatory Commission for electricity of Republic of Srpska in its past work has realized successful cooperation with the State Regulatory Commission for electricity (SERC) based in Tuzla and Regulatory Commission for electricity in Federation of Bosnia and Herzegovina based in Mostar (FERC). Apart from the common participation in trainings and workshops, all three commissions have been harmonically cooperating on making rules and regulations within their competences. There have been full cooperation and contacts between employees

of the regulatory commissions who mutually exchange experiences and knowledge from some spheres of the regulatory work.

During the seven-day training of the key staff of Regulator in the Austrian Regulatory Commission (E-Control) in October 2004 which was realized through the USAID, there was a future cooperation agreed with this Commission too.

#### 1.5.4. Participation in the work of trainings, conferences and workshops

In 2004, there was active participation of members and staff of the Regulation in the workshops which were of educational nature. Trainings and workshops held, were organized by the consulting company Pierce Atwood, and financed by USAID and were of great importance.

The first training was held from 6 to 10 September 2004 in Tuzla on the subject of the tariff methodology defining.

All raised questions and non-clarified issues related to the tariffs were solved at the following training which was held from 4 to 8 October in Mostar.

Three-day training related to creation of rules and regulations for issuance of licenses for the activities in the electric energy sector was held in Banja Luka, middle October 2004.

Apart from the mentioned trainings, persons in charge of sectors in Regulator, along with their colleagues from SERC and FERC participated in the training in Wien Austria in the period from 17/10 to 24/10/2004 organized by USAID. Organizers of the training in Austria were the Austrian Agency for electricity E-Control, E.V.A - National Association for consultations in the energy sector, Viena Utilities - the major supplier of electricity and Verbund - the major generator of electricity. Specializing in this field, staff of Regulator was introduced the process of liberalization and organization of the electricity market in Austria, procedures related to creation of rules and regulations, management of protocol and control of documents, method of the competent institutions reporting, preservation of independency of the regulatory commission etc.

Regulator also intends, in the forthcoming period, to follow the work of important training, conferences and workshops within the scope of regulation of the electric power activity because it, in that way, contributes to improvement of rules of the regulatory branch and gets educated about the problems of liberalization of the energy market pursuant to general movements in the EU and in the region.

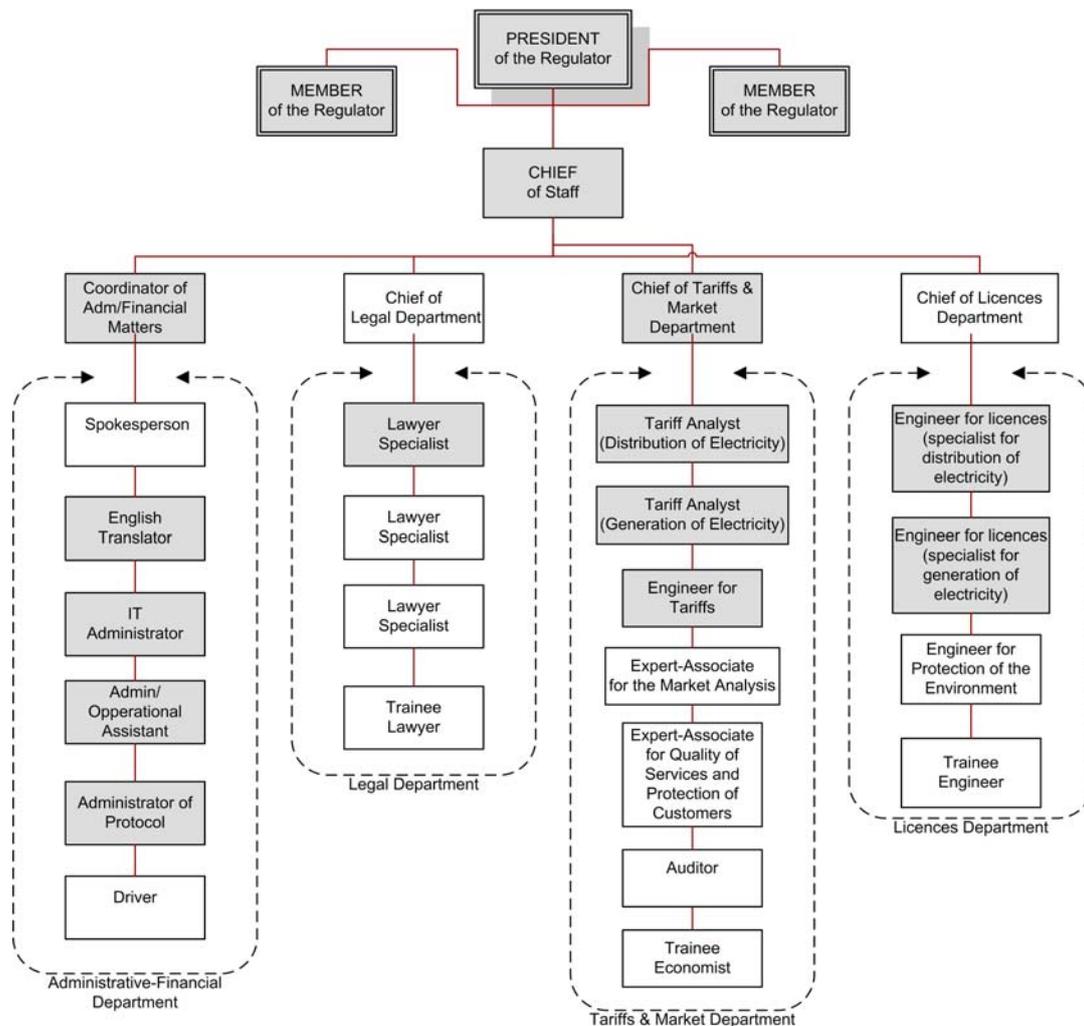
### **1.6. Staff, organization and transparency of the work**

#### 1.6.1 Staff and organization of the work of the Regulatory Commission

Regulatory Commission for electricity of Republic of Srpska has three members, one of which is the president. At the proposal of the Government of Republic of Srpska, the National Assembly of Republic of Srpska, in its ninth session, held on 9 October 2003 appointed the president, Mr. Milenko Cokorilo for the period of 5 years and two members of Regulator: Mr. Milan Baros for the period of 4 years and Mrs. Slobodanka Milasinovic for the period of 3 years. Decisions on appointment were published in the "Official Gazette of Republic of Srpska" number 90/03 dated 6 November 2003 and number 93/03 dated 14 November 2003.

In order to enable beginning of the work of Regulator and initiating the process of creation of rules and regulations and regulation of the electric energy sector, it was

necessary to make selection and appointment of the staff pursuant to the Rule book on work, organization and job systematization. From 1 August 2004 there have been 13 persons employed so until the end of 2004, there were 16 employees who took their duties further to the presented organizational scheme, Picture 1.



Picture 1, Organizational scheme

### 1.6.2. Transparency of work of the Regulatory Commission

Pursuant to the Law, obligation of Regulator is to ensure transparency of work and provide transparent and non-discriminatory behavior at the electricity market. In order to be successful in implementation of duties which were assigned to it by the Law, Regulator initiated a range of activities to ensure transparency of its work which are realized through the transparency of its sessions for the public and media, publishing documents, information, decisions, resolutions, conclusions and opinions at the official website ([www.reers.ba](http://www.reers.ba)) and in the Official Gazette of Republic of Srpska. Finally, transparency of the work is also reflected in timely reporting and publishing notices, documents and decisions in the mass media.

## **1.7. Financing of Regulatory Commission**

### **1.7.1. Financing of the Regulatory Commission**

The Law and Statute of Regulatory Commission for electricity of Republic of Srpska prescribes the financing from fees and taxes from the companies dealing with generation, distribution and trade of electricity, fees for licenses which are issued pursuant to the Law as well as donations from foreign governmental and non-governmental organizations.

Regulator determined the Budget for 2004 in its first regular session which was held on 23 February 2004 while the National Assembly of Republic of Srpska adopted it in the session which was held on 5 March 2004.

**REALIZATION OF THE BUDGET FOR 2004**  
**SYNTETICAL OVERVIEW**  
**on 31.12.2004**

I EXPENDITURES		Adopted Budget 2004	Realization of the budget 2004	Percentage of realization (4/3)
1	2	3	4	5
A	CURRENT EXPENDITURES	829,600	397,535	47.92
1.	Salaries and compensation of fees of staff	548,400	276,533	50.43
1.1.	Gross salaries and compensations	548,400	276,533	50.43
1.1.1	Net salaries and compensations	360,789	181,807	50.39
1.1.2	Taxes and contributions on salaries and compensations	187,611	94,726	50.49
2.	Costs of materials and services	281,200	121,002	43.03
2.1.	Traveling costs	25,950	23,747	91.51
2.2.	Energy costs	12,000	5,434	45.28
2.3.	Costs of municipal services	32,325	11,650	36.04
2.4.	Purchase of material	30,000	10,464	34.88
2.5	Costs for services of transport and fuel	10,800	5,050	46.76
2.6.	Rent of property and equipment	44,300	43,191	97.50
2.7.	Costs of regular maintenance	5,925	327	5.52
2.8	Costs of insurance and banking services	11,400	1,509	13.24
2.9.	Contracted and other services	108,500	19,630	18.09
B	CAPITAL EXPENDITURES	254,000	220,608	86.85
1.	Purchase of equipment	254,000	220,608	86.85
A+B	TOTAL EXPENDITURES	1,083,600	618,143	57.05
II REVENUES				
1.	Revenues from compensations and fees from the companies for generation, distribution and trade of electricity, issued licenses and other revenues	1,083,600	660,000	60.90
2.	Paid and non-spent means	0	-43,567	60.90
3.	Other revenues	0	1,710	0.00
	TOTAL REVENUES	1,083,600	618,143	57.05

Expenditures were realized with 57.05% compared to the planned values, which is reflected in the fact that Regulator was rationally acting while spending money and partly in a fact that the planned volume and dynamics of employment were not realized.

Revenues were also realized with 57.05% i.e. 618.143 KM and they are related to the regulatory fees from the Elektroprivreda Republike Srpske (Power Utility of RS) in the amount of 616.432 KM while the fees from the bidding documents were

1.260 KM and interest 451 KM. Total amount of money approved by the budget for regulatory fees was 1,083.600 KM and it was paid 660.000 KM in 2004. Paid in advance, but not spent means in the amount of 43.567 KM were registered in the book as the means paid in advance and for that amount of money the obligation for 2005 was reduced. Planned by the budget and non-paid in means for 2004 in the amount of 423.600 were not claimed from the Elektroprivreda Republike Srpske.

This analysis of realization of the Budget for 2004 was adapted to the form pursuant to which the Budget was adopted.

#### 1.7.2. Audit report

The Statute of Regulatory Commission for electricity of Republic of Srpska provides that the annual audit of financial reports is compulsory.

Having created the annual balance for 2004, on 25.03.2005 there was a public invitation made for selection of the independent auditor, pursuant to the Law on procurement of goods, services and handing over of the works.

Upon the conducted procedure on 25 April 2005, the independent auditor was selected - Business informer - Audit, ltd. Bijeljina which, following the established dynamics made an audit of financial report, stated the audit opinion and submitted the report on 25 May 2005, from which we present the Balance sheet, Profit and Loss Statement and Audit opinion.

## STATEMENT OF THE AUTHORIZED AUDITOR

1. We carried out the audit of financial reports for "**Regulatory Commission for electricity of Republic of Srpska**", Trebinje until 31.12.2004 and it is about: Balance sheet and Profit and Loss statement. The Regulator Management is responsible for making and content of the financial reports, given on pages 2 and 3. Our responsibility is to, according to the completed audit, make our statement on objectivity and accuracy of the state of property, capital and liabilities as well as the business results whether the accounting results were respected while making them.
2. The audit was carried out pursuant to the Law on accounting ("Official Gazette of RS" number 18/99 and 62/2002), Rule book on audit of financial reports ("Official Gazette of RS" number 33/2003), Law on accounting and audit of BiH ("Official Gazette of BiH" number 42/2004) and International Auditing Standards. International standards require that the audit is planned and carried out in a way to make sure, in a reasonable manner, that the financial reports do not contain wrong information of material importance. The audit includes testing of evidences, on the basis of checking using the samples which support information given in the financial reports. Audit also comprises the estimate of applied accounting rules and estimate of important estimations carried out by the management, as well as the general estimation of presentation of financial reports. We think that the audit, which we carried out, provides solid basis for our statement.
3. In our opinion, financial reports objectively and truly regarding all questions, present the state of property, capital and liabilities of Regulator on 31 December 2004 as well as the business results for 2004 pursuant to regulations on accounting and accounting standards of Republic of Srpska, in a way which was described in the remarks accompanying the financial reports.
4. **In accordance with the above mentioned, the authorized auditor expresses the positive auditing statement.**

**"Business informer - audit" ltd**

Bijeljina, May 2005

Authorized auditor  
M. Sc Obrad Kecman

**BALANCE SHEET**  
on 31 December 2004 and 2003

	Remark	KM without decimals 2004	2003 <sup>1</sup>
<b>ASSETS</b>			
PERMANENT PROPERTY			
- <b>Fixed assets</b>	3.3. and 4.1		
- Purchasing value		219.653	
- Correction of value		(12.303)	
- Non-written off value		207.350	
<b>Permanent property in total</b>		<b><u>207.350</u></b>	
CURRENT ASSETS			
- Financial means - cash	4.5	<u>102.296</u>	
- <b>Total current assets</b>		<b><u>102.296</u></b>	
<b>BUSINESS ASSETS</b>		<b><u>309.646</u></b>	
<b>PASSIVE BALANCE</b>			
CAPITAL			
- <b>Basic capital - Net</b>	5.1.	<u>207.350</u>	
	5.1.	<b><u>207.350</u></b>	
LIABILITIES			
- Providers	5.2	14.313	
- Liabilities for income and compensations of incomes	5.3	27.318	
- Liabilities on taxes and contributions to income	5.4.	15.146	
- Taxes, contributions and other liabilities	5.5	144	
- Other liabilities	5.6.	1.808	
- Passive time limits	5.7	<u>43.567</u>	
<b>Total liabilities</b>		<b><u>102.296</u></b>	
<b>BUSINESS PASSIVE BALANCE</b>		<b><u>309.646</u></b>	

<sup>1</sup> Regulator started to work in 2004. Data for 2003 do not exist.

**PROFIT AND LOSS STATEMENT  
for 2004 and 2003**

in KM without decimals			
	Remark	2004	2003 <sup>2</sup>
BUSINESS REVENUES	6.1		
-Revenues from contributions, fees, donations, gifts and assistance		<u>617.692</u>	
<b>Total revenues</b>		<b><u>617.692</u></b>	
BUSINESS EXPENDITURES	6.2	<u>410.793</u>	
<b>BUSINESS PROFIT-LOSS</b>		<b><u>206.899</u></b>	
FINANCIAL REVENUES AND EXPENDITURES			
- Financial revenues	6.3	451	
- Financial expenditures		-	
<b>PROFIT-LOSS from the financing sources</b>		<b>451</b>	
TOTAL REVENUES AND EXPENDITURES			
- Total revenues	6.4.	618.143	
- Total expenditures	6.4.	410.793	
<b>SURPLUS OF REVENUES OVER EXPENDITURES</b>		<b><u>207.350</u></b>	

Surplus of revenues over expenditures was completely used for purchase of the fixed assets, pursuant to the adopted budget.

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<sup>2</sup> Regulator started to work in 2004. Data for 2003 do not exist.

## 2. REFORM OF THE ELECTRIC POWER SECTOR AND ELECTRICITY MARKET IN REPUBLIC OF SRPSKA

### 2.1. General remarks

The first important activity which related to the reform of the electric power sector in Bosnia and Herzegovina is preparation of the Statement on the electric power policy during 1999 and beginning 2000. The Statement was "a white book" i.e. guidelines of reform of the electric power sector in Republic of Srpska and BiH; it was prepared on the basis of the Study which was made by the English Consulting house "NERA". Proposal of the "Statement" was amended by certain amendments that were related to creation of the unique transmission company in BiH, establishment of the regulatory body at BiH level for regulation of the transmission activity and obligation to offer the majority parcel in the privatization process of "Elektroprivreda". End of 2002 there was a Study on restructuring and privatization of the electric power sector in Republic of Srpska made on which basis the Action plan of restructuring of the electric power sector in BiH for Republic of Srpska was made. The same year there was the Law on electricity and Law on Transmission, ISO and SERC passed and in that way there was a legal framework made for implementation of the reform of the electric power sector in RS.

### 2.2. Law on electricity, application and difficulties in their application

The Law on electricity of RS, as the basic entity law for the electric power sector in Republic of Srpska regulates the activities of generation, distribution, supply and trade of electricity, including regulation of these activities through establishment of the Regulatory Commission for electricity of RS and defining its authorizations and competences.

Electric power transmission of electricity and control of the electric power system in BiH (System operator) and regulation of these activities were defined at BiH level by the Law on Transmission, ISO and SERC. Establishment of the company "Elektroprenos Bosne i Hercegovine" and Independent System Operator of BiH were regulated by special laws (Law on establishment of the Transmission and Law on establishment of ISO).

Application of the Law which regulates functioning of the electric power sector in Republic of Srpska and BiH is slowed down by slow implementation of the Action plan for restructuring of the electric power sector in BiH for Republic of Srpska, while the Action plan for restructuring of the electric power sector in BiH for BiH Federation was adopted only in 2005.

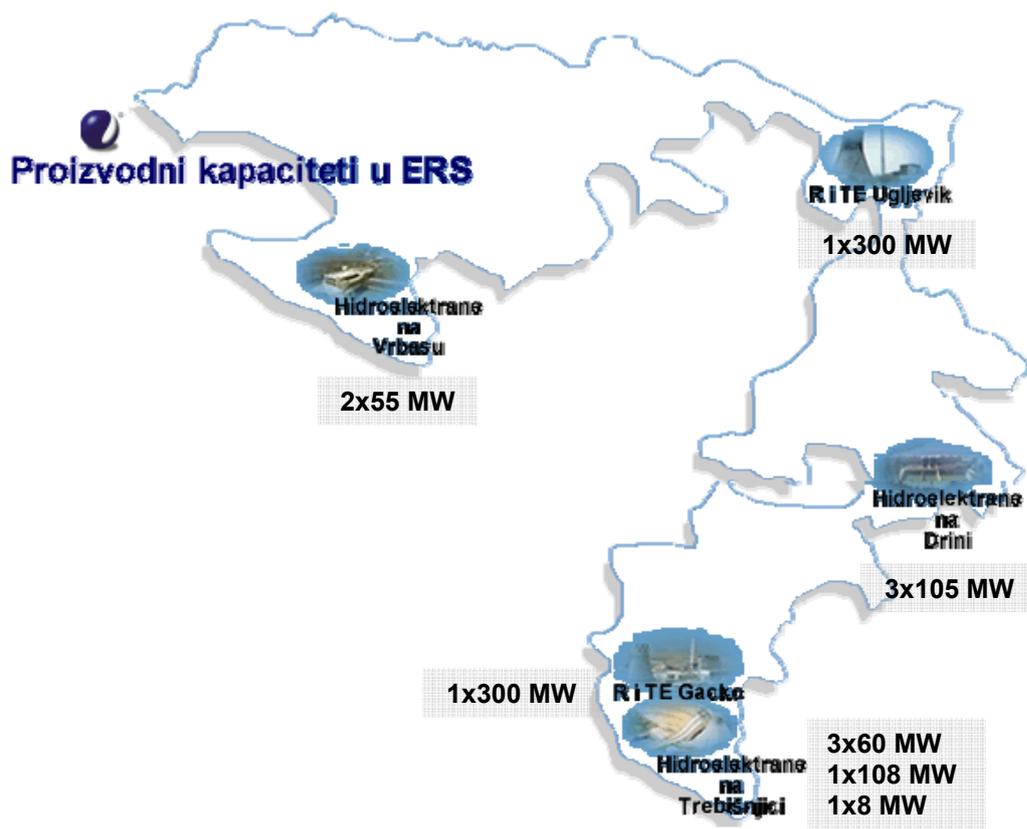
Inconsistency of some provisions of the Law on electricity, need for harmonization with other laws in Bosnia and Herzegovina as well as obligation of harmonization with provisions of the Contract on the energy community of South-Eastern Europe (if signed and ratified) imposes the need for review of the Law on electricity of RS. The experience of the European countries in transition and EU countries show that changes of national energy legislations were needed after 3 to 6 years of application of the initial reform laws.

## 2.3. Electricity market and public services

Electric power activities can be done as public or market services. However, obligations of the energy subjects do not differ according to that criterion but to way of creation of prices (free or regulated).

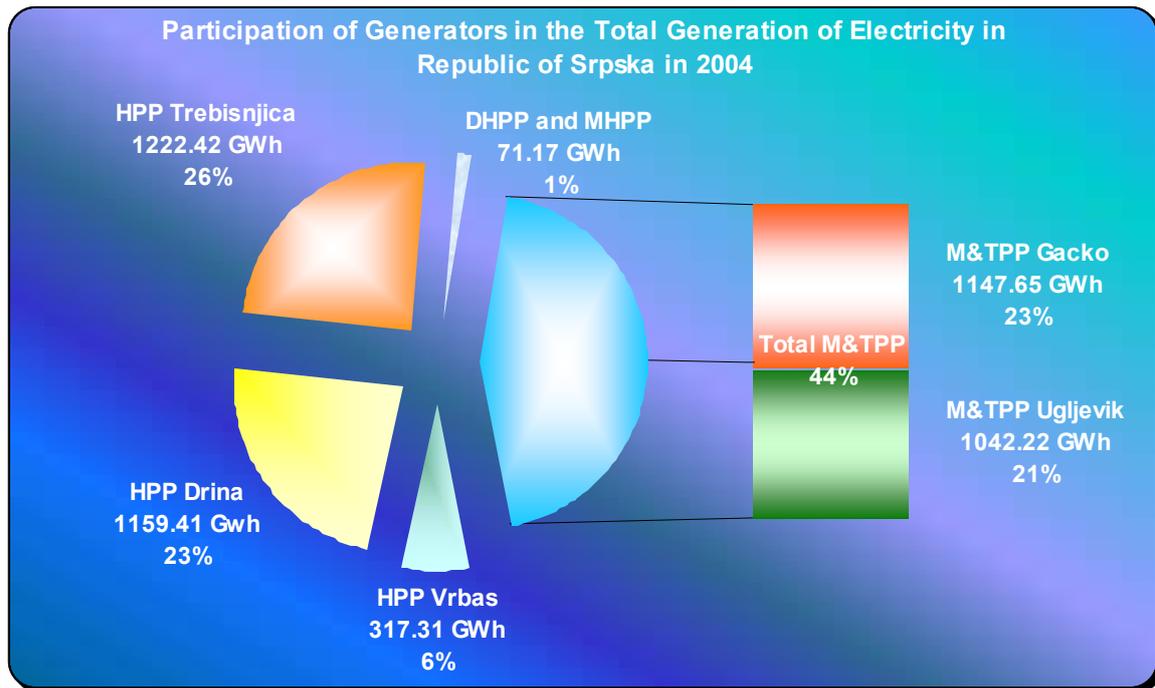
### 2.3.1. Generation of electricity

Generation of electricity, i.e. selling of the electricity generated is an activity which is carried out in the market competition. When the electricity market is open, the generation prices are completely "free" apart from some exceptions which are related to the renewable sources and co-generation and also in case of emergency. During the market opening process, generation prices are also regulated at the very beginning usually by the regulatory body. In Republic of Srpska, Regulatory Commission for electricity determines the price of electricity at the threshold of each plant. Generation of electricity for tariff buyers is an obligation of the public service while generation of electricity for the eligible buyers in Republic of Srpska, BiH and in export, is the generation for the market.



Picture 2, Generation capacities in Republic of Srpska

Generation of electricity in Republic of Srpska is carried out in five generation companies and four small hydroelectric power plants within two distribution companies. The realized generation in 2004 was 4960,18 GWh. Picture number 2 presents generation capacities in RS, while Picture number 3 presents the structure of electricity in 2004.

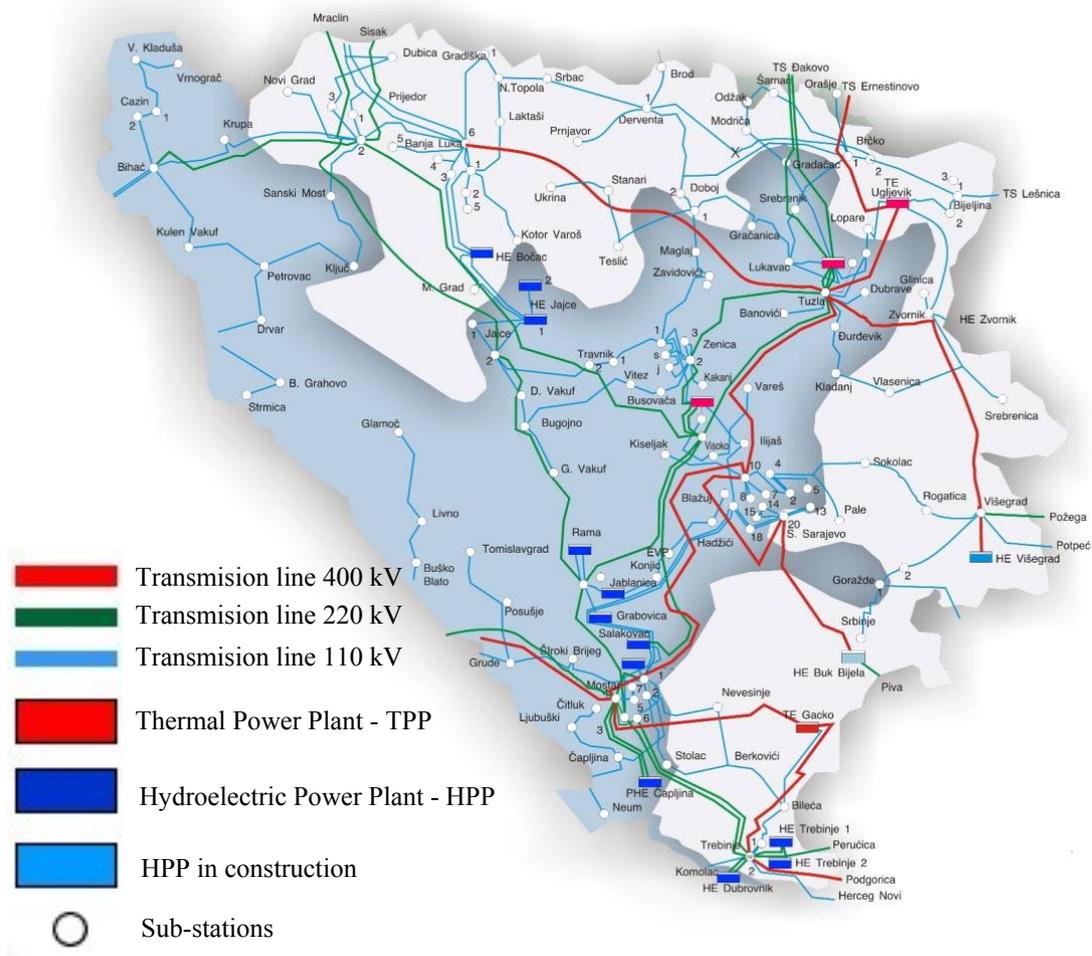


*Picture 3, Structure of electricity generation in 2004*

### 2.3.2 Transmission of electricity

Transmission of electricity is a monopolistic activity and that is why it has to be regulated in order to provide usage of the network for all users in equal and transparent way at regulated prices. It is of special importance that the transmission activity is separated from other commercial electric power activities in special companies (managerial and legal unbundling) in order to provide impartiality in offering services. The transmission activity in Republic of Srpska was organized at the level of BiH within a special company "Elektroprenos Bosne i Hercegovine". Regulation of the transmission activity is within the competence of SERC.

Picture number 4 gives a map of the transmission network of Bosnia and Herzegovina. The network was considerably damaged during the war and it was divided in two parts one of which belonged to the First I synchronous UCTE zone (Federation BiH) and another to the Second II synchronous zone (Republic of Srpska), but it was completely reconstructed and joined again. Namely, from 10.10.2004 when reconnection of two synchronous zones (I synchronous zone which covers the West and Central Europe and II which covers the South-East Europe), the electric power network of Republic of Srpska has been an integral interconnection part of a big European UCTE network.



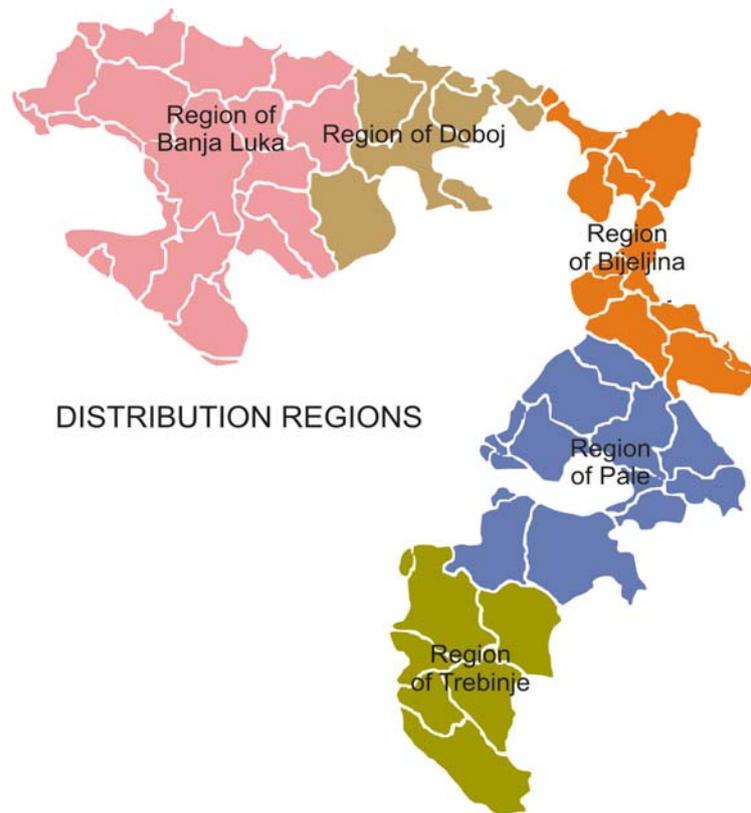
Picture 4, Transmission Network of Bosnia and Herzegovina

### 2.3.3. Distribution of electricity

Distribution of electricity is transmission of electricity at middle-voltage and low-voltage network for the purposes of delivery to end users and is, as it is the case with transmission at high-voltage network a monopolistic activity and being like that it should be regulated in order not to misuse the monopolistic behavior of distribution companies which possess capacities to perform these activities in certain area. When it is about unbundling of distribution activity from other commercial activities (generation and supply), it is also being imposed as the condition of impartiality in offering services, but the national legislation of European countries and EU legislation as a roof for its parties allows a lot of exceptions and time delay of the unbundling obligation of three years in relation to the transmission activity.

Distribution activity in RS is performed in five distribution companies (Picture number 5) within "Elektroprivreda RS" with franchising rights of delivery of electricity in certain geographic areas and it was regulated by the Regulatory Commission for electricity of RS. Distribution companies also perform the electricity supply for tariff buyers. Although the distribution and supply of electricity in Republic of Srpska are performed in the system of compulsory public service, it

will be necessary to apply appropriate unbundling of these activities in case that they are performed within the same legal structure (in the beginning accounting and later on managerial-functional).



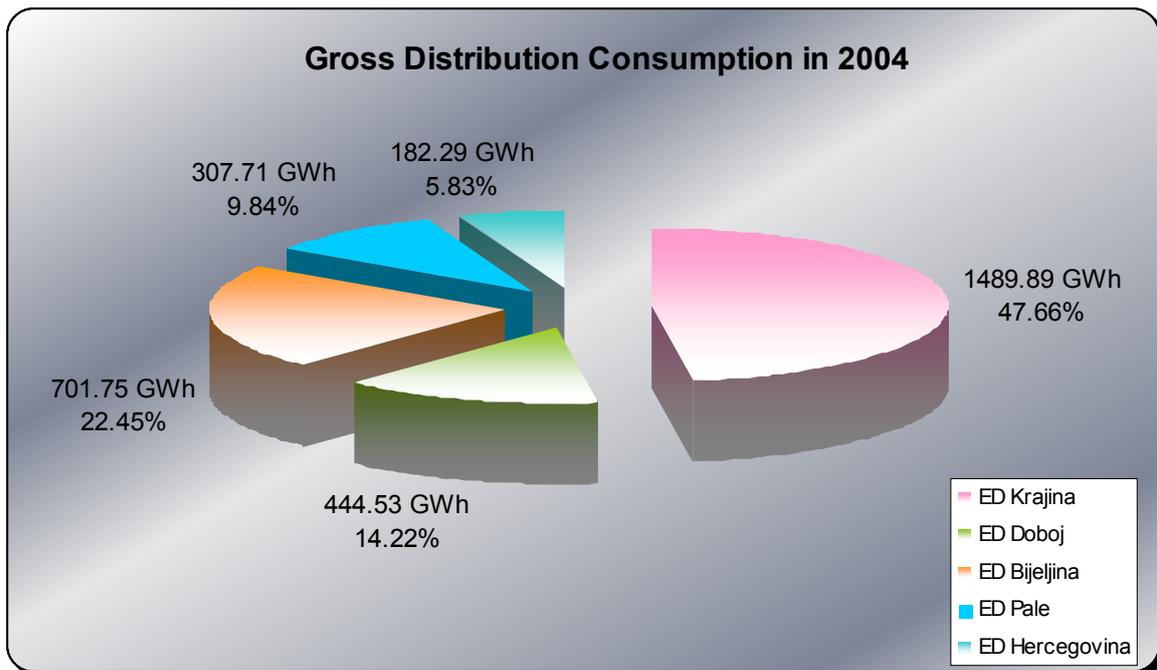
Picture 5, Distribution Regions in Republic of Srpska

#### 2.3.4 Supply of electricity

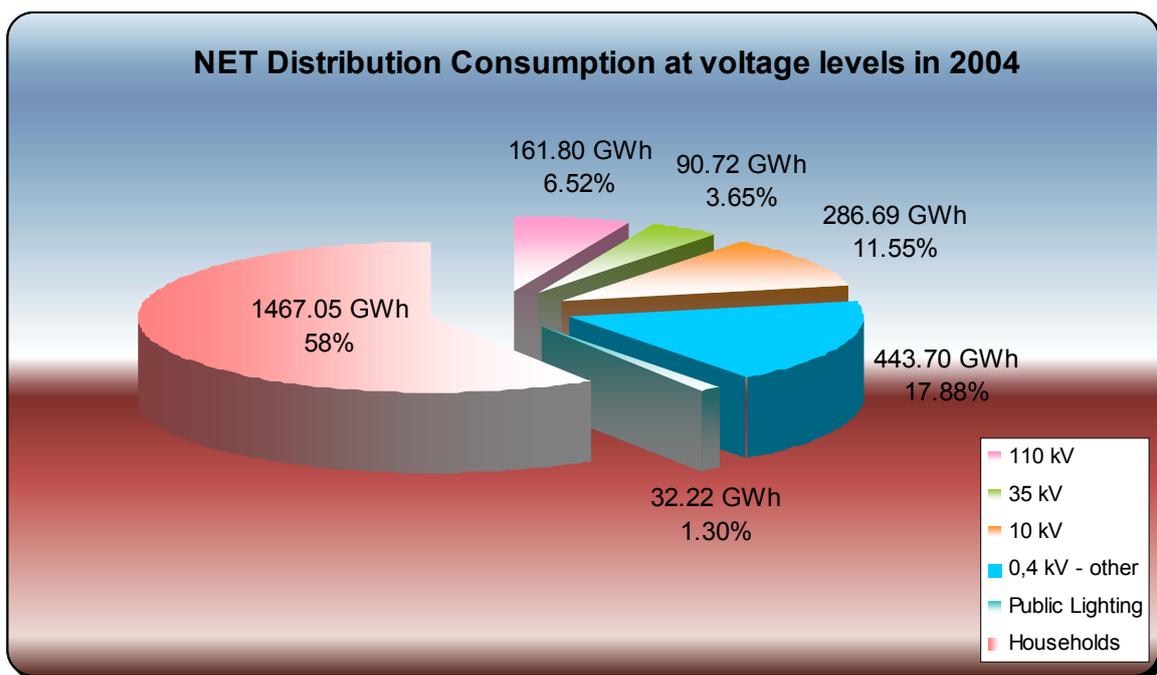
Supply of electricity is, in a principle, a commercial activity which is performed in conditions of free competition when it is about the developed markets. It is the measure of transparency of some market which is expressed by freedom of buyer to choose its supplier of electricity.

According to that principle, buyers are divided into two categories: eligible (free choice of supplier) and non-eligible (arrested) buyers. Supply of non-eligible (tariff) buyers in RS is a regulated activity, so that Regulatory Commission for electricity in RS determines tariffs for tariff buyers under which the licensee supplies them with electricity. Licensee for supply the tariff buyers with electricity in certain tariff area should be, in the beginning, regional distribution company but, having in mind that it is about the same legal structure, it is obliged to make the accounting unbundling of the supply from the "classical" activity of distribution.

Picture number 6 presents gross distribution consumption at distribution companies (regions), while the picture number 7 presents the structure of total consumption of electricity in Republic of Srpska at categories of consumption (voltage levels and groups of buyers).



Picture 6, Gross Distribution Consumption of Electricity in 2004



Picture 7, Structure of Total Consumption in 2004

### 2.3.5. System operators

System operator is an electric power subject which is in charge of control of certain electric power system (offering and provision of system services). Transmission system operator (TSO) is often an integral part of the transmission company while distribution system operator (DSO) is as a rule within the distribution company. System services offering by the system operator should also be regulated and supervised, both regarding prices of its services and also

regarding transparency and impartiality toward beneficiaries of its services. TSO obtains a part of the services from other electric power structures (ancillary services), usually in the market competition in a transparent way, while costs of the purchase of such services are transferred to its beneficiaries pursuant to already established and approved rules.

Function of the transmission system operator is, for Republic of Srpska, and for transmission as well, organized on the level of BiH within a special non-profitable company "Independent system operator for BiH" (ISO) which was regulated by SERC.

#### **2.4. Dynamics of the market opening**

Level of transparency of the electricity market is defined as a part of consumption of buyers who are free to choose the supplier, i.e. consumption of eligible buyers in the total consumption of all buyers. The threshold to get a status of eligible buyers in some countries has been defined in different ways: by the annual consumption, connecting capacity or voltage levels of the connection.

The Law on electricity (Article 49) provides that all buyers of electricity in Republic of Srpska that have total consumption of more than 10 GWh may get a status of eligible buyer. Conditions and criteria for getting a status of eligible buyer are prescribed by Regulatory Commission for electricity of RS.

Activities related to the market opening are necessary to be harmonized on the level of Bosnia and Herzegovina, through direct cooperation of regulatory commissions, although these problems have not been completely regulated in both entity laws on electricity and Law on Transmission, ISO and SERC. Market opening implies making the opening plan, necessary rules and preparation of institutions in a way that the market can function in the unique market area of Bosnia and Herzegovina and join the regional market of the South-Eastern Europe. The prepared contract on energy community of the South-Eastern Europe should be a binding document for countries-signatories to it, which means that its energy legislation has to be mutually harmonized both, regarding establishment of necessary market subjects and respect of deadlines for realization of conditions which are necessary for functioning of the fair electricity market in the region.

#### **2.5. Safety of supply**

Safety of supply is a question which is getting more and more important with the market opening. It implies establishment of the institution of responsibility for safe supply and mechanisms to remove possible causes of insecurity in the network or unavailability of generation or purchase of electricity. In order to ensure satisfactory level of the supply safety, it is necessary to provide sufficient generation capacities, appropriate transmission and distribution system and effective control. This question can often be solved in a more effective way on the regional level, although so far, until the common solution is found, even EU countries determine their own procedures and make special measures in order to ensure safe supply of electricity.

### 2.5.1. Construction of generation facilities of electricity

In order to provide safety of supply it is necessary to define the procedure for construction of new generation capacities which means that the procedure and its implementation should be in accordance with objective, clear and impartial, already publicly published criteria. This procedure is called the license issuance procedure for construction of generation capacities or the authorization procedure. Applicants for construction of the facility, in case that they do not get the license for construction have to be informed about reasons for the license denial. The applicant should also be enabled to lodge the complaint in case of denial of application for construction of the generation facility.

If sufficient generation facilities are not provided through the process of approval (authorization) for safe supply of buyers, i.e. if there isn't market interest for construction of new generation facilities, there might be invitation for bids open for construction of additional generation capacities which should be based on publicly published criteria.

Construction of generation facilities on the basis of renewable sources and for the concurrent generation of heat and electricity (co-generation) should be additionally regulated.

### 2.5.2. Safety of the electric power system and electricity market

In order to ensure safety of an electric power system it is necessary to provide, at least the following activities:

- making and regular annual update of long-term estimates of the transmission network development by the system operator in cooperation with the transmission company;
- making and regular annual update of long-term estimate of the electricity market development;
- creation of appropriate estimates of supply safety for buyers of electricity on the basis of estimates of development of the market and transmission network, and submitted applications for issuance of approvals for construction of generation facilities;
- creation of plans of necessary measures to ensure necessary safety of the electric power system;

Safety of the electric power system in Republic of Srpska and Bosnia and Herzegovina, apart from the fact that the installed generation capacities go far beyond the need of electricity consumption for both energy and capacity and that the transmission network has been completely restructured to the level which was before the war, was consistently resolved neither regarding legal and regulatory framework nor clear defining the procedures and institutional responsibility. Laws on concession, environmental laws and regulations, energy laws and other regulations require full harmonization in order to overcome possible misunderstandings during the process of construction of new and reconstruction of existing electric power structures.

## 2.6. Prices of electricity in Republic of Srpska<sup>3</sup>

The current prices of electricity in Republic of Srpska have been determined on the basis of Tariff system and tariff rates which were made by Government of Republic of Srpska in December 2004 pursuant to amendments of the Law on electricity and they will be applicable as of 1 January 2006 until Regulatory Commission for electricity determines new ones. Determining these prices, there have been some corrections made of the prices which were valid until that time and which were determined by "Elektroprivreda" RS with consent of Government of Republic of Srpska.

The existing tariff system has the following characteristics:

- prices of electricity are different for different categories of consumption and groups of buyers and they depend on the season and part of the day when the electricity is used;
- the basic division of buyers of electricity on categories of consumption on the basis of voltage level which the electricity is taken from accompanied with division on low voltage on the categories of household and other buyers (commercial structures i.e. companies, trade and others);
- winter season lasts from 01/10 to 31/03 and summer from 01/04 to 30/09;
- high season tariff (HT) is from 6 to 22 hours, i.e. in summer time from 7 to 23 hours; low season tariff (LT) is from 22 to 6 hours, i.e. in summer time from 23 to 7 hours. Low tariff comprises also days of weekend from Friday at 22(23) to Monday at 6(7) hours;
- Calculation elements which make the total price are: active energy, capacity charge and excessively taken reactive energy.

### 2.6.1. Households

- all households are calculated the active energy at middle tariff except households which have the calibrated two-tariff device and tariff switch clock inserted under the conditions that they submitted the application for such calculation;
- Capacity for households is calculated in the following way: 1 kWh of capacity charge is calculated at each initiated 200 kWh of consumption of electricity, while 6KW of capacity charge is calculated for consumption of over 1000 kWh.

(All prices are given in pennies and without taxes)

Period	Active energy High tariff	Active energy Low tariff	Active energy Middle tariff	Capacity at kW
Winter season 01.10 - 31.03	12,90	6,45	10,32	300
Summer season 01.04.-30.09.	8,60	4,30	6,88	200

<sup>3</sup> Source of data "Elektroprivreda Republike Srpske", Trebinje

## 2.6.2. Other buyers

Voltage level	Tariff group	Description	Season	High tariff	Low tariff	Middle tariff	Reactive energy	Calculating capacity
110 kV	110	Contracted buyers measuring at 110 kV	winter	5,40	2,70	-	1,80	800,00
			summer					
35 kV	035	Contracted buyers measuring at 35 kV	winter	5,80	2,90	-	1,90	840,00
			summer					
10 kV	010	Contracted buyers measuring at 10 kV	winter	6,20	3,10	-	2,00	880,00
			summer					
0,4 kV	031	Transfer in the category of households	winter	12,90	6,45	10,32	-	300,00
			summer	8,60	4,30	6,88	-	200,00
0,4 kV	041	Other buyers at 0,4 kV with measuring capacity	winter	10,00	5,00	-	3,25	1000,00
			summer					
0,4 kV	042	Other buyers at 0,4 kV without measuring capacity (one-tariff)	winter	-	-	19,20		2400,00
						12,80		1600,00
0,4 kV	043	Other buyers at 0,4 kV without measuring capacity (two-tariff)	winter	24,00	12,00	-	8,40	2400,00
			summer	16,00	8,00		5,60	1600,00
0,4 kV	060	Public lighting	winter	-	-	12,00	-	-
			summer					
0,4 kV	046	Other buyers at 0,4 kV agricultural producers (one-tariff)	winter	-	-	12,67	-	1584,00
			summer	-	-	8,45	-	1056,00
0,4 kV	047	Other buyers at 0,4 kV agricultural producers (two-tariff)	winter	15,84	7,92	-	5,54	1584,00
			summer	10,56	5,28	-	3,70	1056,00

## **B. ANNEX - ELECTRICITY MARKET IN EUROPE**

### **1. REGULATION OF THE ELECTRICITY MARKET IN THE EUROPEAN UNION**

#### **Changes**

The last decade of the 20th century and beginning of this century were marked with big changes in the energy and, in particular, in the electric power sector. The electric power sector, which was due to technological reasons considered as the closed sector, natural monopoly, entered the process of liberalization and opening of the market and it suffered big changes.

The European Union countries, as well as other countries which introduced changes had a different starting position. Their position resulted from the political system, constitutional solutions of organization of the country, treatment of electricity as a public service, property of company, development of the market of goods and capital, financial capacity of some countries and economic possibilities of citizens. Although, the market opening in the European Union countries started end of 80-s, it was only in 1996 that EU determined minimum standards of changes with Directives, which should have contributed to removal of barriers for opening of the unique electricity market. In June 2003, there were new Directives established, treated with more details and in a more transparent way. The changes in electric power sector as a rule are implemented in phases facing numerous problems, which are of objective and subjective nature. The slowest changes include the European Union countries which had strong state-owned, vertically integrated companies.

Establishment of the unique European Union market will speed changes in all countries while the market interest itself will put some pressure on construction of standardized solutions in organization, realization and control of the transmission and distribution network which will enable development of the open electricity market.

The reform of the electric power sector does not imply obligation of privatization, although in the Eastern-European countries (new members of the European Union or those that would like to become), while defining plans of reforms or finding a way which would enable development of the electricity market, the question of property would be raised first. Even some companies from the European Union countries, which were not privatized in their own countries, had considerable business activities in the privatization process in the Eastern-European countries.

#### **Measures for the market establishment**

Until recently, generation, transmission and distribution of electricity were considered as natural monopolies in most countries. The electricity sector was mostly organized through the vertical linking of companies either as monopoly or oligopoly, mostly state-owned or firmly-regulated private property, which controlled all segments of the electric power activity. However, the things have started to change recently. Beginning of 90s, the European Union started with

the process of liberalization, i.e. opening of the electricity market. It was firstly initiated in order for the competition between the party offering service (generation and supply) to bring the following: reduction of prices, raising level of services, reduction of differences in prices between countries, enabling buyers to choose by themselves who they are going to buy electricity from, and for the purposes of reducing needs for maintenance and construction of expensive spare capacities.

Liberalization of the electricity market in EU is based on establishment of competition in generation and supply of electricity and in free access to the transmission networks in the region of whole EU, which aim should have been establishment of the internal electricity market. In order to establish an effective electricity market, it would be necessary to undertake some basic measures:

- **Establishment of the electricity market**

The first measure should be enabling construction and control of generation capacities at the market bases.

- **Access of the third party**

Having in mind that construction of the parallel transmission and distribution network, as a rule, is not cost-effective, it is necessary to enable the access of the third party to the existing network and under equal, non-discriminatory conditions.

- **Unbundling**

The existing electric power structures have often been vertically integrated and in its structure they had a network too, so it might have been expected that they would undertake anything in order to prevent, i.e. make the access to the third parties more difficult. In order to avoid such problems, it is necessary to unbundle activities of transmission and distribution from generation i.e. supply. Such unbundling is possible to be undertaken in four ways, or in their combination:

- Accounting unbundling for the company dealing with transmission or distribution is the weakest form of unbundling;
- Management unbundling in a way that the management of network is unbundled from management of the rest of the company;
- Legal unbundling in a way to create a special legal person (company) which business will be limited to the network;
- Unbundling of the property in a way that the vertically integrated company commits itself to sell the network in a way that the network is in no way controlled by the owner of the company dealing with generation or supply of electricity.

- **Establishment of the independent regulatory body**

Establishment of the effective electricity market requires effective regulation of transmission and distribution activities for the reasons of:

- Prevention of discrimination, especially when there was not effective unbundling in a way that the regulator tests conditions under which the access to third parties is enabled;
- Prevention of cross-subsidies because vertically integrated companies intend to increase prices for transmission and distribution (where there isn't market competition) and with such realized profit to reduce prices in generation and supply (where there is market) with total realization of profit at the same time;

- Prevention of too high prices having in mind that it is about activities which are monopolies in its essence.
- **Ensuring high level of public services**  
Past experiences in liberalization of all sectors, including the electric power, show that introduction of the competition match encourages actors participating in it to improve the quality of services. However, there are a lot of areas where it is necessary to have intervention of the country in order to protect the public interest, e.g. safety of supply, protection of the environment, protection of socially vulnerable buyers etc.
- **Reciprocity**  
Establishment of the internal market requires harmonization of the liberalization tempo in order to avoid situations in which closeness of market of some country enables its companies to keep monopolistic situation and realization of the profit on the basis of monopoly, which those companies place it as investments at markets of other countries which went further in liberalization. In that way real competition is disabled because the companies from the closed market are in a more favorable situation.
- **Making of applicable rules at the level of EU**  
It is not enough to liberalize markets of each country member to EU but it is necessary to create rules which will encourage the over-border trade especially regarding the issues such as transparency of the over-border tariffs, capacity congestion management etc.  
It can be said that the internal market of electricity is based today on Directive 96/92/EC from 1996 on general rules for internal electricity market which became effective in February 1997. Directive is based on three basic principles:
  - Introduction of competition concurrently respecting principles of the public service according to which ensuring appropriate and reliable supply of electricity is of most importance;
  - Gradual introduction of competition in order to ensure necessary time for adapting;
  - The principle of shared-responsibility, in a sense that the Directive does not impose ready solutions to the countries-members but only gives a framework for construction of the internal market leaving a wide area for adoption of rules which are the best for the particular situation of each country.
 Directive 2003/54/EC was made on 26 June 2003 and it completely replaced Directive 96/92/EC, introducing some new things in the following areas:
  - speed of the market opening,
  - the way of giving licenses for construction of new capacities,
  - access to the network,
  - public service obligation and
  - obligation of the system operator unbundling;

Provisions of this Directive should be applicable in countries members until 1 July 2004.

## **Generation of electricity**

Development of the electricity market requires that buyers should have not only a legal but a real possibility to choose supplier of electricity. It means that electric power companies from one country should be in position to import and export electricity (the right of free flow of goods), but also that each subject should have a possibility to generate electricity in any of EU countries. It was disputable how to treat the electric energy - either as a commodity or service. So, even in 1964 the European Court, in one of its cases, determined that the electric energy was a commodity in a sense of Article 23 of the Contract on the European Community. It was also confirmed in some other cases.

Directive 96/92/EC started from the assumption that generation of electricity should completely be open to competition and in that way to contribute to creation of effective internal market of electricity. It was foreseen to be realized through establishment of two ways of construction of the generation structures - the bidding process and system of approval (authorization) which is granted by the responsible body of the country member but the countries are free to choose either of these systems or their combination. The difference between these two systems is that when it is about the bidding, the country determines in advance future needs for generation capacities on the basis of forecast of needs for electricity and on the basis of it, it opens the public invitation for bids for construction of new or reconstruction of the existing capacities while when it is about the procedure of construction upon approval (license), all applications for construction which were submitted pursuant to the above prescribed, already defined conditions must be approved, regardless of the estimate of future needs for generation capacities, i.e. estimate of future consumption of electricity.

Apart from the already made conditions, countries members to it also have to provide implementation of appropriate procedure of giving approval in which, among other things, it should be provided that it is non-discriminatory, objective and transparent. Denial of the approval granting must be based and explained, but it is necessary to provide the possibility of lodging complaints to the subjects whose applications were refused. When it is about the invitation for bids, countries or authorized bodies appointed by them may determine plans for construction of new capacities on the basis of which public invitation for bids for their construction will be published.

Apart from the usual applications which were prescribed for the invitation for bids, Directive determines that countries members to it should determine the appropriate body which will be in charge of implementation and control of public invitation for bids and which must not be linked with the activities of generation, transmission and distribution of electricity. Fourteen countries members to it committed themselves to the system of license granting, Portugal introduced the combined system so that for the market of eligible buyers, construction is carried out following the system of licenses, while the construction of capacities for the tariff buyers' market is carried out following the bidding procedure.

Directive 2003/54/EC introduced changes in the area of generation firstly in a way to prescribe that new capacities are, as a rule, constructed on the basis of approval (authorization), and only exceptionally on the basis of public bidding. This change exactly reflects the real situation so that most countries chose the system of authorization as well as the conviction that this approach additionally liberalizes the market. The approval procedure itself was made similarly as it was done in

Directive 96/92/EC but new criterion was added which countries members to it may take into account while granting approval (criterion of protection of public health and safety). Directive has prescribed the following criteria:

- Reliability of the electric power system, facility and accompanying equipment,
- Protection of public health and safety,
- Protection of the environment,
- Usage of the land and location,
- Usage of public areas,
- Energy effectiveness,
- Nature of primary resources,
- Characteristics of the Applicant such as technical, economic and financial capabilities,
- Harmonization with measures in Article 3 of Directive.

There is a possibility given to countries members to it when granting approvals for small or middle distributed generation (generation in a case when its facilities are connected to the distribution system) to take into account their limited size and possible impact.

The procedure of construction of new facilities or introduction of measures of energy effectiveness, i.e. control of consumption at the public bidding suffered considerable changes. It is possible to apply it in two cases - when it is necessary for the safety of supply and when it is for the purposes the Environmental protection, i.e. for the purposes of encouragement of usage of new technologies. Apart from existence of either of these two conditions, it is necessary to meet the condition that in the procedure of the approval-authorization system, these interests would not be met.

### **Transmission of electricity**

Transmission and distribution networks have always been, and probably will be, the monopolies. For that purposes, in order to have more effective market, it is necessary to establish such mechanisms which will enable all suppliers of electricity to have access to the network in order to supply its buyers.

Directive 96/92/EC in its chapter IV determines issues related to transmission of electricity. Transmission is defined as transport of electricity at high voltage system with the aim to deliver electricity to end users or distributors.

Each country member to it should appoint, or request the companies owners of the transmission system, transmission system operator (TSO) which would be in charge of control and maintenance of the system, and when needed, of development of the system and its connection with other systems everything in order to provide electricity supply. Transmission system operator is in charge of dispatching in its area as well as of using interconnections with other systems. Both of them should be carried out under conditions which are objective, published and applied without discrimination, whereat TSO must not particularly favor generation facilities which are owned or co-owned by the company which owns TSO too (provided that TSO is not completely separated from the company dealing with generation). Technical rules of the transmission system control must be objective, non-discriminatory and in a regular way published.

There are two possibilities to organize the system operator. System operator may be a company which is, at the same time, dealing with transmission (Transmission System Operator - TSO), provided that it was separated from generation and supply. If there isn't such unbundling, then system operator has to be independent (Independent System Operator - ISO) from other activities of the company.

System operators are responsible for technical control of the system, the energy flows control and exchange with connected systems. They should enable safety, reliability and effectiveness of the electric power system along with all ancillary services without discrimination, especially those that would be for the benefit of companies which are proprietary connected to them. When it is about protection of the Environment, countries members to it may request TSO to, while engaging generation capacities, give advantage to those who produce electricity from renewable resources or waste or co-generation (generation in the concurrent process with electrical and heat energy and/or mechanical energy). So, there is a possibility mentioned in the Directive of giving advantage to electricity generated from the renewable resources.

Most countries members to it took the advantage of this possibility, but TSO, as a rule, dispatches in priority "ecologically generated" electricity at higher prices, and costs are transferred to buyers.

Directive 2003/43/EC makes, as the most important change in the transmission system control, more clearly defining tasks of the transmission system operator and more severe and better defined criteria which are to be applied while unbundling transmission system operator from the rest of the system.

Directive 96/92/EC in its chapter V determines issues of distribution of electricity. Distribution is defined as transport of electricity at middle-voltage and low-voltage systems with the aim to deliver electricity to buyers. In most countries members there is one TSO and more distribution system operators (DSO).

Directive prescribes that the countries members should appoint, or request the companies that own or that are responsible for distribution systems, system operator with the task to be in charge of the system control, maintenance of the system, and if needed, for development of distribution system in certain area as well as its connection with other systems. Countries members may also impose the obligation to TSO to supply buyers in certain area whereat the prices may be regulated. Duties of the distribution system operator were determined in almost the same way as the ones of the transmission system operator.

Directive 2003/54/EC makes considerable changes regarding distribution system control in a way that it almost identifies it with the mode of the transmission system control. Tasks of the distribution system operator have been amended and more clearly defined, there is an obligation to un-bundle distribution system operator introduced, what did not exist in Directive 96/95/EC and what is new is the possibility to introduce mixed operator of the transmission and distribution systems.

One of the most important, crucial changes in realization of the electric power activity is unbundling of distribution network from supply.

#### **1.4.1. Organization of access to the network**

Directive 96/92/EC in chapter V envisages three ways for organization of the access to transmission and distribution network - agreed access, regulated access and access of the only buyer. Whichever method is chosen, countries members

should ensure that their results are similar in a sense of economic results and in that way to directly contribute to the benchmarking level of the market opening and possibility of access to the electricity market.

- The agreed access, pursuant to which generators and buyers of electricity mutually directly make contracts on the sale of energy, but at the same time they have to agree, in negotiations, access to the transmission, i.e. distribution network with their operators
- Regulated access enables the eligible buyers to directly make contracts with suppliers on sale of electricity, while the access to the network is ensured on the basis of already determined tariffs and procedures
- In the only buyer access, independent generators of electricity may contract access to the network with its operator and at the same time conclude contracts with eligible buyers but only outside the system through commercial contracts in a way which is similar to one of the contract on access to the network by third party.

It is considered that the system of regulated access, established at published prices and procedures, is the most effective in a sense of encouragement of the market development and competition. Not only that discrimination on the basis of prices is disabled with it but the companies are also allowed to long-term planning of purchase of electricity on the basis of the published prices of transmission (usage of transmission and distribution network).

Fourteen countries members chose the regulated access. It was only Germany which chose the agreed one, but it is necessary to mention that prices of access to the network in Germany are the result of negotiation between associations of buyers, electric power companies and system operator. The prices are published and complete transparency is enabled, but they are not binding.

One-buyer access was not chosen by any countries, but Italy and Portugal chose that option for tariff buyers, and regulated access for eligible buyers.

Directive 2003/54/EC makes changes in a way that it enables only regulated access to the network on the basis of tariffs which have to be made in an objective and non-discriminatory way (or at least methodology for their calculation) and published in advance and approved by the regulatory body. This is related only to eligible buyers but having in mind dynamics of the market opening it means that from 1 July 2007 it will be related to all buyers.

Access to the network can only be denied in case of shortage of necessary capacities. Valid reasons are to be given for that denial.

#### ***1.4.2. Unbundling of activities and transparency of the accounts***

Networks were usually owned by vertically integrated monopolies. In order to provide the market competition, it is necessary to provide access to the network for everybody under the same conditions. It is partly provided by rules on access to the network (regulated access) but, apart from that, it is necessary to conduct interest-unbundling of network systems from other activities in a vertically integrated company.

Directive 96/92/EC in chapter V determines issues of unbundling and transparency of accounts of companies dealing with electric power activities. In order to implement it, there have been requirements made for three cases:

- separate accounts for generation, transmission and distribution in relation to other activities of the company;

- creation of appropriate mechanisms by TSO in order to prevent disclosure of confidential information either within the system or to the third party;
- managerial unbundling of TSO;

Countries members should provide that integrated companies lead separate accounts for generation, transmission, distribution and other activities. In "old" Directive it was unclear whether trade and supply of electricity is different from distribution because it depends on it whether accounts should be separated in that segment.

Directive 2003/54/EC makes considerable changes in this area.

In order to have the obligation of unbundling activities, it is necessary to meet one of the following conditions:

- transmission or distribution activity are carried out along with generation or supply within the same company,
- holding company controls a certain number of companies some of which are in charge of generation or supply, and some of transmission or distribution of electricity;

The first condition is rather clear, but when it is about the second one there is a question how to define the term of control. Along with definition, European Commission in its official notice (note) defined what kind of control exists if one company has majority of shares of another or when it is a shareholder in minority but realizes real control. The essential control can be realized in two ways - either that there is a contract which authorizes one company (regardless of portion in ownership) to control another, or structure of co-owners is such that one company has and controls majority of votes in the assembly of the company, although it does not have majority parcel of portions.

If the system operator (the provisions are similar for both, transmission and distribution) is a part of vertically integrated company, it is required to be unbundled in a sense of unbundling of accounts (accounting unbundling), legal form of unbundling, and in a sense of organization and making decisions (functional - managerial unbundling).

- **Accounts unbundling**

Electric power companies, in its internal accounting, have to keep separate accounts for each of its activities of transmission and distribution, as they should do if the mentioned activities are carried out in separate companies for the purposes of avoidance of discrimination, hidden subsidies and disabling competition. Accounting unbundling implies creation of separate financial reports for each activity.

- **Legal unbundling**

Companies dealing with transmission and distribution should be legally un-bundled from vertically integrated companies. This provision essentially contributes to unbundling if combined with provisions about obligation of managerial unbundling. If the control has been really un-bundled, then it is less important to have legal unbundling and vice-versa; pure legal unbundling without managerial does not mean a lot.

- **Control unbundling**

Due to the lack of proprietary unbundling, the key element in ensuring independency of the system operator is the control unbundling. Article 10,

paragraph 1 of Directive requires that such unbundling should be in relation to organization and making decisions. Unbundling in relation to the system of making decisions means that management makes decisions on the basis of economic interest of the network company, and not on the basis of interest of the "whole" company in which structure there is a network company. When it is about the organizational unbundling, it is mostly related to unbundling in relation to space, infrastructure, common services, etc.

### **1.5. Obligation to offer public service and protection of buyers**

Obligation of public service may be defined as a special request which is imposed by the public authorities to subjects offering services in order to meet certain public interests. Electric energy is one of the basic commodities for the needs of citizens. While they were state monopolies, it was thought that the electric power structures would always act in public interest i.e. offer public service. Having the market relationships introduced, there was a need to regulate the obligation of the public service offering.

Directive 96/92/EC establishes the principle according to which for some countries members to it, introduction of the public service obligation can be necessary for safety of supply of buyers, for protection of the Environment, which, in their opinion, free market uncared for, could not be able to provide. Later on, that principle was analyzed in a way that Directive allows countries members to it to impose the public service obligation to the electric power structures when it is in general economic interest.

When it is about the energy sector, the European Commission makes the following conditions for application of the public service obligation:

- Imposed obligations must refer to the service offering which are of general economic interest that the service relates to;
- must directly contribute to fulfillment of general economic interest;
- must be imposed in a way that they do not affect the trade development to such extent that it contravenes interests of the community;

According to Directive, there are five categories of public services:

- reliability, including safety of supply,
- regularity of supply,
- quality of supply,
- price of supply and
- Protection of the Environment.

Public service obligations should comply with general frameworks of EU rules and must not be used for the purposes of giving advantage to domestic generators in relation to the parties. Directive 2003/54/EC makes changes for the purposes of strengthening protection of buyers and better defining of the public service obligation.

- obligation of the countries members that the electric power companies operate pursuant to Directive
- right of the countries members to impose obligation of the public service offering
- obligation of the countries members to undertake appropriate measures for the purposes of realization of aims of social and economic cohesion, protection of the Environment and safety of supply

- Obligation of the countries members to provide offering of the universal service for households,
- Obligation of the countries members to protect vulnerable buyers
- Obligation for the purposes of protection of buyers
- Obligation of the countries members to grant the state subsidies and exclusive rights in a non-discriminatory way
- Obligation of the countries members to inform the European Commission about measures which they undertook
- Obligation of the countries members to carry out the obligation of the public service offering
- Obligation to publish data which are of interest for protection of the Environment
- Obligation of the countries members to provide eligible buyers with a possibility to simply change the supplier of electricity.

### **1.6. Regulatory bodies**

Since it is about monopolies in this sector, as a rule, when it is about networks without which the effective market cannot be established, there is a need to found the regulatory bodies which will be in charge of enabling the market match in the electricity sector.

Directive 96/92/EC does not give details on regulatory bodies, other than it prescribes that countries members to it should establish appropriate and effective mechanisms for regulation, supervision and transparency in order to avoid all possible misuses of dominant position, especially those which adversely affect costumers and any other kind of incorrect behavior. However, the Directive itself reflects two aspects of regulations, a pure regulatory function and a monitoring function in order to provide an appropriate market action, the result of which is that all EU countries, as well as ten countries which joined on 1 May 2004 founded an independent regulatory body for energy activities including Germany which was the last country that did it.

Directive 2003/54/EC determines that countries members have to establish one or more regulatory bodies with regulatory functions. They have to be completely independent from the electric power structures and their competences should be as follows:

- Prevention of discrimination and provision of effective market functioning with a special regard to:
  - Rules on control and enabling connection to the network;
  - Mechanisms for resolving capacity congestion;
  - Time needed to transmission and distribution companies to establish connections and make repairs;
  - Publication of appropriate information by the Transmission and Distribution System operators regarding interconnections, use of network and allocation of capacity to interested parties,
  - Real unbundling of accounts in order to avoid hidden subsidies between generation, transmission and supply;
  - Conditions, rules and tariffs for connection of new generators of electricity that guarantee objectiveness, transparency and equality;
  - To which extent the transmission and distribution system operators meet their tasks pursuant to the Directive;

- Level of transparency and competition.
- Determination and approval, before becoming effective of, at least those methodologies which are used for calculation or defining conditions for:
  - Connection and access to networks including tariffs for transmission and distribution;
  - Offering services for settlement of deviations from the planned ones;
  - Supervision over safety of supply;
  - Resolving disputes within the scope of its competence;
  - Contribution to development of the internal market and equaling market conditions.

It is interesting to analyze basic indicators of regulatory bodies in the whole process of reform, liberalization, restructuring and opening of the electricity market in the European Union.

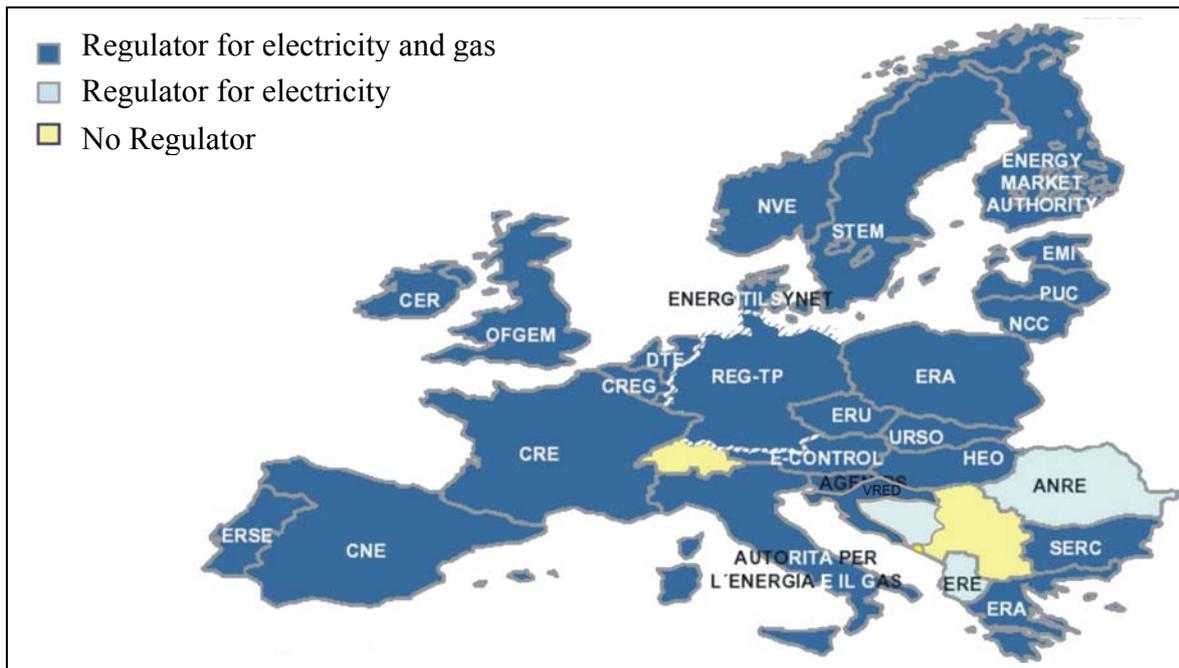
In all analyzed European countries, including Germany, the regulatory body was established. Number of employees per the regulatory bodies in Europe varies between 10 (Greece, 2001) and 340 (Great Britain, 2001). It can generally be said that the number of employees in the regulatory bodies has been considerably increasing. In the EU countries, average number of employees in the regulatory bodies was 68 in 2001, 79 in 2002 while it was 86 in 2003 which is an increase of the employees for 13 percent, i.e. 9 percent annually.

If we include countries which joined and candidates for EU in that analysis, the average number of employees in all mentioned regulatory bodies was 82 in 2002 and 92 in 2003 which represents an annual increase of 11 percent. It is also necessary to emphasize difference in size of energy sector and scope which some regulatory bodies include.

The annual budget of regulatory bodies in Europe varies between 0,3 million Euro (Estonia, 2003) and 103 million Euro (Great Britain, 2001). After the British regulatory body, Spain is the country with the biggest annual budget (21 million Euro 2003).

Although there are big differences in annual budgets, for illustration purposes, one can say that the average annual budget of regulatory bodies of EU countries is around 13 million Euro; i.e. if countries which joined and candidates for EU are included, the average annual amount is around 8 million Euro. Average annual budget of the regulatory bodies of countries that joined and candidates for EU membership is around 4.5 million Euro.

Picture number 8 presents data on establishment of energy regulatory bodies in Europe and their regulatory competences (only electricity or combination of electricity and gas). End of 2004 only Serbia and Switzerland, out of all European countries, did not have the energy regulatory body established (Commission, Agency, Council etc).



Picture 8, Data on established regulatory bodies in Europe, end 2004

## 2. INDICATORS OF THE MARKET DEVELOPMENT LEVELS

The European Commission follows the level of market development in countries members to it having in mind the following characteristics:

- existence of the regulatory body,
- transparency of the market (TWh/year),
- size of the market (TWh/year),
- supply of eligible buyers,
- way of access to the transmission network;
- number of the licensed generation companies,
- number of the licensed transmission companies,
- number of the licensed distribution companies,
- number of the licensed companies for supply,
- portion of three major generation companies in totally constructed generation capacities,
- portion of three major companies for supply at the open electricity market,
- organization of the transmission activity regarding:
  - organizational model of transmission company in relation to the mother company;
  - integrity of ownership and control of transmission network,
  - unbundling of activities of control of electric power system from other activities,
  - transparency of account of the transmission system operator,
  - separation of the location which belongs to transmission system operator from those where other commercial activities are performed and
  - ownership of the transmission system operator;

Basic current indicators of the electricity market in EU at the beginning of 2005 are:

- Liberalization of the electricity market in EU has been constantly progressing. Although national particularities and differences temporarily give more diverse picture, the complete liberalization should be finished until 1 July 2007.
- Freedom to choose electricity supplier in most EU countries has been currently available mostly for all categories of consumers except households. Nine countries members to EU accomplished full market transparency for all categories of consumers including households.
- In the countries which published complete market transparency for 01.01.2005 there is a great number of generation companies except in Spain and Sweden.
- The country with most suppliers of electricity in 2003 was Germany (940). Czech Republic, Spain and Italy had between 300 and 400 registered suppliers. In most cases there are very few companies - suppliers that have some significant share of the market.

The table below presents the progress of the liberalization process expressed in percents of the market transparency. Market transparency represents the percentage of electricity which is consumed by buyers who are free to choose the supplier in relation to the whole electricity market in the country member to EU. The table also gives the threshold, i.e. basic criterion for getting a status of eligible buyer and size of the opened market in TWh. Although Norway is not member to EU its data were presented in order to illustrate behavior of some developed European country which is not obliged to apply provisions of the Directive.

Table number 1 - Market transparency level on 01.01.2005 in the European Union countries and Norway<sup>4</sup>

Country	2001		2005	
	Market transparency	Market transparency	Threshold for eligible buyers	Size of the opened market (TWh)
<b>EU-25</b>		<b>66%</b>		<b>2162</b>
<b>EU-15</b>	<b>59%</b>	<b>88%</b>		<b>2094</b>
<b>BE</b>	<b>35%</b>	<b>90%</b>	<b>All buyers</b>	<b>60</b>
<b>CZ</b>		<b>47%</b>		<b>25</b>
<b>DK</b>	<b>33%</b>	<b>100%</b>	<b>All buyers</b>	<b>33</b>
<b>DE</b>	<b>100%</b>	<b>100%</b>	<b>All buyers</b>	<b>500</b>
<b>EE</b>		<b>10%</b>	<b>&gt;40GWh</b>	<b>1</b>
<b>EL</b>	<b>30%</b>	<b>62%</b>	<b>Except households</b>	<b>29</b>
<b>ES</b>	<b>54%</b>	<b>100%</b>	<b>All buyers</b>	<b>210</b>
<b>FR</b>	<b>30%</b>	<b>70%</b>	<b>All buyers</b>	<b>275</b>
<b>IE</b>	<b>30%</b>	<b>56%</b>	<b>&gt;1 GWh</b>	<b>12</b>
<b>IT</b>	<b>45%</b>	<b>79%</b>	<b>Except households</b>	<b>225</b>
<b>CY</b>		<b>35%</b>	<b>&gt;350 MW</b>	<b>1</b>
<b>LV</b>		<b>76%</b>	<b>Except households</b>	<b>4</b>
<b>LT</b>			<b>unknown</b>	
<b>LU</b>	<b>0%</b>	<b>57%</b>	<b>&gt;20 GWh</b>	<b>3</b>
<b>HU</b>		<b>67%</b>	<b>Except households</b>	<b>22</b>
<b>MT</b>	<b>0%</b>	<b>0%</b>		
<b>NL</b>	<b>33%</b>	<b>100%</b>	<b>All buyers</b>	<b>100</b>
<b>AT</b>	<b>100%</b>	<b>100%</b>	<b>All buyers</b>	<b>55</b>
<b>PL</b>		<b>52%</b>	<b>&gt;1 GWh</b>	<b>50</b>
<b>PT</b>	<b>30%</b>	<b>100%</b>	<b>All buyers</b>	<b>42</b>
<b>SI</b>		<b>75%</b>	<b>Except households</b>	<b>10</b>
<b>SK</b>		<b>66%</b>	<b>Except households</b>	<b>15</b>
<b>FI</b>		<b>100%</b>	<b>All buyers</b>	<b>80</b>
<b>SE</b>	<b>100%</b>	<b>100%</b>	<b>All buyers</b>	<b>135</b>
<b>UK</b>	<b>100%</b>	<b>100%</b>	<b>All buyers</b>	<b>335</b>
<b>NO</b>		<b>100%</b>	<b>All buyers</b>	<b>110</b>

<sup>4</sup> EYROSTAT – Statistics in focus - July 2005

### 3. ELECTRICITY PRICES

#### 3.1. Benchmarking prices of electricity for industry and households in Republic of Srpska and surrounding<sup>5</sup>

Pictures number 9 and 10 present prices of electricity for customers in Republic of Srpska and surrounding (Federation of Bosnia and Herzegovina, Serbia, Montenegro and Croatia) for typical forms of consumption, everything pursuant to definitions for "standard customers: under nomenclature of EUROSTAT, i.e. prices are presented in the same way as EUROSTAT gives them in its reports for countries of European Union as follows:

- industrial customer which consumes 24,000,000 kWh of electricity annually with maximum capacity of 4,000 kW and 6000 hours of annual usage of maximum capacity (i.e. standard customer under nomenclature of EUROSTAT)
- industrial customer which consumes 2,000,000 kWh of electricity annually with maximum capacity of 500 kW and 4000 hours of annual usage of maximum capacity (i.e. standard buyer under nomenclature EUROSTAT)
- industrial customer which consumes 50,000 kWh of electricity annually with maximum capacity of 50 kW and 1000 hours of annual usage of maximum capacity (i.e. standard customer under nomenclature EUROSTAT)
- standard customer from the category of household which consumes 3500 kWh of electricity annually, out of which 1 300 kWh at night and has connecting capacity 4-9 kWh (i.e. standard customer under nomenclature EUROSTAT)
- standard customer from the category of household which consumes 7500 kWh of electricity annually, out of which 2500 kWh at night and has connecting capacity 6-9 kW (i.e. standard customer under nomenclature EUROSTAT)

Having in mind that these graphs of prices are aimed at benchmarking average price of the same or similar typical customer which different tariff rates were applied to, and for the simplification purposes, during the treatment, it was considered that the industrial consumers consumed the same quantity of electricity in high or low tariff and high or low season.

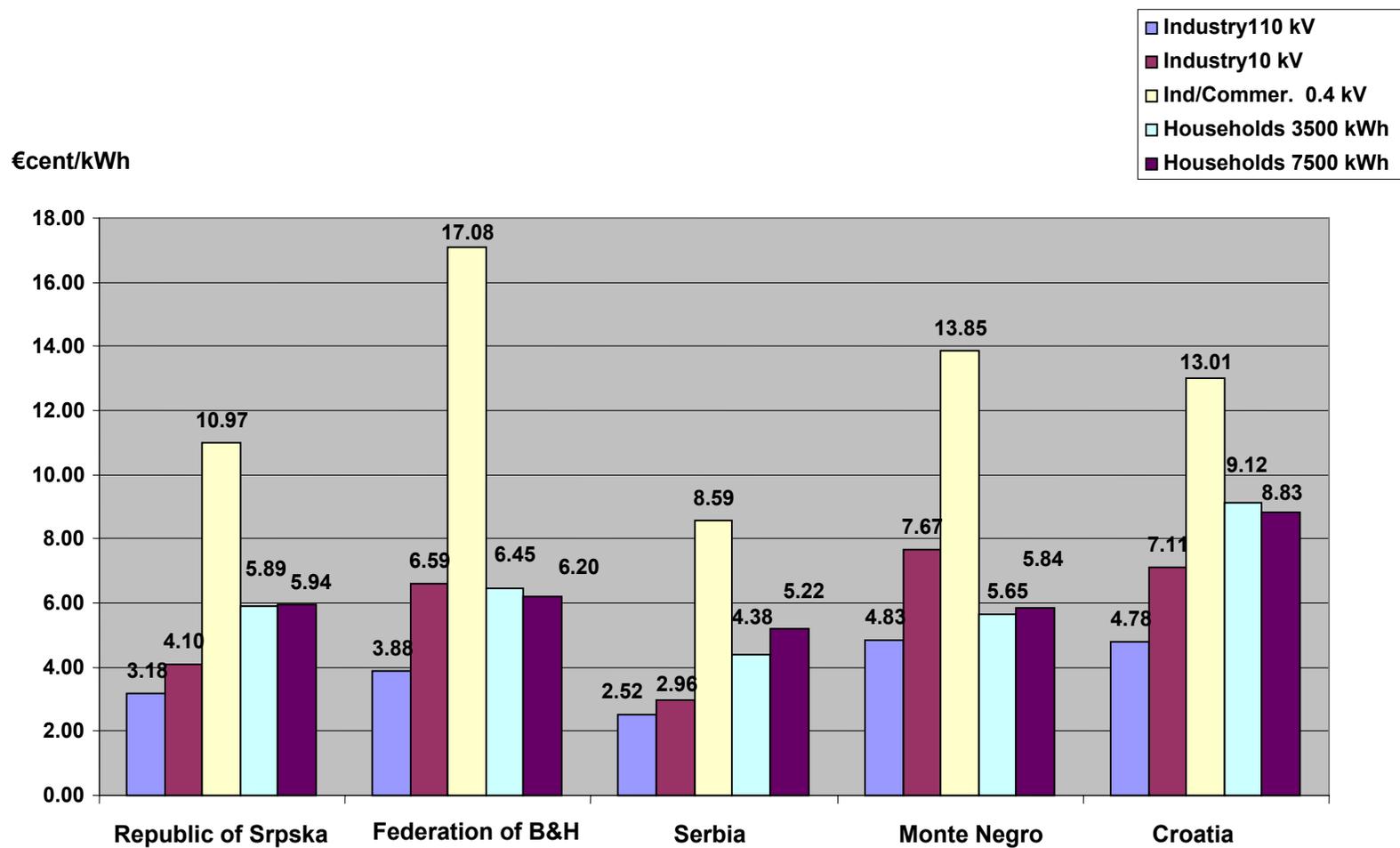
The prices in picture number 9 include the taxes on added value (Serbia 18%, Montenegro 10% and Croatia 22%) and taxes on financial transactions (Republic of Srpska 10% and Federation BiH 10%).

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<sup>5</sup> Sources of data:

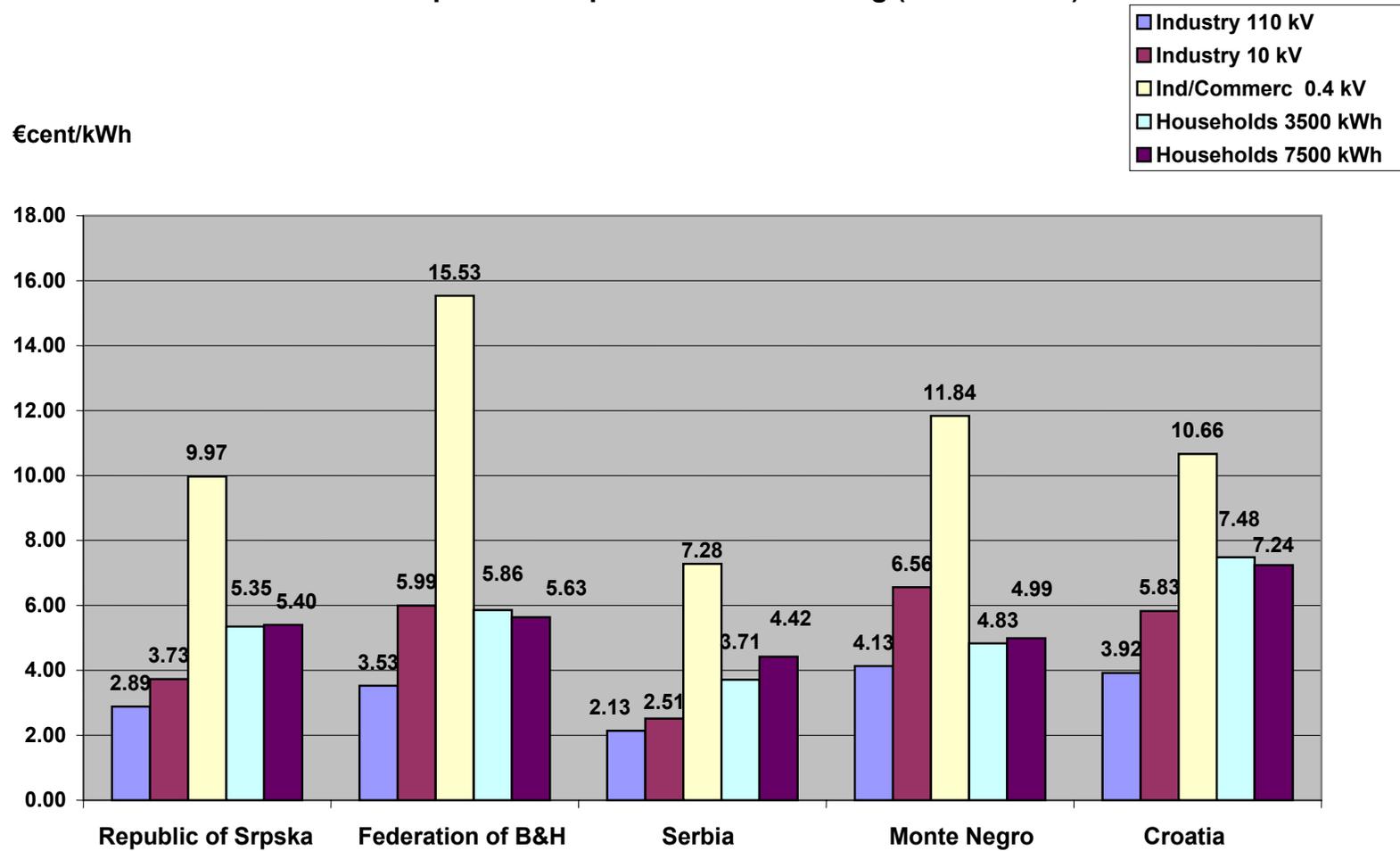
- "Elektroprivreda Republike Srpske" Trebinje - Tariff system and tariff rates for selling electricity in Republic of srpska (<http://www.elektroprivreda-rs.com>)
- PC Elektroprivreda BiH dd Sarajevo - Tariff rates for selling electricity in Federation of Bosnia and Herzegovina (<http://www.elektroprivreda.ba>)
- PC Elektroprivreda HZHB dd Mostar - Tariff rates (<http://ephzhb.ba>)
- PC Elektroprivreda Srbije Beograd - Price list for selling electricity (<http://www.eps.co.yu>)
- Elektroprivreda Crne Gore AD Niksic - Tariff rates for selling electricity at transmission and distribution network (<http://www.epcg.cg.yu>)
- Hrvatska elektroprivreda d.d. Zagreb - Amendment of tariff rates in Tariff system for services of electric power activities which are performed as public services (<http://www.hep.hr>)

**Benchmarking prices of electricity for industry and households  
in Republic of Srpska and surrounding (taxes excluded)**



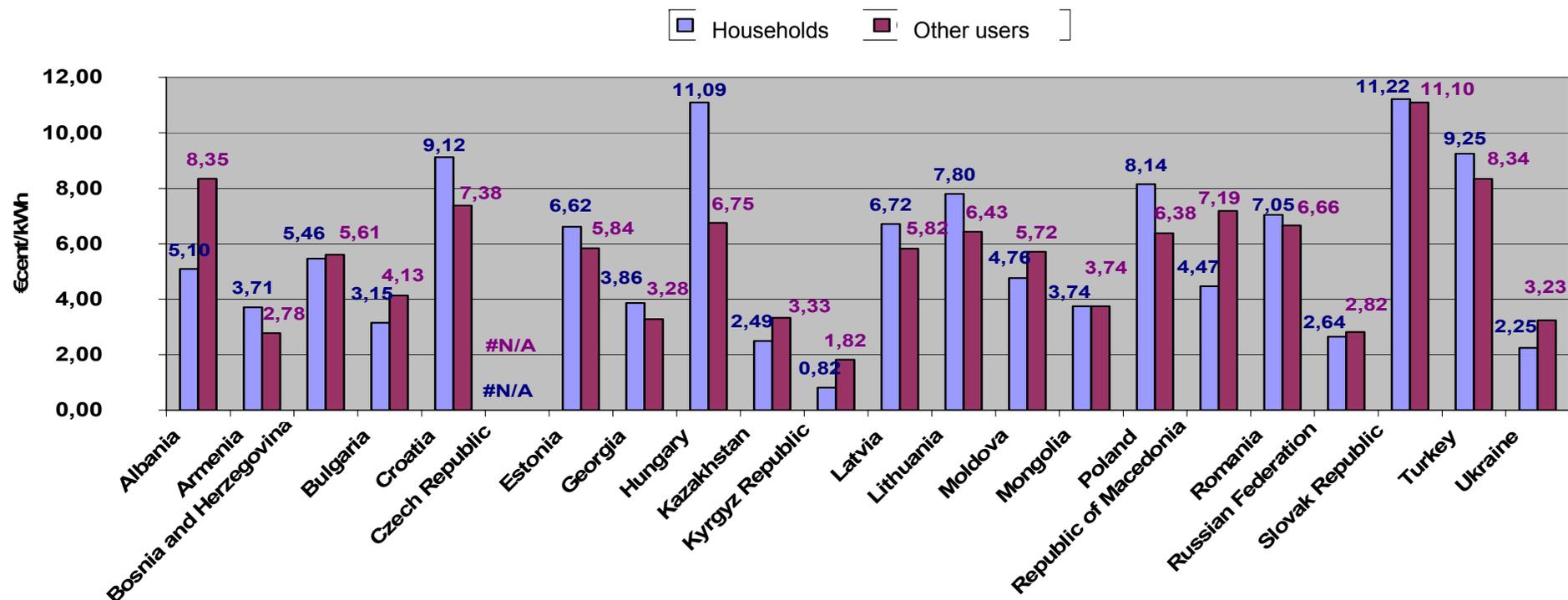
Слика бр. 9 - Упоредне цијене електричне енергије за индустрију и домаћинства у Републици Српској

### Benchmarking prices of electricity for industry and households in Republic of Srpska and surrounding (tax included)



Picture number 10- Benchmarking prices of electricity for industry and households in Republic of Srpskaj

3.2. Prices of electricity in the Central and South-Eastern Europe and some of the former Soviet Union countries<sup>6</sup> in the second quarter of 2004 (taxes included)



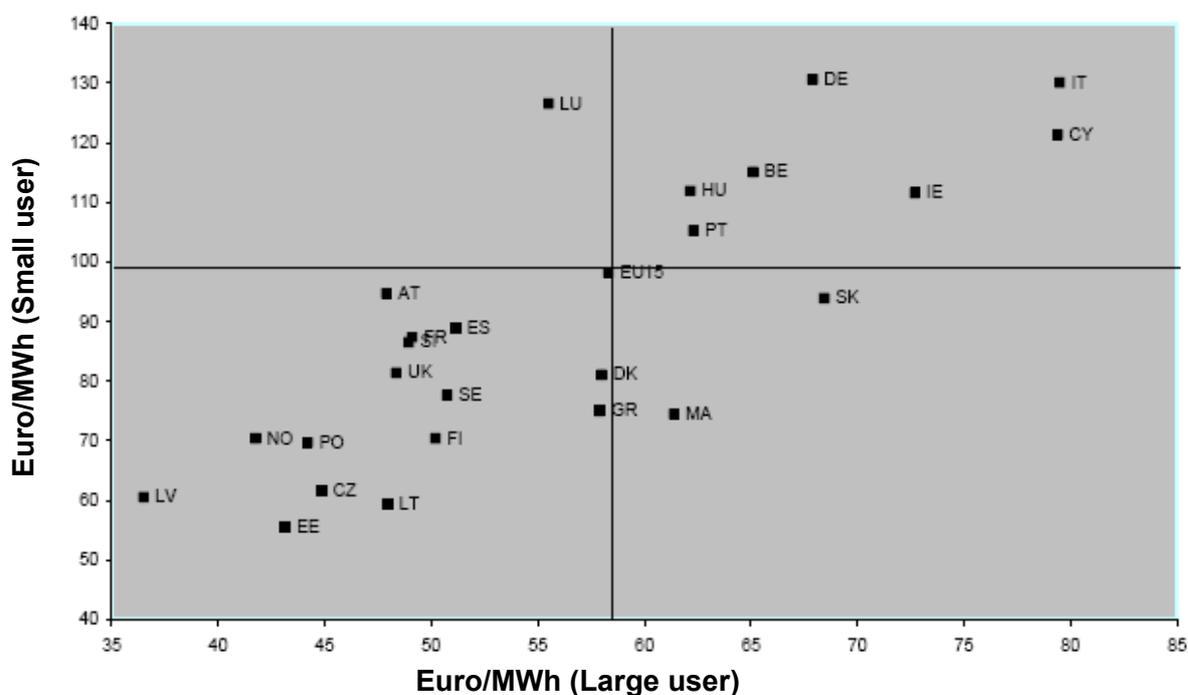
Picture number. 11 -

Benchmarking prices of electricity for households and other buyers in some countries of Central and South-Eastern Europe and some of the former Soviet Union countries

<sup>6</sup> Source of data - ERRA Budapest

### 3.3. Benchmarking prices of electricity in European Union countries in July 2004 (prices did not include taxes)<sup>7</sup>

Picture number 12 gives retail prices of electricity in a way which is very convenient for mutual benchmarking:



Picture number 12 . Prices of electricity in EU countries

Remark:

- Price for "Large user" means average price for standard industrial buyer who consumes 2,000,000 kWh of electricity annually with maximum capacity of 500 kW and 4000 hours of annual consumption of maximum capacity (i.e. standard buyer under nomenclature of Eurostat) and standard industrial buyer who consumes 24,000,000 kWh of electricity annually with maximum capacity of 4,000 kW and 6,000 hours of annual consumption of maximum capacity (i.e. standard buyer at nomenclature of Eurostat)
- Price for "Small user" is an average price for standard industrial buyer who consumes 50,000 kWh of electricity annually with maximum capacity of kW and 1000 hours of annual consumption of maximum capacity (i.e. standard buyer under nomenclature of Eurostat), standard buyer from the category of household who consumes 3,500 kWh of electricity annually, out of which 1,300 kWh at night and has connecting capacity of 4-9 kW (i.e. standard buyer under nomenclature of Eurostat) and standard buyer from the category of household who consumes 7,500 kWh of electricity

<sup>7</sup> Source of data - EUROSTAT

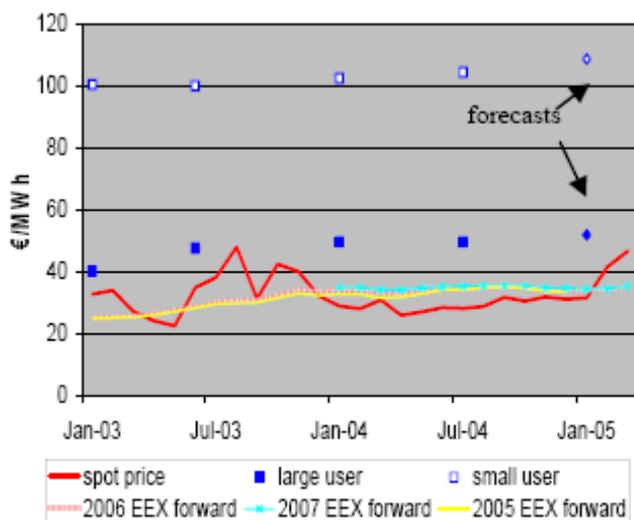
annually, out of which 2,500 kWh at night and has connecting capacity of 6-9 kW (i.e. standard buyer under nomenclature of Eurostat)

### 3.4. Tendency of the electricity price growth in EU in the first quarter of 2005<sup>8</sup>

#### 3.4.1. West Europe

Prices at spot market in the "West Central" part of European Union kept on growing in the first three months of 2005 similarly as it was the case end of 2004 and they amounted on average to around 45 Euro/MWh. However, prices for long-term contract "forward" show that the growth of "daily" prices is of transitional nature. Prices for contracts "forward" for calendar 2006 and 2007 have been approximately the same and they amount to 35 Euro/MWh what is a slight difference in relation to the prices from 2005.

Prices fluctuation at spot market does not reflect completely the prices for end users, so that their increase in January 2005 comparing to July 2004 is estimated to be approximately 6%. It is expected that the prices (without tax) for industrial consumers will retain in the upper part of range €40-50/Mwh, while the prices (without tax) for small commercial buyers and households will be around €100/MWh.



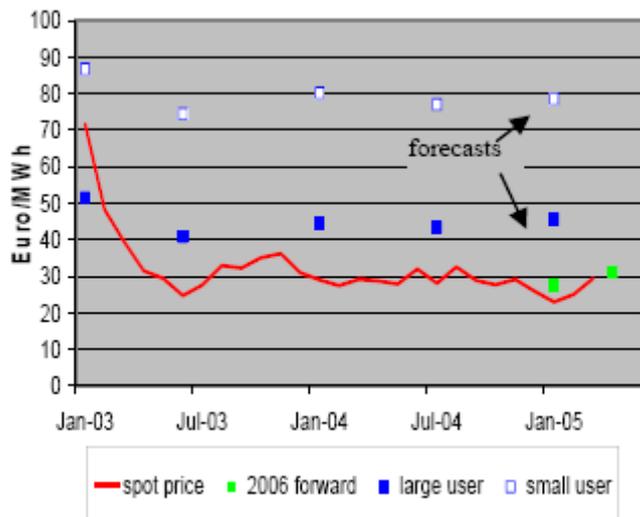
Graph 1. Sum average wholesale and retail prices in 2003-2005 in "West Europe" (BE, NL, FR, DE, AT, SI)

#### 3.4.2. Nordic region

The "spot" prices at Nordic region are stable and at relatively low level in relation to other regions; their average was below €30/MWh (relatively mild winter and good hydrological situation) in the first three months of 2005. The prices for "forward contracts" retained at the approximately same level.

<sup>8</sup> Sources for prices "forward": Platts, "Power in Europe", Nordpool Financial Market, EEX Terminmarkt

Sources for retail prices (January 2005) estimate on the basis of DTI Quarterly Report March



Graph 2. Sum average wholesale and retail prices 2003 - 2005  
Nordic region

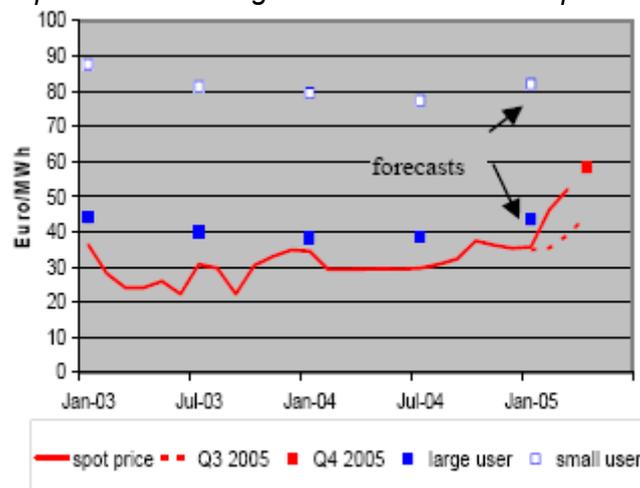
Retail prices have been more linked to the spot market in Nordic countries, although last analyses indicate some increase in January 2005. However, these prices are among lowest in EU.

### 3.4.3 Great Britain

In Great Britain, daily wholesale prices in the first three months of this year reflect expectations envisaged by long-term market "forward" and they are at the level of €50/MWh, although they started decreasing in the second half of March. It is expected that the prices will rise again in the second half of the year. The current prices for the forward contract for the third quarter are above €50/MWh, and for the fourth quarter they are almost €60/MWh.

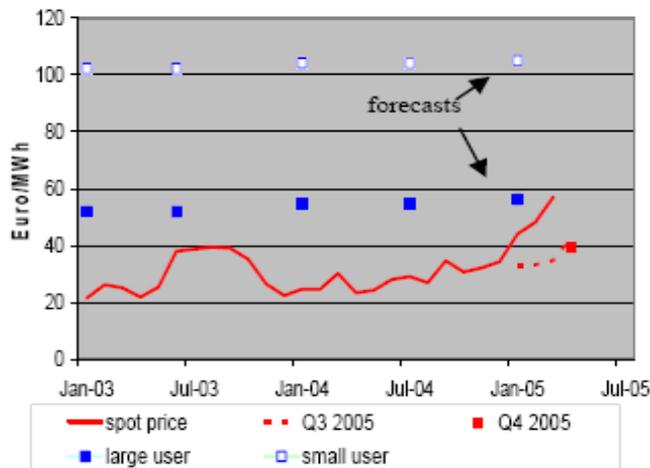
Retail prices for end users have also been rising so that they are over 10% higher than in January 2005 compared to July 2004.

Graph 3. Sum average wholesale and retail prices in 2003-2005: Great Britain



### 3.4.4 Spain

Very cold and dry weather in Spain during the first three months of 2005 resulted in considerable increase of prices, so that the average prices in March of around €60/MWh were higher than prices at any European exchange market.

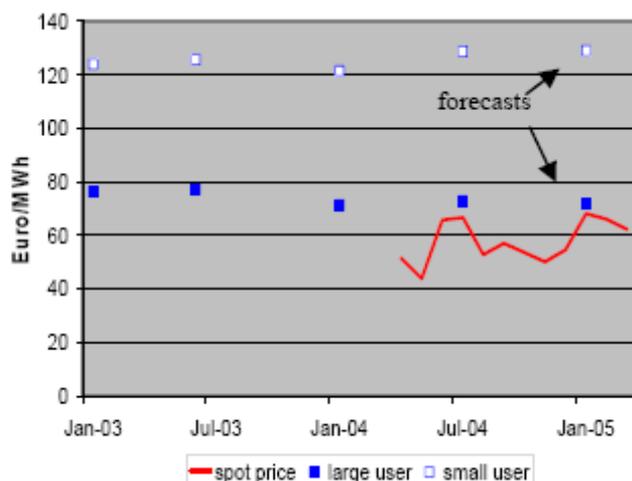


Graph 4: Sum average wholesale and retail prices 2003-2005

Future prices for long-term contracts for the remaining part of the year reflects the return to normal prices although they will stay at the level of €40/MWh. However, retail prices of electricity did not follow these events at the wholesale market since they are still under very strong control.

### 3.4.5. Italy

The wholesale prices in Italy remained at the level of €60/MWh, and the retail prices are relatively stable.

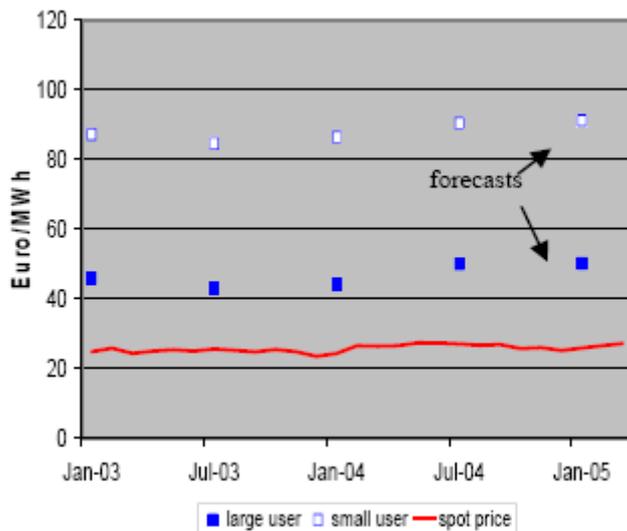


Graph 5: Sum average wholesale and retail prices 2003-2005:

### 3.4.6. Central Europe

There are a few pieces of available information about new countries members of EU from Central Europe, while the problems of past long-term contracts are still unknown and unsolved although there are indicators that many of these contracts will be terminated until 2007.

The prices on the Polish exchange market are still at very low level, which, regarding the increase of prices in the west Europe implies the increased demand for transmission capacities towards the neighboring countries.



Graph 6: Sum average wholesale and retail prices 2003 - 2005: Central Europe (Poland, Czech Republic, Slovakia and Hungary)