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STATE ELECTRICITY
REGULATORY COMMISSION



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STATE ELECTRICITY REGULATORY COMMISSION

**REPORT ON ACTIVITIES
OF THE STATE ELECTRICITY REGULATORY COMMISSION
IN 2015**

Tuzla, December 2015

Report on Activities of the State Electricity Regulatory Commission follows the reporting requirements of regulatory authorities in the European Union and Energy Community requirements, with some adaptations presenting the specificities of the regulatory framework in Bosnia and Herzegovina.

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1. INTRODUCTION

Reform and restructuring of the sector, electricity market liberalisation, the use of renewable energy sources, new investments and regional integration are the dominant topics in which the power sector was absorbed in 2015.

The legal framework development in the field of electricity, safe and reliable supply, dynamic and even better designed wholesale market, actual operation of nominally open retail market, emphasise the relevance and importance of an independent regulator. The role of regulator in deregulation processes is to define market principles for activities for which it is possible (generation, trading and supply) and set prices-tariffs for natural monopolies with free access to network infrastructure on a non-discriminatory basis to all interested parties.

The State Electricity Regulatory Commission has continued its mission in enhancing the functionality of open electricity market in Bosnia and Herzegovina (BIH). In this context, a special emphasis was put on completing a set of rules and decisions promoting market principles in the previously fully regulated area of providing ancillary services and balancing of the BIH power system. With this, one of numerous measures in the function of sector development, which were recognised and accepted by Prime Ministers of the six Western Balkans countries within the ‘Berlin process’, had already been implemented.

Bosnia and Herzegovina has a number of obligations ahead in the process of implementing the *EU Stabilisation and Accession Agreement*, the energy dimension of which has been clearly defined by the *Treaty establishing the Energy Community*. In this process, dynamics of this Community in its strengthening and enlargement are to be taken into account.

While creating the Energy Union, the European Union calls on strengthening of Energy Community activities, better implementation of EU law and implementation of key infrastructure projects in order to establish free transportation of energy through the EU and Energy Community countries and enhance security of supply.

The stability of the BIH power system operation was confirmed also in 2015. Total electricity generation in the past year amounted to 14,408 GWh, which is 4.1 % less in comparison to the previous year which was very favourable in hydrological terms. Hydro power plants produced 5,426 GWh, that is, 6.8 % less than in 2014. Generation by thermal power plants amounted to 8,712 GWh, which is 2.3 % less in comparison to the previous year. This is the third year in a row marked by the downward trend of generation by thermal power plants, caused mostly by reduced coal production as well as low electricity

*The State Electricity
Regulatory Commission is an
independent institution of
Bosnia and Herzegovina,
which acts in accordance
with the principles of
objectivity, transparency and
equality, and has jurisdiction
over and responsibility for
the transmission of
electricity, transmission
system operation and
international trade in
electricity, as well as
generation, distribution and
supply of electricity for
customers in the Brčko
District of Bosnia and
Herzegovina.*

*SERC is a non-profit
institution and is financed by
regulatory fees, which are
paid by the licensed entities.*

prices at the wholesale market. Generation by small hydro, solar and wind power plants amounted to 246.9 GWh, while industrial power plants produced 23.3 GWh.

Total electricity consumption in BIH in 2015 amounted to 12,606 GWh, which is 3.2 % higher than in the previous year, thus putting an end to the downward trend present since 2013. Consumption of customers connected to the transmission system decreased by 1.6 % while consumption of customers connected to the distribution network increased by 3.9 % compared to the previous year. The increase was observable among the customers connected to the 10 kV voltage level in particular as well as among the customers falling under the category ‘other customers.’

The maximum load of the power system in 2015 amounting to 2,105 MW was reported on 31 December 2015 at the 18th hour, which is less than the historic maximum of 2,207 MW reported on the same day and hour last year.

Total electricity in the transmission network amounted to 17,860.1 GWh, which is 1.01 % higher than in 2014. Transmission losses amounted to 359.4 GWh, that is, 2.01 % in relation to total energy in the transmission network. The trend of reducing distribution losses continued and they amounted to 1,035.1 GWh or 10.45 % in relation to gross distribution consumption, which was at the lowest level in the history of the BIH power sector.

In 2015, 3,445 GWh was exported, which is 7.3 % or 271 GWh less than in the previous year, which is mostly the consequence of reduced electricity generation. Imports amounted to 1,308 GWh with a 37.2 % increase compared to the previous year. Registered electricity transit through the BIH transmission network amounted to 2,439 GWh, which is an increase of 991 GWh or 68.5 % in comparison to 2014, consequently, total revenue achieved by BIH in the first nine months of 2015 on the basis of the *Inter-TSO Compensation Mechanism* (ITC mechanism) was doubled compared to the same period last year and exceeded 3 million BAM.



SERC was established by the Parliamentary Assembly of Bosnia and Herzegovina by adoption of the Law on Transmission of Electric Power, Regulator and System Operator of BIH, and by appointment of the Commissioners.

The Report on Activities of the State Electricity Regulatory Commission in 2014 was considered at the sessions of both Houses of the Parliamentary Assembly of Bosnia and Herzegovina. The report was adopted

- *at the 14th session of the House of Representatives, held on 30 June 2015, and*
- *at the 7th session of the House of Peoples, held on 15 July 2015.*

2. COMPOSITION AND ORGANISATION OF WORK OF THE STATE REGULATORY COMMISSION

Commissioners from the Federation of Bosnia and Herzegovina are:

- Mr. Mirsad Salkić, with his second five-year term (from 30 December 2009) and
- Mr. Nikola Pejić, with a five-year term (from 24 September 2007).

The Commissioner from Republika Srpska is

- Mr. Milorad Tuševljak, with a five-year term (from 10 August 2011).

It is obvious that the first five-year term of one Commissioner from the Federation of Bosnia and Herzegovina expired and that the second five-year term of the other Commissioner expired as well. Having in mind that the *Law on Transmission of Electric Power, Regulator and System Operator of BIH* sets forth that the Commission can only operate with all three commissioners and make decisions by a unanimous vote, and taking into consideration the existing practice, Mr. Nikola Pejić and Mr. Mirsad Salkić continue to perform this function until the completion of the procedure for (re)appointment of Commissioners from the Federation of Bosnia and Herzegovina.¹

Since the establishment of State Electricity Regulatory Commission, the Commissioners rotate in the position of the Chairman equally on an annual basis. Until 30 June 2015, this function was performed by Mr. Nikola Pejić. Mr. Milorad Tuševljak is the current Chairman of the Commission until 30 June 2016.

The work of SERC is organised within four departments:

- Tariff and Market Department,
- Licensing and Technical Affairs Department,
- Legal Department,
- Financial and Administrative Department.

Thematic working teams are formed on a needs basis at SERC in the work of which employees from different sectors participate with the aim of achieving higher performance.

SERC follows the requirements of regulatory practice by using different ways to improve its knowledge and experience, that is, by

¹ At the time of the creation of this report, the procedures for appointment of two Commissioners proposed by the Government of the Federation BIH have been in the procedure before the Parliament of the Federation BIH. Following the confirmation, the nominations are submitted to the BIH Council of Ministers, which propose the appointments to the Parliamentary Assembly of Bosnia and Herzegovina.

strengthening its professional capacities. The improvement of knowledge is achieved by participation in different professional consultations, conferences and topical seminars, in the country and abroad, and by distance e-learning, which has become dominant in the practice of the Commission. In addition, systematic training aimed at continuous harmonisation of knowledge, skills and practice with needs and expectations of the institution is provided by specialised workshops of the Energy Community Secretariat, training programs of the Energy Regulators Regional Association and the Florence School of Regulation, and seminars of the Directorate for European Integration aimed at the process of accession and integration of BIH into the European Union.

A particular contribution to professional training in 2015 was provided by the USAID *Energy Investment Activity* (EIA) Project, within which several educational workshops were organised covering different thematic contents.

SERC will remain dedicated to ensuring continuous professionalism of human resources through well-established as well as new training methods using modern communication tools. The justification of this approach has been confirmed by information, communication and presentation competence of a high number of individual employees who successfully present their knowledge and experience at international professional gatherings of regional as well as global scope.

In addition to professional training of its employees, the State Electricity Regulatory Commission also informed about and shared experiences on regulatory practice with regulated companies' employees, and participated in professional training of staff of other regulatory authorities in the region. Furthermore, SERC provided quality professional information on the energy sector and its reform not only to specialists in the sector but also to the general public, with special training organised for public media representatives.

Large volumes of different documents have been created as a result of SERC activities. The number of documents and information is constantly increasing. SERC, as the creator, organises keeping, evaluation, extraction and protection of the registry office material under the professional supervision of the Archive of Bosnia and Herzegovina. This cooperation enables these processes to develop in line with professional principles, experiences and recommendations and through mutual familiarisation of the two institutions.

In the reporting period, functionally obsolete and written-off computer equipment was replaced by the new one, in compliance with prescribed standards and guidelines of the BIH Council of Ministers for procurement of computer equipment and software. In this process, energy consumption characteristics of equipment and good practices were taken into account as recommended by the Office for Auditing of the Institutions of Bosnia and Herzegovina in their performance audit reports.



3. KEY ACTIVITIES

Documents under regulatory competences are reviewed and determined in regular sessions, in accordance with the authorities prescribed by the law; issues and documents of an organisational and administrative nature are reviewed and adopted in internal meetings.

With a view to soliciting comments of interested parties and members of the public on rules and regulations, or on any other document, SERC organises general hearings; technical hearings, which are organised to resolve technical issues during the proceedings, e.g., the processing of procedural or essential issues; and formal hearings, which are organised to establish decisive facts, based on which SERC may resolve certain applications or disputes.

Regular sessions and all public hearings are open to the public.

In 2015, the State Electricity Regulatory Commission held 19 regular sessions and one extraordinary session, 28 internal meetings and organised ten public hearings, out of which eight had general and two had formal character.

In the reporting period, in a transparent manner and by holding relevant public hearings in which interested members of the public were allowed to give their comment along with power sector stakeholders, the Commission conducted the activities with regard to adoption and approval of a range of documents, tariff setting, granting of licenses, and carried out other activities of which the most important ones are grouped in the clusters listed below.

Transparency towards the public through consultation and communication with all interested professionals, as well as the general public, is the fundamental orientation of the Commission, which is conducive to checking the suitability of proposed solutions before their final adoption. The practice of the mutual exchange of collected public comments in the same or similar procedures is applied by all three regulatory authorities in the power sector of Bosnia and Herzegovina.

3.1 SERC Rules and Documents

Licensing Rule

After the expiry of deadlines as defined by the *Decision on scope, conditions and time schedule of electricity market opening in Bosnia and Herzegovina* from 2006, adoption of the *Rules on Supply of Customers in Brčko District BIH with Electricity* (2013 and 2014), relevant rules under the competence of the entity regulators, and after the adoption and approval of the new *Market Rules* in 2015, the need arose for harmonisation of the *Licensing Rule* with concepts, terms and solutions present in these as well as other rules and the changes which occurred in the meantime in the electricity market in BIH.

The term ‘eligible customer’ defined different customer categories which from the beginning of market opening process in 2007 successively acquired the possibility – eligibility to freely chose their suppliers and supply offers which suited them best. As the electricity market has been fully opened since 1 January 2015 for all customers, the concept of tariff, that is, non-eligible customer (a customer without the right to freely choose a supplier), lost its meaning and was no longer appropriate either for classification of customers or the name of the activity, that is, name of the license.

With the market and regulatory framework development, enhancement of competition and, in particular, increase in a number of traders in the electricity market, there were no longer any reason for certain industrial consumers to be engaged in international trading – import of electricity for self-consumption to meet their own needs by using a special license.

Initiatives of some energy entities drew attention to the presence of administrative obstacles in performing the electricity generation activity in newly built generation facilities during trial operation. The introduced changes to issuance of a temporary generation license made connection of generation facilities in the Brčko District BIH to the transmission system during trial operation easier as well as the registration of daily schedules of these facilities based on a unique identification mark – EIC code (*Energy Identification Code*) granted by the ISO BIH.

The obligation to obtain certificates on quality assurance system was kept only for non-market activities (transmission of electricity, activities of the independent system operator and electricity distribution), taking into account in this manner the specificities which are characteristic of trading activity with regard to the number of employees, size and internal organisation of those entities and, in particular, the level of costs for obtaining such documents.

Based on multiannual practice in implementing the license suspension concept, amendments to the Rule were also used to limit the licensee to ask several times for temporary suspension of the license at his own initiative by ‘putting it on hold’ for certain periods during the term of the license, by which they practically challenged the credibility of their actual activities in the electricity market. Furthermore, it was necessary to provide more efficient tools to penalise the failure of licensees to pay the regulatory fee on a regular basis.

Changing the previous method of drafting licensing conditions for performance of the international electricity trading activity – by defining the Standard licensing conditions as a standard set of rules on right and obligations of the licensee known beforehand (acceptance of which is confirmed by submitting a written statement to that effect already with the license application), the procedure for granting this type of licenses, which is most common in practice, was even more simplified. This also considerably reduced the number of documents which circulated so far both within SERC and in communication with the applicant and interested third parties due to formal and procedural reasons.

Following a public hearing on proposed solutions held on 18 November 2015 and lapse of deadlines for submission of public comments, in which interested parties supported the proposed solutions, the State Electricity Regulatory Commission

adopted *Rules on amendments to the Licensing Rule* on 15 December 2015. At the same session of the Commission, *Standard licensing conditions for performance of the international electricity trading activity* were defined.

A New Method of Providing Ancillary Services and Balancing of the BIH Power System

During the past three years, aware of the importance of ancillary services and balancing of the power system, the State Electricity Regulatory Commission in cooperation with the Independent System Operator and other power utilities conducted a range of activities which resulted in a new method of providing ancillary services and balancing of the BIH power system.

The joint activities of SERC and the ISO BIH with the use of documents developed within the USAID *Regulatory and Energy Assistance Project* (REAP) in March 2014 resulted in defining the *Concept of Ancillary Services for the balancing of the power system of Bosnia and Herzegovina* (hereinafter: the Concept of Ancillary Services or the Concept). It is the opinion that solutions as defined by the Concept ensure stable and reliable operation of the power system and the fulfilment of BIH's international obligations, primarily under the *Treaty establishing the Energy Community* and towards the European Network of Transmission System Operators for Electricity (ENTSO-E) and its Regional Group of Continental Europe, that is, the SHB Control Block (Slovenia – Croatia – Bosnia and Herzegovina).

The Concept of Ancillary Services with illustrations of a considerable number of procedures which had to be developed paved the way for further trends in completion of the existing regulatory framework for the provision of ancillary services for balancing of the BIH power system and the commencement of its operational functioning. The basic solutions of the Concept were transformed through further elaboration into rules applicable in practice which regulate this issue on new grounds.

In July 2014, SERC amended the *Tariff Pricing Methodology for services of electricity transmission, operation of ISO and ancillary services*. SERC expected that the ISO BIH would harmonise the existing Market Rules and Grid Code pursuant to the SERC Conclusions from March 2014 and make them compatible with the solutions provided in the Concept, together with additional procedures required to implement the rules.

Due to considerable delays in dynamics of those activities, SERC regulated the method of providing ancillary services and balancing of the BIH power system on a temporary basis by the Decision of 18 November 2014.

By the *Decision on dry-run period for application of implementing rules and procedures for the provision of ancillary*



services and balancing of the power system of BIH, in December 2014 SERC accepted the opinion of the ISO BIH and other power entities to define 1 June 2015 as the deadline for the commencement of effective application of rules and procedures. However, as the new Market Rules were defined only on 24 April 2015, when approving them in May 2015 SERC decided that the application thereof would commence on 1 January 2016, until when the dry-run period was prolonged.

During the remaining period until the end of 2015, SERC adopted a decision defining coefficients and price caps for capacity and energy of secondary and tertiary control as well as coefficients with the price of positive and negative imbalances, while the price cap for downward tertiary control capacity was set in amendments to the decision. In this manner, the input parameters were defined for procurement of ancillary services on the market which was conducted by the ISO BIH as the entity procuring ancillary services and providing the system service in Bosnia and Herzegovina.

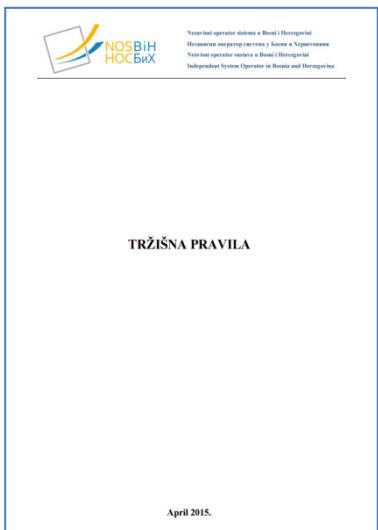
At the end of 2015, the ISO BIH defined the final versions of documents accompanying the new Market Rules:

- Rules of daily balancing energy market for tertiary control,
- Ancillary service procedures and Procedures for data exchange between the ISO BIH and distribution system operator,
- Standard forms of balance responsibility agreement and ancillary services agreement,
- Balance group participation form, Balance responsible party registration form, Reserve object registration form, Market participant registration form and Application for EIC codes, and
- Concrete injection and withdrawal points and Instructions for daily schedules nominations.

By a separate SERC decision which was adopted in the tariff proceedings upon the application of the Independent System Operator in BIH, a tariff for system services was determined thus completing a set of rules and decisions which enabled the introduction of market principles into the previously fully regulated method of providing ancillary services and balancing of the BIH power system as of 1 January 2016. In this manner, the functionality of open wholesale and retail electricity markets was enhanced and one of the measures accepted by Prime Ministers of the six countries in the region within ‘Berlin process’ implemented.

3.2 Documents Approved by SERC

Market Rules



The Market Rules regulate relationships between the ISO BIH and licensed participants in the electricity market. The purpose of the Rules is to create conditions for safe operation of the BIH power system, that is, efficient procurement of ancillary services and provision of system service, balancing of the BIH system at the lowest possible costs, and efficient functioning and further development of the wholesale and retail electricity markets in BIH.

The Rules define participants, method of their registration and balance responsible party and balance group registration. Daily schedule nominations, agreement notification procedure and operational phase of engaging ancillary services are prescribed; types of injection and withdrawal points in the transmission and distribution networks and assignment of metering points are defined as well as delivery of metering data. The Rules regulate balance responsibility of balance responsible parties, market participants and end customers. Ancillary services of primary, secondary and tertiary control, voltage and reactive power control, covering of losses in the transmission system, elimination of unintentional deviations from daily schedules – compensation, daily balancing energy market for tertiary control, imbalances, calculation and reporting and data publication are elaborated separately.

Thus, the Market Rules are an exceptionally demanding technical document which includes the basic concept of market redesign, legal and regulatory framework for market design, technical preconditions for market functioning and provides a number of procedures regulating technical and commercial relationships among market participants.

The first Market Rules were prepared and approved in 2006. Taking into consideration the new method of providing ancillary services and balancing the BIH power system as defined by the Concept of Ancillary Services and accepting regional changes, in March 2014 the procedure for preparing new Market Rules was initiated, in which comments of market participants were provided through the relevant Technical Committee. The Market Rules were submitted to SERC in April 2015 and approved in May with effective application starting on 1 January 2016.

Grid Code

The Grid Code regulates connection requirements (procedures, contracts, criteria), the method of operational planning (demand forecast, network constraints management) and operational work (dispatching, procedures, communications), measures in

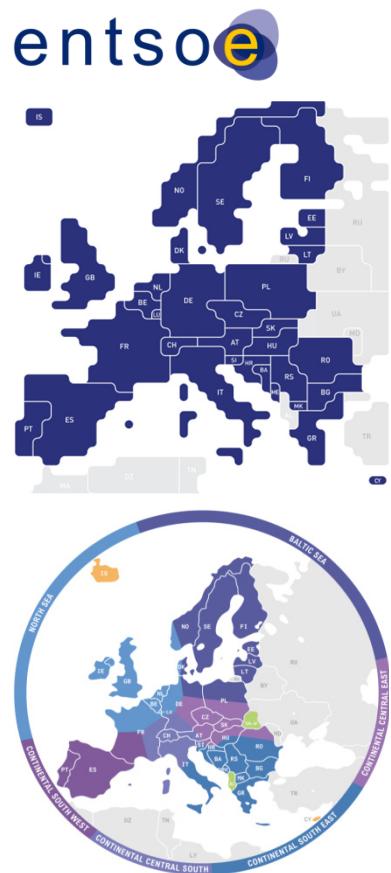
unexpected situations (consumption control, operational restoration of the system after total breakdown), metering code in the power system and other necessary technical measures for quality and reliable transmission system operation.

When defining the *Concept of Ancillary Services for the balancing of the power system of Bosnia and Herzegovina* in March 2014, SERC pointed out that this document should be used to innovate and complete the existing regulatory framework, including amendments to the Grid Code as approved by SERC decisions in 2006 and 2011. By its Decision from November 2014, SERC excluded from application some Grid Code provisions until harmonisation thereof with the Concept of ancillary services.

The need for modifications of the Grid Code was also recognised in the *Indicative Generation Development Plan for the Period 2016 – 2025*. However, in 2015, the ISO BIH did not submit to SERC any amendment to the Grid Code for approval.

Harmonisation, that is, unambiguous regulation of a whole set of rules for network operation was recognised in the Third Energy Package of the EU. In line with this, the EU Member States, with full participation of the European Network of Transmission System Operators for Electricity (ENTSO-E) and the Agency for the Cooperation of Energy Regulators (ACER) conduct a complex activity of developing rules for operation of networks (*Network Codes*). The set of these rules in the field of electricity comprises three groups:

- *System connection codes*
 - Network Code on Requirements for Generators (RfG),
 - Network Code on Demand Connection (DCC),
 - Network Code on High Voltage Direct Current Connections (HVDC),
 - *System operation codes*
 - Network Code on Operational Security (OS),
 - Network Code on Operational Planning and Scheduling (OPS),
 - Network Code on Load Frequency Control and Reserve (LFCR),
 - Network Code on Emergency and Restoration (ER),
 - *Market codes*
 - Network Code on Capacity Allocation and Congestion Management (CACM),
 - Network Code on Forward Capacity Allocation (FCA),
 - Network Code on Electricity Balancing (EB).



On 5 December 2014, the European Union Member States approved the first of several rules – CACM. Commission Regulation (EU) 2015/1222 establishing a guideline on capacity allocation and congestion management was adopted on 24 July 2015. The implementation deadline is three years.

The Network Code on RfC was approved on 26 June 2015, followed by publishing of the Draft Commission Regulation (EU) establishing this code. The Network Code on HVDC was approved as third – on 11 September 2015 while the Network Code on DCC was approved on 16 October 2015. Until the end of the year the fifth network code – the Network Code on FCA was adopted on 30 October 2015.²

ENTSO-E, ACER and the European Commission are currently working on a new version of the first three operational codes (OS, OPS, and LFCR), which will be merged into a single System Operation Guideline.

The content of all network codes becomes part of the European Union legislation and directly applicable in the Member States following the adoption of regulations by the European Commission. In line with the defined procedure, in the Energy Community Contracting Parties transposition of regulations should be done by national regulators following the adoption of relevant decisions by the Permanent High Level Group of the Energy Community.

In 2016, the European Commission, ACER and ENTSO-E will conduct intensive activities on completing the remaining network codes while in the Energy Community activities on adopting decisions for transposition of these codes into to the Energy Community *acquis* will be carried out. Therefore, the issue of network codes is imposed as one of the key activities in the work of relevant institutions in Bosnia and Herzegovina, primarily the State Electricity Regulatory Commission and ISO BIH.

Indicative Generation Development Plan for Period 2016 – 2025

An *Indicative Generation Development Plan* is developed for a ten-year period every year. The goal of the plan is to inform the current and future users of the needs and existing projects for the construction of new generation capacities. At the same time, this plan is used as one of the bases for the development of a *Long-Term Transmission Network Development Plan in BIH*, which is also developed every year covering a ten-year period including the issue of new cross-border lines.

The main objective of the Indicative Generation Development Plan is to analyse the balance of capacity and energy in the

² At the time of the creation of this report, the approved codes are undergoing scrutiny by the European Parliament and Council in order to check compliance of the codes with the main principles of the European Union and Third Package. The adoption of regulations is expected in the beginning of 2016.

transmission network for the following ten years. The development of this document is also in the function of fulfilling obligations towards ENTSO-E.

The Independent System Operator in BIH, as all other system operators within ENTSO-E, is obligated to provide its contribution to the development of the European Ten-Year Network Development Plan (TYNDP), which is prepared on a biannual basis pursuant to Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity.³ In this context, the ISO BIH is obligated to submit BIH power system development plans, which are based on consumption, generation including new sources, and planned reinforcements of the internal transmission network and interconnections. These activities presume and imply full coordination at the regional level with the analysis of potential congestion in the internal network and cross-border lines.

An electricity consumption forecast for the period from 2016 to 2025 was developed using the previous nine-year experience in preparation of this type of plans, taking into consideration the existing trends as well as assessments of various international and national institutions. Furthermore, the trend in gross domestic product was an important factor while forecasting electricity consumption, for which data and projections of international financial institutions were used. For development of the *Indicative Generation Development Plan for the Period 2016 – 2025*, qualitative input data were provided, although some transmission system users do not provide data in accordance with the Grid Code provisions, primarily in the field of electricity. Furthermore, some investors make unrealistic projections concerning the year when a facility would be put into operation, in which case the ISO BIH provides its own projection. In terms of providing information on the dynamics of connecting new generation facilities to the transmission network, the need for the more significant contribution by the relevant entity ministries and regulatory commissions was recognised. Furthermore, the necessity to amend the Grid Code and Connection Rules was highlighted.

A public hearing on the document, held in March 2015, focused on generation forecasts, new generation facilities and balances of capacity and energy in the transmission network. The balances of capacity and energy for the following ten years lead to the necessity of constructing the new generation capacities. The State Electricity Regulatory Commission adopted a *Decision on approval of the Indicative Generation Development Plan for the Period 2016 – 2025* in April 2015.



³ Following public consultation, ENTSO-E submitted the TYNDP 2014, that is, the latest *European Ten-Year Transmission Network Development Plan* to ACER on 31 October 2014, which in its opinion pointed to the need for further improvements of the preparation process. The issuance of the next plan (TYNDP 2016) is expected in June 2016.

DUGOROČNI PLAN RAZVOJA
PRENOSNE MREŽE 2015. - 2024.
KNJIGA I

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Long-Term Transmission Network Development Plan for Period 2015 – 2024

The State Electricity Regulatory Commission approved the first Long-Term Transmission Network Development Plan in November 2014, with the repeated conclusion on significant delays in preparation of planning documents.⁴ The Long-Term Development Plan ensures that obligations towards the European Network of Transmission System Operators for Electricity (ENTSO-E) concerning contributions to the development of the European Ten-Year Network Development Plan are met more adequately.

Pursuant to applicable legal provisions, a long-term transmission network development plan is developed on an annual basis and covers the forthcoming ten-year period. The relevance of the long-term plan is reflected in the fact that based on this plan Elektroprivreda BiH prepares its annual investment plan and submits it to SERC for approval by the end of November for the following year.

The Long-Term Transmission Network Development Plan for the Period 2015 – 2024 was submitted to SERC only in December 2015. Although this document was submitted in the period when the planning documents for the upcoming period (2016 – 2025) and the related Investment plan for 2016 should have been reviewed, SERC started to review the submitted Long-Term Plan. The adoption of the decision is expected at the beginning of 2016.

The Long-Term Plan which was prepared by the Transmission Company and subsequently revised by the Independent System Operator in BIH, defines the required reinforcement of the existing transmission network facilities and construction of the new ones to ensure timely commencement of activities with regard to designing, constructing and putting into operation of infrastructure necessary for a continuous supply and stable operation of the system. The funds required for implementation of proposed investments for the period 2015 – 2024 amount to €432.41 million. It is necessary to allocate €180.08 million for construction of new facilities (€73.34 million, €41.72 million and €63.02 million for substations, transmission lines and interconnectors respectively) while €245.33 million should be allocated for reconstruction (€171.81 million and €73.52 million for high-voltage and mid-voltage facilities and transmission lines respectively).

Rules for Allocation of Cross-Border Transmission Capacities

The Coordinated Auction Office in South East Europe (SEE CAO) with the seat in Podgorica was formally established on 27 March 2014 commencing its operational activities on 27 November 2014 when annual auctions on the borders BIH – Montenegro and BIH – Croatia were organised.

⁴ The Long-Term Plan for the forthcoming ten-year period should be submitted to SERC for approval by the end of October.

During 2015, SEE CAO organised its activities in line with *Auction Rules for Capacity Allocation*, which were approved in September 2014 by the competent national regulators of Albania, Bosnia and Herzegovina, Montenegro, Greece, Croatia, Kosovo* and Turkey at the request of the operators. In 2015, new versions of Auction Rules were prepared following necessary consultation with stakeholders in the sector and the Energy Community Regulatory Board (ECRB). Taking into account the joint position of the ECRB on Auction Rules, in October 2015 SERC adopted a *Decision on approval of Auction Rules for Capacity Allocation* (version 1.3 from September 2015), which the Independent System Operator submitted for approval.



On several occasions at national and international gatherings, SERC welcomed the commencement and successful operation of SEE CAO, but also expressed its concerns over its reduced geographic scope, that is, lack of participation of operators from all South East Europe countries.

Due to non-participation of Serbia in activities of this Office, there is still a need to regulate rules for allocation of cross-border capacities on the joint border between BIH and Serbia on an annual, monthly and daily basis. Consequently, on 18 November 2015, at the request of the Independent System Operator in Bosnia and Herzegovina, SERC approved:

- *Rules for annual and monthly auctions for allocation of transmission capacities on the border between regulation areas of the Public Utility Elektromreža Srbije (EMS) and the Independent System Operator in Bosnia and Herzegovina (ISO BIH) in 2016*, and
- *Rules for daily auctions for allocation of transmission capacities on the border between regulation areas of the Public Utility Elektromreža Srbije (EMS) and the Independent System Operator in Bosnia and Herzegovina (ISO BIH) in 2016*.

As SEE CAO does not cover intraday allocation of cross-border transmission capacities, at the request of the ISO BIH the following documents were also approved by same SERC decision:

- *Rules for intraday allocation of transmission capacities on the border between regulation areas of the Independent System Operator in Bosnia and Herzegovina (ISO BIH) and the Public Utility Elektromreža Srbije (EMS) in 2016*,
- *Rules for intraday allocation of transmission capacities on the border between regulation areas of the Independent System Operator in Bosnia and Herzegovina (ISO BIH) and the Montenegrin Electric Transmission System (CGES) in 2016*, and

* This designation is without prejudice to positions on status, and is in line with United Nations Security Council Resolution 1244 and the International Court of Justice.

- *Rules for intraday allocation of transmission capacities on the border between regulation areas of the Croatian Transmission System Operator (HOPS) and the Independent System Operator in Bosnia and Herzegovina (ISO BIH) in 2015.*

In 2016, allocation of transmission capacities on the border with Serbia through annual and monthly auctions is conducted by EMS while daily and intraday auctions are conducted by the ISO BIH. Intraday auctions on the borders with Croatia and Montenegro are conducted by HOPS and the ISO BIH respectively.

General Conditions for Electricity Supply in Brčko District BIH

With the aim of harmonising the provisions of *General Conditions for Electricity Supply in the Brčko District BIH* with changes caused by full electricity market opening, on 2 June 2015 JP Komunalno Brčko submitted amendments to the General Conditions to SERC for approval.

On this occasion, SERC adopted Conclusions according to which the proposer is obligated to consistently replace, that is, harmonise the term referring to the electricity customers throughout the whole text of the General Conditions. It was also suggested that the issues noted by the SERC expert team be additionally considered and analysed, in particular those that are not in compliance with the *Rules on Supply of Customers with Electricity*. It was noted that the proposed adjustment of tariff category and tariff group does not protect customers' right, which is the reason why the proposer was asked to remove these shortcomings.

The proposer is obligated to conduct a public hearing on a Proposal of amendments to the General Conditions in Brčko and prepare and adequately publish the consolidated text of the General Conditions for Electricity Supply in the Brčko District BIH.

In line with the SERC Conclusions, on 15 December 2015 the Steering Board of the Public Utility *Komunalno Brčko* adopted an innovated Decision on amendments to the General Conditions, followed by the adoption of a *Decision on approval of General Conditions for Electricity Supply in the Brčko District BIH* by the State Regulatory Commission.

Operation of Transmission System Users during Functional Testing and Trial Operation

With regard to completion of construction works at the Thermal Power Plant Stanari, the first constructed facility of this kind in the past several decades in Bosnia and Herzegovina, at the proposal of the Independent System Operator in BIH, SERC gave its approval to the method of operation of the Company EFT – Rudnik i Termoelektrana Stanari (EFT – Stanari Coalmine and Thermal Power Plant Company) during functional

testing and trial operation. As an exception to the Market Rules, it was permitted for the transmission system user to provide reserve capacity, that is, energy to cover its own imbalances and compensate all unintentional deviations through compensation programs as defined by the ISO BIH.

The commencement of functional testing and synchronisation of TPP Stanari with the BIH power system is scheduled for the first working day in 2016.

3.3 Licensing Proceedings

In 2015, SERC granted seven licenses for the international electricity trading activity, while at the time of writing this Report, it worked intensively on solving two additional applications for the same activity filed by GEN-I d.o.o. Sarajevo and Vitol Adriatik d.o.o. Sarajevo.

Due to the expiration of the term of the previously issued license for the international electricity trading activity, the proceedings were conducted and five-year term licenses were renewed to the following entities:

- Petrol BH Oil Company d.o.o. Sarajevo (February 2015),
- ProEnergy d.o.o. Mostar (February 2015),
- Interenergo d.o.o. Sarajevo (October 2015),
- HEP-Trade d.o.o. Mostar (November 2015),
- Danske Commodities BH d.o.o. Sarajevo (December 2015).

The Company EFT – Rudnik i Termoelektrana Stanari d.o.o. Stanari was granted a temporary license (October 2015), while the Company Steelmin BH d.o.o. Jajce renewed the license for the international electricity trading for self-consumption (October 2015).

At the request of the companies, international electricity trading licenses to the Companies EL-EN Solutions d.o.o. Banja Luka (June 2015) and KTG Zenica d.o.o. Zenica (October 2015) were suspended by SERC decisions to the expiry of their respective terms.

As licensees for the international electricity trading activity, the following entities also were registered in the previous period: GEN-I d.o.o. Sarajevo, Alpiq Energija BH d.o.o. Sarajevo, Repower Adria d.o.o. Sarajevo, HSE BH d.o.o. Sarajevo, MH Elektroprivreda Republike Srpske Parent Company, a.d. Trebinje, JP Elektroprivreda Hrvatske zajednice Herceg Bosne d.d. Mostar, JP Elektroprivreda Bosne i Hercegovine d.d. Sarajevo, Energy Financing Team (EFT) d.o.o. Bileća, Ezpada d.o.o. Mostar, Comsar Energy Trading d.o.o. Banja Luka and Axpo d.o.o. Sarajevo while B.S.I. d.o.o. Jajce was registered for the import of electricity for self-consumption.

The Independent System Operator in Bosnia and Herzegovina Sarajevo and Elektroprenos Bosne i Hercegovine a.d. Banja Luka are holders of the license for performance of the activity of independent system operator and the license for the electricity transmission activity respectively. The Public Utility Komunalno Brčko d.o.o. Brčko holds the license for electricity distribution and the license for electricity trading and supply in the territory of BIH.

Every year, including this one, the Company Elektroprenos Bosne i Hercegovine updated and reported changes in overviews of facilities used by the Company for performance of the activity of electricity transmission as well as overviews of transmission lines which are not owned by the Transmission Company and are not in the function of electricity transmission, on which SERC reached relevant conclusions in March 2015.

3.4 Monitoring of Activities of Licensed Entities

As part of its regular activities, throughout the year SERC monitors operations of the licensed entities and their compliance with the licensing conditions, primarily by monitoring regulated companies – the ISO BIH, Elektroprenos BIH and JP Komunalno Brčko. Monitoring is performed by an analysis of regular and special reports submitted by the licensed entities as well as by announced or unannounced visits to licensees. Licensees submit annual, semi-annual, monthly and daily reports on individual activities of a financial, technical and organisational character. In addition, licensees' reports on contingency events in the system are available.

Visits of SERC experts to the regulated entities enable a direct insight into their documents and activities, which is of great relevance in particular when analysing the financial position of an entity from the aspect of application of approved tariffs.

In October 2015, the following regulated entities were visited in the function of regulatory monitoring:

- JP Komunalno Brčko,
- Independent System Operator in Bosnia and Herzegovina, and
- Elektroprenos Bosne i Hercegovine.

JP Komunalno Brčko was once again requested by the State Electricity Regulatory Commission to conduct unbundling of accounts for non-energy activities and fulfil the obligation to adequately register any income received on the basis of operation of the Work Unit *Elektrodistribucija*, separately from incomes that the Company receives on the basis of other activities (water production and distribution, maintenance of public areas and transport and disposal of waste materials). SERC reminded the regulated entity of the obligation to define ownership relationships

over the fixed assets in the function of electricity distribution and supply, which are registered as fixed assets of the Government of Brčko District BIH, with JP Komunalno Brčko having a servitude right. The necessity to resolve the issues of depreciation of these assets was pointed out, in particular in terms of investment maintenance. The licensee was requested to prepare a long-term investment plan which would include necessary funding as well as a method to ensure it. The obligation to update annexes to the electricity distribution license was highlighted, namely, an *Overview of Facilities* used for this activity. Having noted a significant share of labour costs when analysing expenses of the Company, SERC pointed to the need for responsible acting in this segment, in particular with regard to staff recruitment.

After a visit in the function of regulatory monitoring, SERC called on the ISO BIH to exercise the utmost responsibility with regard to the framework and structure of approved costs and expenditures. Compliance with deadlines for review and submission of a long-term transmission network development plan was highlighted (until the end of October in the current year for the upcoming ten-year period). The ISO BIH was instructed to monitor voltage quality pursuant to EN 50160 standard. Regarding the issue of connection and putting of new generation facilities into operation, SERC recognised the need for transforming the experiences gained into rules and regulations dealing with these matters. SERC suggested that the ISO BIH, in consultation with the competent regulators and ministries, prepare descriptive informative materials which would present to all potential investors necessary steps to be undertaken in the phase of connecting and commissioning trial operation of any new generation facility. With a view of increasing transparency, including information sharing and quality interaction of market participants, the ISO BIH was called to publish rules, regulation, forms and other documents in a timely manner and update power indicators and other information on its website, both in the official BIH languages and English. SERC asked for development of an innovated document in the function of estimating maximum capacity for integration of generation facilities using solar and wind energy into the BIH power system, taking into consideration the existing transmission and regulation capacities.

As part of regulatory monitoring, SERC drew attention of Elektroprenos BIH to timely commencement and efficient implementation of activities on development of a long-term transmission network development plan as well as to revision of the plan in line with comments provided by the ISO BIH. Furthermore, the necessity to fulfil the obligation regarding development and submission of an annual investment plan for the forthcoming year for approval until the end of November of the current year was highlighted. It was suggested to the Company to resolve the issue of outstanding receivables with other business entities in the country as soon as possible and pursuant to the



relevant laws. The regulated entity was asked to consider and propose amendments accordingly to the relevant documents providing for connection charges for newly constructed substations 110/x kV which are in the function of distribution, thus putting distribution system operators in the same position as other legal entities connecting to the transmission system. The necessity to constantly improve the quality of supply was highlighted in particular, primarily through operational readiness of transmission facilities and lines.

The following international traders were visited in the function of regulatory monitoring in May, July and September 2015: HEP-Trade, Danske Commodities BH, Petrol BH Oil Company, Elektro energija BH, Interenergo, Repower Adria and EFT – Rudnik i Termoelektrana Stanari (Coalmine and Thermal Power Plant Stanari).

The visits were conducted with a view of inspecting the licensed activity and establishing facts on fulfilment of the prescribed licensing conditions. On this occasion, the necessity to permanently fulfil general and specific criteria was emphasised (in case of performing other activities, the licensee is obligated to ensure unbundling of accounts for a licensed activity and other activities). The obligations of complying with tariffs, Market Rules and Grid Code, including the right to participate in the work of technical committees, were pointed out. Furthermore, during the visit other business documents of international traders were also inspected, information on problems encountered by some entities was collected and it was suggested to pay more attention to some aspects of performing the licensed activity which may violate compliance with the prescribed licensing conditions.

3.5 Tariff Proceedings

Tariffs for Electricity Transmission Services

In March 2015, Elektroprenos Bosne i Hercegovine filed the application for modification of the electricity transmission tariff in which the Company presented requests for revenues and expenditures as well as costs that the Company plans to include in the tariffs for its services. An average tariff increase of 13% was requested by this application.

SERC made decisions upon the tariff application pursuant to the criteria as laid down in the *Law on Transmission of Electric Power, Regulator and System Operator of BIH* and the *Tariff Pricing Methodology for services of electricity transmission, operation of independent system operator and ancillary services*.

On 14 April 2015, a formal hearing was held in order to define facts in the tariff proceedings. SERC applied the basic principles prescribing that the tariff will be fair, reasonable, and non-discriminatory, based on the objective criteria and justified costs and set in a transparent manner. A decision defining the revenue

requirement of Elektroprenos BIH for 2015 and tariff for electricity transmission services was adopted in May 2015.

According to this decision, applicable as of 1 July 2015, the average transmission charge was kept at the previous level amounting to 4.545 €/MWh, therefore, the transmission component in the electricity price remained unchanged. Part of the transmission charge referring to energy also remained unchanged amounting 2.955 €/MWh. As the current volumes of transferred energy and capacity in the BIH electricity transmission system were more favourable than in the preceding period, part of the transmission charge referring to capacity was reduced by 3.1% amounting to 752.6 €/MW.

The SERC decision does not have any impact on the electricity prices paid by end-customers.

Tariff Proceedings at Request of Independent System Operator in BIH

Pursuant to the legal obligation to submit for consideration the application for revenues and expenditures in the following year as well as costs that the Company plans to include in the tariffs for system operation, the ISO BIH filed such application in November 2015, in which it presented and reasoned planned revenues, expenditures and costs in 2016.

Stagnation and a mild decrease in electricity consumption over the past three years, that is, withdrawal of electricity from the transmission network, caused poorer realisation of the ISO BIH financial plan in 2015 as well as the request for correction of the revenue requirement in 2016.

SERC made decisions upon the tariff application pursuant to the same criteria as applied when setting transmission tariffs with a formal public hearing held on 2 December 2015. By a decision adopted on 29 December 2015, the revenue requirement of the Independent System Operator in Bosnia and Herzegovina for 2015 was defined and the tariff for its operation was kept at the same level amounting to 0.3026 €/MWh.

In the same tariff proceedings, the application of the ISO BIH for a tariff for system services was considered. By a separate decision a tariff amounting to 0.2563 €/MWh was set, thus completing a set of rules and decisions which enabled introducing market principles into the previously fully regulated method of providing ancillary services and balancing of the BIH power system as of 1 January 2016. Consequently, prices of ancillary services, balancing energy and imbalances are formed on the market. With this, functionality of open wholesale and retail electricity markets was increased and one of the measures accepted by Prime Ministers of the six countries in the region within the ‘Berlin process’ was implemented.

The decisions of the State Regulatory Commission adopted in these tariff proceedings also do not have any impact on the electricity prices paid by end-customers.

3.6 Technical Aspect of Transmission System Operation

Operation of the BIH power system was stable and without bigger problems throughout the year. Functional operation was enabled for all system users in accordance with the defined quality standards. The planned works as well as those additionally requested on the transmission network were completed in the function of the current and investment maintenance.

A maximum load of the power system in 2015 was recorded on 31 December at the 18th hour amounting to 2,105 MW, while maximum daily electricity consumption of 40,261 MWh was achieved on 24 December 2015. A minimum load of 858 MW was recorded on 2 May 2015 at the 4th hour, while minimum daily electricity consumption of 27,211 MWh was achieved on 1 May 2015. Maximum and minimum loads in 2015 and over the past ten years are presented in Figures 1 and 2 respectively.

Figure 1. Maximum and minimum monthly load in 2015 (MW)

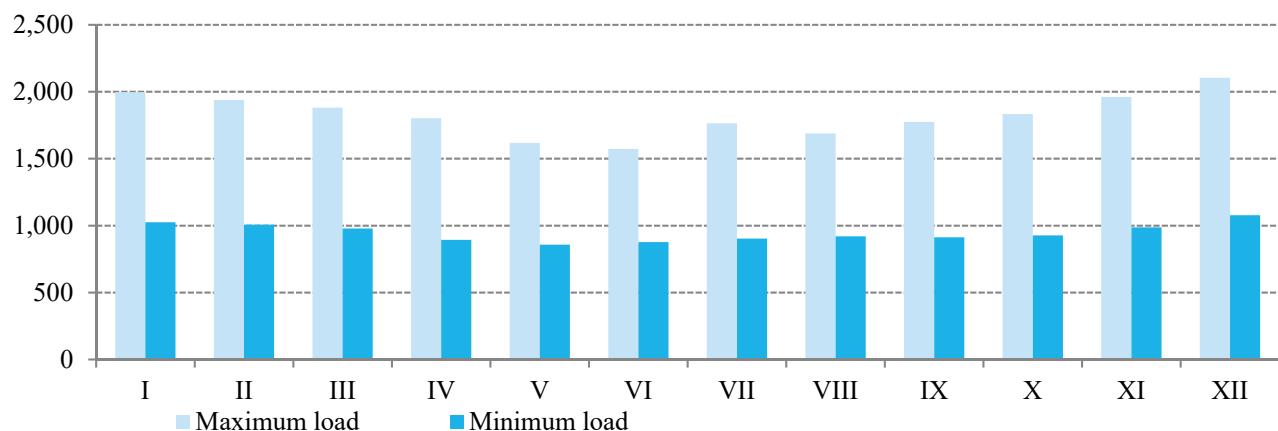
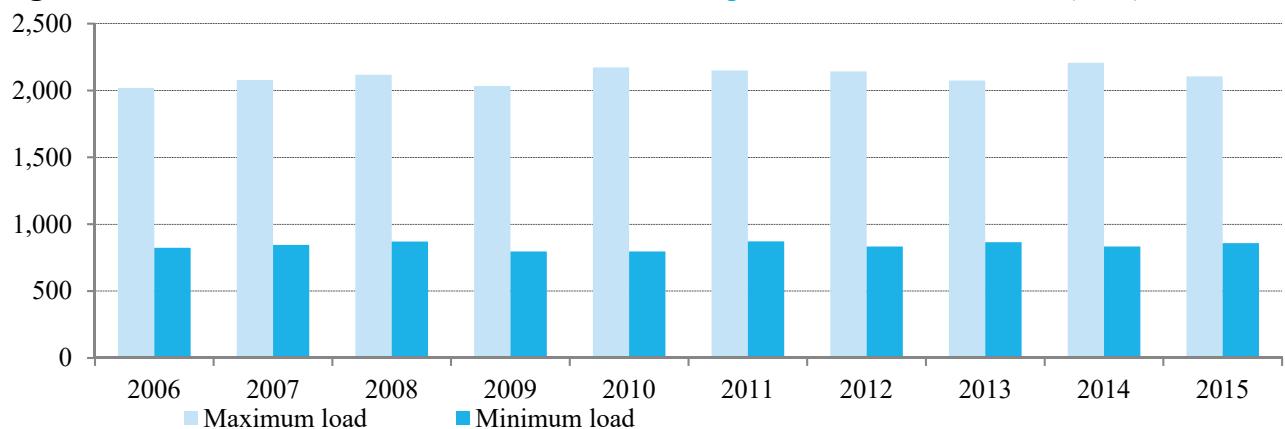


Figure 2. Maximum and minimum annual load over the period from 2006 to 2015 (MW)



Unintended deviations from declared exchange schedules in the SHB Control Block during the whole 2015 amounted to 141 GWh in total at hours at which an electricity deficit was registered in the BIH control area, and 138 GWh at hours at which an electricity surplus was registered. Monthly deviations of the BIH power system towards the SHB Control Block are presented in Figure 3. A maximum hourly electricity deficit was recorded in September amounting to 181 MWh, while a maximum surplus was recorded in December 2015 amounting to 194 MWh.

Total electricity taken from the transmission network amounted to 17,860.1 GWh, which is a 1.01 % decrease in comparison to 2014. Transmission losses amounted to 359.4 GWh, or 2.01 % of total energy in the transmission system. The trend of reducing distribution losses continued and they amounted to 1,035.1 GWh or 10.45 % in relation to gross distribution consumption, which was the lowest level recorded in the history of the BIH power sector. Percentage of transmission and distribution losses over the past several years is presented in Figure 4.

In 2015, PHP Čapljina took over 13.9 GWh in the pumping mode.

Figure 3. Monthly deviations of BIH power system towards SHB Control Block in 2015 (GWh)

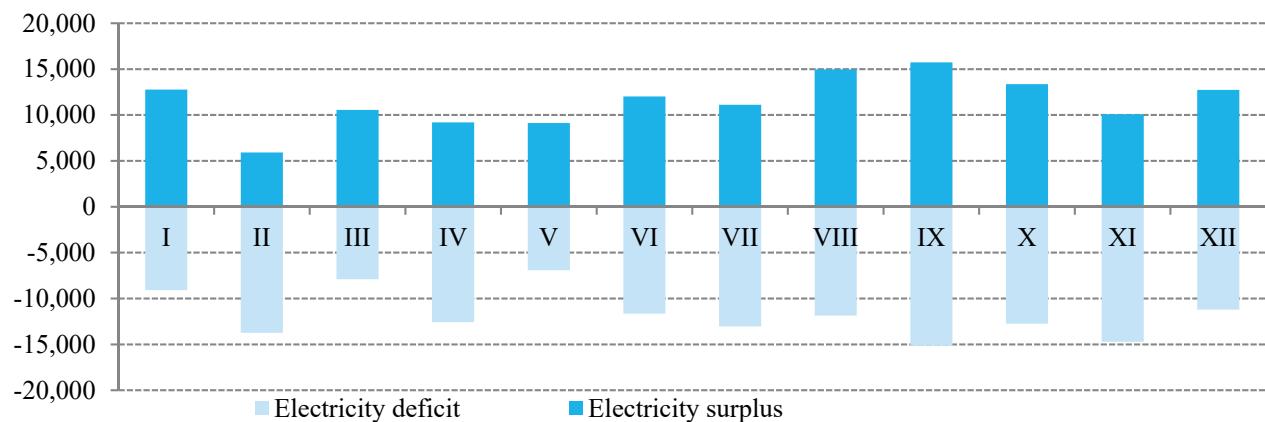


Figure 4. Transmission and distribution losses

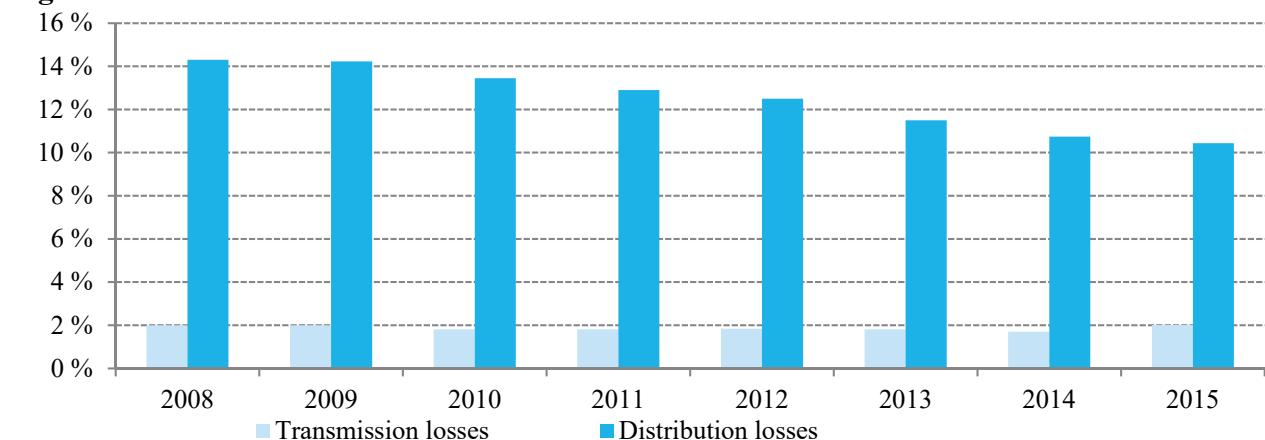


Table 1. Energy not supplied due to interruptions in the transmission network

	2011		2012		2013		2014		2015	
	MWh	min	MWh	min	MWh	min	MWh	min	MWh	min
ENS _{unpl}	906.80	14,593	2,499.08	110,506	494.74	17,484	420.75	35,458	467.224	21,017
ENS _{pl}	2,106.92	36,032	1,081.15	47,807	1,362.40	29,940	1,328.79	25,646	1,244.372	58,363
<i>Total</i>	3,013.72	50,625	3,580.23	158,313	1,857.14	47,424	1,749.54	61,104	1,711.596	79,380

Table 2. Average interrupted time in the transmission network by month (min)

Month	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
AIT ₂₀₁₁	0.7698	0.6631	1.9833	10.9127	8.3742	10.6196	13.6533	4.2118	17.9519	15.3561	5.7561	6.4662
AIT ₂₀₁₂	1.7559	66.6730	0.9586	10.4317	11.5640	5.8708	5.6832	4.4618	13.2911	11.3357	12.6825	3.4717
AIT ₂₀₁₃	4.4568	9.4367	6.2339	10.8451	3.5897	9.4802	8.9578	3.8633	10.8216	9.1419	3.4251	3.8644
AIT ₂₀₁₄	4.0226	0.9460	7.6195	7.8256	1.4890	21.1840	4.1355	5.0214	14.1595	5.8988	7.6719	2.8193
AIT ₂₀₁₅	0.3656	1.4387	9.7107	8.5098	12.3043	11.2509	5.9257	6.2781	6.6186	9.7405	5.1279	2.1100

Data on energy not supplied (ENS) due to unplanned interruptions (ENS_{unpl}), as well as energy not supplied due to planned interruptions (ENS_{pl}) in the BIH power system over the past five years are provided in Table 1. It is evident that total energy not supplied over the past five years continuously decreases.

Table 2 contains data on continuity of supply, that is, the average interrupted time (AIT) in the high-voltage transmission network.

As far as investments in the transmission network are concerned, out of the Transmission Company's own funds amounting to €145,075,863 available for investments per investment plans for 2014 and 2015, procurement procedures amounting to €103672266 were initiated of which €55,825,400 was contracted and €18,359,000 implemented.

In the course of 2015, several contracts on construction, reconstruction and rehabilitation of transmission lines worth some €2.8 million implemented, of which the most important ones were rehabilitation of TL 400 kV Buk Bijela – Sarajevo 20, worth €767,000 and construction of transmission line 2×110 kV for TS Buna, worth €496,000. Construction and reconstruction of facilities with an investment value of €9.2 million are in progress, which should be finalised by the end of first quarter of 2016. The most important facilities with works in progress are transmission lines 110 kV Kotor Varoš – Ukrina, Visoko – Fojnicica and Mostar 4 – Široki Brijeg – Grude, and new transformer substations 110/x kV Mostar 9 (Buna) and Laktaši 2.

Furthermore, activities on constructing the following substations are in progress: TS 110/x kV Šipovo, TS 110/x kV Gradiška 2,

TS 110/x kV Bužim, TS 110/x kV Fojnica and TS 110/x kV Čitluk 2, where it should be noted that the signed contracts are mostly implemented according to the agreed dynamics. Reconstruction and extension of substations are ongoing at the following five locations: TS 110/x kV Zvornik, TS 110/x kV Cazin 1, TS 110/x kV Bihać 2, TS 110/x kV Tešanj, while only reconstruction is ongoing at the following seven locations: TS 110/x kV Mostar 6, TS 110/x kV Konjic, TS 110/x kV Bileća, TS 110/x kV Mostar 2, TS 110/x kV Sarajevo 13, TS 400/x kV Tuzla 4.

In the course of 2015, new transformer substations 110/x kV were put into operation as follows: TS Dub to which a new generation facility was connected – Hydropower Plant Ustiprača with installed capacity of 6.9 MW, and TS Bjelajce to which a new industrial customer was connected R-S Silicon (27 MW). The circuit breakers Tuzla 4 and Banja Luka 6 at TS Stanari were unblocked turning the mentioned substation into a new BIH power system node.

Similar to the previous years, in 2015 voltage levels in the power system often exceeded the regular scopes. The main reasons for occurrence of high voltage in the BIH transmission network were as follows:

- under-loaded 400 kV transmission lines during low demand periods,
- periodically lower reactive power consumption in BIH from the aspect of 110 kV network (situations with lower operational load and increased reactive power consumption occurring in summer lead to lower voltage in the network due to increased use of air conditioners),
- periodical and unplanned operation of generators in BIH in capacitive part of capability curve,
- very low level of operation of PHP Čapljina in the compensation regime,
- blocked positions of tap switching voltage regulators,
- unadjusted transmission ratios of transformers having the possibility of zero voltage switching,
- unfavourable impact of the power systems of Croatia and Montenegro, in particular of Croatia, where voltage levels in the southern part of 400 kV network almost half the time annually exceed the maximum of allowed upper limit,
- insufficient possibilities of voltage and reactive power regulation at the voltage level of 400 kV.

In 2015, in order to lower high voltage levels regulation of transformers was conducted, power plants were instructed to operate in sub-exciter mode, while 400 kV and 220 kV transmission lines were disconnected as a measure of last resort, taking into account the security of supply criterion, that is, meeting the so-called $n - 1$ criterion.

Table 3. SAIFI and SAIDI for the transmission network

		2011	2012	2013	2014	2015
SAIFI	Planned interruptions	0.90	0.87	0.83	0.72	0.65
	Unplanned interruptions	0.94	1.16	1.01	0.80	0.90
	<i>Total</i>	1.84	2.03	1.84	1.52	1.56
SAIDI	Planned interruptions (min/customer)	142.69	146.62	124.36	143.84	108.53
	Unplanned interruptions (min/customer)	52.00	142.24	55.69	277.15	76.00
	<i>Total (min/customer)</i>	194.69	288.87	180.05	421.01	184.52

Tabela 4. SAIFI and SAIDI for the transmission network including outages of middle voltage feeders caused by interruptions in the distribution network

		2011	2012	2013	2014	2015
SAIFI	Planned interruptions	4.93	4.27	4.52	3.99	4.12
	Unplanned interruptions	9.07	8.53	9.35	7.61	7.76
	<i>Total</i>	14.00	12.80	13.87	11.60	11.88
SAIDI	Planned interruptions (min/customer)	516.17	393.93	404.33	671.60	365.77
	Unplanned interruptions (min/customer)	459.32	729.96	474.87	678.42	532.99
	<i>Total (min/customer)</i>	975.49	1,123.89	879.20	1,350.02	898.76

In 2015, 550 outages were registered in the transmission system, of which 210, 211 and 104 at 110 kV, 220 kV 400 kV voltage level respectively. In addition, nine failures of 400/220 kV transformers, three failures of 400/110 kV transformers and 13 failures of 220/110 kV transformers were registered.

The quality of the power system operation is monitored by analysing the Transmission Company's data on technical aspects of the transmission system operation, which, in addition to indices of continuity of customer supply ENS and AIT, are also presented by SAIFI and SAIDI indices.

SAIFI and SAIDI indices are obtained by monitoring the number and duration of interruptions in the Transmission Company's facilities resulting in supply interruptions for customers directly connected to the transmission network and/or supply interruptions in middle voltage feeders exceeding three minutes.

Tables 3 and 4 show the SAIFI and SAID indices for the past five years. Table 3 includes only interruptions caused by events in the transmission network, while Table 4 also includes interruptions in middle voltage feeders in the Transmission Company's substations caused by events in the distribution network. The indices are significantly less favourable in Table 4, taking into consideration outspread connections and length of the distribution network which is in practice more prone to different types of failures.

The basic data on the BIH power system and the map of the system are provided in Attachments A and B respectively.

3.7 Electricity Market

Power Indicators

In 2015 total electricity generation amounted to 14,408 GWh or 4.1 % less in comparison to the previous year, which was marked by more favourable hydrological conditions. Hydro power plants produced 5,426 GWh, that is, 6.8 % less than in 2014. The last year, 2015, may be described as moderately unfavourable in hydrological terms, during which realised inflows were slightly lower than the multiannual average.

Generation by thermal power plants amounted to 8,712 GWh which is by 2.3 % less in comparison to the previous year. This is the third year in a row marked by the downward trend of generation by thermal power plants, caused mostly by reduced coal production as well as low electricity prices at the wholesale market. Generation based on renewable sources (small hydro, solar and wind power plants) amounted to 246.9 GWh, while industrial power plants produced 23.3 GWh. A break-down of generation over the last ten years is provided in Figure 5. Small-scale renewable generation is by 6.5% lower compared to 2014

Figure 5. Break-down of electricity generation in BIH during over the last ten years (GWh)

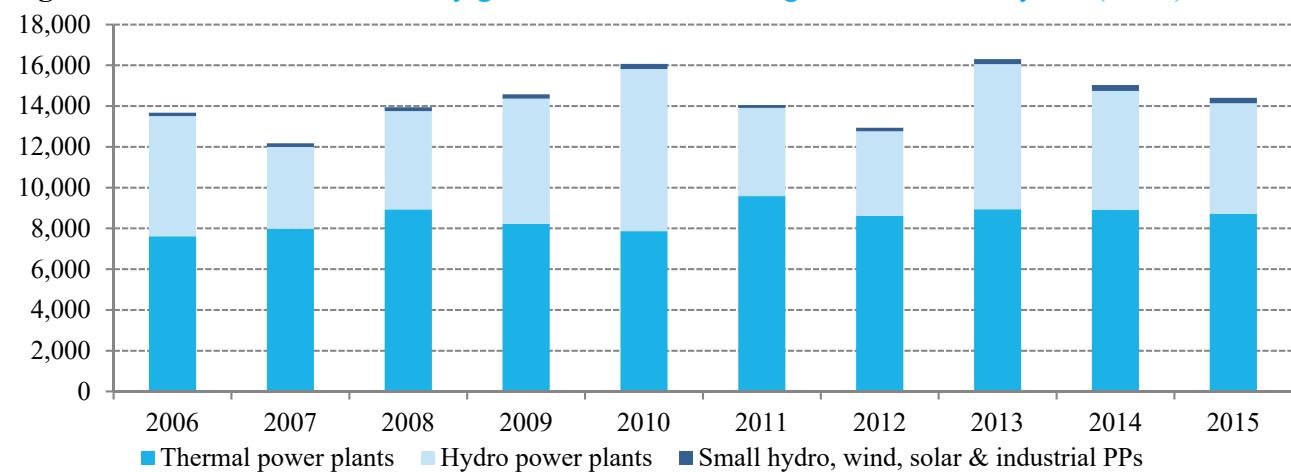
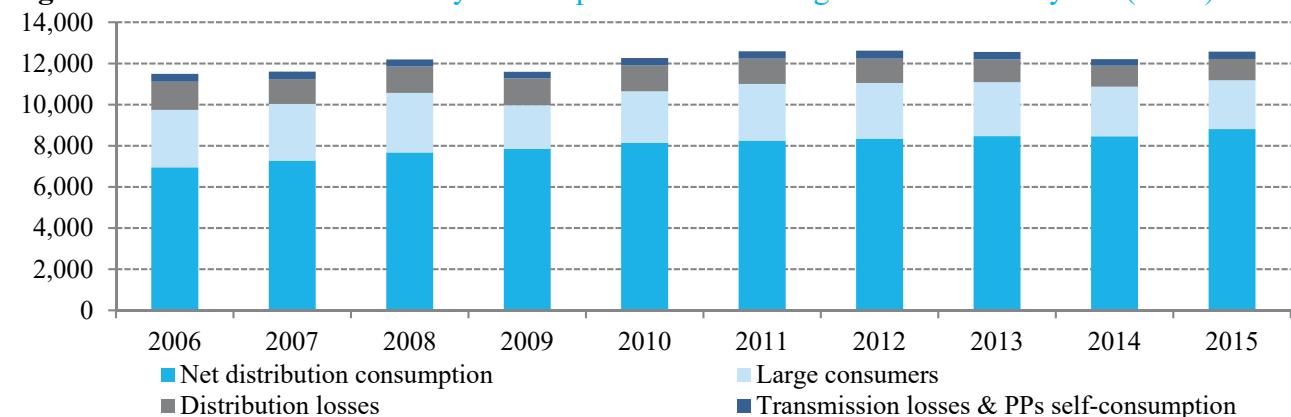


Figure 6. Break-down of electricity consumption in BIH during over the last ten years (GWh)



due to a drop in generation by small hydro power plants which still have a dominant share compared to other power plants belonging to this group – wind and solar, that is, photovoltaic power plants. Consequently, the share of small-scale renewable generation in total generation decreased from 1.9 % to 1.7 %.

After two years marked by a decrease in electricity consumption, in 2015 total electricity consumption increased by 396 GWh or 3.2 %, with consumption of customers connected to the transmission network having decreased by 1.6 %, while consumption of customers connected to the distribution network increased by 3.9 % compared to the previous year. The increase was observable among the customers connected to the 10 kV voltage level in particular as well as among the customers falling under the category other customers. The largest electricity customer in BIH – the Company Aluminij (Aluminum) consumed 1,532.5 GWh, which is 3.8 % less compared to 2014. A break-down of total consumption in BIH over the last ten years is provided in Figure 6.

Electricity taken from the transmission network amounted to 11,733 GWh which is a 3.1 % increase in comparison to 2014. Data on energy taken from the transmission network by months and suppliers are presented in Figures 7 and 8 respectively.

Figure 7. Energy taken over from the transmission network in BIH – monthly data (GWh)

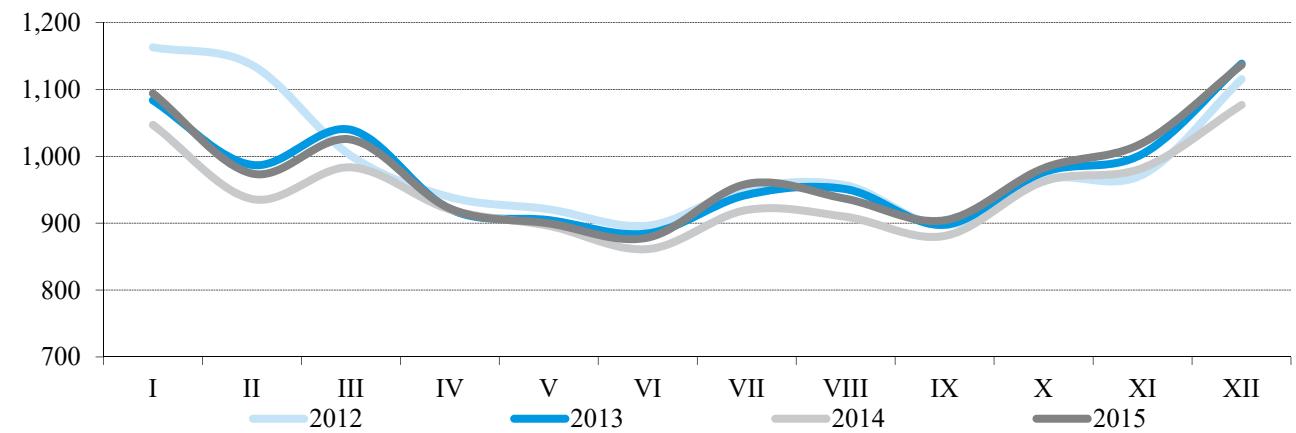


Figure 8. Energy taken over from the transmission network in 2015 per supplier (GWh)

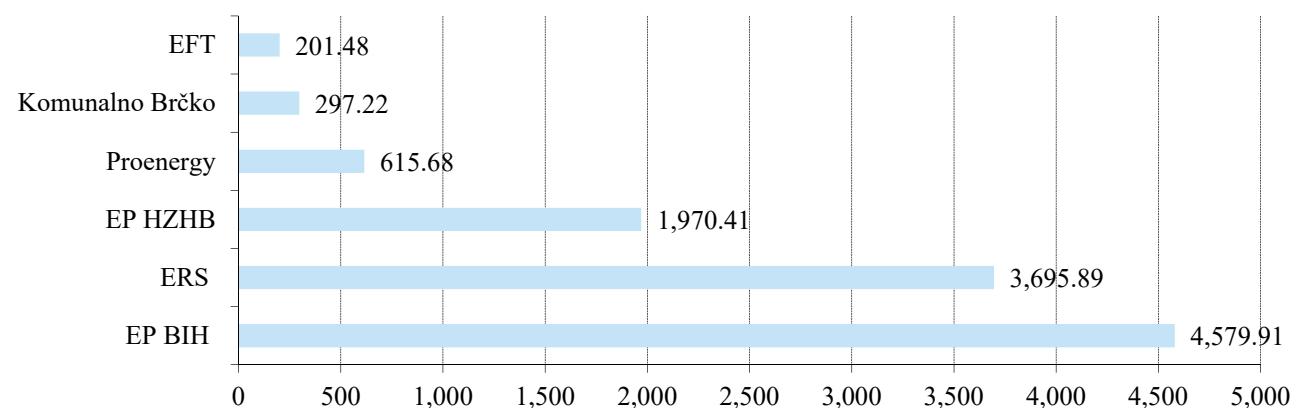
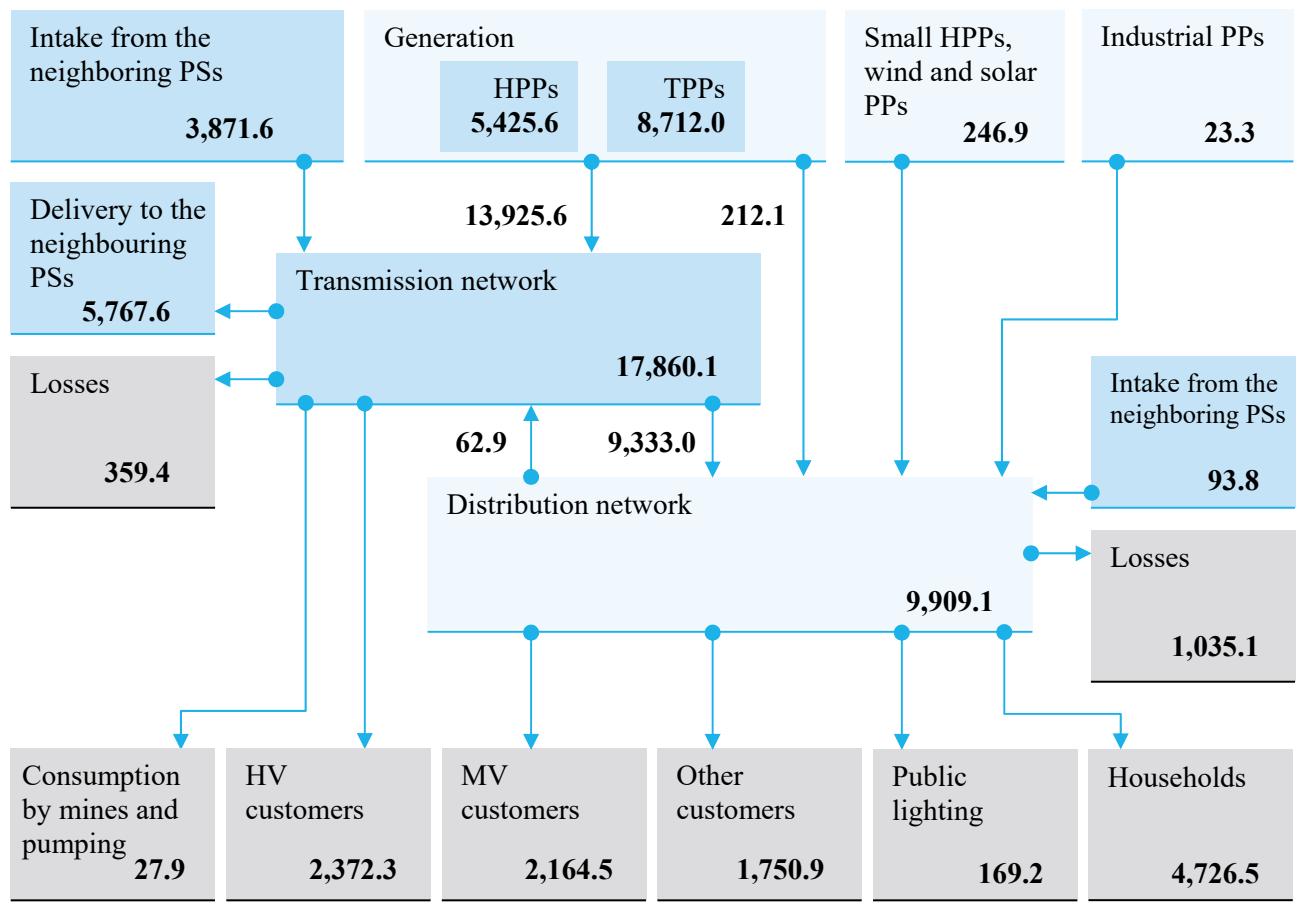


Figure 9. Balance volumes realised in 2015 (GWh)



The difference between total generation and total consumption in BIH, that is, a balance surplus in 2015 amounted to 1,802 GWh, or 1,018 GWh less than in the previous year. A descriptive overview of power balance volumes realised in 2015 is provided in Figure 9. The basic power indicators of Bosnia and Herzegovina are provided in Attachment C.

Regional Electricity Market

The same as in the previous years, the characteristic of the electricity market in South East Europe continues to be a downward trend in wholesale electricity prices. There are no indications that this trend, which mostly affects electricity exporters, might change any time soon. For most part of the year, according to indices of the Hungarian power exchange (HUPX), which is most often taken as the reference PX for the region, wholesale electricity prices were at the level of an anchor price of 40 €/MWh, with smaller periodical fluctuations below or above the given value.

In general, the level of prices in the region is the consequence of low prices on the continent (Table 5). The electricity market in Europe is significantly influenced by the expansion of renewable

Table 5. Electricity prices at power exchanges (€/MWh)

PX indices	Average price	Maximum price	Minimum price
Phelix	31.66	51.27	-0.80
ELIX	32.80	57.32	4.40
SIPX	41.40	90.14	9.92
HUPXDAM	40.62	90.45	13.74
OPCOM	36.40	59.02	5.93

Phelix – European Energy Exchange (EEX) index for Austria and Germany

ELIX – European Power Exchange index of EEX

SIPX – Slovenian Power Exchange index

HUPXDAM – Day-ahead index of Hungarian Power Exchange (HUPX)

OPCOM – Romanian Power Exchange index

sources and lasting stagnation in consumption which is the result of poor economic growth and significant investments in energy efficiency programs implemented within the EU energy policy.

Electricity Market in BIH

In 2015, total electricity consumption in BIH amounted to 12,606 GWh, or 3.2 % higher than in the previous year, which discontinued the decreasing trend present since 2013. Customers connected to the transmission took over 2,372 GWh or 1.6 % less than in 2014.

9,846 GWh was taken over from the distribution network, or 3.9 % higher than in the previous year, of which 8,811 GWh pertains to take-over by end customers and 1,035 GWh to distribution losses. Total sale to customers in BIH increased by 2.9 % amounting to 11,183 GWh.

The average price for customers supplied by public suppliers amounted to 0.0691 €/kWh, which is a 0.4 % increase compared to the previous year. Total value of sale to these customers amounted to €713.25 million, which is an increase of €17.28 million, or 2.5% higher than in 2014.

The average price for households in 2015 amounted to 0.0705 €/kWh, which is a 2.1% increase compared to the previous year. This increase is a consequence of universal service tariff adjustments in the Federation BIH and Brčko District BIH made by the relevant regulators which continue to remove inherited cross-subsidies between customers belonging to the category of other customers and households. Trends of average electricity prices for end customers in Bosnia and Herzegovina are presented in Figure 10, while Figure 11 gives an overview of average electricity prices of the power utilities per customer category in 2015.

Figure 10. Average electricity prices by customer category, excluding VAT (€/kWh)

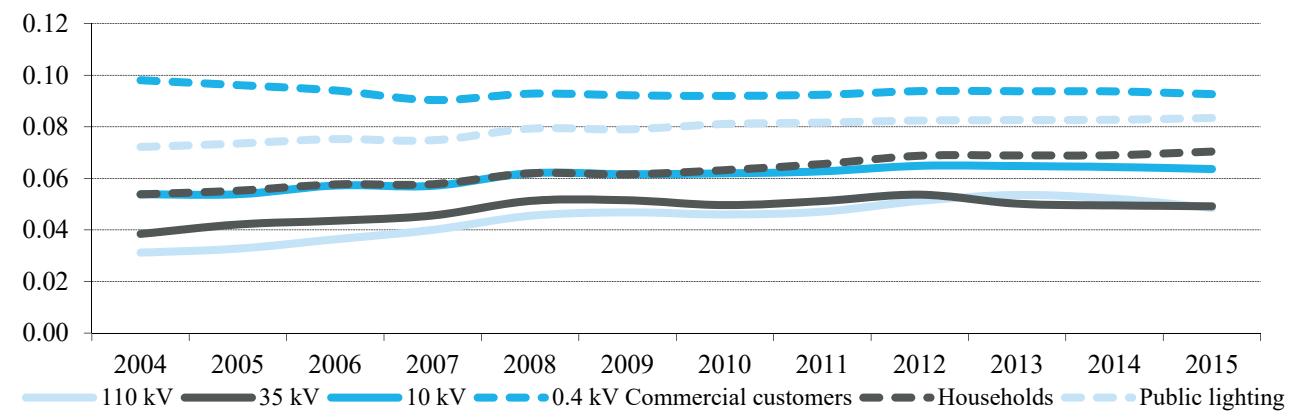
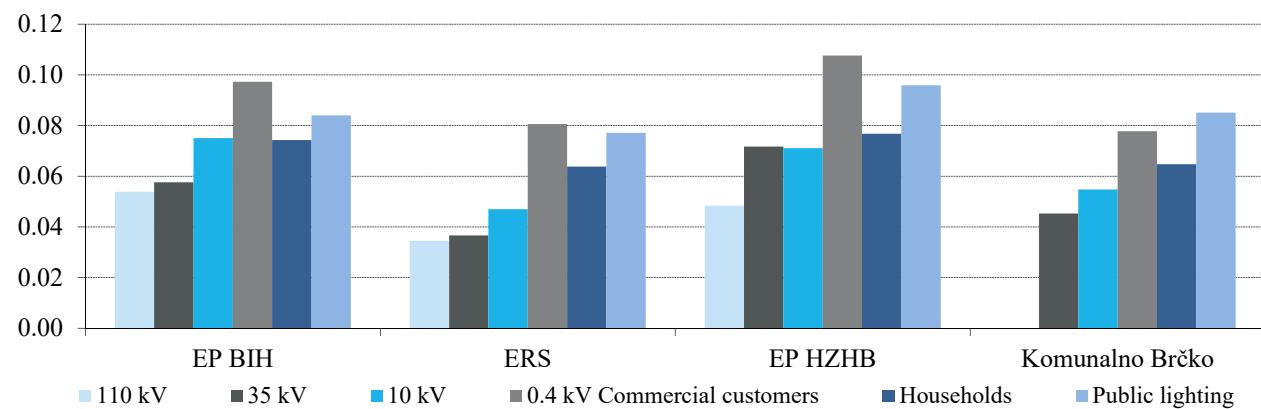


Figure 11. Average electricity prices by public utility excluding VAT (€/kWh)



Total business results of the companies in the sector are more modest in comparison to the previous year considering a significant decrease in electricity exports due to decreased generation by Elektroprivreda BIH and Elektroprivreda RS. The continuing drop in prices on the regional market certainly had an impact on poorer export results. On the other hand, these market conditions had a positive impact on business performance of Elektroprivreda HZHB, which, in addition, increased generation by 3.8 % in comparison to 2014. Eventually, total sale of electricity to domestic customers and those in the region amounted approximately to €845 million. It is obvious that the existing level of wholesale prices had a negative impact on total revenues of power utilities and their profitability.

Deregulation processes continued in the retail market. Changes were reflected in decisions of the competent regulatory commissions not to issue tariff rates for those consumption categories which cannot be regulated any longer pursuant to the adopted and applicable legislation on market opening. Already with the expiry of 2014, regulation of supply tariffs for all customers was abolished except for households and small customers (commercial customers, that is, other customers at 0.4 kV), while the

Table 6. Number of electricity customers in BIH

	<i>110 kV</i>	<i>35 kV</i>	<i>10 kV</i>	<i>Other customers</i>	<i>Households</i>	<i>Public lighting</i>	<i>Total</i>
Elektroprivreda BIH	5	67	838	61,439	674,648	3,921	740,918
Elektroprivreda RS	11	36	957	35,148	512,083	1,104	549,339
Elektroprivreda HZHB	3	1	175	14,787	175,281	1,567	191,814
Komunalno Brčko			1	3,814	30,822	423	35,090
<i>Total</i>	19	105	2,000	115,188	1,392,834	7,015	1,517,161

practice of regulating tariffs for distribution services was kept. Since 1 January 2015, all customers in BIH have the possibility to choose their suppliers on the market. Customers that do not chose their supplier on the market, may be supplied by public suppliers at public supply prices, while households and small customers may be supplied within the universal service.

The number of electricity customers in BIH was steadily increasing and at the end of 2015 amounted to 1,517,161. The number of customers during the year increased by 12,146, with 10,460 customers belonging to the category of households (Table 6).

The BIH retail electricity market is still characterised by the domination of public power utilities (public suppliers), which traditionally supply their customers, each in its own (*de facto* but not *de jure*) exclusive geographic area.

In 2015, only two customers, Aluminij Mostar and B.S.I. Jajce, were not supplied exclusively by public suppliers. In 2015, Aluminij Mostar was supplied on the market as in the previous period, purchasing 660.38 GWh for self-consumption from suppliers on the market (ProEnergy), which is 43.1 % of its consumption. The customer B.S.I. was supplied on the market by EFT and purchased in this way 201.48 GWh which is 88.8 % of its total consumption. To sum up purchase in 2015, a total of 7.7% of energy taken by end customers in Bosnia and Herzegovina was purchased from suppliers that do not fall under the public service obligation. This situation indicates that traditional suppliers ('incumbents') still have the dominant position on the market, which is the characteristic state of play not only in the region but on the continent as well.

Trading in the wholesale market in Bosnia and Herzegovina is significantly more dynamic. Although this market has not been institutionalised yet, the result of numerous bilateral contracts is impressive – 16 licensed entities were active in this market making turnover of 6,457,790 MWh (Figure 12).

Figure 12. Overview of trading on the wholesale market in BIH in 2015 (MWh)

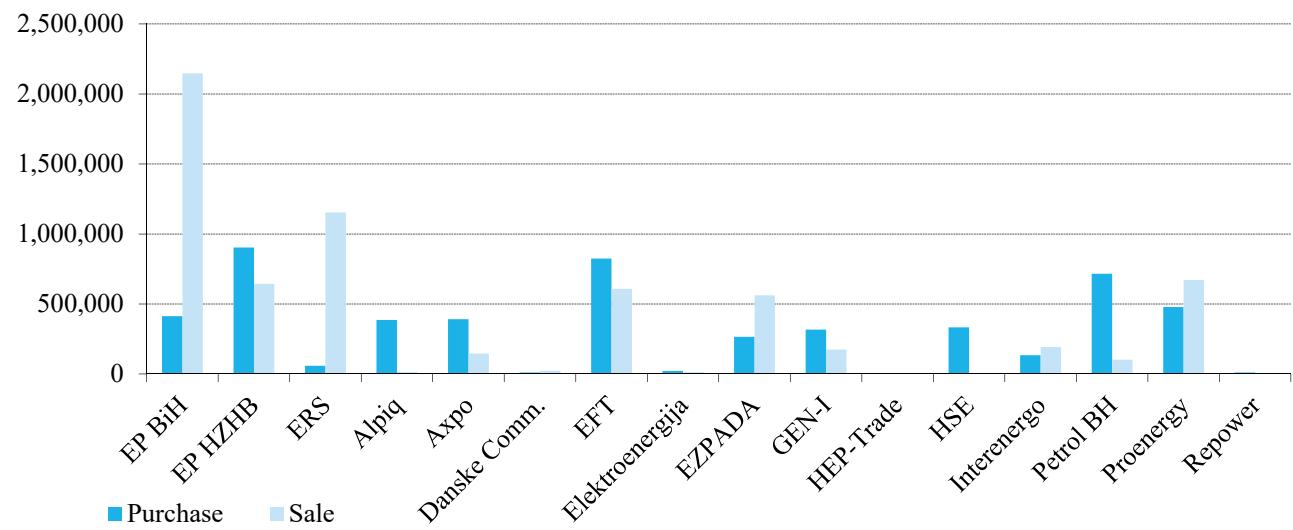
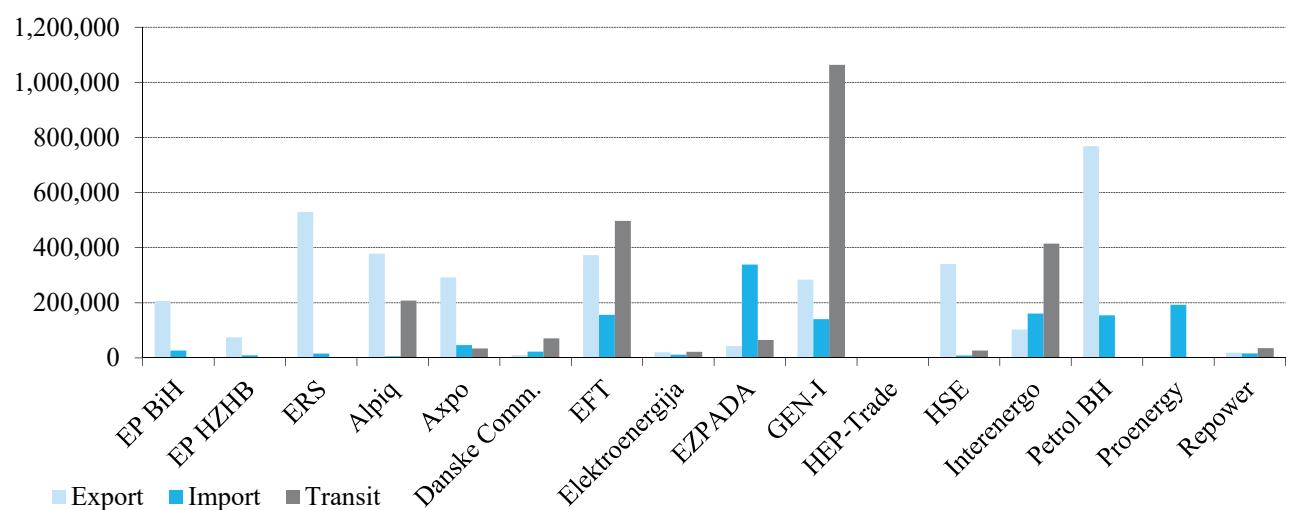


Figure 13. Overview of cross-border transactions by entities in 2015 (MWh)



Cross-Border Trade

Good connections of the BIH system with the neighbouring power systems enable sale of electricity to the countries in the region which have significant shortages.

In 2015, exports amounted to 3,445 GWh, which is 7.3 %, or 271 GWh less than in the previous year, and mostly a consequence of reduced electricity generation. Fifteen entities exported electricity, among which Petrol BH Oil Company with 768 GWh was the leader in terms of the export scope, followed by Elektroprivreda RS, Alpiq Energija BH and EFT with 530 GWh, 378 GWh and 373 GWh respectively (Figure 13).

Electricity imports amounted to 1.308 GWh, which is a 37.2 % increase compared to the previous year. Among the 16 entities

importing to BIH, the highest imports were realised by Ezpada (339 GWh), ProEnergy (193 GWh) and Interenergo (161 GWh), Figure 13.

The largest scope of cross-border exchange is traditionally achieved with Croatia and Montenegro respectively, and the smallest with Serbia. In 2015, this ratio was changed due to a significant increase in transit flows from Serbia to Bosnia and Herzegovina caused by an increase in balance surplus of electricity in Romania and Bulgaria (Table 7).

Table 7. Cross-border trade per border, including registered transits (GWh)

<i>Country</i>	<i>Export</i>	<i>Import</i>
Croatia	2,952.3	1,254.9
Serbia	1,277.6	1,862.1
Montenegro	1,654.3	629.8
<i>Total</i>	5,884.2	3,746.8

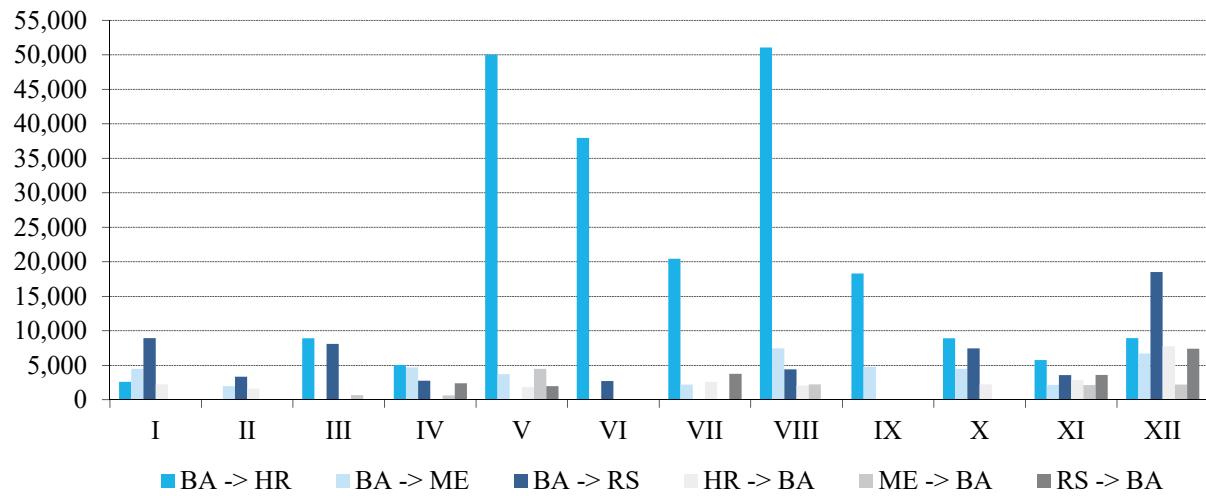
In 2015, registered electricity transits through the BIH transmission system amounted to 2,439 GWh, which is an increase of 991 GWh or 68.5 % in comparison to 2014. Transit flows are important because their scope is used as the basis for determining revenues of every country participating in the *Inter-TSO Compensation Mechanism* (ITC mechanism), which is described in more detail in earlier SERC Reports on Activities. Total revenue achieved by BIH on this basis in the first nine months of 2015 amounted to €1,556,677.39, which is as twice as high in comparison to the same period last year. Namely, during the last two years transit flows were reduced while export flows were increased, which had a negative impact on the amount of revenues based on the ITC mechanism. However, in 2015 a significant increase in transit flows in the east-west direction occurred, consequently increasing the revenues from the ITC mechanism.

From 2010 to the end of 2014, the ISO BIH applied the *Rules of Allocation of the Right to Use Cross-Border Transmission Capacities*, organising auctions on a daily, monthly and annual basis.

In 2015, cross-border capacity allocation through auctions was organised by the *Coordinated Auction Office in South East Europe* (SEE CAO) on the BIH – Montenegro and BIH – Croatia borders while on the BIH – Serbia border joint auctions of the two operators were organised (Please see Sections 3.2).

The total revenue on the basis of cross-border transmission capacity annual auctions for 2016 amounts to €486,765.21. The

Figure 14. Income on the basis of monthly auctions, per border and direction (€)



highest price was reached on the border with Croatia in the direction from BIH to Croatia amounting to 1,317.6 €/MW.

Revenues realised to date on the basis of auctions for allocation of cross-border transmission capacities on an annual basis are provided in Table 8 while Figure 14 provides an overview of revenues based on monthly auctions per border and direction.

Table 8. Revenues achieved from annual auctions

Year	Revenue (€)
2011	2,448,605.01
2012	2,541,440.64
2013	1,041,000.96
2014	1,485,561.86
2015	558,158.52
2016	486,765.21

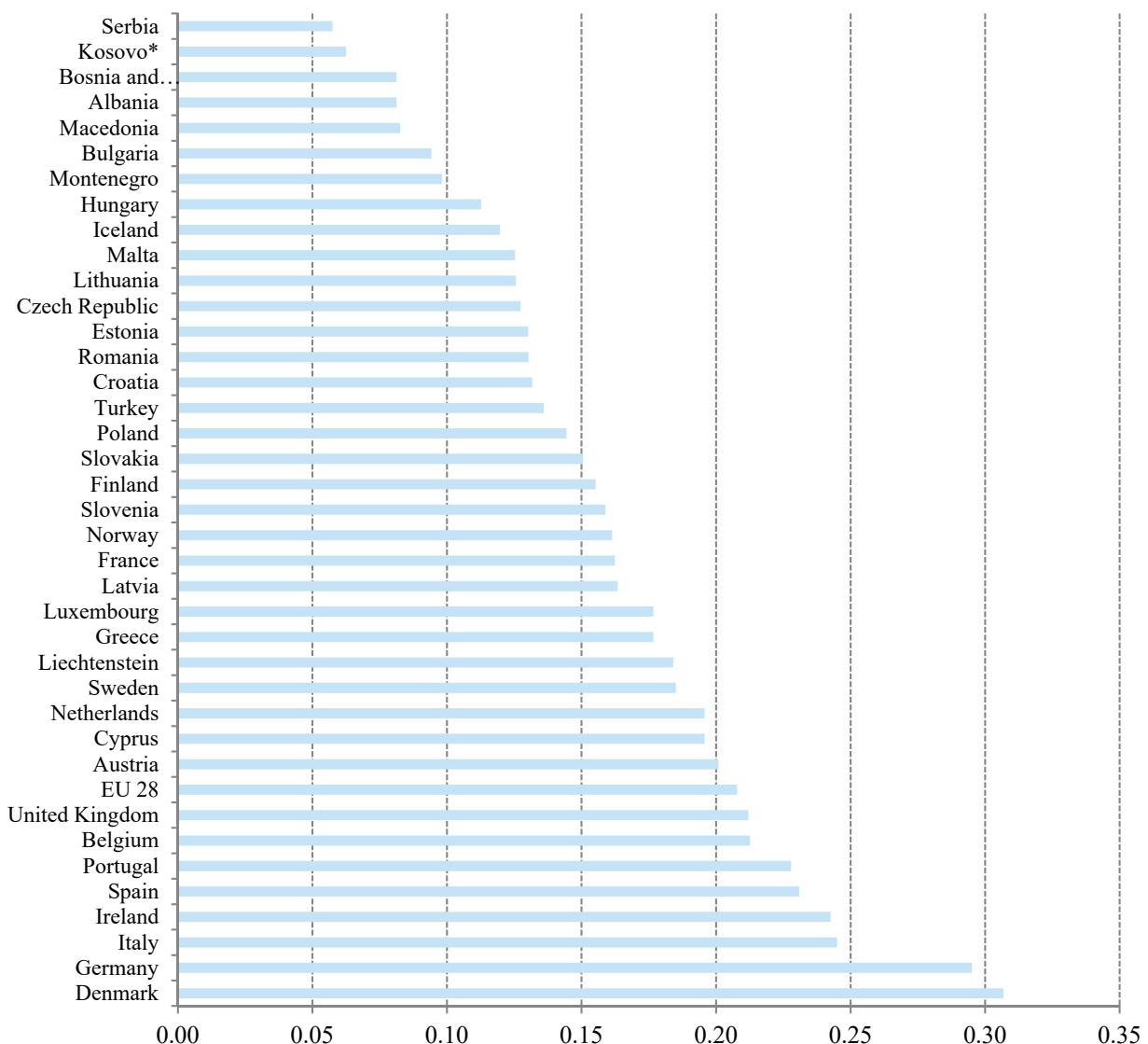
The user of all revenues from auctions for allocation of the right to use cross-border capacities as well as revenues achieved by the application of the Inter-TSO Compensation Mechanism (ITC mechanism) is Elektroprenos of Bosnia and Herzegovina.

3.8 Energy Statistics

Aware of the relevance of objective presentation of data on energy volumes and electricity prices, in 2015 SERC continued to pay particular attention to enhancing its performance in the segment of energy statistics. The key partner in the exchange of energy volumes and data is the Agency for Statistics of Bosnia and Herzegovina, with which SERC has been cooperating for several years, in particular with regard to fulfilling the reporting obligation towards international bodies, in line with prescribed methodologies and reporting dynamics.

The cooperation between the two institutions contributes to energy statistics development and harmonisation of the BIH official system of statistics with statistics of the EU countries in all fields, in particular in the field of energy statistics.

Figure 15. Electricity prices expressed in €/kWh for households (annual consumption from 2,500 to 5,000 kWh) in 2015, using Eurostat methodology



Note: The given amounts include VAT

Figure 16. A geographic overview of electricity prices for households (in €/kWh) in 2015, using Eurostat methodology

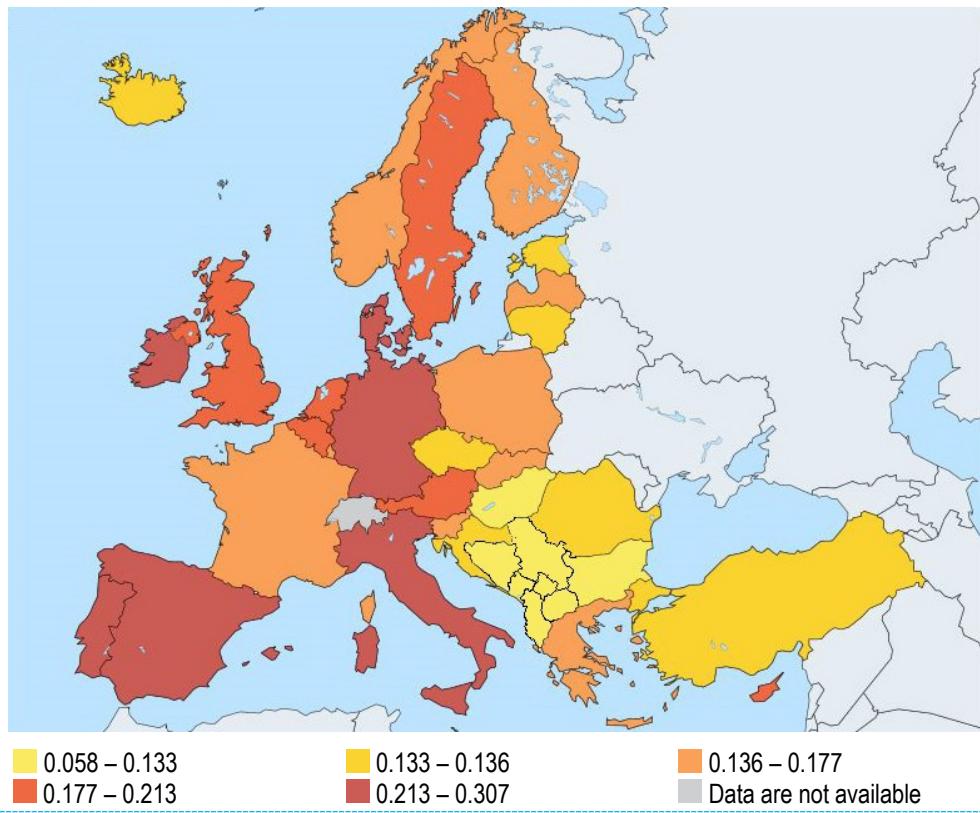
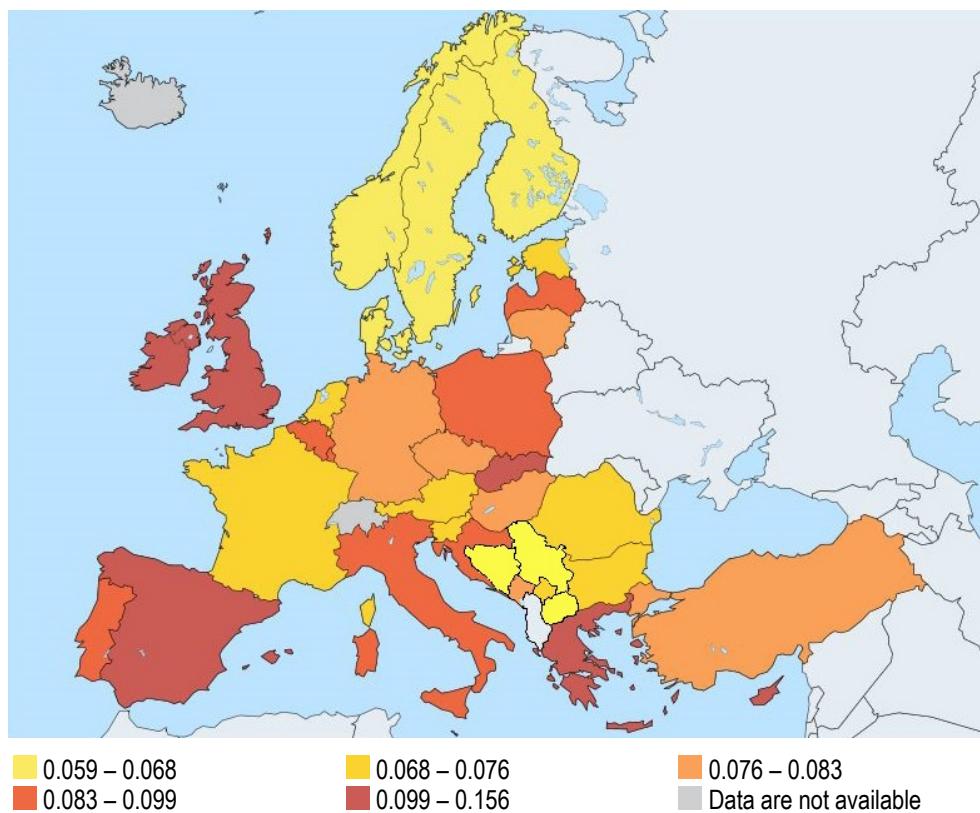


Figure 17. A geographic overview of electricity prices for industrial customers (in €/kWh) in 2015, using Eurostat methodology





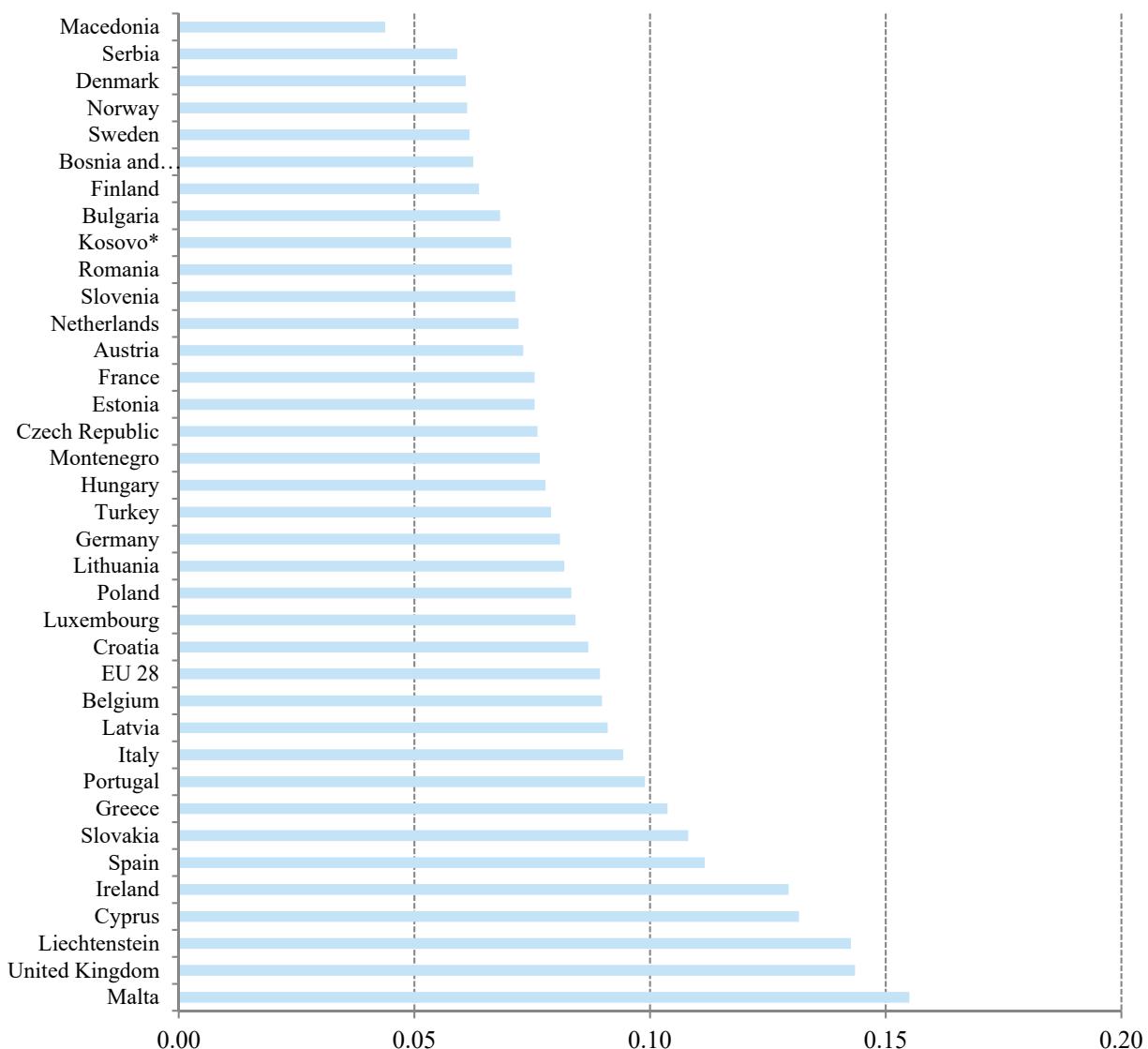
Eurostat is the statistical office of the European Union situated in Luxembourg. Its task is to provide the European Union with statistics at European level that enable comparisons between countries and regions.

The results of the cooperation between the two institutions are recognisable in Eurostat's reports, which include data on electricity prices in Bosnia and Herzegovina since 2011, thus enabling their comparison with EU countries and some countries that are in the EU accession process (Figures 15 – 18).

In addition to analysing data on the BIH power sector, SERC continuously collects and analyses data on regional markets, including data on power exchanges seated in Leipzig, Budapest, Bucharest and Ljubljana (Table 5).

Based on a systematic approach to numerous power indicators, SERC provided quality answers to a number of inquiries by national and international institutions also in 2015 by presenting statistical data.

Figure 18. Electricity prices expressed in €/kWh for industrial customers (annual consumption from 500 to 2,000 MWh) in 2015, using Eurostat methodology



Note: The given amounts do not include VAT

3.9 Other Activities

In addition to the aforementioned activities, in 2015 SERC also exchanged data with a number of state institutions including the BIH Council of Ministers, Directorate for Economic Planning of BIH Council of Ministers, Council of Competition of BIH, Foreign Investments Promotion Agency in BIH, BIH Agency for Statistics⁵, and prepared different types of information they needed. SERC gave a particular contribution to activities of a Temporary Stabilisation and Accession Subcommittee, that is, the Stabilisation and Accession Committee⁶ and a Temporary Subcommittee on Transportation, Environment, Energy and Regional Development. In line with its legal powers to act in the area of Brčko District BIH as a regulatory authority, through its activities SERC cooperates with the District Government.

Since their establishment, the State Electricity Regulatory Commission and Entity Commissions – the Regulatory Commission for Energy in the Federation of BIH (FERK) and the Regulatory Commission for Energy of Republika Srpska (RERS) cooperate and harmonise their activities.

Electricity Legislative Framework Development

Bosnia and Herzegovina should have harmonised national legislation with EU legislation in the field of electricity by 1 January 2015, with a focus on the content of the Third Energy Package (Please see Attachment D). In this context, from the end of 2012 to January 2014, the project Development of an EU-*acquis*-compliant legislative framework in the field of electricity in BIH was implemented through a technical assistance project of the European Commission.

The final result of the project is a harmonised set of working texts for new laws, and in some cases draft amendments to the existing laws at the national, entity and Brčko District BIH level. Transposition of the applicable EU legislation is organised in such a way as to enable full harmonisation of legislation at all administrative levels in BIH (taking into account their separate competences and regulatory powers) with the EU *acquis* on electricity.

A working group comprising experts of the relevant ministries, regulatory commissions and business entities, using the results of the European Commission technical assistance project intensively worked on preparing a working text of the new Law on Regulator,

⁵ The State Electricity Regulatory Commission signed Memoranda of Understanding with the BIH Agency for Statistics and Council of Competition of BIH on 19 April 2011 and 28 May 2014 respectively.

⁶ The EU Stabilisation and Accession Agreement, signed on 16 June 2008, entered into force on 1 June 2015, consequently the Stabilisation and Accession Committee replaced the formerly established Temporary Committee.

Transmission and Power Market in BIH in the last quarter of 2015. The significant support in preparation of the new law was provided by the Energy Community Secretariat. The Ministry of Foreign Trade and Economic Relations, as the relevant ministry, announced that the Law would be considered at a session of the BIH Council of Ministers in the first quarter of 2016 and subsequently referred to the parliamentary procedure. Adoption of this law is to be followed by adoption of mutually harmonised laws in the field of electricity within all jurisdictions in BIH.

Regulatory Partnership



In 2015, activities within the project of the United States Agency for International Development (USAID) were finished through which partnership of BIH energy regulators with the National Association of Regulatory Utility Commissioners (NARUC) and several regulatory commissions thereof was facilitated, with the Public Utilities Commission of Ohio (PUCO) having served as the lead commission. The project contributed to the regulatory reform process aimed at gradual integration with the European Union institutions. A Memorandum of Understanding between the project parties was signed in January 2014.

The project was designed to enable exchange of information and experience, and introduce the best practices enabling the regulators to continue to create and implement non-discriminatory and independent regulation with the aim of ensuring efficient, transparent and stable functioning of the power sector and, at the same time, protecting interests of customers and investors.

Energy Investment Activity



During 2015, activities on yet another comprehensive project funded by USAID were conducted. The Energy Investment Activity Project (EIA), with the planned duration from October 2014 to June 2019, is focused on cooperation with and support to all key actors in the energy sector (ministries, regulators, companies etc.). The EIA Project is organised through the following components:

- Addressing impediments to investment in the energy sector,
- Addressing retail market deficiencies in BIH,
- Achieving energy savings in BIH, using regulatory incentives,
- Expediting progress towards EU integration, and
- Public outreach.



With the aim of establishing a dialogue on topical issues in the energy sector, the EIA Project organised the first Energy Summit in BIH in April 2015 under the auspices of the State Regulatory Commission and Entity Regulators. Plenary sessions, panel discussions, presentations and workshops were dedicated to

energy sector investments, retail electricity market functioning and regional market integration. Technical sessions were also organised at the summit dealing with a number of topics such as reduction of emissions from power plants in BIH, electricity generation using biomass, new roles of distribution system operators and integration of renewables into the market.

Within the project during 2015, several education workshops were organised which were dedicated to various topics including the field of ancillary services, balancing mechanism, reduction of emissions from large combustion plants, energy efficiency, quality of supply, business processes of distribution system operators and data exchange in the sector.

Representatives of the State Regulatory Commission will follow activities organised within the Project and participate in the implementation of some components, in particular those relating to the regulatory activities.

Regulatory Bridge

In June 2015, activities on implementation of a regional USAID and NARUC project Southeast Europe Regulatory Bridge commenced, in which, beside the regulator from Bosnia and Herzegovina, regulatory authorities from the following countries participate: Albania, Armenia, Georgia, Kosovo*, Macedonia, Serbia and Ukraine. The objective of the Southeast Europe Regulatory Bridge is to provide technical assistance and support to the energy regulators in regulating a competitive electricity markets and supervising unbundling and functioning of distribution system operators (DSO) and suppliers. In the course of 2015, activities on preparing Regional Regulatory Guidelines were initiated, which should establish best practices for regulating the activities of both DSOs and competitive electricity suppliers, including the guidelines for efficient market information management and protection of consumer rights.

The Regional Guidelines will form the basis for the development of country-level implementation plans, customised to various stages of market development. The National Roadmaps will outline specific regulations, rules or secondary legislation to be drafted or amended in each country.

Results of Resolved Court Disputes

All five court rulings of the Court of Bosnia and Herzegovina confirmed the lawfulness of the SERC decisions that were disputed before court by legal persons whose applications were decided upon after the completion of the tariff proceedings. No new applications for revision of any decision from the SERC regulatory practice have been filed since 2009 by any person that has standing to commence an action.



4. ACTIVITIES IN INTERNATIONAL INSTITUTIONS

4.1 Energy Community

In 2015, the Energy Community marked the tenth anniversary of its existence by the celebration ceremony. The *Treaty establishing the Energy Community*, which was signed in Athens on 25 October 2005, and came into effect on 1 July 2006, provides for the creation of the biggest internal market in the world for electricity and gas, with effective participation of the European Union on one side, and the following eight Contracting Parties: Albania, Bosnia and Herzegovina, Kosovo*, Macedonia, Moldova, Montenegro, Serbia and Ukraine.⁷

In accordance with the expression of interest, the following countries participate in the work of the Energy Community bodies: Austria, Bulgaria, the Czech Republic, Croatia, Cyprus, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, the Netherlands, Poland, Romania, Slovakia, Slovenia, Sweden and the United Kingdom. These twenty countries have the status of Participants and directly participate in the work of the Energy Community bodies; in the voting procedure their positions are expressed by votes of the European Commission.

Armenia, Georgia, Norway and Turkey have observer status in the Energy Community bodies. Negotiations with Georgia on acquiring status of a Contracting Party continue.

The main goals of the Energy Community are the creation of a stable and single regulatory framework and market space that ensures reliable energy supply and attracts investments in the electricity and gas sectors. In addition, it assumes the development of alternative sources of gas supply and improvement of the environment, with the implementation of energy efficiency and the utilisation of renewable sources.

By signing the Treaty, the contracting parties from the region are obligated to establish a common electricity and gas market that will operate in accordance with the standards of the EU energy market into which it will integrate. It is to be achieved by gradual transposition of the EU *acquis*, which means the implementation of the relevant EU directives and regulations pertaining to electricity, gas, environment, renewable energy sources, energy efficiency, oil, statistics and infrastructure (Attachment D).

The Energy Community has a pivotal role not only in the internal dimension but also in the external dimension of the Energy Union.

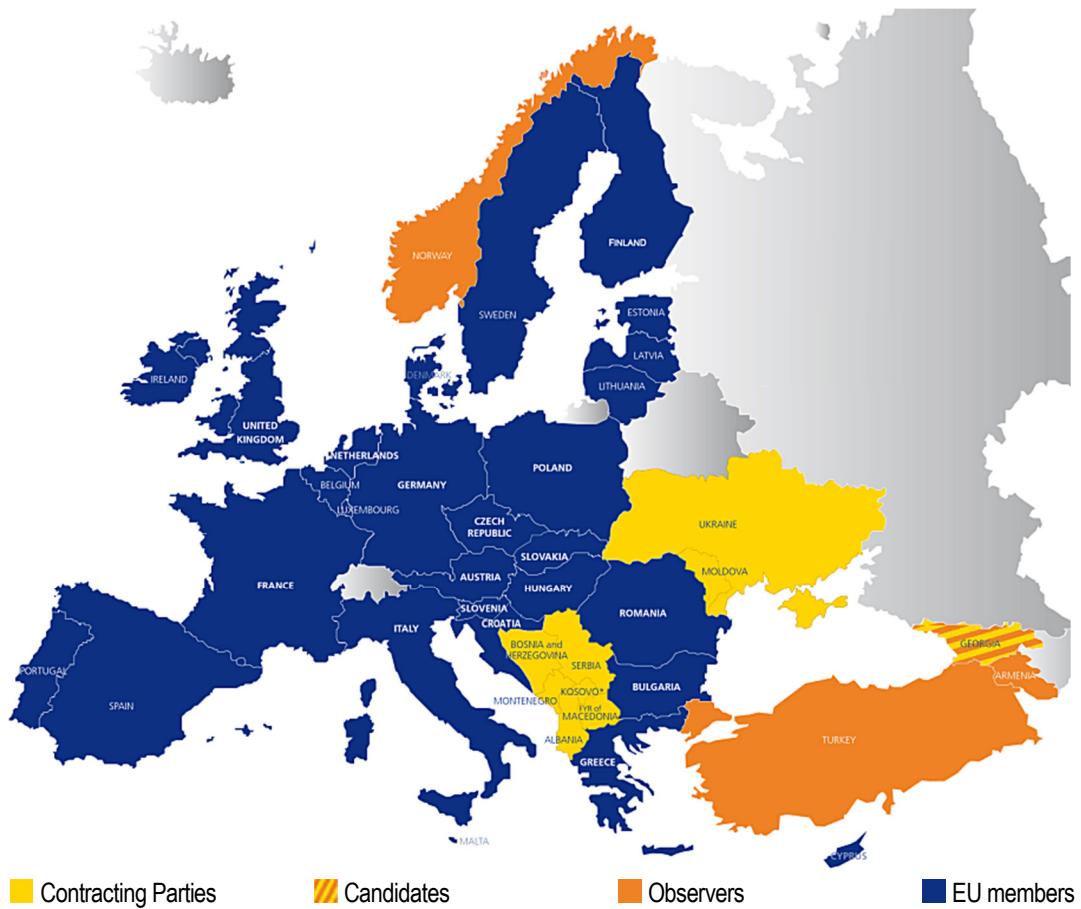
The Treaty establishing the Energy Community is valid until July 2026.

⁷ The list shows the Contracting Parties on December 31, 2015. Moldova and Ukraine have Contracting Party status as of 1 May 2010 and 1 February 2011 respectively.

Mr. Maroš Šefčovič, Vice-President of the European Commission for Energy Union: "From the regional pre-accession tool, the Energy Community has developed into an eminent instrument for our joint security of supply, for our debates on how to cooperate better...how to converge our legal and also infrastructural systems. It helped us to promote safe, secure and predictable production and transportation of energy in the closest EU neighbourhood."

*From the speech at the celebration ceremony marking the first decade of the Energy Community's existence,
Vienna, 27 August 2015*

Figure 15. Geographic scope of the Energy Community



To ensure an adequate process of establishing and functioning of the Energy Community, the Treaty establishes a Ministerial Council, Permanent High Level Group, Regulatory Board, Electricity Forum (Athens Forum), Gas Forum, Oil Forum (seated in Belgrade) and the Secretariat. The role, competence and activities thereof were described in detail in the previous SERC reports.

In the history of the Energy Community, 2015 was one of the most active years. The extensive activities on the legal framework development were conducted, in particular on development of national laws concerning energy markets. The future and further development of the Energy Community itself have been the subject of numerous analyses aimed at choosing the optimal options for its strengthening and enlargement. The European Union, which carries out the reform and restructuring of its energy policy by creating the Energy Union, of which the Energy Community is an important part, has a significant impact on its development policy.

This approach is also reflected in a resolution adopted on 15 December 2015 in which the European Parliament invites the European Commission to come forward with concrete proposals based on the Report of the High Level Reflection Group (*An Energy Community for the Future*) to further reform the Energy Community in order to establish a true pan-European Energy

Mr Miguel Arias Cañete, EU Commissioner for Climate Action and Energy: “The Energy Community is the most efficient instrument in ensuring effective implementation of the EU’s energy, environment and competition acquis in the European Union’s neighbourhood. Today’s Ministerial Council once again took key steps to achieve closer integration of the EU and Energy Community energy markets in a sustainable way.”

*From the speech at the 13th meeting of the Ministerial Council of the Energy Community,
Tirana, 16 October 2015*

Community. The focus should be better governance and enhancement of Energy Community institutions, including the establishment of an Energy Community Parliamentary Assembly.

The resolution titled *Towards a European Energy Union* calls on the European Parliament and the Commission, the EU Member States and Contracting Parties to, among others, strengthen the Energy Community’s activities through better implementation of EU law and concentrate their efforts on implementing key infrastructure projects in order to establish the free flow of energy across the EU and Energy Community countries and improve security of energy supply.

In October 2015, the Ministerial Council of the Energy Community adopted some proposals of the report *An Energy Community for the Future*. The implementation of the legal framework and reduction of investment risks were strengthened through improvement of implementing measures and dispute settlement rules. Furthermore, the establishment of a Parliamentary Plenum strengthened the role of national parliaments with parallel increase in transparency by strengthening the role of civil society and business undertakings in the Energy Community institutions. The adoption of a joint act for 28 EU Member States and eight Energy Community Contracting Parties will improve the legal and regulatory framework in the area of security of gas supply.

At the same meeting the Ministerial Council extended the Energy Community *acquis* by Directive 2012/27/EU on energy efficiency, Regulation (EU) No. 347/2013 on guidelines for trans-European energy infrastructure and Commission Regulation (EU) No. 431/2014 on energy statistics, as regards the implementation of annual statistics on energy consumption in households.

The support to the energy market development is provided in particular by the measures adopted by the Prime Ministers of Albania, Bosnia and Herzegovina, Kosovo*, Macedonia, Montenegro and Serbia on the second Summit on the Western Balkans in the framework of the ‘Berlin process’ held on 27 August 2015. In the area of electricity, they primarily refer to removal of shortcomings in primary and secondary legislation, development of organised wholesale and balancing markets, market allocation of cross-border capacities, deregulation of prices, unbundling of commercial activities from those characterised by natural monopoly and strengthening the regulatory independence.

Bosnia and Herzegovina and the Energy Community

By active participation in the Energy Community, Bosnia and Herzegovina confirms its commitment to the energy sector reforms, liberalisation of the energy market and harmonisation of its policies with those of EU member states.

In 2016 Bosnia and Herzegovina will hold the Energy Community Presidency in Office. During that period the priorities of the Energy



Community will be further reforms of the Community in line with the recommendations from the report *An Energy Community for the Future*, support to the creation of the European Energy Union, consistent implementation of the *acquis*, that is, legal framework of the Energy Community with focus on the implementation of the ‘Third Energy Package’ in all Contracting Parties, security of supply, electricity market transparency and adoption and commencement of implementation of the first set of EU network codes. The focus of activities will be on the environmental protection and wholesale market development.

It is obvious that in Bosnia and Herzegovina itself, additional efforts should be made at different administrative levels to transpose and implement the Energy Community *acquis*. The deadlines for the fulfilment of numerous obligations of Bosnia and Herzegovina have already expired, with a relatively short period of time left for the remaining obligations (Attachment D). This is also indicated by the infringement cases initiated by the Energy Community Secretariat (Attachment E).

SERC Activities in the Energy Community Bodies

The work of the State Electricity Regulatory Commission in the Energy Community was carried out with the necessary cooperation of the Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina, through support and contribution to the implementation of different projects supporting the Energy Community development, and in particular, through proactive involvement in surveys which were planned and implemented by different groups with the wider thematic spectrum that included energy regulators from the region and the European Union.

SERC activities in the Energy Community continue to focus on the Regulatory Board, which was established on 11 December 2006 in Athens. Since then SERC actively participates in its activities, representing the interests of Bosnia and Herzegovina. The chairmanship of the ECRB Customers and Retail Markets Working Group as of 2007 contributes to the affirmation of BIH.

In 2015, during which the Regulatory Board held three meetings, it gave a significant contribution to the creation of Energy Community policies in the field of regulatory initiatives in promoting network investments, treating interconnections between the Energy Community Contracting Parties and European Community Member States and enhancing regulatory independence. In the previous year, the ECRB continued the joint activities with the Agency for the Cooperation of Energy Regulators (ACER), the Council of European Energy Regulators (CEER) and the Mediterranean Energy Regulators (MEDREG) as well as the European Network of Transmission System Operators for Electricity (ENTSO-E) and the European Network of Transmission System Operators for Gas (ENTSO-G).



The ECRB organises a considerable part of its activities through several working groups (Electricity Working Group, Gas Working Group and Customers and Retail Markets Working Group), with the support of the relevant Energy Community Secretariat Section.

During 2015, the ECRB remained dedicated to the development of electricity and gas markets, issues of cross-border transmission capacities allocation, establishment of the balancing mechanism, implementation of the European network codes, development of mechanisms for customer protection, information and education and analysis of quality of electricity supply.

4.2 Energy Regulators Regional Association – ERRA



The *Energy Regulators Regional Association (ERRA)* is an organisation composed of independent energy regulatory bodies from the Central European and Eurasian region with affiliates from Africa, Asia, Middle East and America. Amendments to the ERRA Constitution made in 2015 removed barriers for joining of regulators from new regions and allowed active participation of all members. ERRA members come from 33 countries in addition to the Regional Regulatory Association of West Africa (Figure 20).

The goals of ERRA are improvement of energy regulation in the member countries, facilitating the development of independent and stable energy regulators, improvement of cooperation among regulators, exchange of information, research and experience among the members, better access to information on world-wide experience on regulation of energy activities.

Figure 20. ERRA membership



The State Electricity Regulatory Commission is a full ERRA member as of 19 May 2004. At the General Assembly meeting held in May 2010, the two entity regulatory commissions, the Regulatory Commission for Energy in the Federation of BIH and the Regulatory Commission for Energy of Republika Srpska, became ERRA associate members.

SERC representatives actively participate in the work of the General Assembly, Investment Conference and the ERRA Presidium in which a SERC Commissioner was elected a member for a two-year term in March 2014. Commitment of the representatives of the State Electricity Regulatory Commission was observed also in the work of standing committees and working groups with a particular emphasis on the Customers and Retail Markets Working Group, the Standing Tariff/Pricing Committee and the Standing Licensing/Competition Committee. The chairmanship of this Committee as of 2010 contributes to the affirmation of Bosnia and Herzegovina in ERRA.

In addition to active participation in ERRA bodies, the State Electricity Regulatory Commission fulfils the role as a member of this Association by providing relevant information on the power sector and regulatory practice in BIH.

The historical evolution of topics of interest to the members is evident within the ERRA institutions. The widely present restructuring of the energy sector and markets was the reason for choosing competition-oriented sustainable solutions as the topic in focus of regulatory authorities' interest and activities.

4.3 Mediterranean Energy Regulators – MEDREG

The Mediterranean Energy Regulators (MEDREG) was established in Rome in November 2007. In order to promote a clear, stable and harmonised regulatory framework, MEDREG facilitates a continuous cooperation among the Northern, Southern and Eastern shores of the Mediterranean basin. The Association gathers regulatory authorities from Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Italy, Israel, Jordan, Libya, Malta, Montenegro, Morocco, the Palestinian Authority, Portugal, Slovenia, Spain, Tunisia and Turkey (Figure 21).



The main objective of the Association is the promotion of clear, stable and harmonised legal and regulatory frameworks in the Mediterranean region with the aim of facilitating investments in energy infrastructures and supporting market integration. Towards this goal, MEDREG promotes a permanent exchange of know-how, data collection and diffusion of expertise through comprehensive studies, recommendation reports and specialised training sessions in the field of energy regulation.

Its organisation is structured around the General Assembly, the Secretariat seated in Milan and five working groups: (1) on

Figure 21. Geographic scope of MEDREG



Institutional Issues, (2) on Electricity, (3) on Gas and (4) on Environment, Renewable Energy Sources and Energy Efficiency and (5) customer issues.

The representatives of SERC directly participate in the work of the General Assembly, while the contribution to the activities of Working Groups is provided by the use of various communication tools and provision of required information and comments on draft documents.

4.4 International Confederation of Energy Regulators – ICER



The International Confederation of Energy Regulators (ICER), established in October 2009, is a voluntary framework for cooperation between energy regulators from around the globe. ICER's aim is to improve public and policy-maker awareness and understanding of energy regulation and its role in addressing a wide spectrum of socio-economic, environmental and market issues.

Over 250 regulatory authorities on six continents are included in the ICER's membership through 11 regional regulatory associations and two national energy regulatory authorities (Figure 22). SERC is an ICER member through ERRA and MEDREG.

ICER's work is focused around several key areas, in line with the topics defined during each World Forum on Energy Regulation (WFER), the leading international conference on energy regulation, held once every three years. The sixth World Forum on Energy Regulation was held in May 2015 in Istanbul. On that occasion, the

results of the global cooperation of energy regulators during the previous three years were presented through three ICER reports: *The Benefits to Successful Market Integration*, *Regulatory Approaches to Managing Investment Uncertainty* and *Energy Connections: Engaging the Consumer in Building Stronger Systems*.

The Forum identified security of supply, sustainability, competitiveness and good regulatory practices as the priorities over the following 3-year period and established four separate virtual working groups accordingly. The next World Forum on Energy Regulation will be held in Mexico, in 2018.

ICER continues its activities in its Women in Energy initiative launched in October 2013. The goal of this global initiative of energy regulators is to help the advancement of women in energy, through practical tools.

In 2013, ICER launched its Chronicle as a means to further promote ICER goals of enhanced exchange of regulatory research and expertise. Since then a SERC employee is engaged as a member of the Editorial Board of this professional magazine. The ICER Chronicle is a publication issued twice a year in electronic format, gathering articles on regulatory topics.

SERC actively participates in ICER's activities and provides support in different ways, including the provision of responses regarding different activities and surveys, thus enabling an insight into and exchange of practice in the area of interest to regulatory activities.

Figure 22. ICER Members



Lord Mogg, Chair of ICER:

"Wherever they are in the world, citizens and businesses alike want secure, sustainable and affordable energy. In sharing our expertise and experiences across the world, we regulators learn from each other and are better able to tackle global challenges including energy security."

From the speech at the sixth World Forum on Energy Regulation, Istanbul, 25 May 2015



4.5 Council of European Energy Regulators – CEER

The Council of European Energy Regulators (CEER) is a non-profitable association bringing together energy regulators. Its members and observers are the independent statutory bodies responsible for energy regulation at national level. CEER brings together 33 national regulatory authorities from European Union Member States, European Free Trade Association (EFTA) and EU accession countries including Contracting Parties of the Energy Community Treaty. CEER is at the forefront of efforts to foster competitive energy markets and empower consumers. Working collectively through CEER, national regulatory authorities develop forward thinking proposals at EU level, spreading best practice and delivering solutions back within NRAs.

At the end of 2015, the State Electricity Regulatory Commission was offered observer status at CEER. Taking into consideration the applicable legal framework and defined regulatory competence as well as the current activities which in 2016 are expected to result in transposition of the content of the EU Third Energy Package into the BIH legislation, SERC informed the CEER Secretariat that it would be ready to apply and obtain observer status at the Council of European Energy Regulators following the adoption of new legislation.

5. AUDITING REPORT

SERC provides funding for the implementation of its activities pursuant to the *Law on Transmission of Electric Power, Regulator and System Operator of BIH*. The basic revenue of SERC is the regulatory fee paid by holders of licenses for performance of the activity of electricity transmission, independent system operator, international electricity trading and supply of customers with electricity and electricity distribution in the Brčko District BIH. The regulatory fee is determined in a manner so as to cover SERC's costs, while the obligation to pay the regulatory fee in the forthcoming period is reduced by an excess of revenues over expenditures. In this manner, all realised revenues are earmarked exclusively for covering basic expenditures as defined by the financial plan.

The plan of expenditures is defined based on costs which are planned using the incremental budgeting method, that is, based on real costs from the preceding years which underwent audit by independent auditors as well as the Office for Auditing of the Institutions of Bosnia and Herzegovina.

In line with the aforementioned rules and principles, the Financial Plan for 2016 was defined in the reporting period and submitted to the Parliamentary Assembly of Bosnia and Herzegovina.

In addition to preparation of plans, SERC financial dealings also cover the following areas:

- incurrence and settlement of financial obligations for the needs as defined in the approved Financial Plan,
- cash flow management,
- monitoring of the Financial Plan realisation in the current year,
- internal financial reporting as the basis for adoption of the relevant business decisions,
- an analysis and estimate of future cash flows as the basis for development of a new financial plan,
- financial reporting to external bodies, authorised institutions and the public.

The outcome of the aforementioned activities and adopted decisions are financial reports presenting business results at the end of a business year. Financial reports are audited every year in order to have an independent and impartial audit of the stated business results as well as to check the compliance of these procedures with the applicable regulations.

In 2015, the audit of SERC financial reports for the previous year was performed by the Auditing, Accounting and Consulting Company REVIK d.o.o. Sarajevo with which a contract was

"In our opinion, the financial reports show realistically and objectively the financial standing of the State Electricity Regulatory Commission on 31 December 2014 in all materially relevant aspects as well as its business results and changes in permanent funds and cash flow for the year which ended at that point, in accordance with the International Financial Reporting Standards (IFRS)."

REVIK, 24 March 2015

concluded based on a published public invitation for auditing services.

In addition to determining the objectivity of the financial reports as a whole, the performed audit included concurrent evaluation of accounting policies applied and relevant estimates of the SERC management.

It is the opinion of the independent auditor that the presentation of financial reports, recognising and measuring of transactions and business events, objectively and realistically present the state of assets, liabilities, capital and financial results of business performance.

With the mentioned opinion, SERC maintained the highest audit opinion for compliance of its financial reports with the international accounting standards and legal regulations, which SERC was given in previous periods by external auditors, including the opinions by the Office for Auditing of the Institutions of Bosnia and Herzegovina.

Any recommendation by auditors enhancing business performance and increasing success and responsibility is applied by SERC unreservedly in order to ensure well-organised and efficient work with the simultaneous prevention or identification of possible mistakes.

By using external auditing, SERC ensures an independent and reliable report on the use of property and treatment of incomes and expenditures. The revised annual financial report is published on an annual basis with the aim of providing information on SERC's financial standing and business results to interested persons and the general public. Audited financial reports for 2014 were published in the Official Gazette of BIH (No. 32/15) and on the SERC internet site.

6. MAIN ACTIVITIES IN 2016

The State Electricity Regulatory Commission will continue its activities on providing the conditions for free trade and unhindered electricity supply in accordance with the previously defined quality standard to the benefit of citizens of Bosnia and Herzegovina, and in compliance with international agreements, national laws, the relevant European regulations and directives as well as other internal electricity market rules.

In 2016, SERC will continue to cooperate with the Parliamentary Assembly of Bosnia and Herzegovina (PA BIH), in particular with the Committee on Traffic and Communications of the House of Representatives of PA BIH and the Committee on Foreign and Trade Policy, Customs, Traffic and Communications of the House of Peoples of PA BIH. In addition, the focus of interest will primarily remain on the information exchange and harmonisation of key regulatory activities with the Ministry of Foreign Trade and Economic Relation of BIH, which is competent for policy creation in accordance with the *Law on Transmission of Electric Power, Regulator and System Operator of BIH*.

All existing modalities of mutual follow up and harmonisation of activities will be used also in 2016 in relationships with the Regulatory Commission for Energy in the Federation of BIH and the Regulatory Commission for Energy of Republika Srpska as well as with other regulatory bodies established at national level, primarily the Council of Competition of BIH.

In order to meet the need of different decision-making levels for quality and reliable statistical energy data, SERC will remain a reference source and an active generator of these data. To this end, SERC will follow developments of EU rules and comply with the Energy Community agenda continuing its cooperation with the BIH Agency for Statistics.

Furthermore, SERC will follow activities and trends in the whole energy sector and directly participate in all relevant events.

Through its activities SERC will be focused on:

- Setting tariffs in line with SERC competencies,
- Issuance of licenses,
- Regulatory monitoring of licensed entities,
- Creation of new regulatory rules and an analysis of the previously adopted regulatory rules and the existing practice with a review and revision of SERC rules,
- Monitoring implementation of new models for procurement of ancillary service and provision of system service and balancing of the BIH power system,

- Fostering a higher degree of integration of the national electricity market with a particular emphasis on the efficient functioning of fully open wholesale and retail markets,
- Development of rules regulating connection of users to the transmission system,
- Capacity building in terms of the fulfilment of international obligations with regard to regulatory reporting,
- Approving and monitoring rules developed by the Independent System Operator in Bosnia and Herzegovina, Elektroprenos BIH and Komunalno Brčko,
- Approving the *Indicative Generation Development Plan for the Period 2017 – 2026* and approving the *Long-Term Transmission Network Development Plan* for a ten-year period as well as an *Investment Plan of Elektroprenos BIH*,
- Monitoring the implementation of the Inter-TSO Compensation Mechanism (ITC mechanism) and operation of the Coordinated Auction Office in South East Europe (SEE CAO),
- Regulatory activities regarding the European network codes,
- Sharing information on regulatory practice with the regulated entities and the public, and
- Performing other tasks within competences vested in SERC.

While conducting its activities SERC will take into account the protection of customers and give its full contribution to the creation of best applicable solutions in accordance with competences vested in SERC under law.

Taking into account the fact that under the *Treaty establishing the Energy Community* Bosnia and Herzegovina is obligated to transpose the new rules of the European Union on the internal energy market ('Third Package') into its national legislation and apply them in practice, SERC will contribute to the legal framework development in line with its competences and through optimal coordination with other stakeholders.

The implementation of the power sector reform in Bosnia and Herzegovina, harmonisation of secondary legislation and efficient coordination among the bodies participating in its drafting and development is in the interest of all stakeholders. The aim is to create a clear and stable legal framework based on the European directives and rules on the internal electricity market.

In this context, SERC is planning to continue to actively participate in the development of an EU-acquis-compliant legislative framework in the field of electricity in Bosnia and Herzegovina, and removal of shortcomings in the power sector specified in the *BIH 2015 Report of the European Commission*.

SERC will also participate in supporting and implementing regional priorities and Energy Community projects but also in the priorities identified for the BIH power sector within the Energy Community, that is, those specified in the *Annual Implementation Report of the Acquis under the Treaty establishing the Energy Community* and Conclusions of the BIH Council of Ministers.

In line with its competences, the State Electricity Regulatory Commission will contribute to implementation of recommendations of meetings of the Subcommittee on Transportation, Environment, Energy and Regional Development, Interim Committee and BIH Stabilisation and Association Committee as well as implementation of measures in the energy sector as agreed at the Western Balkans Summit within ‘Berlin process’.

In 2016, the multiannual USAID project *Energy Investment Activity* (EIA) will continue and the State Electricity Regulatory Commission will follow its activities and participate in implementation of some components relating to the regulatory activities. SERC plans to actively participate also in the Second Energy Summit planned in spring 2016 within the EIA project.

SERC will continue to participate in the regional USAID and NARUC project *Southeast Europe Regulatory Bridge*, in which regulatory authorities from Albania, Armenia, Georgia, Kosovo*, Macedonia, Serbia and Ukraine participate in addition to the regulators from Bosnia and Herzegovina.

SERC will also focus on the activities of international bodies pertaining to the electricity market regulation, primarily in:

- ECRB – the Energy Community Regulatory Board (including the Electricity Working Group, Gas Working Group and Customers and Retail Markets Working Group),
- ERRA – the Energy Regulators Regional Association (including the Standing Licensing/Competition Committee, Standing Tariff/Pricing Committee and the Customers and Retail Markets Working Group),
- MEDREG – the Mediterranean Energy Regulators (including Working Groups on institutional issues; electricity; gas; customers and environment, renewable energy sources and energy efficiency),
- ICER – International Confederation of Energy Regulators.

Furthermore, SERC will continue to follow up the work of the Council of European Energy Regulators (CEER) and Agency for the Cooperation of Energy Regulators (ACER), and depending on the legal framework development in BIH consider the possibility to directly participate in activities of these bodies.

ATTACHMENT A: Basic Data on the Power System of Bosnia and Herzegovina

(Source: ISO BIH, the Company for Transmission of Electric Power of BIH and public power utilities)

Basic Data on Installed Capacity of Generation Units

Total installed capacity of generation units in Bosnia and Herzegovina amounts to 4,009.14 MW, with 2,054.90 MW and 1,765 MW installed in major hydro power plants and thermal power plants respectively. Installed capacity of small hydro, wind, solar and biogas power plants amounts to 97.41 MW while installed capacity of industrial powers plants in BIH is 91.23 MW.

Hydro power plants	Capacity of power unit (MW)	Total installed capacity (MW)	Thermal power plants	Installed capacity (MW)	Available capacity (MW)
Trebinje I	2×54+1×63	171	TUZLA	715	635
Trebinje II	8	8	G3	100	85
Dubrovnik (BIH+HR)	2×108	216	G4	200	182
Čapljina	2×210	420	G5	200	180
Rama	2×80	160	G6	215	188
Jablanica	6×30	180	KAKANJ	450	398
Grabovica	2×57	114	G5	110	100
Salakovac	3×70	210	G6	110	90
Mostar	3×24	72	G7	230	208
Mostarsko blato	2×30	60	GACKO	300	276
Peć-Mlini	2×15	30	UGLJEVIK	300	279
Jajce I	2×30	60			
Jajce II	3×10	30			
Bočac	2×55	110			
Višegrad	3×105	315			
Ustiprača	2×3.5	7			

Basic Data on the Transmission System transmission lines

Nominal voltage of transmission lines	Length (km)
400 kV	864.73
220 kV	1,524.80
110 kV	3,911.35
110 kV – cable line	31.78

interconnections

Nominal voltage of transmission lines	Number of inter-connectors
400 kV	4
220 kV	10
110 kV	23
<i>Total</i>	37

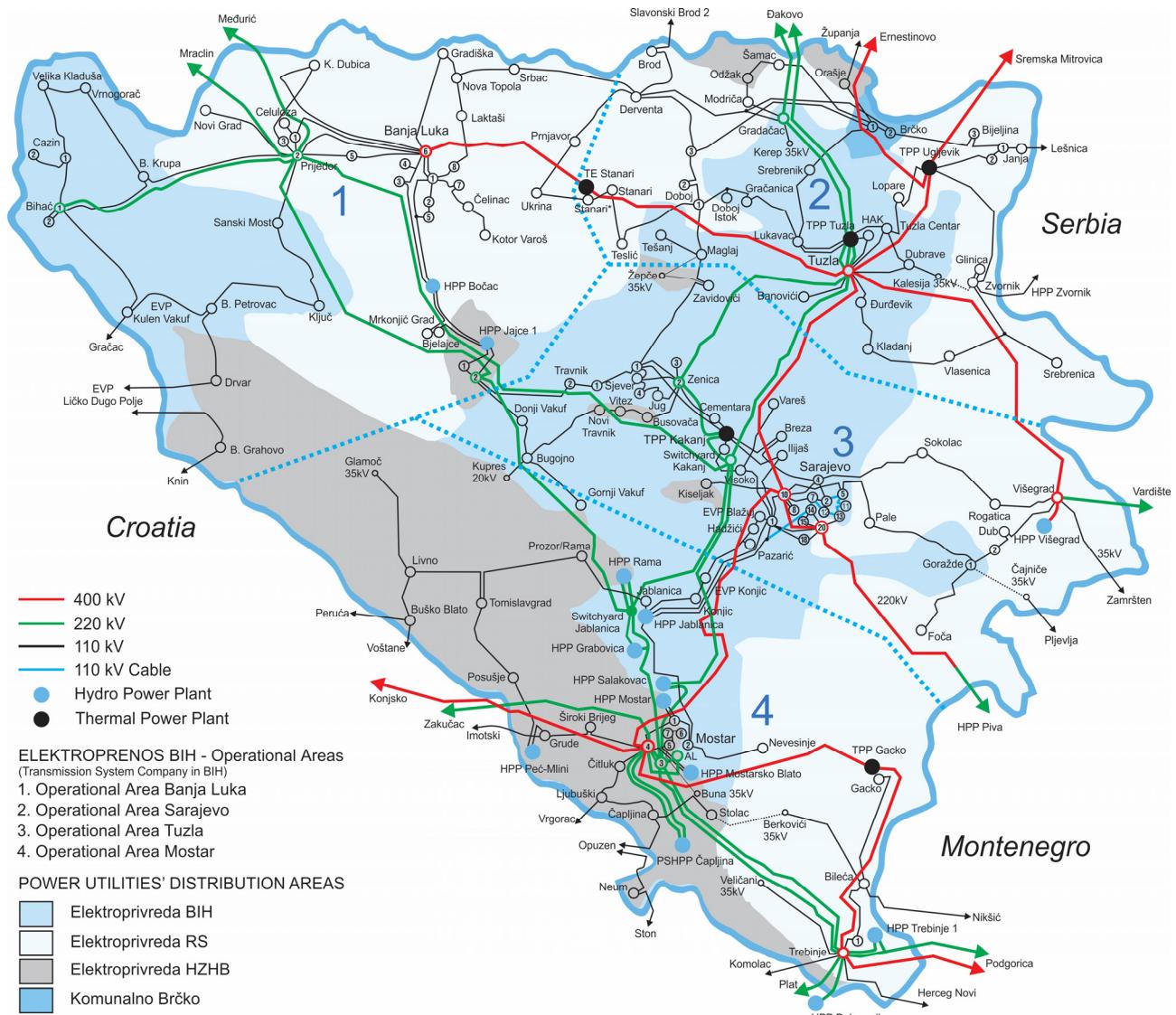
transmission substations

Type of substation	Number of substations	Installed capacity (MVA)
TS 400/x kV	10	6,390.5
TS 220/x kV	8	1,423.0
TS 110/x kV	128	5,043.0

transmission substations

Transmission ratio of transformers	Number of transformers	Installed capacity (MVA)
TR 400/x kV	14	4,900.0
TR 220/x kV	14	2,100.0
TR 110/x kV	227	5,387.5

ATTACHMENT B: Map of the Power System of Bosnia and Herzegovina with Operational Areas of Elektroprenos BIH and Distribution Areas of Public Power Utilities (31 December 2015)



ATTACHMENT C: Basic Power Indicators of Bosnia and Herzegovina

(GWh)

Year 2015	EP BIH	ERS	EP HZHB	Komunalno Brčko	BIH
Generation in hydro power plants	1,436.28	2,166.12	1,823.14		5,425.54
Generation in thermal power plants	5,413.40	3,298.66			8,712.06
Generation in small and industrial PPs	160.68	93.55	16.03		270.26
Generation	7,010.36	5,558.33	1,839.17		14,407.86
Distribution consumption	4,542.81	3,661.53	1,376.42	265.38	9,846.14
Transmission losses					359.37
Large customers	449.56	159.31	1,763.43*		2,372.30
PPs self-consumption and pumping		13.96	13.90		27.86
Consumption	4,992.37	3,834.79	3,153.75	265.38	12,605.66

* Including the amount of 861.86 GWh which Aluminij and B.S.I. purchased as eligible customers

Year 2014	EP BIH	ERS	EP HZHB	Komunalno Brčko	BIH
Generation in hydro power plants	1,542.61	2,522.09	1,755.81		5,820.52
Generation in thermal power plants	5,786.99	3,133.66			8,920.65
Generation in small and industrial PPs	188.97	82.39	17.31		288.67
Generation	7,518.57	5,738.14	1,773.12		15,029.84
Distribution consumption	4,392.55	3,526.02	1,310.79	251.65	9,481.01
Transmission losses					304.46
Large customers	442.76	155.87	1,811.57*		2,410.20
PPs self-consumption		14.12			14.12
Consumption	4,835.31	3,696.01	3,122.37	251.65	12,209.79

* Including the amount of 755.93 GWh which Aluminij and B.S.I. purchased as eligible customers

Year 2013	EP BIH	ERS	EP HZHB	Komunalno Brčko	BIH
Generation in hydro power plants	1,854.43	2,920.91	2,348.28		7,123.62
Generation in thermal power plants	5,549.53	3,390.12			8,939.65
Generation in small and industrial PPs	150.59	73.98	14.71		239.28
Generation	7,554.55	6,385.01	2,362.99		16,302.55
Distribution consumption	4,401.52	3,567.50	1,343.83	258.14	9,570.99
Transmission losses					343.10
Large customers	448.20	126.21	2,048.14*		2,622.55
PPs self-consumption and pumping		13.26	8.74		22.00
Consumption	4,849.72	3,706.97	3,400.71	258.14	12,558.64

* Including the amount of 884.94 GWh, which Aluminij purchased as an eligible customer

Year 2012	EP BIH	ERS	EP HZHB	Komunalno Brčko	BIH
Generation in hydro power plants	1,086.63	1,832.77	1,229.30		4,148.70
Generation in thermal power plants	5,367.80	3,251.70			8,619.50
Generation in small and industrial PPs	115.40	43.04	7.89		166.33
Generation	6,569.83	5,127.51	1,237.19		12,934.54
Distribution consumption	4,340.28	3,551.14	1,379.43	262.54	9,533.39
Transmission losses					308.14
Large customers	446.23	119.18	2,136.41*		2,701.83
PPs self-consumption and pumping		13.62	67.26		80.88
Consumption	4,786.52	3,683.94	3,583.10	262.54	12,624.24

* Including the amount of 910.54 GWh, which Aluminij purchased as an eligible customer

Year 2011	EP BIH	ERS	EP HZHB	Komunalno Brčko	BIH
Generation in hydro power plants	1,113.63	1,817.09	1,395.40		4,326.12
Generation in thermal power plants	6,138.01	3,449.76			9,587.77
Generation in small and industrial PPs	100.82	28.61	6.60		136.04
Generation	7,352.47	5,295.46	1,402.00		14,049.93
Distribution consumption	4,284.17	3,556.16	1,363.04	271.71	9,475.08
Transmission losses					324.17
Large customers	417.17	124.08	2,216.62*		2,757.87
PPs self-consumption and pumping		14.23	21.22		35.45
Consumption	4,701.34	3,694.47	3,600.88	271.71	12,592.57

* Including the amount of 876.00 GWh, which Aluminij purchased as an eligible customer

ATTACHMENT D: Energy Community *Acquis*

The *acquis*, that is, the legal framework of the Energy Community, focuses on directives and regulations from the Third Energy Package providing for common rules for internal electricity and gas markets and regulating cross-border trade. On several occasions, the initial set of rules from 2005 was innovated by new directives and regulations and supplemented by rules on cross-border trade, as well as rules in the areas of environment, competition and renewable energy sources. In 2007, the *acquis* was expanded to include the EU directives on security of supply, while as of 2008 the term ‘network energy,’ which initially included electricity and gas, includes the oil sector as well. In 2009 and 2010, the *acquis* was further expanded to include directives on energy efficiency, while in 2011, by the Ministerial Council decision rules comprising the ‘Third Package,’ excluding Regulation (EC) No 713/2009, became legally binding also for the Energy Community Contracting Parties. In 2012, the *acquis* was significantly expanded by directives in the field of renewable sources, minimum oil stocks and statistics, in 2013 by a part of directive on pollution prevention and control and regulation relating to the ITC mechanism and transmission charging while in 2014 it was expanded by the regulation on transparency, that is, obligation to report data on electricity markets. In 2015, the *acquis* was expanded by rules in the field of energy efficiency, environment, statistics and infrastructure.

The Energy Community *acquis* follows the development of the European Union legal framework and at present it includes its key energy legislation in the fields of electricity, gas, security of supply, environment, competition, renewable energy sources, energy efficiency, oil, statistics and infrastructure. The general deadlines for transposition into national legislation and implementation of EU regulations and directives are provided in brackets.

Acquis on Electricity

- Commission Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council (deadline: 24 Dec 2015),
- Regulation (EU) No 838/2010 of the European Commission of 23 September 2010 on laying down guidelines relating to the inter-transmission system operator compensation mechanism and a common regulatory approach to transmission charging (deadline: 1 January 2014),
- Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2008 concerning common rules for the internal electricity market and repealing Directive 2003/54/EC (deadline: 1 January 2015, except for Articles 9(1), 9(4) and 11 for which the deadlines are 1 June 2016, 1 June 2017 and 1 January 2017 respectively),
- Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003 (deadline: 1 January 2015).

Acquis on Gas

- Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal natural gas market and repealing Directive 2003/55/EC (deadline: 1 January 2015, except for Articles 9(1), 9(4) and 11 for which the deadlines are 1 June 2016, 1 June 2017 and 1 January 2017 respectively),
- Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission network and repealing Regulation (EC) No 1775/2005 (deadline: 1 January 2015).

Acquis on Security of Supply

- Directive 2005/89/EC of the European Parliament and of the Council of 18 January 2006 concerning measures to safeguard security of electricity supply and infrastructure investment (deadline: 31 December 2009),
- Council Directive 2004/67/EC of 26 April 2004 concerning measures to safeguard security of natural gas supply (deadline: 31 December 2009).

Acquis on Environment

- Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) – only Chapter III, Annex V, and Article 72(3)-(4) (deadline: 1 January 2018),
- Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on limitation of emissions of certain air pollutants by large combustion plants (deadline: 31 December 2017),
- Council Directive 1999/32/EC of 26 April 1999 relating to a reduction in the sulphur content of certain liquid fuels and amending Directive 93/12/EEC (deadline: 31 December 2011),
- European Community Council Directive 85/337/EEC of 27 June 27 1985 on assessment of the effects of certain public and private projects on environment, with subsequent amendments of 3 March 1997 (Directive 97/11/EC), and Directive 2003/35/EC of the European Parliament and the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment (deadline: 1 July 2006),
- Article 4(2) of the European Community Council Directive 79/409/EEC of 2 April 1979 on conservation of wild birds (deadline: 1 July 2006).

The *acquis* on environment shall be implemented insofar as they affect network energy. According to Article 13 of the Treaty, the Contracting Parties recognise the importance of the Kyoto Protocol and shall endeavour to accede to it.

Continued on the next page ↪

⇒ Continuation from the previous page

Acquis on Competition

The following activities are not allowed and shall be assessed pursuant to Article 81, 82 and 87 of the Treaty establishing the European Community:

- Prevention, restriction or distortion of competition,
- Abuse of dominant position,
- Any public aid which distorts or threatens to distort competition.

In particular, with regard to public undertakings and undertakings to which special rights have been granted, provisions of the Treaty establishing the European Community, in particular Article 86, shall be upheld.

Acquis on Renewable Energy Sources

- Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC, and 2003/30/EC (deadline: 1 January 2014).

National targets for the share of energy from renewable energy sources in total gross consumption in 2020 were defined for the Contracting Parties by the Ministerial Council Decision of 18 October 2012 (2012/03/MC-EnC).

Acquis on Energy Efficiency

- Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (deadline: 15 October 2017),
- Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (deadline: 31 December 2011),
- Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products (deadline: 30 September 2012),
- Directive 2006/32/EC of the European Parliament and of the Council of 9 April 2006 on energy end-use efficiency and energy services and repealing Council Directive 93/76/EEC (deadline: 31 December 2011).

Acquis on Oil

- Directive 2009/119/EC of the European Parliament and of the Council of 14 September 2009 imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products (deadline: 1 January 2023).

Acquis on Statistics

- Commission Regulation (EU) No 431/2014 of 24 April 2014 amending Regulation (EC) No 1099/2008 of the European Parliament and of the Council on energy statistics, as regards the implementation of annual statistics on energy consumption in households (deadline: 31 December 2016),
- Commission Regulation (EU) No 147/2013 of 13 February 2013 amending Regulation (EC) No 1099/2008 of the European Parliament and of the Council on energy statistics, as regards the implementation of updates for the monthly and annual energy statistics (deadline: 31 December 2013),
- Directive 2008/92/EC of the European Parliament and of the Council of 22 October 2008 concerning a Community procedure to improve the transparency of gas and electricity prices charged to industrial end-users (deadline: 31 December 2013),
- Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics (deadline: 31 December 2013).

Acquis on Statistics

- Regulation (EC) No 347/2013 of the European Parliament and Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009 (deadline: 31 December 2016).

When defining the *Acquis*, the Ministerial Council makes certain adjustments of EU rules to the institutional framework of the Energy Community, taking into account time limits in the region. The Ministerial Council also adopted several independent measures pertaining to dispute resolution, establishment of the ‘8th Region’ aimed at facilitation of cross-border electricity trade and measures for coordination of security of supply.

Note: Texts of EU rules provided in this appendix are available on the internet site of the State Electricity Regulatory Commission (www.derk.ba).

ATTACHMENT E: Infringement Cases: Energy Community – Bosnia and Herzegovina

(31 December 2015)

- Case ECS-1/10, initiated by an *Opening Letter* of 21 September 2010 concerning state aid. Although in February 2012, the *Law on System of State Aid in BIH* was adopted and the State Aid Council established at the end of the same year, the position of the Energy Community Secretariat is that its effective implementation was still missing. The Secretariat announced that the case would be closed upon the Council becoming fully operational.
- Case ECS-8/11, initiated by an *Opening Letter* on 7 October 2011 for non-compliance of obligations by BIH concerning the adoption of relevant legislation in the gas sector. Having taken into account the reply of the BIH Council of Ministers to the Opening Letter, the Secretariat sent a *Reasoned Opinion* on 24 January 2013, and following a new reply submitted the case to the Ministerial Council for decision by way of a *Reasoned Request* on 21 May 2013. On 23 September 2014, the Ministerial Council of the Energy Community emphasised that breaches by BIH in implementing the binding EU directives were serious and persistent and tasked the Energy Community Secretariat to assist BIH in preparing the required legislation. On 21 October 2014, the Energy Community Secretariat submitted a *Draft Law on Transmission of Natural Gas, Regulator and Internal Market in BIH* which is in compliance with the ‘Third Package.’ As BIH had not legally regulated this area, on 16 October 2015, for the first time in its history the Ministerial Council of the Energy Community adopted measures against BIH as a Contracting Party for one year period.
- On 11 February 2013, in case ECS-2/13 the Secretariat sent an *Opening Letter* to Bosnia and Herzegovina for failure to transpose and implement requirements concerning the reduction of emissions of sulphur dioxide (SO₂) resulting from the combustion of heavy fuel oils and gas oils. Taking into consideration factual circumstances, the Secretariat sent a *Reasoned Opinion* to Bosnia and Herzegovina on 21 December 2015.
- Case ECS-1/14, initiated by an *Opening Letter* on 3 March 2014 for non-compliance of obligations by BIH concerning transposition and implementation of Directive 2006/32/EC on energy end-use and energy services. The deadline for transposition and implementation of this Directive expired at the end of 2011.
- On 11 February 2014, in case ECS-4/14 the Secretariat sent an *Opening Letter* to Bosnia and Herzegovina for failure to comply with the Energy Community *acquis* on renewable energy, that is, for failure to adopt its national action plan for renewable energy, for which the deadline expired on 30 June 2013. BIH sent its reply on 8 April 2014. Subsequently, on 24 February 2015, the Secretariat sent a *Reasoned Opinion*. As it was not followed by any action in writing by BIH, the Secretariat submitted the case to the Ministerial Council for decision by way of a *Reasoned Request* on 12 May 2015. In its Decision of 16 October 2015, the Ministerial Council confirmed non-compliance with the *acquis* and ordered BIH to adopt its national action plan for renewable energy without further delay.

Additional information on the activities and procedures conducted by the State Electricity Regulatory Commission may be obtained on the internet at www.derk.ba, by phone on +387 35 302060 and 302070, fax +387 35 302077, e-mail info@derk.ba or at the SERC seat in Tuzla, M. Jovanovića Street 4/II.

