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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 2017**

Tuzla, December 2017

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 reflecting the characteristics of the regulatory framework in Bosnia and Herzegovina.

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1. INTRODUCTION

The past year, 2017, was a year of challenges in the whole energy sector, both at the global and local level. The specific weather conditions characterised by the poor hydrology in yet another year in a row, low temperatures at the beginning of the year and increased consumption, caused a significant increase in wholesale electricity prices. The new challenges also open up new possibilities on the market which becomes more dynamic on a daily basis. The existing dynamic, in addition to the required availability of energy resources and economic efficiency thereof, points to the relevance of flexibility in all areas of the electricity sector.

In 2017, Bosnia and Herzegovina (BIH) made some important steps in the integration process towards the European Union. The answers to *the Questionnaire of the European Commission for the preparation of the Opinion on the BIH Application for the membership of the EU*, which were prepared for Chapters: *Energy, Trans-European Networks and Consumer and Health Protection* will enable detailed identification of further activities necessary to implement the *acquis* of the European Union on the internal market.

During 2017, the State Electricity Regulatory Commission (SERC) continued its regulatory mission in the sector creating conditions for unhindered trade in electricity and reliable electricity supply with continuous monitoring of the licensed entities. Jointly with other regulators in the region, SERC participated in the implementation of concrete measures for regional electricity market development and its integration into the EU market.

The market principles in the segment of ancillary services and power system balancing have become fully operational in BIH and set an example of a successful model in South-East Europe. Although the wholesale market has not been institutionalised yet it shows an impressive scope of trading. On the retail market, customers that switched their suppliers accounted for 15.85% of final energy consumption. Furthermore, tens of thousands of customers changed the supply conditions by modifying contracts with their previous traditional suppliers thus choosing on the open market supply offers that suited them best.

The BIH electric power system operated steadily and without any bigger problems throughout 2017 regardless of the exceptionally unfavourable weather and hydrological conditions. All system users were able to operate functionally in line with the defined quality standards.

New 110/x kilovolts (kV) substations TS Čitluk 2, Gradiška 2, Šipovo and Tuzla 3 were put into operation with reconstructed or new connection lines. Furthermore, the reconstruction of high and middle voltage plants and the installation of a new transformer were completed in the Bileća substation, in the Sarajevo 15, Mostar 1 and Novi Grad substations the reconstruction and installation of new transformers was done while in the Bihać,

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.

Nova Topola, Sarajevo 10 and Mostar 6 substations new transformers were installed. All works for connection of the Mesihovina wind farm with installed capacity of 50.6 megawatts (MW) were completed with the commencement of operation expected in March 2018.

After a record in electricity generation reached in 2016 in BIH, during 2017 a total of 15,151 gigawatt hours (GWh) of electricity was produced, which is 1,358 GWh, or 8.2% less in comparison to the previous year. An extremely poor hydrological situation, with the minimum level of precipitation and inflows, following the previous two unfavourable years in hydrological terms, had the biggest impact on reduced generation. A total of 3,831 GWh was produced by hydropower plants, which is even 29.9% less than in the previous year and the lowest value recorded during a period of more than 20 years. On the other hand, generation by thermal power plants reached a new record of 10,918 GWh which is 2.9% more than in the previous year. Small-scale renewable generation (small hydro, wind, solar and biofuel power plants) reached 380.2 GWh, while industrial power plants produced 21.3 GWh.

Total consumption reached a record of 13,366 GWh, which is a 3.9% increase. A total of 202 pumping cycles of PHP Čapljina were conducive to this increase during which the plant withdrew 266 GWh and produced 197 GWh. With the proper use of technical capacities which enabled purchasing cheap energy at night and selling more expensive peak energy, PHP Čapljina made significant financial results even under the unfavourable hydrological conditions. Consumption of customers connected to the transmission system increased by 3.8% amounting to 2,562 GWh. Consumption of customers connected to the distribution network also increased amounting to 10,179 GWh or 1.9% more than in the previous year.

The maximum load of the power system in 2017 amounting to 2,189 MW was reported on 11 January 2017 at the 18th hour, which is less than the historic maximum of 2,207 MW reported at the same hour on 31 December 2014.

Total electricity in the transmission network amounted to 17,995.5 GWh, which is 5.6% less than in 2016. Transmission losses amounted to 341.5 GWh, or 1.90% of total energy in the transmission network. The trend of reducing distribution losses continued and they amounted to 1,005.9 GWh or 9.88% in relation to gross distribution consumption, which is the lowest level in the history of the BIH power sector.

In 2017, a total of 5,161 GWh was exported, or 2.4% less than in the previous year while electricity imports amounted to 3,322 GWh, which is an increase of even 117.9% compared to the previous year. Registered electricity transit through the BIH transmission network amounted to 3,275 GWh, which is an increase of 404 GWh or 14.1% in comparison to 2016.

2. COMPOSITION AND ORGANISATION OF WORK OF THE COMMISSION



The State Electricity Regulatory Commission 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 Commissioners from the Federation of Bosnia and Herzegovina are:

- Mr. Suad Zeljković, with a five-year term (from 11 June 2016), and
- Mr. Nikola Pejić, with his second five-year term (from 11 June 2016).

The Commissioner from the Republika Srpska is

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

It is evident that the first five-year term of the Commissioner from the Republika Srpska expired. Having in mind that the Law on Transmission of Electric Power, Regulator and System Operator of BIH sets forth that the Commission operates with all the commissioners and make decisions by a unanimous vote, and taking into consideration the existing practice, Mr. Milorad Tuševljak will perform this function until the completion of the procedure for the appointment of the Commissioner from the Republika Srpska for a new term.¹

Since the establishment of the State Electricity Regulatory Commission, the Commissioners rotate in the position of the Chairman equally on an annual basis. Until 30 June 2017, this function was performed by Mr. Suad Zeljković. Mr. Nikola Pejić is the current Chairman of the Commission until 30 June 2018.

In line with the Law, SERC was established as an independent institution of Bosnia and Herzegovina, with the obligation to act in accordance with the principles of objectivity, transparency and non-discrimination. These principles have been incorporated in all SERC legal documents and implemented in all procedures. This method of operation has been adjusted to the maximum extent possible to the *Policy Guidelines of the Energy Community Secretariat on the Independence of National Regulatory Authorities* from January 2015. Incorporated in rules and continuously implemented in practice, the independence of the State Electricity Regulatory Commission has been shown and demonstrated in all areas including political, legal, social and financial dimension.

¹ At the time of the creation of this Report, the procedure for the appointment of the Commissioner from the Republika Srpska is in process before the Council of Ministers of Bosnia and Herzegovina. It was preceded by a proposal put forward by the Republika Srpska Government which was then confirmed by the Republika Srpska National Assembly. The Council of Ministers of Bosnia and Herzegovina proposes the appointment of the Commissioner to the Parliamentary Assembly of Bosnia and Herzegovina.

The Third European Union Energy Package especially highlights the correlation between the regulatory independence and reform implementation and introduces expanded powers and enhances regulatory independence, in particular with regard to market monitoring and imposing sanctions for anti-competitive behaviour.

Pursuant to the Law, the basic provisions on competence, organisation and method of work, financing, transparency and the protection of confidential data are regulated by the *Statute of the State Electricity Regulatory Commission* adopted in 2003, immediately after the establishment of SERC followed by amendments in 2004 and 2009. In December 2017, the Decision on amendments to the Statute was adopted which clearly prescribed the exclusive organisational and formal role of the Chairman of the Commission without any additional powers in presenting, representing or decision-making of SERC in relation to the other two Commissioners. Consequently, any excessive formalism has been avoided with regard to registration of any modification of data in statistical, tax and other registers.

The work of SERC is organised within four departments:

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

With the aim of performing tasks in a more efficient manner, thematic working teams are formed on a needs basis at SERC in the work of which employees from different sectors participate.

SERC follows the requirements of regulatory practice by using different methods to improve its knowledge and experience, that is, to strengthen its professional capacities. The improvement of knowledge is achieved by participation in different professional symposiums, conferences and topical seminars, in the country and abroad, and by distance e-learning, which has become dominant in practice of the Commission. In addition, systematic training aimed at continuous harmonisation of knowledge, skills and practice with the 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 2017 was provided by the *United States Agency for International Development* (USAID) through its *Energy Investment Activity* (EIA) Project and *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ) GmbH (German Agency for International Co-



The Report on Activities of the State Electricity Regulatory Commission in 2016 was reviewed at the sessions of both Houses of the Parliamentary Assembly of Bosnia and Herzegovina. The report was adopted

- *at the 45th session of the House of Representatives, held on 10 May 2017, and*
- *at the 29th session of the House of Peoples, held on 29 May 2017.*

operation) through the project *Promoting Renewable Energy in Bosnia and Herzegovina*, 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 and the use of modern communication tools. The justification of this approach has been confirmed by information, communication and presentation competence of a high number of individual employees to successfully present their knowledge and experience at national and international professional gatherings.

In addition to professional training of its employees, the State Electricity Regulatory Commission also informed 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 wider 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 has been 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, SERC used the possibility of implementing a modern method of organising records management, and in compliance with the prescribed standards and rules of the BIH Council of Minister, started using an electronic records management system. In addition to the efficient entry and search of data as well as archiving a large number of documents in the digital form, the introduced system created the prerequisites for modern business process management and the integration with other business systems. In this process, good practice as recommended by the Office for Auditing of the Institutions of Bosnia and Herzegovina in their performance audit reports was taken into consideration.

3. KEY ACTIVITIES

In 2017, the State Electricity Regulatory Commission held 13 regular sessions and one extraordinary session, 26 internal meetings and organised eight public hearings, of which seven were general while one was formal.

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 licences, and carried out other activities of which the most important ones are grouped in the clusters provided below.

Transparency towards the public through consultation and communication with all interested professionals, as well as the wider 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 energy sector of Bosnia and Herzegovina.

3.1 SERC Rules and Documents

Rules of Ancillary and System Services and Balancing of the BIH Power System

During the past several 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 (ISO) 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.

A Concept of Ancillary Services for the balancing of the power system of Bosnia and Herzegovina, as defined in March 2014, specified the basic solutions, illustrated a considerable number of procedures which had to be developed and strategically paved the way for further trends in completion of the existing regulatory framework for the provision of ancillary services for balancing of the power system.

A number of activities of SERC and the ISO BIH, which were described in detail in the previous Reports on Activities of the Regulatory Commission, resulted in a set of rules and decisions whereby on 1 January 2016 the market principles had been introduced in the formerly fully regulated method of providing ancillary services and balancing the BIH power system. In this manner, the functionality

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 public hearings. With a view to resolving technical issues during the proceedings and processing of procedural or essential issues, technical public hearings are held. With a view to establishing decisive facts, based on which SERC may resolve certain applications or disputes, formal public hearings are held.

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

of open wholesale and retail electricity markets in Bosnia and Herzegovina was enhanced (please see Section 3.8).

In 2016 and 2017, the balancing electricity market in BIH operated successfully and it sets an example of a successful model in South-East Europe. However, taking into consideration the early phase of implementation and dynamic nature of this market, throughout 2017 SERC closely monitored its operation and modified the documents regulating its operation as appropriate.

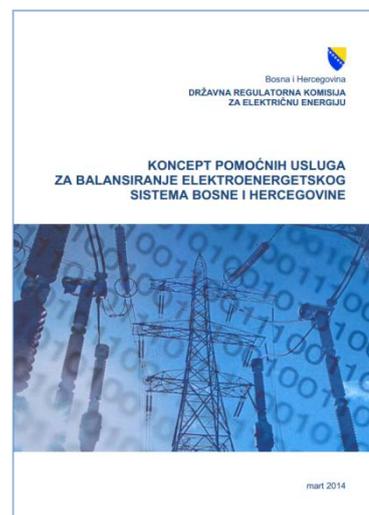
In June 2017, with the aim of achieving the balanced ratio of the incomes based on the system service tariff and expenditures based on payments for procurement of ancillary services and incomes and expenditures based on the balancing energy and deviations of the balance responsible parties, SERC reduced the system service tariff from 1.923 €/MWh to the value of 1.629 €/MWh, with the application thereof commencing on 1 July 2017.

In September 2017, a new *Decision on determination of coefficients and price caps for ancillary services* was adopted with the aim of improving the balancing market operation and removing some observed imbalances in view of certain financial values and tendencies thereof during the implementation in practice.

On that occasion, particular attention was paid to determining the price cap for the provision of secondary control capacity. In 2016, an average level of the provision of secondary reserve amounted to 68.4%, while in the first seven months of 2017 it amounted to 66.5%, which is considerably higher than in the period before the introduction of the new Concept of the power system balancing but still insufficient having in mind the importance of providing necessary scopes of this service. A shortage of this service was observed in particular during the off-peak period (00:00-06:00 hrs), in which a deviation of the BIH regulation area was constantly noted in the direction of a surplus, by delivery of energy to the SHB Control Block (Slovenia – Croatia – Bosnia and Herzegovina). As an incentive to service providers, the price for providing the secondary control capacity service was raised by 3.2%.

Furthermore, with the aim of simplifying the ancillary and system services calculation, the prices of secondary and tertiary control capacity were adjusted to the calculation on an hourly basis and presented in BAM/MW/h, instead of the previously used measurement units (BAM/kW/monthly)².

Pursuant to the provisions of the *Tariff pricing methodology for services of electricity transmission, operation of independent system operator and ancillary services*, the price cap for balancing energy for upward tertiary control was set to an



² € 1 = BAM 1.95583

amount of 212 €/MWh which equalled five times the value of the reference price of electricity on the market, which amounted to 42.41 €/MWh at the time of adopting the Decision.

In 2017, the ISO BIH was enabled to independently pass decisions on purchase of the missing volumes of ancillary services on the market, without a separate SERC decision which was previously required, thus expediting the decision making process and further improving the balancing market operation in practice.

With the successful balancing market development, the offer of services increased significantly and the needs for ancillary services in 2018 had already been met to a significant extent through annual bids organised by the ISO BIH at the end of 2017 (electricity to cover loss in the transmission system as well as capacity reserve for upward and downward tertiary control is fully provided, while secondary control in the peak and off-peak periods is provided in an amount of 99.3% and 72.6% respectively). The missing volumes of secondary control capacity reserve will be purchased on a monthly basis.

Connection Rules

Connection Rules prescribe the procedures for connection of new generators' or customers' facilities to the transmission network at 400, 220 and 110 kV voltage level, connection of facilities to 35, 20, 10 and 6 kV medium voltage level at 110/x kV substations of Elektroprenos BIH (the Company for Transmission of Electric Power in BIH), as well as connection of the existing facilities in case of an increase in installed capacity, upgrade or reconstruction of facilities. The Rules regulate the procedures of issuance of conditions for connection of the user, development of surveys and issuance of connection permits, define the grounds of contractual relationships between the transmission network users and regulate connection fees to be paid by the users. The applicable Rules, adopted in 2008, were amended several times in the previous period.

Instigated by the changes in the sector, SERC launched the preparation of new connection rules. Using a working text prepared by Elektroprenos BIH, in April 2016 SERC defined a draft of new Connection Rules which essentially keep the procedures, concepts and solutions as defined by the Connection Rules of 2008 but also harmonise them with the practical needs, or supplement them following the initiatives launched in order to give more room for more efficient implementation of power infrastructure projects to which this rule is of utmost importance.

Representatives of several entities which may be affected by the new rules participated in a general public hearing, during which they assisted through a two-way process in the preparation of an innovated text of the Draft Rules. The hearing conducted indicated

the necessity to obtain an expert opinion of some technical matters, which was the reason why a technical public hearing was organised subsequently. This approach took into consideration the fact of parallel process for adoption of a new Grid Code, acknowledging the benefit of synchronising the activities between the developers of both documents in order to make the prescribed solutions mutually compatible.

The technical public hearing was held at the end of 2016 to which the relevant experts of the competent ministries, regulatory commissions, Elektroprenos BiH, ISO BiH, distribution system operators and competent authorities in the field of renewable energy sources had been invited.

Subsequently, following the presented discussions and new information of this issue, in May 2017 SERC defined an innovated text of the Draft Connection Rules and held a general public hearing thereon in June 2017. During the summer 2017, it became clear that the part of the European Union network codes and guidelines pertaining to connection (please see Section 3.2 of the Report, the part titled *Market and Grid Rules*) would soon become legally binding also for BiH through the Energy Community institutions, which was the reason for postponing the adoption of the new Connection Rules.

However, at the beginning of November, due to the urgent need to resolve the issue of connection in a uniform manner, SERC adopted the *Rule on amendments to the Connection Rules*, thus removing certain dilemmas which might have occurred after approval of the new Grid Rules in December 2016, which, inter alia, additionally defined the procedures for connection to the transmission network.

3.2 Documents Approved by SERC

Indicative Generation Development Plan

An *Indicative Generation Development Plan* is developed for a ten-year period every year. The purpose of the plan is to inform the current and future users of the needs and existing projects for 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 Bosnia and Herzegovina*, 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 transmission network for the following ten years. The development of this document is also in the function of fulfilling obligations towards the European Network of Transmission System Operators for Electricity (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 and 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 2018 to 2027 was developed using the experience gained in the 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 the development of the *Indicative Generation Development Plan for the Period 2018 – 2027*, adequate 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 consumption. Furthermore, it is evident that 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 a more significant contribution by the relevant entity ministries and regulatory commissions was recognised.

A public hearing on the document, held in April 2017, focused on consumption 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 indicated the necessity to construct some new generation capacities.

In May 2017, the State Electricity Regulatory Commission adopted a *Decision on approval of the Indicative Generation Development Plan for the Period 2018 – 2027*, adopting also a Conclusion obligating the ISO BIH and Elektroprenos BIH to undertake appropriate technical analyses and evaluations in order to ensure the conditions for increasing the level of implementation of projects on integration of intermittent energy sources into the transmission network.

³ TYNDP 2016, that is, the latest *European Ten-Year Transmission Network Development Plan* was revised following public consultation and published on 20 December 2016. The activities on the development of the next plan (TYNDP 2018) are in progress, which is developed jointly with a gas transmission network development plan.

Long-Term Transmission Network Development Plan

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 Long-Term Plan for the forthcoming ten-year period should be submitted to SERC for approval by the end of October. The relevance of the Long-Term Plan is reflected in the fact that based on this plan Elektroprenos BIH prepares its annual investment plan and submits it to SERC for approval by the end of November for the following year.

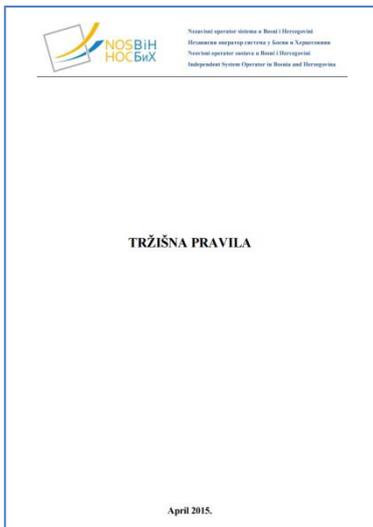
The Long-Term Transmission Network Development Plan for the Period 2017 – 2026 was submitted to SERC in the middle of December 2016, with a short delay. This planning document, which was prepared the same as the previous ones by Elektroprenos BIH and subsequently revised by the ISO BIH, defines the required 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 the continuous supply and system stability. The total value of investments as projected by the Long-Term Plan amounts to € 422.04 million.

The Long-Term Plan envisages the construction of new substations and transmission lines in BIH the value of which amounts to € 105.39 million and new interconnectors the value of which amounts to € 46.01 million. The Plan also includes the reconstruction and expansion of substations (€ 169.25 million), reconstruction of transmission lines (€ 71.88 million), refurbishment of the SCADA system (supervisory control and data acquisition) and telecommunication equipment (€ 22.5 million), and installation of shunt reactors to improve voltage regulation in the power system (€ 7 million).

After completing the analyses, in January 2017 SERC passed a *Decision on approval of the Long-Term Transmission Network Development Plan for the Period 2017 – 2026. The Investment Plan of Elektroprenos BIH for 2017* was approved at the same session containing the detailed structure and dynamics of the implementation of planned investments.

At the beginning of November 2017, Elektroprenos BIH submitted to the ISO BIH the *Long-Term Transmission Network Development Plan for the Period 2018 – 2027* for review and revision. After Elektroprenos BIH received the Report on the review of the Plan by the ISO BIH, at the end of 2017 Elektroprenos BIH submitted to SERC the revised Long-Term Plan. The ISO BIH is expected to submit the Plan to SERC for final approval at the beginning of 2018.





Market and Grid Codes

The State Electricity Regulatory Commission closely monitored the implementation of the Market and Grid Codes in 2017.

The Market Code regulates relationships between the ISO BIH and licensed participants in the electricity market. The purpose of the Code 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 Bosnia and Herzegovina.

The Market Code is an exceptionally demanding technical document which includes the basic concept of market design, 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.

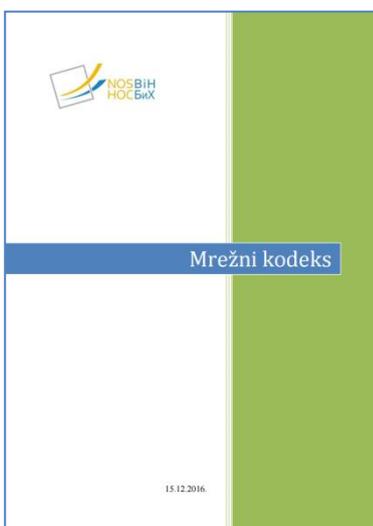
The applicable Market Code was approved by SERC in May 2015 with the effective application commencing as of 1 January 2016.

The Grid Code is one of the key documents for functioning of the power system and electricity market in Bosnia and Herzegovina. It regulates the method of planning and developing the transmission system, connection requirements (procedures, contracts, criteria), the method of operational planning (demand forecast, network constraints management) and operational activities (dispatching, procedures, communications), measures in unexpected situations (consumption control, operational restoration of the system after total or partial breakdown), metering code in the power system and other necessary technical measures for quality and reliable transmission system operation.

The purpose of the Grid Code is to define elements relevant for secure and reliable functioning of the BIH power system, enable development, maintenance and operation of the transmission network in compliance with the applicable rules and existing European practice.

The new Grid Code, approved in December 2016, represents a quality step forward in structural and normative terms, additionally defines the preparation of planning documentation and connection procedures and takes over to a significant extent the standards as defined by the European network codes including innovated scopes of voltage levels for normal and contingency operation.

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





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.

During 2017, SEE CAO organised its activities in line with *Auction Rules for Capacity Allocation*, which were approved in September 2016 by the competent national regulators in the region at the request of the operators. In 2017, following the necessary consultation with stakeholders in the sector and the Energy Community Regulatory Board (ECRB), the new rules for capacity allocation were prepared comprising:

- Harmonised Allocation Rules for long-term transmission rights pursuant to Article 51 of Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation,
- Specific annex for the bidding zone borders serviced by the Coordinated Auction Office in South East Europe (CAO SEE) to the Harmonised Allocation Rules for long-term transmission rights,
- Rules for explicit daily capacity allocation on the bidding zone borders serviced by SEE CAO,
- Participation Agreement between the Coordinated Auction Office in South East Europe d.o.o. Podgorica (Allocation Platform) and the Registered Participant,
- Financial conditions for participation in procedures organised by the Allocation Platform pursuant to the Participation Agreement,
- SEE CAO Nomination Rules, and
- SEE CAO Information System Rules.

On 14 September 2017, at the proposal of the ISO BIH, the SERC passed a decision approving these rules.

On several occasions at national and international gatherings, SERC expressed its support to the successful operation of SEE CAO and also expressed its expectation that the geographic scope would include operators from all countries of South East Europe in the near future.

As Serbia does not participate 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 22 November 2017, 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 EMS AD Beograd (EMS) and the ISO BIH, and*
- *Rules for daily auctions for allocation of transmission capacities on the border between regulation areas of EMS AD Beograd (EMS) and ISO BIH.*

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 EMS AD Beograd (EMS),*
- *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 AD (CGES), and*
- *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).*

Also in 2018, the allocation of transmission capacities on the border with Serbia through annual and monthly auctions is conducted by Elektromreža Srbije (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.

Cross-Border Tertiary Regulation

In 2017, the ISO BIH initiated the activities with the neighbouring system operators on the establishment of a model enabling the cross-border exchange of tertiary control energy. After a virtual cross-border line was registered in this context, the ISO BIH submitted to SERC for approval the *Contract on mutual delivery of cross-border tertiary control energy for the provision of system services from abroad* for the electric power systems of Bosnia and Herzegovina and Serbia. The State Electricity Regulatory Commission approved this Contract on 11 October 2017.

The subject of the Contract is the provision of assistance in the form of mutual delivery of cross-border tertiary control energy in order to enhance secure and reliable operation of the two systems. In this manner, the cross-border exchange of one of the products on the balancing market, which was formerly known as 'emergency exchange', has been formalised. A virtual transmission line registered in the SCADA systems of the two opera-

tors for simulation of exchange will be used for calculation of transactions, which is in line with *the ENTSO-E Continental Europe Operation Handbook*. For energy exchange in physical terms, the remaining available cross-border capacity will be used after the completion of intraday capacity allocation.

The Independent System Operator in Bosnia and Herzegovina and the transmission system operator in Serbia, *Elektromreža Srbije*, concluded this Contract on 16 November 2017. Its implementation means the fulfilment of the obligations of Bosnia and Herzegovina regarding the measures under the Road Map for the implementation of WB 6 initiative in the part pertaining to cross-border exchange of balancing services.

3.3 Licensing Proceedings

In 2017, SERC granted six licences for various activities, while at the time of creating this Report, it was intensively working on the application filed by Vitol Adriatik d.o.o. Sarajevo for renewal of the licence for the international electricity trading activity.

In October 2017, due to the expiration of the term of the previously issued licence for the international electricity trading activity, having conducted the proceedings SERC issued a new licence to Public Utility Komunalno Brčko d.o.o. for electricity trading and supply in the territory of BIH. The licence was issued for the period from 1 November 2017 to 31 October 2022).

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

- HSE BH Energetsko preduzeće d.o.o. Sarajevo (August 2017)
- EFT-Rudnik i Termoelektrana Stanari (*EFT-Coalmine and TPP Stanari*) d.o.o. Stanari (October 2017),
- MH Elektroprivreda Republike Srpske – Parent Company, a.d. Trebinje (November 2017),
- JP Elektroprivreda Hrvatske zajednice Herceg Bosne d.d. Mostar (November 2017),
- JP Elektroprivreda Bosne i Hercegovine d.d. Sarajevo (November 2017),

All the licences for the international electricity trading activity issued after January 2016 are used pursuant to the *Standard licence conditions for performance of the international electricity trading activity*. By the adoption of these conditions as a standard set of rules on the rights and obligations of the licensee known beforehand (the acceptance of which is confirmed by submitting a written statement to that effect already with the

licence application), SERC further simplified and expedited the procedure for granting this type of licences, which is most common in practice. 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.

After notification of change of the seat, that is, address by a licensee, a decision on an extension of use of the licence at the newly registered address was adopted for Proenergy d.o.o. Mostar (October 2017). Two applications of December 2017 for an extension of use of the licence due to the change of the licensee's name are under the procedure (Prvo plinarsko društvo d.o.o. Sarajevo changed into Erdal d.o.o. Sarajevo, and HEP-Trade d.o.o. Mostar changed into HEP Energija d.o.o. Mostar).

In addition to the Companies already mentioned in this part of the Report as the licensees, in the previous period the same status was registered for the following entities: Energy Financing Team d.o.o. Bileća, Ezpada d.o.o. Mostar, Comsar Energy Trading d.o.o. Banja Luka, Axpo d.o.o. Sarajevo, Petrol BH Oil Company d.o.o. Sarajevo, Interenergo d.o.o. Sarajevo, Danske Commodities BH d.o.o. Sarajevo, GEN-I d.o.o. Sarajevo, Alpiq Energija BH d.o.o. Sarajevo and G-Petrol d.o.o. Sarajevo. So, at the end of 2017, a total of 19 entities are holders of international electricity trading licences.

LE Trading BH d.o.o. Banja Luka, that had not been granted a SERC licence in the previous period, filed an incomplete licence application for the international electricity trading activity in 2016. As the applicant did not remove the presented shortcomings even after a repeated notification, in the middle of May 2017 SERC adopted a conclusion rejecting this application as incomplete.

The licensing procedure for issuance of a licence for the international electricity trading activity initiated upon an application of the Company Inteh d.o.o. Banja Luka was terminated by a SERC conclusion in June 2017 as the applicant withdrew its application.

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

Every year, including this one, in relation to the situation of the previous year, Elektroprenos BIH updated and reported changes in overviews of the facilities used by the Company for performance of the electricity transmission activity as well as overviews of the 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 April 2017.

3.4 Monitoring of Activities of Licensed Entities

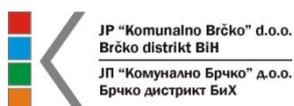
As part of its regular activities, throughout the year the State Electricity Regulatory Commission monitors operations of the licensed entities and their compliance with the licence conditions, primarily by monitoring the regulated companies – ISO BIH, Elektroprenos BIH and JP Komunalno Brčko.

Monitoring is performed through 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 September and November 2017, the following regulated entities were visited:

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



The State Regulatory Commission reminded JP Komunalno Brčko of the necessity to resolve the issues of 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. SERC reiterated the necessity of meeting the obligation pertaining to full unbundling of accounts for the distribution and supply activities as well of these activities and other non-energy activities (water production and distribution, maintenance of public areas and transport and disposal of waste materials). The licensee was recalled to submit an application for updating the annexes to the licence for performance of the electricity distribution activity, i.e., an *Overview of Facilities* used for this activity.

Komunalno Brčko was recalled to re-examine the treatment of 'joint consumption' at the level of the Company, and find a solution to bill and charge other Work Units for electricity delivered to them. SERC expressed its expectations that Komunalno Brčko would undertake activities in terms of

capacity building of the unit dealing with electricity supply and trading so that the unit would be capable of undertaking activities and actions to prevent or reduce to an acceptable level the consequences of price fluctuations on the electricity market, highlighting that the purchase of electricity should be approached in a more flexible and timely manner.

The necessity of developing the legal framework in the Brčko District BIH was pointed out with the aim of having the more qualitative and timely response to any changes taking place in the energy sector, in particular with regard to renewable energy sources, efficient cogeneration and energy efficiency.

After a visit in the function of regulatory monitoring, SERC called on the ISO BIH to demonstrate responsibility with regard to the framework and structure of approved costs and expenditures and undertake all necessary actions and measures to improve cost and expenditure management, taking care of the number of employees in particular. The obligation to comply 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 and impact of large consumers on voltage quality at transmission network connection points.

It was emphasised that it was necessary to report timely and fully on international activities of the ISO BIH including activities within the Security Coordination Centre (SCC), the Coordinated Auction Office in South East Europe (SEE CAO), the European Network of Transmission System Operators for Electricity (ENTSO-E) and the current status and implementation of the agreement at the level of the SHB Control Block (Slovenia – Croatia – BIH).

As part of regulatory monitoring, the comprehensive information was requested on the Contract pertaining to the purchase of the premises for the ISO BIH Reserve Centre as well as the information on all activities and preliminary steps leading to the conclusion of the aforementioned Contract. At the time of creation of this Report (December 2017), SERC was not provided with the comprehensive documentation on this issue.

With a view to increasing transparency, including information sharing and quality interaction among market participants, it was stressed that it was important to publish rules, regulations, forms and other documents in a timely manner and update power indicators and other information on the ISO BIH website both in the languages officially used in BIH and English.



As part of regulatory monitoring, SERC asked *Elektroprivreda BiH* to deliver its Annual Report and provide reports on the implementation of approved Long-Term Transmission Network Development Plan and Investment Plan in tabular form and reminded it to adhere to the prescribed schedules for submission of new planning documents for approval.

Elektroprivreda BiH was called to resolve the long-lasting problem concerning high voltage levels in the transmission network as soon as possible, with the required sharing of information with the competent regulator on all planned activities and possible new circumstances and new studies in this field. With regard to receivables from the users of the services, the Company was called to submit the information on status of outstanding receivables and the activities undertaken for the collection thereof. Furthermore, as the significant investments planned in telecommunication equipment were not sufficiently explained in the planning documentation, detailed information on these issues was requested.

The information on all 110 kV transmission lines was requested which are currently used at lower voltage levels to supply distribution nodes as well as a proposal for activities in order to overcome this practice. The necessity to constantly improve the quality of service was highlighted in particular, primarily by enhancing operational readiness of the facilities and lines and building new infrastructure in the function of reliable supply and connection of new users.

In December 2017, the following international traders were visited in the function of regulatory monitoring of the licensed activity and compliance with the licence conditions: Proenergy d.o.o. Mostar, Ezpada d.o.o. Mostar, HSE Energetsko preduzeće d.o.o. Sarajevo and Vitol Adriatik d.o.o. Sarajevo.

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 the 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 the compliance with the prescribed licence conditions.

The current financial standing of the entities was inspected with regard to compliance with the prescribed conditions regarding the amount of registered capital and the licensees' financial stability.

Increased interest of the international traders in activities on the retail electricity market was noticed during the monitoring activities.

3.5 Dispute Resolution

Dispute resolution among transmission system users falls under the regular SERC authorities and powers. *Elektroprenos Bosne i Hercegovine* and *Elektroprivreda Hrvatske zajednice Herceg Bosne* are the first two entities that asked SERC to act in this capacity and resolve their multiannual dispute. The dispute occurred due to different views on the existence of obligation by one party to pay costs of the fee for connection of HPP Mostarsko Blato to the transmission network.

Having assessed that both parties provided sufficient evidence based on which the factual situation may be established properly and fully, SERC resolved the dispute using the shortened procedure in compliance with the prescribed rules undertaking all formal legal actions for this proceeding which include the possibility for the parties to the dispute and the public to oppose to this SERC decision.

The SERC Decision ordering Elektroprivreda HZHB to pay the fixed part of the fee for connection of HPP Mostarsko Blato to the transmission network was adopted on 26 January 2017. While considering the evidence and resolving the dispute, SERC established that basically there were no disputable facts among the parties as none of the parties in the proceeding disputed or opposed to the proofs provided by the other party or challenged them. Therefore, the general rules, set beforehand and established for all investors, as defined by the *Connection Rule* were applied on such a factual situation.

While resolving this dispute, SERC acted within the defined requirements and under its powers and obligations to ensure fair and non-discriminatory access to the transmission network. This obligation implies the equality of all entities which are in the process of connecting or have already been connected to the transmission network without challenging the obligation to pay the connection fee.

The Decision of the State Regulatory Commission is binding but does not preclude the right of any party to the dispute to initiate proceedings before the relevant court, which is used by Elektroprivreda HZHB (please see Section 3.10 of the Report, Part *Ongoing and Resolved Court Disputes*).

3.6 Technical Aspect of Transmission System Operation

The BIH electric power system operation was stable and without bigger problems throughout the year regardless of the exceptionally unfavourable weather and hydrological conditions. All system users were able to operate functionally in line with the defined quality standards. The planned works as well as those additionally requested in the transmission network were completed in the function of the current and investment maintenance.

A maximum load of the electric power system amounting to 2,189 MW was recorded on 11 January 2017 at the 18th hour, while maximum daily electricity consumption of 44,294 MWh was achieved on 11 January 2017. A minimum load of 847 MW was recorded on 2 May 2017 at the 4th hour, while minimum daily electricity consumption of 26,674 MWh was achieved on 1 May 2017. Maximum and minimum loads in 2017 and over the past ten years are presented in Figures 1 and 2 respectively.

Unintended deviations from declared exchange schedules in the SHB Control Block during the whole 2017 amounted to 31 GWh in total at hours at which an electricity deficit was registered in the BIH control area, and 56 GWh at hours at which

Figure 1. Maximum and minimum monthly load in 2017 (MW)

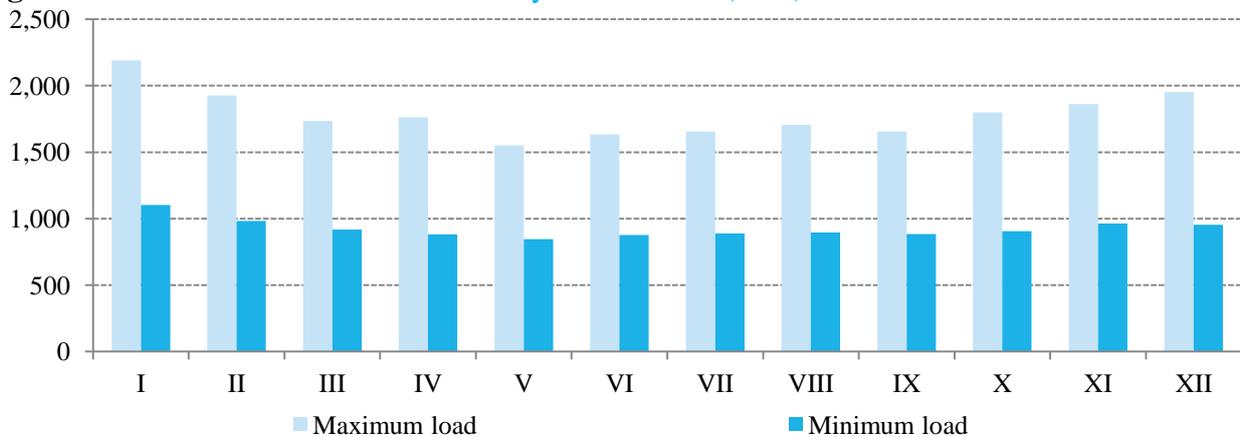
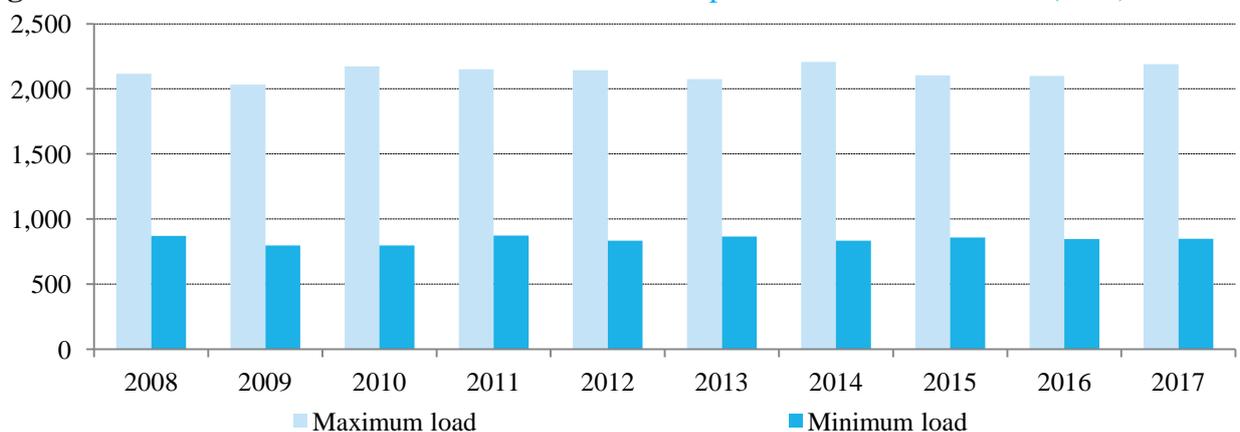


Figure 2. Maximum and minimum annual load over the period from 2008 to 2017 (MW)



an electricity surplus was registered. Monthly deviations of the BIH power system towards the SHB Control Block in 2017 are presented in Figure 3. A maximum hourly electricity deficit (shortage) was recorded in October amounting to 179 MWh/h, while a maximum surplus (overspill) was also recorded in October 2017 amounting to 157 MWh/h.

Total electricity in the transmission network amounted to 17,995.5 GWh, which is 5.6% less than in 2016. Transmission losses amounted to 341.5 GWh, or 1.90% of total energy in the transmission system. The trend of reducing distribution losses continued and they amounted to 1,005.9 GWh or 9.88% in relation to gross distribution consumption, which was the lowest level recorded in the history of the BIH electric power sector. Percentage of transmission and distribution losses is presented in Figure 4.

A total of 202 pumping cycles were conducted by PHP Čapljina in 2017 during which the plant withdrew 266 GWh and produced 197 GWh. Total generation of this power plant amounted to 278 GWh of electricity.

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

Figure 3. Monthly deviations of BIH power system towards SHB Control Block in 2017 (GWh)

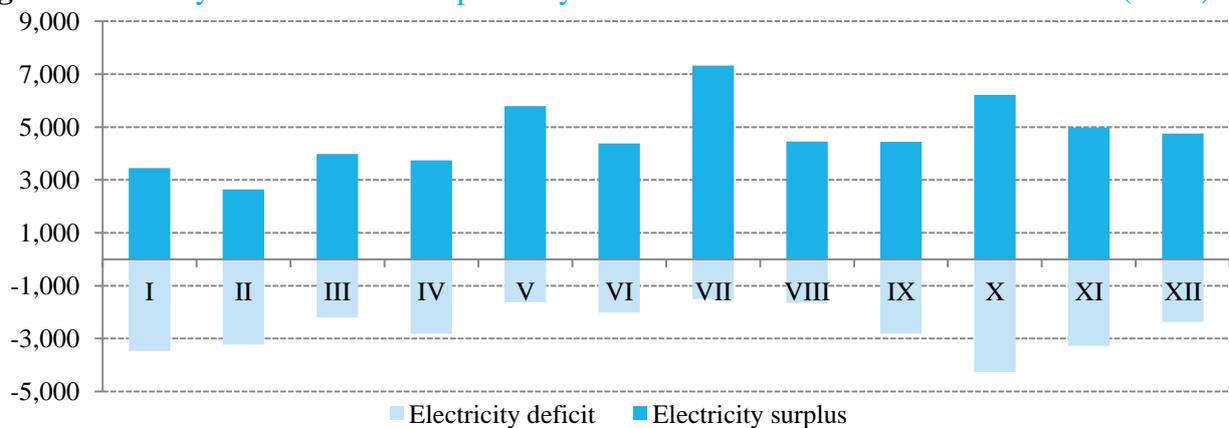


Figure 4. Transmission and distribution losses

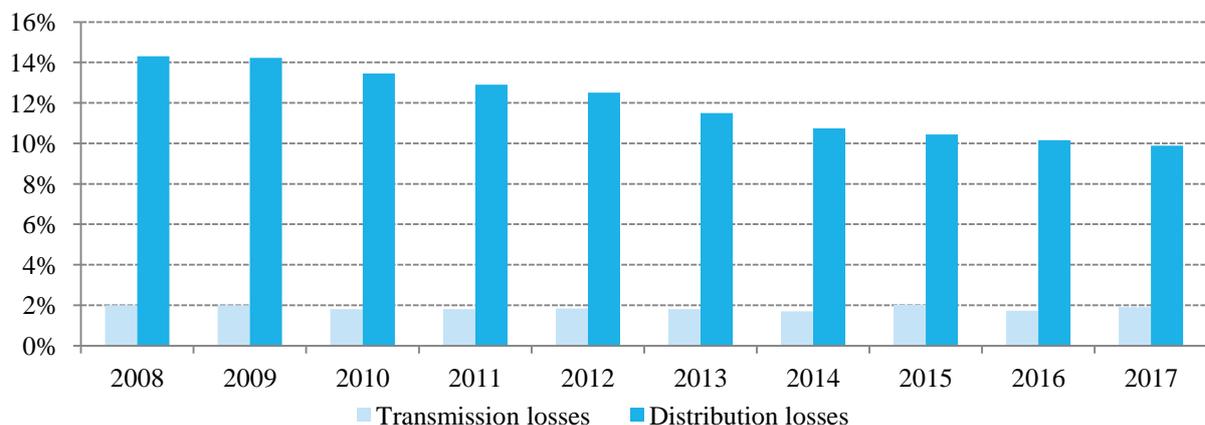


Table 1. Energy not supplied due to interruptions in the transmission network

	2013		2014		2015		2016		2017	
	MWh	min	MWh	min	MWh	min	MWh	min	MWh	min
ENS _{unpl}	494.74	17,484	420.75	35,458	467.22	21,017	528.46	15,975	1,362.35	16,594
ENS _{pl}	1,362.40	29,940	1,328.79	25,646	1,244.37	58,363	287.16	25,032	1,633.75	24,817
Total	1,857.14	47,424	1,749.54	61,104	1,711.59	79,380	815.62	41,007	2,996.10	41,411

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 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
AIT ₂₀₁₆	0.3549	1.0903	0.1659	0.0799	0.9460	4.6876	13.4773	5.6841	5.9238	0.8767	1.8523	2.3055
AIT ₂₀₁₇	5.3071	2.7625	3.0089	11.4069	4.2718	10.4772	9.7140	4.2352	8.5023	15.9486	3.2145	4.8497

are provided in Table 1. It is evident that total energy not supplied, after a decreasing trend by 2016, increased significantly in 2017.

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, the Transmission Company's own funds available for investments in 2017 amounted to € 130,470,630. The value of materials provided in the previous period amounts to € 1,678,352. Total Company's own funds in 2017 include the funds transferred under the investment plan for 2016 amounting to € 99,775,862, of which the contractual obligations amount to € 19,840,369, funds for investment projects where procurement procedures are in progress amount to € 51,407,958, and funds for investment projects where procurement procedures are in the preparatory phase amount to € 28,512,196. Depreciation funds for 2017 amount to € 26,050,671.

In 2017, several contracts on construction, reconstruction and rehabilitation of transmission facilities were implemented. New 110/x kilovolts (kV) substations TS Čitluk 2, Gradiška 2, Šipovo and Tuzla 3 were put into operation with reconstructed or new connection lines. Furthermore, the reconstruction of high and middle voltage plants and the installation of a new transformer were completed in the Bileća substation, in the Sarajevo 15, Mostar 1 and Novi Grad substations the reconstruction and installation of new transformers was done while in the Bihać, Nova Topola, Sarajevo 10 and Mostar 6 substations new transformers were installed. All works for connection of the Mesihovina wind farm were completed with the entry/exit system to the Tomislavgrad – Posušje 110kV transmission line. The

commencement of operation of this power plant with installed capacity of 50.6 MW is expected in March 2018.

Similar to the previous years, in 2017 voltage levels in the power system often exceeded their prescribed 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 low reactive power consumption in BIH from the aspect of 110 kV network (situations with low operational load and increased reactive power consumption are exceptional occurring in summer when the increased use of air conditioners leads to lower voltage in the network),
- 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 (TS Konjsko),
- insufficient possibilities of voltage and reactive power regulation (Q/U regulation) at the voltage level of 400 kV.

In 2017, 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 (13 times), taking into account the security of supply criterion, that is, meeting the so-called $n - 1$ criterion. The highest voltage levels in the 400 kV and 220 kV network were registered at substation TS Trebinje – 444.67 kV and 253.32 kV respectively, while in the 110 kV network this was the case with substation TS Sarajevo 10 – 128.29 kV.

In 2017, 446 outages were registered in the transmission system, of which 193, 176 and 63 at 110 kV, 220 kV and 400 kV voltage level respectively. In addition, seven failures of 400/220 kV transformers, three failures of 400/110 kV transformers and four 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 the indices of continuity of customer supply ENS and AIT, are also presented by the SAIFI and SAIDI indices.

The SAIFI index (System Average Interruption Frequency Index) indicates the average number of interruptions per customer during a year

The SAIDI index (System Average Interruption Duration Index) indicates the average interruption duration for each customer in minutes per year

Table 3. SAIFI and SAIDI for the transmission network

		2013	2014	2015	2016	2017
SAIFI	Planned interruptions	0.83	0.72	0.65	0.55	0.92
	Unplanned interruptions	1.01	0.80	0.90	0.97	0.81
	<i>Total</i>	1.84	1.52	1.56	1.52	1.73
SAIDI	Planned interruptions (min/customer)	124.36	143.84	108.53	92.92	114.66
	Unplanned interruptions (min/customer)	55.69	277.15	76.00	68.61	48.55
	<i>Total (min/customer)</i>	180.05	421.01	184.52	161.53	163.21

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

		2013	2014	2015	2016	2017
SAIFI	Planned interruptions	4.52	3.99	4.12	3.53	3.93
	Unplanned interruptions	9.35	7.61	7.76	5.78	7.01
	<i>Total</i>	13.87	11.60	11.88	9.31	10.94
SAIDI	Planned interruptions (min/customer)	404.33	671.60	365.77	399.12	324.97
	Unplanned interruptions (min/customer)	474.87	678.42	532.99	371.99	465.81
	<i>Total (min/customer)</i>	879.20	1,350.02	898.76	771.18	790.78

The 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 SAIDI indices for the past five years. Table 3 includes only interruptions caused by events in the network under the responsibility of Elektroprenos BIH, while Table 4 also includes interruptions in middle voltage feeders in the Transmission Company's substations caused by disturbances in the distribution network which are significantly less favourable, 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 electric power system and the map of the system are provided in Attachments A and B respectively.

3.7 Tariff Proceedings

Tariffs for Electricity Customers in the Brčko District BIH

The proceedings for setting of tariff rates for electricity distribution services and tariff rates for electricity supply within the universal

service in the Brčko District of BIH were initiated in October 2017, following an application by the regulated company – *JP Komunalno Brčko*.

A formal public hearing within the proceedings was held on 15 November 2017. After the regulated company provided all information requested additionally including the electricity procurement costs for the forthcoming period, in December 2017 SERC passed the decisions on tariffs for distribution and electricity supply within the universal service in the Brčko District of BIH, the application of which will start on 1 January 2018, thus replacing the decisions applicable in 2017.

JP Komunalno Brčko is the public supplier in the area of the Brčko District BIH which purchases all the electricity for supply of its customers on the wholesale electricity market. Although this Company requested in its application an average increase of tariffs by 5.4% and 24.2% for distribution and supply respectively, SERC did not change by its decisions the tariffs for the distribution network utilisation, while average prices for supply of small commercial customers and households increased by 3% and 7.6% respectively. The increase in prices on the wholesale electricity market in 2017 was taken into account with the price adjustments while the operational and capital costs of Komunalno Brčko in the electricity power activity remained at the same level.

In the first half of 2017, the households in Brčko District of BIH had the lowest average electricity price in Bosnia and Herzegovina (0.065 €/kWh). The new prices for households are 3.3% lower than those paid by customers of Elektroprivreda BIH, that is, 9.4% lower than those paid to Elektroprivreda HZHB, and 6.4% higher compared to households supplied by Elektroprivreda RS. Hence, the new prices for households in the Brčko District BIH are still lower than an average price for households in BIH.

A particular emphasis in the tariff proceedings was put on the distribution system operation in the Brčko District of BIH. Distribution losses in 2015 and 2016 amounted to 13.08% and 12.38% respectively in comparison to gross distribution consumption, which is higher than average values in BIH, where these losses at the same time amounted to 10.51% and 10.26% respectively. With a view to cutting distribution losses and gradually reducing them to an average level in BIH, and taking into consideration operational measures implemented by JP Komunalno Brčko, after approving an amount of 12% for distribution losses in 2017, in this tariff proceeding for 2018 they were approved in an amount of 11%.

Tariffs for Operation of Independent System Operator; Tariffs for System and Ancillary Services

Pursuant to the legal obligation to submit for consideration the applications 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 an application in October 2016, in which it presented and explained planned revenues, expenditures and costs in 2017. The tariff for operation of independent system operator amounting to 0.378 €/MWh was requested in the application, which would present a 24.75% increase.

A formal public hearing in the proceeding was held at the beginning of December 2016. On that occasion, the regulated company provided an addition explanation of planned expenditures and costs for 2017, while the interveners presented their interests and expectation for the tariff to remain at the current level.

Based on the analyses of the applicant's required costs and expenditures and other available documents, on 3 April 2017 SERC adopted a decision which finalised this tariff proceeding. By the adopted decision, the tariff for operation of independent system operator was kept at the level of 0.303 €/MWh applicable since 1 January 2016. Furthermore, starting on the date the application of this decision commenced (1 May 2017), this tariff is not charged to generators for energy taken over in the pumping mode.

As already described in Section 3.1 of the Report, in June 2017 SERC reduced the system service tariff from 1.923 €/MWh to the value of 1.629 €/MWh, with the commencement of application as of 1 July 2017.

On 22 November 2017, at its own initiative SERC launched the tariff proceedings for setting of tariffs for operation of the independent system operator in Bosnia and Herzegovina and the tariffs for system and ancillary services.

Consequently, the ISO BIH submitted the necessary documentation which included an analytical overview of all achieved, estimated and planned revenues and expenditures for 2017 and 2018 according to which the tariff for operation of independent system operator would remain 0.303 €/MWh.

Tariffs are set pursuant to the criteria as laid down in the *Law on Transmission of Electric Power, Regulator and System Operator of Bosnia and Herzegovina* and *Tariff pricing methodology for services of electricity transmission, operation of ISO and ancillary services*. In tariff setting proceedings, to the maximum extent possible SERC adheres to the basic principles prescribing that tariffs will be fair and reasonable, non-discriminatory, established on objective criteria, based on justified costs and determined in a transparent manner.

The tariff setting proceedings for operation of independent system operator and system and ancillary services will continue in 2018, including a formal public hearing which will be held on 17 January 2018 in which participation of five entities with intervener status was enabled.

Tariffs for Electricity Transmission Services

In November 2016, *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 charge for its services. The average tariff for electricity transmission amounting to 5.409 €/MWh was requested in the application, which would be a 19% increase.

SERC decided upon this tariff application also pursuant to the criteria and principles applied in the previous tariff proceedings. A formal public hearing at which facts in the tariff proceedings were determined was held at the end of December 2016.

With the electricity market development in Bosnia and Herzegovina, market participants' interest in participating directly in tariff proceedings in the capacity of intervener also increased. In addition to the regulated company, five more entities with intervener status granted by SERC actively participate in this proceeding, which is a record in the number of participants actively participating in the proceedings before the regulatory authority.

The final decision in the proceeding was adopted on 3 April 2017 with the commencement of its application set for 1 May 2017. Following the SERC's commitment to ensure an equal approach and correlation in the assessment and approval of certain elements of the tariff applications of the Independent System Operator in BIH and *Elektroprenos BIH*, the tariffs for the electricity transmission services also remained the same, in this case, at the level which had been applied as of 1 July 2015. Consequently, the part of the transmission network charge pertaining to energy remains 2.955 €/MWh while the part of the transmission network charge pertaining to capacity amounts to 0.75 €/kW (an average transmission network charge amounts to 4.545 €/MWh). In accordance with the mentioned commitment, the Commission decided that the tariff for transmission services would not be charged to generators for energy taken over in the pumping mode of operation.

At the request of the regulated company, on 14 December 2017 SERC initiated a new tariff proceeding for electricity transmission services. In its application *Elektroprenos* requested an increase of the average tariff for electricity transmission services to 5.163 €/MWh, i.e., a 13.6% increase.

This tariff proceeding will also continue in 2018, including a formal public hearing which will be held on 18 January 2018 with the possibility for five entities to participate with intervener status.

3.8 Electricity Market

After a record in electricity generation reached in 2016 in Bosnia and Herzegovina, during 2017 a total of 15,151 GWh of electricity was produced, which is 1,358 GWh, or 8.2% less in comparison to the previous year. An extremely poor hydrological situation, with the minimum level of precipitation and inflows, following the previous two unfavourable years in hydrological terms, had the biggest impact on reduced generation.

A total of 3,831 GWh was produced by hydropower plants, which is even 29.9% less than in the previous year and the lowest value recorded in a period of more than 20 years. On the other hand, generation by thermal power plants reached a new record of 10,918 GWh which is 2.9% more than in the previous year.

Small-scale renewable generation amounted to 380.2 GWh, or 5.1% less in comparison to 2016. This is the consequence of the poor hydrological conditions as already mentioned. Nevertheless, a dominant share in this category is still held by small hydro power plants (352.27 GWh, or 92.6%), while solar power plants, biomass power plant and wind power plants produced 21.16 GWh (5.6%), 6.79 GWh (1.8%) and 0.03 GWh respectively.

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

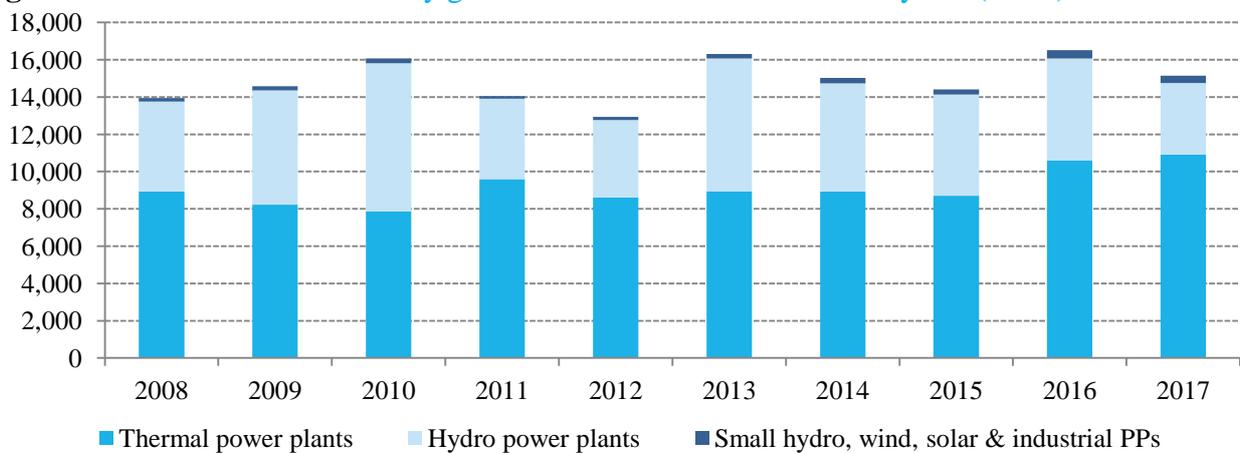
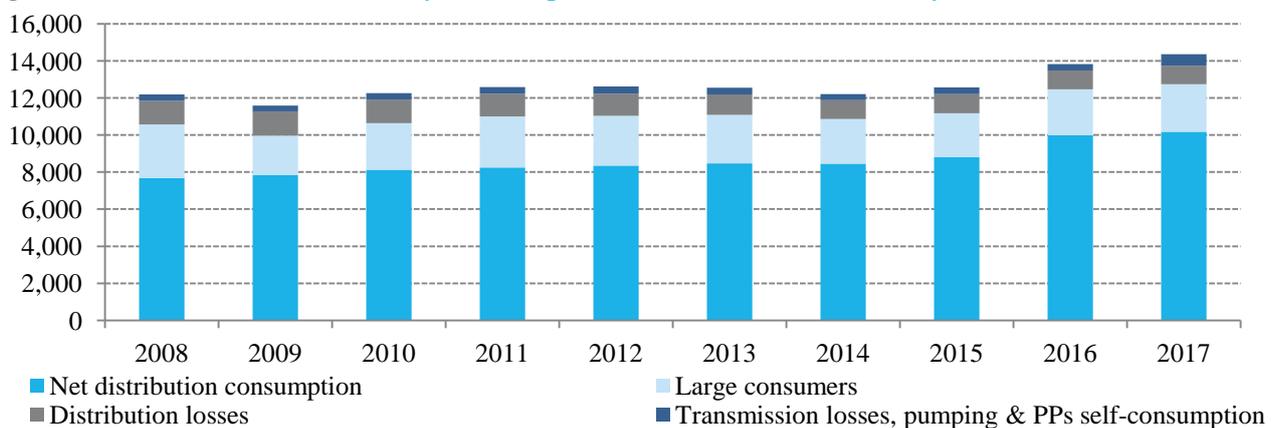


Figure 6. Break-down of electricity consumption in BIH over the last ten years (GWh)



Independent producers have a significant share in small-scale renewable generation, the facilities of which produced 277.65 GWh (73%), while the remaining part was produced by power plants owned by the public utilities. Industrial power plants produced 21.33 GWh. A break-down of generation over the last ten years is provided in Figure 5 while a break-down of total consumption in BIH is provided in Figure 6.

In Bosnia and Herzegovina in 2017 total consumption reached a record of 13,366 GWh, which is 501 GWh or 3.9% more than in the previous year. A total of 202 pumping cycles of PHP Čapljina were conducive to this increase during which this plant withdrew 266 GWh and produced 197 GWh. With the proper use of its technical capacities which enable purchasing cheap energy at night and selling more expensive peak energy, PHP Čapljina made significant financial results even under very unfavourable hydrological conditions and increased its total generation reaching an amount of 278 GWh. Consumption of customers connected to the transmission network increased by 3.8% amounting to 2,562 GWh. Consumption of customers connected to the distribution network also increased amounting to 10,179 GWh, or 1.9% more than in the previous year.

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

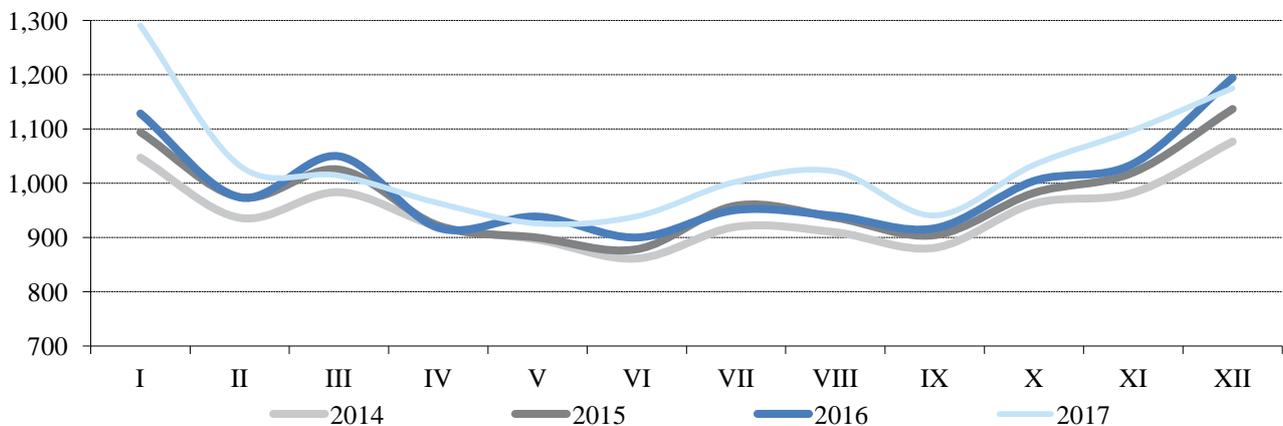


Figure 8. Energy taken over from the transmission network in 2017 per supplier (GWh)

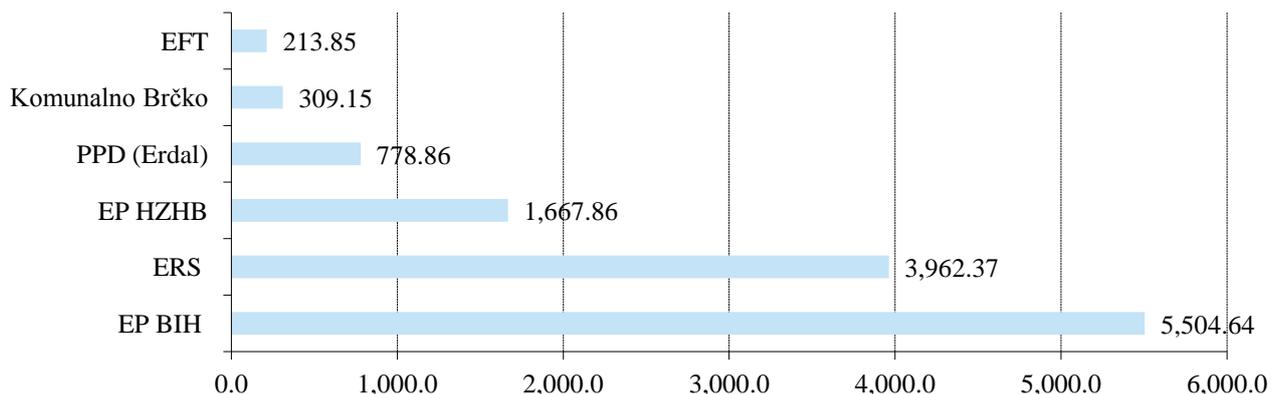
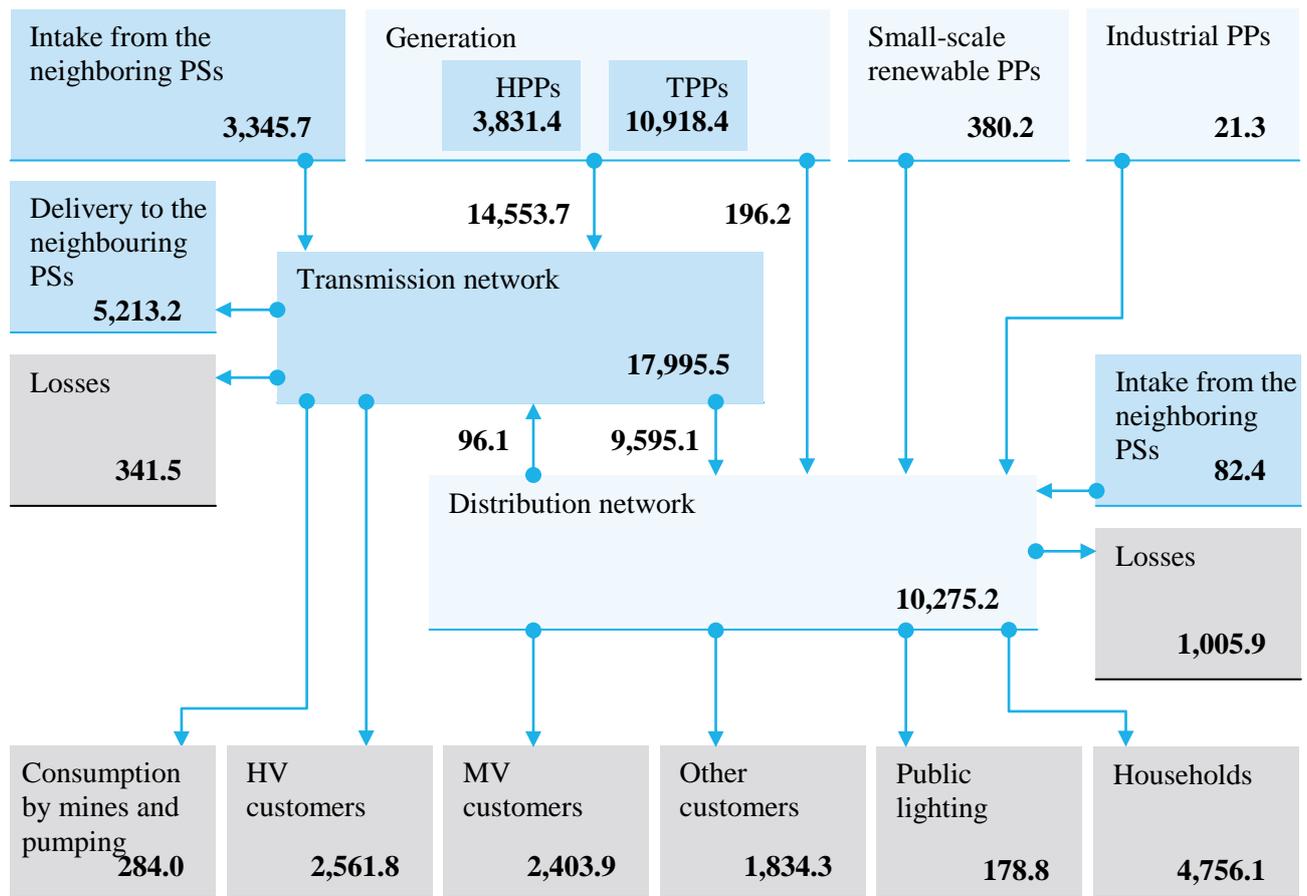


Figure 9. Balance volumes realised in 2017 (GWh)



A total of 12,441 GWh of electricity was taken from the transmission system, which is a 4.1% increase in comparison to 2016. In January 2017, a record in monthly withdrawal of electricity from the transmission network was registered amounting to 1,291.1 GWh (the previous record amounting to 1,194.4 GWh was registered in December 2016). Data on energy taken from the transmission network by months and suppliers are presented in Figures 7 and 8 respectively.

The difference between total generation and total consumption in BIH, that is, the balance surplus in 2017 amounted to 1,785 GWh or 1,859 GWh less than in the previous year. A descriptive overview of electric power balance volumes realised in 2017 is provided in Figure 9. The balance volumes and electric power indicators of BIH are provided in Attachments C and D respectively.

Regional Electricity Market

On the electricity market in South East Europe, which is of direct interest to electric power entities in BIH, a downward trend in wholesale electricity prices was present for several years. In 2017 this trend was discontinued and electricity prices increased to a certain level. The main reason for this change was an electricity

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

<i>PX indices</i>	<i>Average price</i>	<i>Maximum price</i>	<i>Minimum price</i>
Phelix	34.21	101.92	-52.11
ELIX	36.23	133.15	-2.75
SIPX	49.52	114.25	3.21
HUPXDAM	50.36	150.02	11.80
OPCOM	48.17	112.06	11.95
SEEPEX	51.70	151.31	9.89
CROPEX	52.34	158.79	17.44

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

SEEPEX – Serbian Power Exchange index

CROPEX – Croatian Power Exchange index

deficit as the result of reduced generation of hydropower plants due to the extremely unfavourable hydrological conditions. While according to the indices of the Hungarian power exchange (HUPX) wholesale electricity prices were below 40 €/MWh for most of 2016, in 2017 they ranged between 45 and 55 €/MWh, and even higher in the last quarter. Table 5 provides an overview of electricity prices on the relevant power exchanges from the aspect of South East Europe.

Electricity Market in BIH

In 2017, total electricity consumption in BIH amounted to 13,366 GWh or 3.9% more than in the previous year. Customers connected to the transmission system took over 2,562 GWh, which is a 3.8% increase. A total of 10,179 GWh was taken over from the distribution network, or 1.9% more than in the previous year, of which 9,173 GWh pertain to take-over by end customers and 1,006 GWh to distribution losses. Total sale to customers in BIH increased by 2.2% amounting to 11,735 GWh.

The competent regulatory commissions do not to set 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 customers belonging to the category of ‘other consumers’ (small customers, that is, commercial customers at 0.4 kV), while 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 at regulated prices.

In 2017, the option of being supplied within the universal service was used by all households in BIH and most of the customers belonging to the category of ‘other consumers’. An average electricity price for these customers amounted to 0.0772 €/kWh and it was slightly higher than in 2016 when it amounted to 0.0771 €/kWh. An average price for households amounted to 0.0722 €/kWh with an increase of 1% while an average price for customers belonging to the category of ‘other consumers’ was 0.0902 €/kWh which is a 1.7% decrease in comparison to 2016.

It is obvious also from these data that the Regulatory Commissions work on the gradual elimination of inherited cross-subsidies among some categories of electricity customers, which is done in accordance with best international regulatory practice in order to avoid so-called ‘tariff shocks.’ The evident trend of reducing the ratio of the average prices between small commercial customers and households in the past several years in BIH is clearly visible in Figure 10. According to the 2017 data, cross-subsidies between commercial customers and households amount to 25% on average,

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

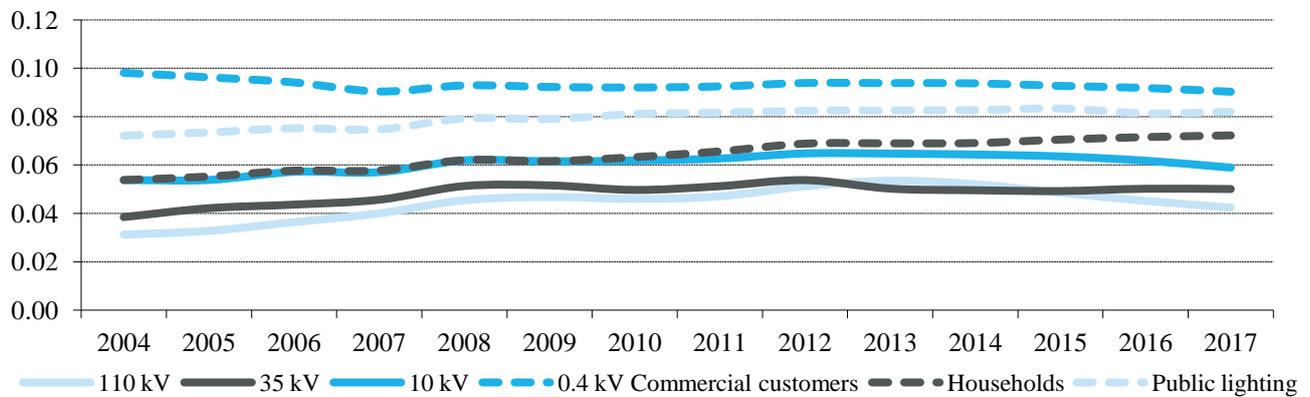


Figure 11. Average electricity prices by public utility excluding VAT (€/kWh)

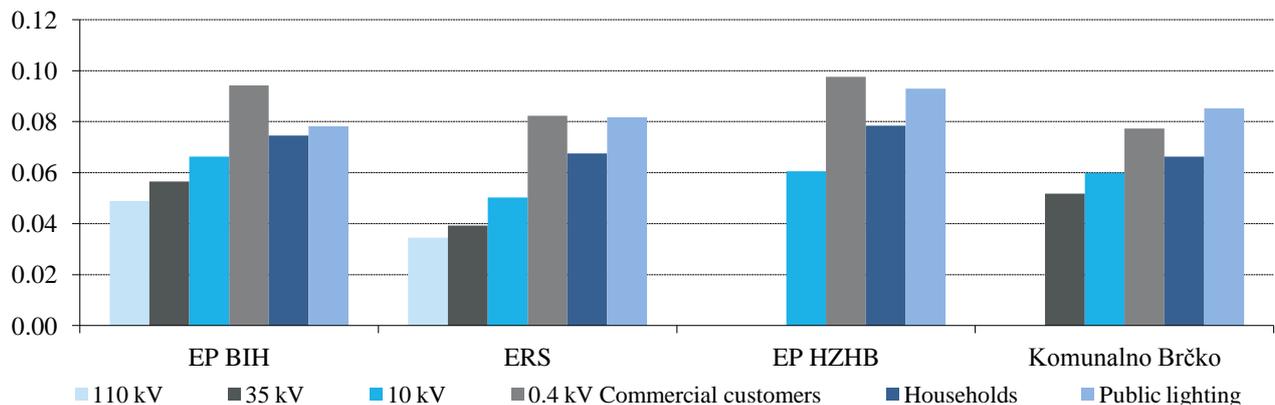


Table 6. Number of electricity customers in BIH

	110 kV	35 kV	10 kV	Other consumers	Households	Public lighting	Total
Elektroprivreda BIH	5	64	844	63,218	688,170	4,295	756,596
Elektroprivreda RS	12	37	1,057	35,156	518,162	1,773	556,197
Elektroprivreda HZHB			206	14,908	177,062	1,692	193,868
Komunalno Brčko		1	46	3,750	31,021	433	35,251
Other suppliers	2		29	25			56
Total	19	102	2,182	117,057	1,414,415	8,193	1,541,968

with the lowest values recorded among the customers supplied by Komunalno Brčko, while the highest values were recorded among the customers supplied by Elektroprivreda BIH. There is an obvious need for further reduction of cross-subsidies through additional measures of the Regulatory Commissions and efficient functioning of the electricity market, thus complying with the basic regulatory principle of reflecting costs in price formation. This would facilitate market competition also in supply of households, i.e., open up possibilities for suppliers on the market to offer more favourable prices and become competitive in this market segment as well.

Trends of average selling electricity prices for end customers in BIH are presented in Figure 10, while Figure 11 gives an overview of average electricity prices per public suppliers and customer category in 2017.

The number of electricity customers in BIH during the year increased by 10,468 thus reaching 1,541,968 at the end of the year with the highest increase pertaining to the category of households – 9,217 (Table 6).

As of 1 January 2016, the first cases of supplier switching were registered among the customers connected to the distribution system. Over the months this number varied⁴, so at the end of 2017, 54 customers which are not supplied by their traditional suppliers were registered, of which 29 belonging to the consumption category at 10 kV and 25 customers in the category of ‘other consumers’ (commercial customers connected to 0.4 kV). They took over 126.82 GWh in total, of which 10 kV customers took over 122.84 GWh, while ‘other consumers’ took over 3.98 GWh. These customers were supplied by *HEP-Trade (HEP Energija) d.o.o. Mostar*, *Petrol BH Oil Company d.o.o. Sarajevo*, *ASA Energija d.o.o. Sarajevo* and *Proenergy d.o.o. Mostar*. Furthermore, in the transmission system amounts of 779.16 GWh and 740.14 GWh were registered which *Prvo*

⁴ In June 2017, a total of 84 customers connected to the distribution system were registered that are not supplied by their traditional suppliers.

plinarsko društvo (Erdal) d.o.o. Sarajevo and Elektroprivreda BIH d.d. Sarajevo sold to Aluminij d.d. Mostar respectively as well as 226.59 GWh sold by Energy Financing Team d.o.o. Bileća to the Company BSI d.o.o. Jajce. To sum up these purchases in 2017, a total of 1,859.97 GWh was delivered to customers that switched suppliers or 15.85% of total energy taken over by end customers in BIH. Furthermore, in 2017 tens of thousands of customers changed the conditions of supply by modifying the contract with their previous traditional suppliers (so-called ‘incumbents’), thus choosing in the open market the supply offer that suited them best. A total of 6,586.47 GWh was delivered to the customers supplied within the universal service (56.13% of total consumption), while 5,148.53 GWh (43.87%) was delivered to the customers for whom prices are not regulated.

Trading on the wholesale market in BIH, which is based on bilateral sales contracts between suppliers, is significantly more dynamic. Although this market has not been institutionalised yet, the result of numerous bilateral contracts is impressive – in 2017, a total of 18 licensed entities were active in this market and traded 8,624,621 MWh which is an increase of 493,049 MWh, or 6.1% in comparison to the previous year (Figure 12). The level of average daily trading amounted to 24 GWh and it is considerably higher than a daily trading volume in the neighbouring power exchanges. It is an important fact that the trading volume on the wholesale market increases every year so it increased by 6.1% in 2017, even under the conditions when generation was reduced by 8.2%.

As already mentioned in Sections 3.1 and 3.7 of this Report, in 2017 there were no changes of regulated tariffs for electricity transmission services or the tariff for operation of the ISO BIH. As of 1 July 2017, the system service tariff has been reduced by 15.3%.

Figure 12. Overview of trading on the wholesale market in BIH in 2017 (MWh)

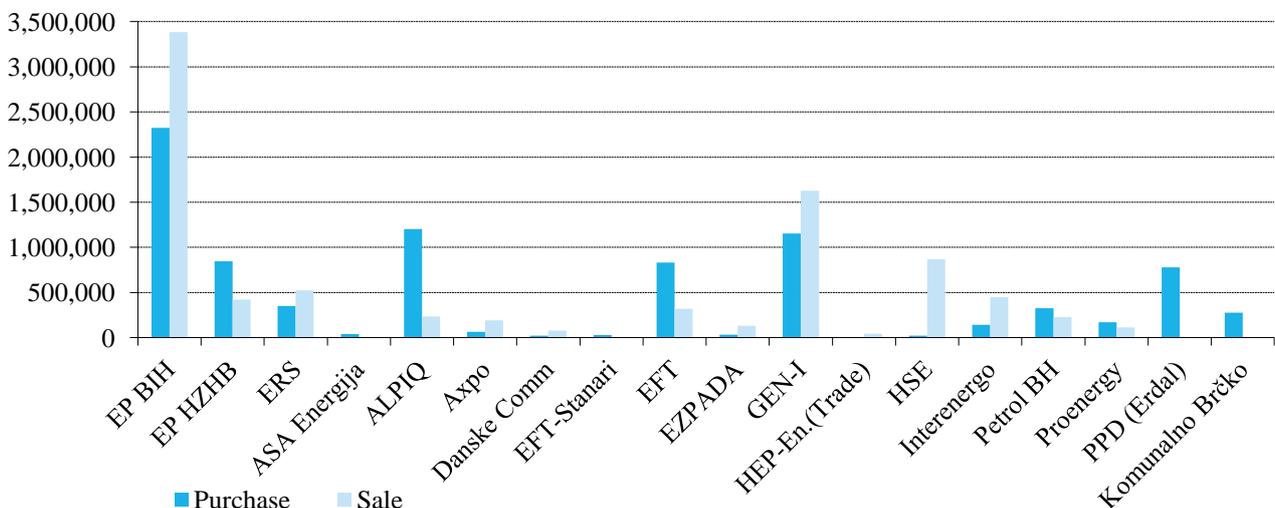


Table 7. Volumes of purchased ancillary services

<i>Ancillary service</i>	<i>Amount (€)</i>
Secondary control – capacity	4,766,304
Tertiary control – capacity	5,195,315
‘Upward’ balancing energy	3,978,588
‘Downward’ balancing energy	-735,613
Losses in the transmission system and compensations	13,572,681
Total	26,777,275

In addition to the wholesale and retail markets, in Bosnia and Herzegovina the balancing market operated by the Independent System Operator in BIH is also functional. Essentially, it is a monopsony market, where on the demand side there is only one entity – ISO BIH, while on the supply side there are mostly generators providing ancillary services (capacity and energy for secondary and tertiary control and energy for covering losses in the transmission system). The calculation of deviations (imbalances) of balance responsible parties from the daily schedule is also conducted on the balancing market in terms of energy and prices. Imbalance prices are determined based on prices of balancing energy on an hourly basis.

All transactions between suppliers on one side and the ISO BIH on the other are conducted based on a market principle through annual and monthly tenders while prices of the balancing energy are formed through offers of suppliers of secondary and tertiary control on a day-ahead hourly basis.

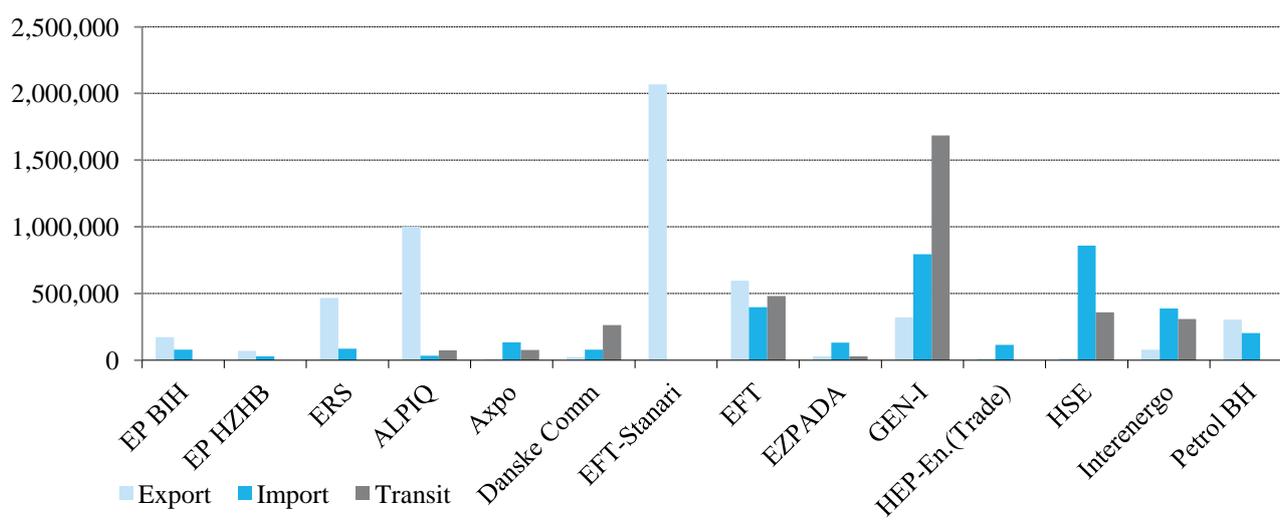
The total value of ancillary services purchased on the balancing market in 2017 exceeds € 26 million as presented by the breakdown provided in Table 7.

At the same time, by the provision of system service to suppliers taking over energy from the transmission system and the calculation of deviations from the daily schedule by balance responsible parties, the ISO BIH collected a total of € 29.17 million with € 22.08 million and € 7.08 million collected for the system service tariff and imbalances respectively.

Cross-Border Trade

Good connections of the BIH system with the neighbouring electric power systems enable a high level of electricity exchange with the neighbouring countries. In 2017, a total of 5,161 GWh was exported or 2.4% less than in the previous year. A total of 14 entities exported electricity, among which *EFT – Rudnik i Termoelektrana Stanari* with 2,068 GWh was the leader in terms of the export scope, followed by *Alpiq Energija*

Figure 13. Overview of cross-border transactions by entities in 2017 (MWh)



BH and Energy Financing Team (EFT) with 1,001 GWh and 596 GWh respectively (Figure 13).

Electricity imports amounted to 3,322 GWh, which is an increase as high as 117.9% compared to the previous year. Among the 13 entities importing to BIH, the highest imports were achieved by HSE BH Energetsko preduzeće (859 GWh), GEN-I (794 GWh), EFT (396 GWh) and Interenergo (387 GWh), Figure 13. The largest scope of electricity trading is traditionally achieved with Croatia followed by Serbia and Montenegro (Table 8).

In 2017, registered electricity transits through the BIH transmission system amounted to 3,275 GWh, which is an increase of 404 GWh or 14.1% in comparison to 2016. Transit flows are of special importance because they are used as the basic element to calculate revenues within the *Inter-TSO Compensation Mechanism* (ITC mechanism), which was described in more detail in earlier SERC Reports on Activities. Total revenue achieved by BIH on this basis in the first ten months of 2017 amounted to € 1,295,639, which is approximately € 0.766 million more than in the same period last year.

Table 8. Cross-border trade per border, including registered transits (GWh)

Country	Exports	Imports
Croatia	4,428.1	3,589.3
Serbia	2,109.9	2,636.6
Montenegro	1,898.1	371.5
Total	8,436.1	6,597.4

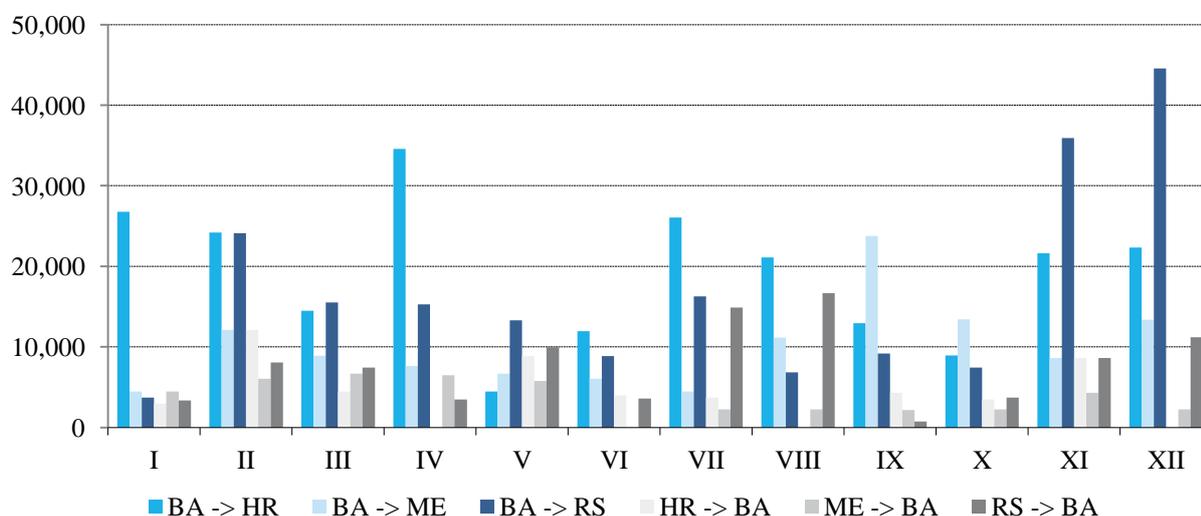
Table 9. Revenues achieved from annual auctions

Year	Revenue (€)
2013	1,041,054.18
2014	1,485,637.81
2015	558,187.06
2016	486,765.21
2017	1,033,460.99
2018	599,096.55

In 2017 as well, cross-border capacity allocation through auctions was organised by the Coordinated Auction Office in South East Europe (SEE CAO) on the BIH borders with Montenegro and Croatia while on the BIH border with Serbia joint auctions of the two operators were organised (Please see Section 3.2). The total revenue of BIH on the basis of cross-border transmission capacity annual auctions for 2018 amounts to € 599,096.5. As in the previous period, the highest price was reached on the border with Croatia in the direction from BIH to Croatia amounting to 2,015 €/MW, with more than 2/3 of revenues on the annual auction being collected in this direction.

Revenues of Bosnia and Herzegovina achieved to date on the basis of auctions for allocation of cross-border transmission capacities on an annual basis are provided in Table 9 while Figure 14 provides an overview of revenues based on monthly auctions per border and direction. 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 BIH.

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

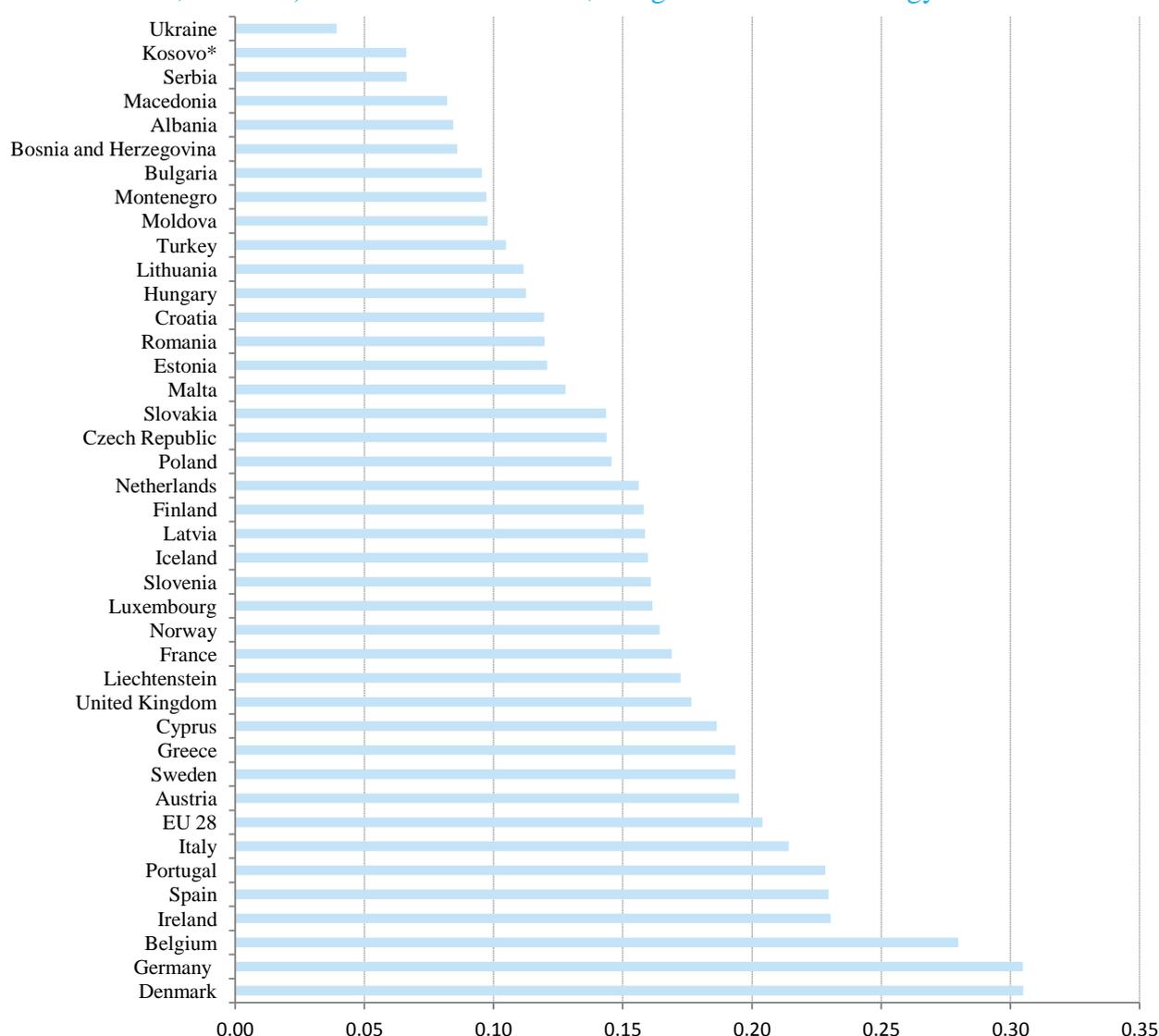


3.9 Energy Statistics



Aware of the relevance of objective presentation of data on energy volumes and electricity prices, in 2017 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 requirement 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 the first half of 2017, using Eurostat methodology



Note: All taxes and levies included

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

Figure 16. A geographic overview of electricity prices for households (in €/kWh) in 2017, using Eurostat methodology

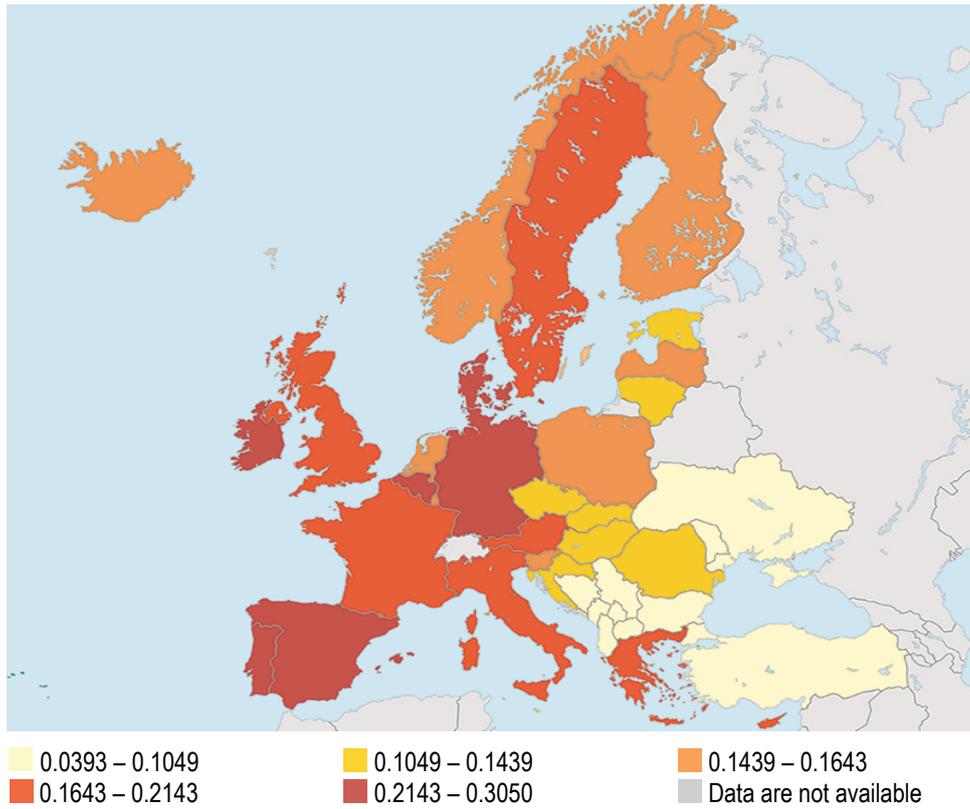
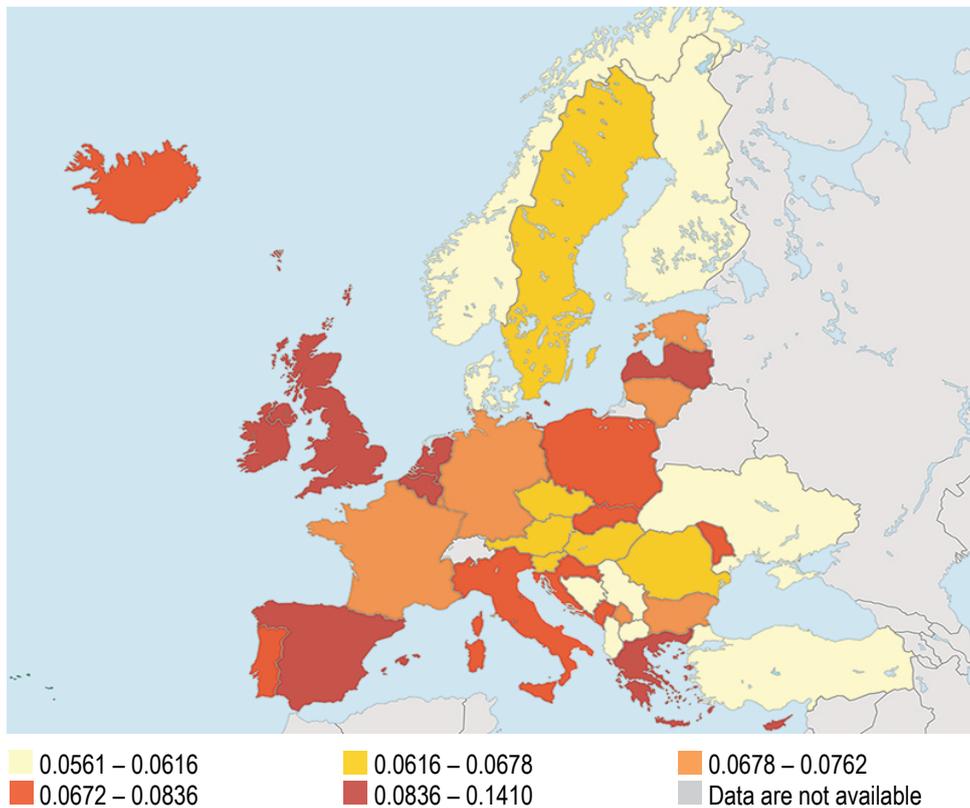


Figure 17. A geographic overview of electricity prices for industrial customers (in €/kWh) in 2017, using Eurostat methodology





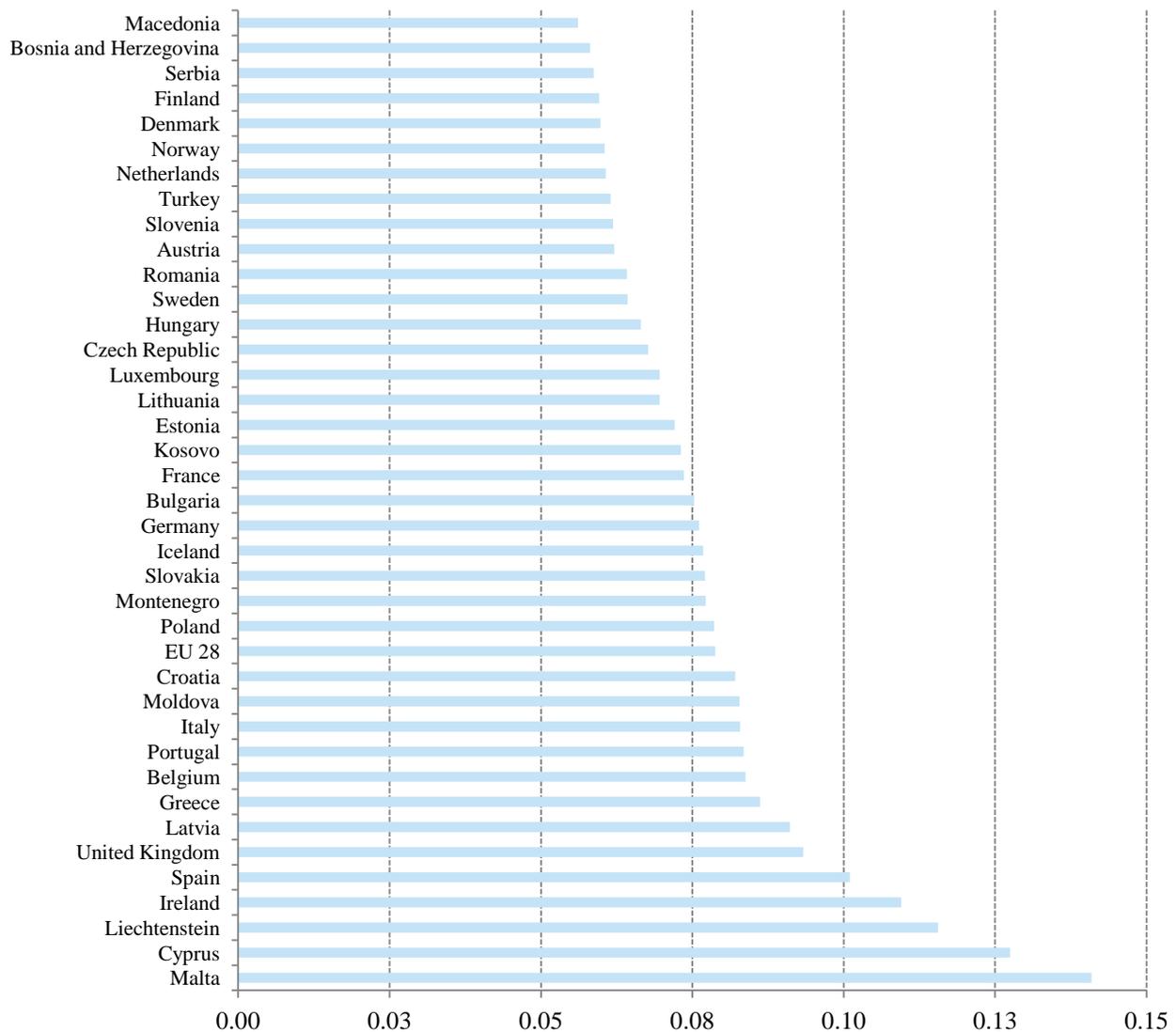
Eurostat is the statistical office of the European Union situated in Luxembourg. Its task is to provide the European Union with statistics at European level that enable comparisons between countries and regions.

The results of 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 electric power sector, SERC continuously collects and analyses data on regional markets, including data on the power exchanges seated in Leipzig, Budapest, Bucharest, Ljubljana, Belgrade and Zagreb (Table 5).

Based on a systematic approach to numerous electric power indicators, SERC provided quality answers to a number of inquiries by national and international institutions also in 2017 by presenting statistical data on the electric power sector of Bosnia and Herzegovina.

Figure 18. Electricity prices expressed in €/kWh for industrial customers (annual consumption from 500 to 2,000 MWh) in the first half of 2017, using Eurostat methodology



Note: All taxes and levies excluded

3.10 Other Key Activities

Also in 2017, the State Electricity Regulatory Commission exchanged data with a number of state institutions including the Council of Ministers of Bosnia and Herzegovina, Ministry of Foreign Trade and Economic Relations, Directorate for European Integrations of the BIH Council of Ministers, Council of Competition of BIH and BIH Agency for Statistics⁵, and prepared different types of information they needed. SERC gave a particular contribution to activities of the Stabilisation and Accession Committee and a Subcommittee on Transportation, Environment, Energy and Regional Development and to developing the answers to the Questionnaire of the European Commission for the preparation of the Opinion on the BIH Application for the membership of the EU. This pertains in particular to the questions from Chapter 15: Energy, Chapter 21: Trans-European Networks and Chapter 28: Consumer and Health Protection and some issues falling under Economic Criteria.

SERC provided its full contribution to the implementation of numerous activities and development of various documents in the energy sector, including the development of the *Framework Energy Strategy of Bosnia and Herzegovina by 2035*, support to the implementation of technical assistance for the establishment of an institutional framework for organised day-ahead market and the development of other documents for the implementation of the measures agreed under the *Road Map for Implementation of 'Western Balkans 6 Initiative'* (so-called *WB6 Initiative*). SERC has a proactive approach in the implementation of this document which is in line with the information from the session of the BIH Council of Ministers of 6 March 2017, when all relevant BIH and Entity authorities were called on to implement the measures identified for efficient functioning of the electricity market in BIH and the region.

In line with its legal powers to act in the area of Brčko District BIH as a regulatory authority, through its activities SERC also cooperates with the Brčko District Government.

Since their establishment, the State 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.

Legislative Framework Development

Bosnia and Herzegovina should have harmonised its national legislation with EU legislation in the field of energy by 1 January

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.

2015, with a focus on the content of the Third Energy Package (Please see Attachment E). 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 so as to enable full compliance of legislation at all administrative levels in BIH (taking into account their separate competences and regulatory powers) with the EU *acquis* on electricity.

Since December 2015, using the results of the European Commission technical assistance project, a working group comprising experts of the relevant ministries, regulatory commissions and business entities with the significant support of the Energy Community Secretariat, intensively worked on preparing a working text of a new national law which would enable transposition of the Third Energy Package in Bosnia and Herzegovina. Following the mentioned activities, on 13 October 2016, the three relevant ministries and Director of the Energy Community Secretariat signed the *Agreement on the removal of serious and persistent breach of the Treaty establishing the Energy Community in the gas sector*. On the following day, the Ministerial Council of the Energy Community passed a decision on suspension of the previously imposed measures against Bosnia and Herzegovina until 31 March 2017, which was the deadline for adoption of the national law in accordance with the signed Agreement and an Action plan as defined by the Agreement, including the adoption of mutually harmonised entity gas laws. As these activities were not implemented within the given deadlines, the measures against BIH were imposed again and were valid until 14 December 2017.

The BIH Ministry of Foreign Trade and Economic Relations prepared a *Pre-Draft Law on Electricity and Gas Regulator, Transmission of Electric Power and Electricity Market in BIH*, and organised public consultation on the content thereof in May 2017 calling upon all interested entities and organisations to submit their comments in writing. SERC used this possibility by giving its concrete proposals and supporting the development of the new law and expressed its readiness and interest to fully, directly and constantly contribute in the subsequent activities on harmonisation of national legislation with the EU legislation in the energy sector.

Energy Investment Activity

During 2017, the activities of the United States Agency for International Development (USAID) were conducted within the project *Energy Investment Activity* (EIA). The Project, with the



Promoting Renewable Energy in BIH

At the beginning of 2016, *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH* (German Agency for International Cooperation) launched the project *Promoting Renewable Energy in BIH* with a view to creating preconditions to increase the use of renewable energy.

The key partners in the project implementation, which will last until the end of 2019, are the respective national and entity ministries and regulators and operators for renewable energy, that is, incentive schemes.

The project provides technical assistance in the field of general improvement of the framework conditions for heat and electricity generation using renewable energy sources (RES), focusing on the use of bioenergy and improvement of technologies for small hydropower plants (up to 10 MW).

The concept of the project defines different areas of intervention, including strategic, legal and regulatory framework, administrative procedures and incentive schemes, innovative technology, capacity building and the development of specific tools. The project is conceived through four areas of intervention:

- General framework conditions for renewable energy sector,
- The development of the bioenergy sector and innovative technologies,
- Improvement of the sector of small hydropower plants,
- Incentive schemes and modes of financing for renewable energy projects.

The long-term nature of the project contributes to further sustainable development of renewable energy sources and necessary diversification of energy sources, thus increasing the national energy security.

The project is conceived so as to ensure full coordination with activities under the *Biomass Energy for Employment and Energy Security Project* of the United Nations Development Program (UNDP) and USAID's *Energy Investment Activity Project*.

Ongoing and 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 the legal persons whose applications were decided upon after the completion of the tariff proceedings. In the period from 2009 to 2016 there were no new applications for revision of any decision from the SERC regulatory practice by any person that has standing to commence an action.

The subject of the dispute between Elektroprenos BIH and Elektroprivreda HZHB (described in Section 3.5 of the Report) is of such nature that SERC could not resolve it to the satisfaction of both parties in the proceeding. Once its value is added and absolutely certain impact on financial interests of any party in the proceeding, it was fully reasonable to expect the dissatisfied party to use the right to launch a proceeding before the Court of Bosnia and Herzegovina.

On 27 March 2017, the Court of Bosnia and Herzegovina informed SERC that Elektroprivreda Hrvatske zajednice Herceg Bosne launched an administrative proceeding against this decision of the State Electricity Commission by filing a lawsuit. At the same time, the plaintiff asked for the postponement of its enforcement but following the SERC's explanation, this request of Elektroprivreda HZHB was rejected by the Decision of the Court of Bosnia and Herzegovina of 4 April 2017. Firmly convinced in the validity of its decision SERC had undertaken further procedural actions concerning the administrative proceeding, prepared an answer to the lawsuit which denied all allegations and submitted the whole file to the Court for its ruling. At the time of drafting this Report, no ruling was made.

Since its establishment SERC has not encountered any problem with collection of regulatory fees. Exceptionally, the KTG d.o.o. Zenica Company, a former holder of the international electricity trading licence, was not fully cooperative on this issue with SERC, so SERC had to request collection of its receivable through court. Although the existence of the requested amount of receivable was proved and the right to the legal default interest established, the respondent KTG d.o.o. Zenica failed to act upon the final ruling of the Municipal Court in Zenica as of October 2017 and fulfil its obligation. Therefore, in December 2017 a proposal for enforcement was submitted to the competent court. At the time of writing this Report, the enforcement proceeding was ongoing.

To prevent any similar sequence of events and potential new problems with collection of its receivables, at the end of 2017 SERC decided to replace the existing system of issuing invoices for collection of regulatory fees since the beginning of 2018 by requesting its payment through an administrative act which has the force of a writ of execution. In this manner the long-lasting process of proving receivables in civil proceedings is avoided and a new more efficient and cost-effective mechanism of collecting receivables is established on this basis.

4. ACTIVITIES IN INTERNATIONAL INSTITUTIONS

4.1 Energy Community



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 nine Contracting Parties: Albania, Bosnia and Herzegovina, Georgia, Kosovo*, Macedonia, Moldova, Montenegro, Serbia and Ukraine.⁶

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, Norway and Turkey have observer status in the Energy Community. In 2016, Belarus filed an application for acquiring observer status.

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.

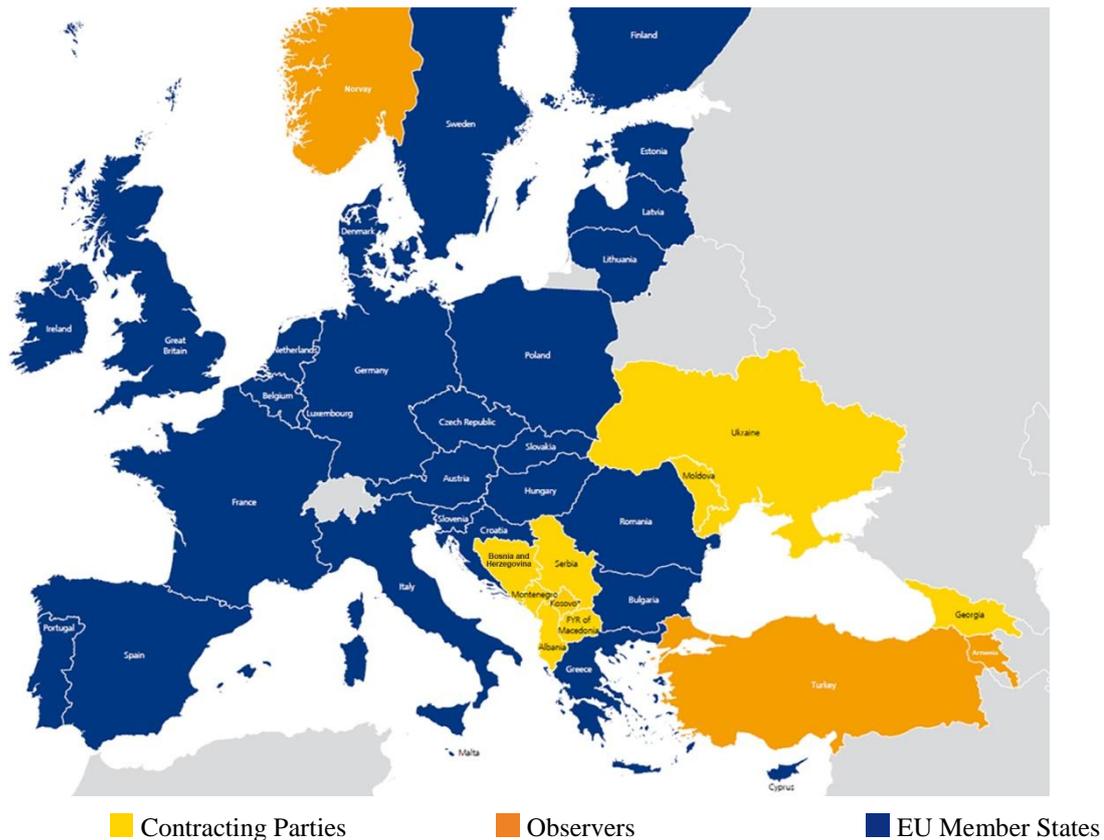
By signing the Treaty, the Contracting Parties from the region are obligated to establish a common electricity and gas market that will operate in accordance with the standards of the EU energy market into which it will integrate. It is to be achieved by gradual transposition of the EU *acquis*, which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

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

⁶ The list shows the Contracting Parties on 31 December 2017. Moldova, Ukraine and Georgia have Contracting Party status as of 1 May 2010, 1 February 2011 and 1 July 2017 respectively.

When the Treaty entered into force, Bulgaria and Romania were also the Contracting Parties which joined the European Union on 1 January 2007 as well as Croatia which is an EU Member State as of 1 July 2013.

Figure 19. 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 and the Secretariat.

The Ministerial Council, as the highest body of the Energy Community, ensures the achievement of goals that are determined by the Treaty establishing the Energy Community. The Ministerial Council consists of one representative of each Contracting Party and two representatives of the European Union.

The Permanent High Level Group (PHLG) brings together senior officials from each Contracting Party and two representatives of the European Community, ensuring continuity of and follow-up to Ministerial Council's meetings, implementing agreed activities and deciding on implementing measures in certain cases.

The Energy Community Regulatory Board (ECRB), seated in Athens, is composed of representatives of the regional national regulatory bodies, while the EU is represented by the European Commission, with the assistance of one regulator of each EU participants and one representative of the Agency for the Cooperation of Energy Regulators (ACER). The ECRB considers the issues of regulatory cooperation and may become a body issuing regional regulatory decisions and serving as a dispute resolution institution. The Regulatory Board has a key role in expanded market operation.

According to the opinion of the European Commission, this supra-national body may become a role model for other parts of the world.

Energy Community Fora, dedicated to electricity, gas and oil, bring together all interested stakeholders, including representatives of governments, regulators, industry, customers, international financial institutions etc.

The Energy Community Secretariat, seated in Vienna, represents the key administrative actor and, together with the European Commission, ensures the necessary coordination and provides support for the work of other institutions. The Secretariat is responsible for reviewing the proper implementation by the Contracting Parties of their obligations under the Treaty, and it submits yearly progress reports to the Ministerial Council. To this extent, the Secretariat acts as a 'guardian' of the Treaty establishing the Energy Community, while the European Commission plays a general coordinator role.

In the past period, the Energy Community has grown into a mature organisation, which provides a solid institutional framework for cooperation, mutual support and exchange of experiences and serves as a model for regional cooperation on energy matters.

In 2017, the activities on the legal framework development were continued in the Energy Community, in particular on the development and implementation of national laws pertaining to energy markets, renewable sources, energy efficiency and environment. A particular attention was paid to cooperation with representatives of civil society and business undertakings. Through the efficient operation of the *Dispute Resolution and Negotiation Centre*, which was established on 25 October 2016, implementing measures and dispute settlement rules were improved thus enhancing the implementation of the legal framework and reduction of investment risks. Furthermore, the establishment of a *Parliamentary Plenum* strengthened the role of national parliaments with parallel increase in transparency in the Energy Community institutions.

The significant support to the energy market development is provided by the measures adopted in the framework of the 'Berlin process', i.e. the initiative of six Western Balkans countries (WB6 initiative) which includes Albania, Bosnia and Herzegovina, Kosovo*, Macedonia, Montenegro and Serbia. 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. Within this process, representatives of transmission system operators, power exchanges, regulatory authorities and ministries signed a Memorandum of Understanding in Vienna on 27 April 2016 which set out general principles of cooperation as well as concrete actions to develop the regional electricity market.

Following the summits held in Berlin, Vienna and Paris, the Fourth Western Balkans 6 Summit was held in Trieste on 12 July 2017.



Heads of governments, ministers responsible for energy, economy and foreign affairs of the region together with high-level representatives from the neighbouring EU countries stressed the importance of the '*Connectivity Agenda*' which focuses on regional transport and energy infrastructure and reforms, emphasising that well-connected and functioning infrastructure networks drive economic growth, provide business opportunities, attract investments and generate jobs.

In the Declaration issued after the Summit, as the basis of cooperation in the energy sector were envisaged the 2016 Memorandum of Understanding and the Treaty establishing the Energy Community under which, according to Title III, all measures for the creation of a single energy market may be undertaken. It is known that this part of the Treaty, in addition to the nine Energy Community Contracting Parties also includes eight neighbouring EU Member States (Bulgaria, Croatia, Greece, Hungary, Italy, Poland, Romania and Slovakia). In this context, it was agreed that the Energy Community Secretariat would propose a set of necessary measures, including on electricity trading and licensing, for the next Summit to be held in London in 2018.

The Energy Community Ministerial Council, which informally met on 9 and 10 June 2017, held a meeting on 14 December 2017. On that occasion, it considered preparations for the development of integrated national energy and climate plans by the Energy Community Contracting Parties. The European Commission was invited to make proposals for incorporation of the '*Clean Energy for All Europeans*' package into the European Community *acquis*. The Council welcomed the proposal of the European Commission for a Recommendation on Directive 98/70 EC relating to the quality of petrol and diesel fuels as well as a Recommendation on Chapter II, Chapter IV and Annex VI of Directive 2010/75/EU on industrial emissions.

The Energy Community priorities in 2017 include:

- Amendments to the Treaty, with a focus on better implementation, sustainability and truly integrated pan-European market,
- Full implementation of the Third EU Energy Package, in particular unbundling of transmission system operators (for electricity and gas) in all Contracting Parties,
- Harmonised position on licensing,
- Cooperation in emergencies,
- Elaborating and harmonising the Energy Community climate goals (renewable energy sources, energy efficiency, reduction of greenhouse gas emissions) by 2030, and
- Commencing the development of integrated energy and climate plans on national and regional level.

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, energy market liberalisation and harmonisation of its policies with those of EU Member States.

It is obvious that in Bosnia and Herzegovina 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 BIH have already expired, with a relatively short period of time left for the remaining obligations (Attch. E). This is also indicated by the infringement cases initiated by the Energy Community Secretariat (Attch. F).

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 bringing together energy regulators from the region and the European Union.

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

In 2016, 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.



4.2 Energy Regulators Regional Association – ERRA

The Energy Regulators Regional Association (ERRA) is an organisation composed of independent energy regulatory bodies from Europe, Asia, Africa 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 34 countries of which 30 are full members while seven are associate members (Figure 20).

The goals of ERRA are the 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.

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 and Investment Conference. 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



Figure 20. ERRA membership



Committee and the Standing Licensing/Competition Committee. The BIH chairmanship of the latter Committee since 2010 contributes to the affirmation of BIH in ERRA.

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

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 2007 in order to facilitate cooperation among the energy regulators from the countries of 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-

Figure 21. Geographic scope of MEDREG



how, data collection and diffusion of expertise through comprehensive studies, recommendation reports and specialised training sessions in the field of energy regulation. The Association is also dedicated to consumer protection focusing on access to information and awareness-raising regarding changes in the sector and addressing the particular situation of vulnerable consumers.

Its organisation is structured around the General Assembly, the Secretariat seated in Milan and five working groups: (1) on Institutional Issues, (2) on Electricity, (3) on Gas (4) on Environment, Renewable Energy Sources and Energy Efficiency and (5) on 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 Council of European Energy Regulators – CEER

The Council of European Energy Regulators (CEER) is a non-profitable association of independent statutory bodies responsible for energy regulation at national level. CEER brings together 36 national regulatory authorities (29 full members and seven observers) from European Union Member States, European Free Trade Association (EFTA) and EU accession countries including Contracting Parties of the Energy Community Treaty. The Council of European Energy Regulators 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.

In late 2015, the Council of European Energy Regulators opened its doors to the Energy Community Contracting Parties. The State Electricity Regulatory Commission has observer status in CEER as of 1 January 2017. As Observers, SERC staff participates in activities of the CEER General Assembly and CEER's working groups. Furthermore, the State Electricity Regulatory Commission has access to the CEER successful and established regulatory network and cooperation tools, and the possibility of a deep understanding of European Union energy policies and practices. In this regards, participation in the Council of European Energy Regulators is also helpful on the path of Bosnia and Herzegovina towards EU membership, and the full obligations this will entail in terms of implementation of the *acquis* in the field of energy.



4.5 International Confederation of Energy Regulators – ICER



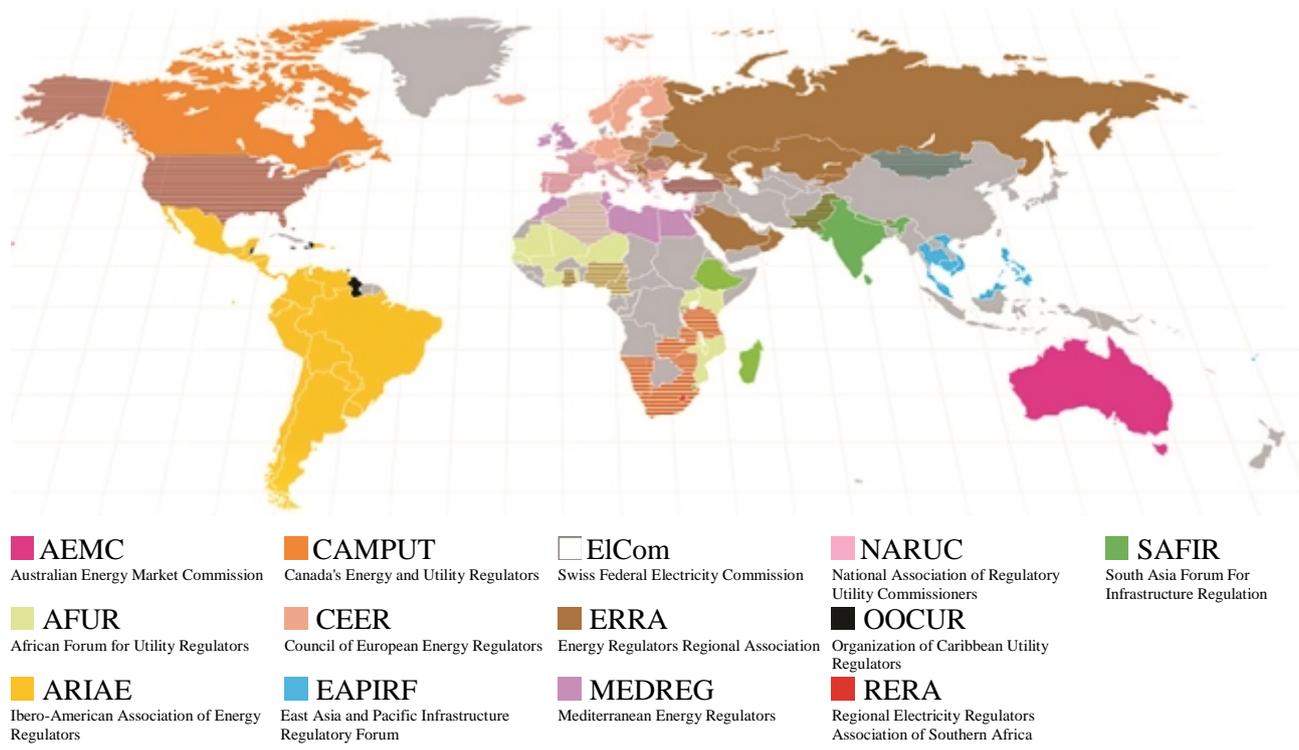
The International Confederation of Energy Regulators (ICER), established in October 2009, is a voluntary framework for cooperation between energy regulators from around the globe. ICER’s aim is to improve public and policy-maker awareness and understanding of energy regulation and its role in addressing 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 participates in and follows the activities of ICER through ERRA, MEDREG and CEER.

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 held in May 2015 in Istanbul identified security of supply, sustainability, competitiveness and good regulatory practices as the priorities over the following three-year period and established four separate virtual working groups accordingly. The upcoming World Forum on Energy Regulation will be held in Cancun, Mexico, in March 2018. The WFER will focus on disruptive innovations which are currently transforming the fundamentals of the energy value chain worldwide. The most relevant current regulatory issues will be addressed at the Forum



Figure 22. ICER Members



including empowered consumers, dynamic markets and sustainable infrastructure.

The Forum will promote the advancement of women in energy by streamlining gender perspective in all of its activities which is the continuation of activities launched in October 2013 in ICER's *Women in Energy* initiative.

In the same year, 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 the exchange of practice in the area of relevance to regulatory activities.

5. AUDITING REPORT

Pursuant to the *Law on Transmission of Electric Power, Regulator and System Operator of BIH*, SERC is funded from its own revenues. The basic revenue of SERC in 2017 was the regulatory fee paid by holders of licences 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 obligations to pay the regulatory fee in the forthcoming period are reduced by an excess of revenues over expenditures.

In addition to efforts to attain the mentioned own funding, SERC financial dealings also include the following activities:

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

The final 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.

The audit of SERC financial reports for the previous year was performed in the first quarter of 2017 by the Auditing, Accounting and Consulting Company REVIK d.o.o. Sarajevo with which a contract was concluded through a competitive request for quotations.

While performing an audit pursuant to the International Standards on Auditing, the auditors collected evidence on amounts and other data as published in the financial reports to be confident beyond doubt that they did not include any relevant material mistakes. In addition to determining the objectivity of the financial reports as a whole, the performed audit included

“In our opinion, the financial reports show realistically and objectively the financial standing of the State Electricity Regulatory Commission (SERC) on 31 December 2016 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, 10 March 2017

concurrent evaluation of accounting policies applied and relevant estimates of the SERC management.

Based on the collected data, the independent auditor gave a positive assessment of SERC financial reports for 2016. 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 the previous periods by external auditors, including the opinions by the Office for Auditing of the Institutions of Bosnia and Herzegovina.

No irregularities were found through *ex-post* controls of financial transactions. This confirmed the efficiency of the established financial management and internal control system enabling the prevention or identification of possible mistakes in order to protect the property from loss caused by negligence or poor management.

With the aim of further enhancing the system of financial management and control, in the reporting period SERC signed an *Agreement on internal audit* with the Internal Audit Unit of the BIH Ministry of Foreign Trade and Economic Relations. Through the establishment of internal audit in line with the principles and standards as implemented by the institutions of Bosnia and Herzegovina, an additional *ex-ante* audit of defined processes has been introduced in business activities and the overall risk management process has been strengthened (so-called risk management).

Through external auditing, SERC ensures an independent and reliable report on the use of property and management of incomes and expenditures. The revised annual financial report is published by the State Electricity Regulatory Commission on an annual basis with the aim of providing information on its financial standing and business results to interested persons and the wider public. The audited financial reports for 2016 were published in the Official Gazette of BIH, 27/17 and on the SERC internet site.



6. MAIN ACTIVITIES IN 2018

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 2018, 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 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 2018 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 focus on:

- Setting tariffs in line with SERC competencies,
- Issuance of licences,
- 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 acts,
- Monitoring the procurement of ancillary service and provision of the system service and balancing of the BiH power system, and, on a needs basis, continuing the development of a model for these services,

- Fostering a higher degree of integration of the national electricity market,
- Contribution to organising and functioning of the wholesale market, including the establishment of an institutional framework for an organised day-ahead market,
- Contribution to organising and functioning of the fully open retail market,
- 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 2019 – 2028* and approving the *Long-Term Transmission Network Development Plan* for the upcoming 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 and guidelines,
- 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 Energy 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 as specified in the reports of the European Commission on BIH.

In line with its competences, the State Electricity Regulatory Commission will contribute to the implementation of recommendations of meetings of the BIH Stabilisation and Association Committee and Subcommittee on Transport, Energy, Environment and Regional Development. As one of the institutions competent for transposition and implementation of the *acquis*, SERC will provide its contribution to the answers to the Questionnaire of the European Commission for the preparation of the Opinion on the BIH Application for the membership of the European Union, in particular to the questions from Chapter 15: Energy, Chapter 21: Trans-European networks, Chapter 28: Consumer and Health Protection and some issues under Economic Criteria.

SERC will 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 as specified in the Conclusions of the BIH Council and *Annual Implementation Report of the Acquis under the Treaty establishing the Energy Community*. Furthermore, SERC will fully contribute to the implementation of measures in the energy sector as agreed at the Fourth Western Balkans Summit within the Berlin process. In accordance with the position of Bosnia and Herzegovina, SERC will participate in the CESEC initiative (the European Commission Initiative on Central and South-Eastern European Energy Connectivity).

SERC is also planning to contribute to the implementation of regional projects of the United States Agency for International development (USAID) and the National Association of Regulatory Utility Commissioners (NARUC), primarily to the development of the *Ten-Year Network Development Plan in South-East Europe*, the commencement of which has been announced for February 2018.

In 2018, the multiannual USAID project *Energy Investment Activity* (EIA) will continue and the State Electricity Regulatory Commission will follow its activities and participate in the implementation of some components relating to the regulatory activities. The participation in the GIZ project *Promoting Renewable Energy in Bosnia and Herzegovina* will also continue. Furthermore, SERC plans to actively participate in the Fourth Energy Summit in BIH, which is planned in spring 2018 as part of these two projects.

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

- 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; customer issues; and environment, renewable energy sources and energy efficiency),
- CEER – Council of European Energy Regulators, and
- ICER – International Confederation of Energy Regulators.

Furthermore, SERC will continue to follow up the work of the 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 this body.

In the forthcoming period SERC will analyse contents and activities regarding the adoption of a new package of measures of the European Union with the goal of providing competition needed to facilitate the clean energy transition (*Clean Energy for All Europeans*), the adoption of which was announced for 2018. This approach takes into account the fact that all new EU regulations and directives in the energy sector become binding for Bosnia and Herzegovina as well through the mechanisms as established under the Treaty Establishing the Energy Community.

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

(Source: ISO BIH, Elektroprenos BIH and public electric power utilities)

Basic Data on Installed Capacity of Generation Units

Total installed capacity of generation units in Bosnia and Herzegovina amounts to 4,384.77 MW, with 2,076.60 MW and 2,065 MW installed in the major hydro power plants and thermal power plants respectively. Installed capacity of small hydro, wind, solar and biogas power plants amounts to 148.94 MW, while installed capacity of industrial powers plants amounts to 91.23 MW.

Hydro power plants	Capacity of power unit (MW)	Total installed capacity (MW)
Trebinje I	2×54+63	171
Trebinje II	8	8
Dubrovnik (BIH+HR)	126+108	234
Čapljina	2×210	420
Rama	80+90	170
Jablanica	6×30	180
Grabovica	2×57	114
Salakovac	3×70	210
Mostar	3×24	72
Mostarsko blato	2×30	60
Peć-Mlini	2×15.3	30.6
Jajce I	2×30	60
Jajce II	3×10	30
Bočac	2×55	110
Višegrad	3×105	315

Thermal power plants	Installed capacity (MW)	Available capacity (MW)
TUZLA	715	635
G3	100	85
G4	200	182
G5	200	180
G6	215	188
KAKANJ	450	398
G5	110	100
G6	110	90
G7	230	208
GACKO	300	276
UGLJEVIK	300	279
STANARI	300	283

Basic Data on the Transmission System

transmission lines

Nominal voltage of transmission lines	Length (km)
400 kV	864.73
220 kV	1,520.38
110 kV	3,952.85
110 kV – cable line	33.15

interconnections

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

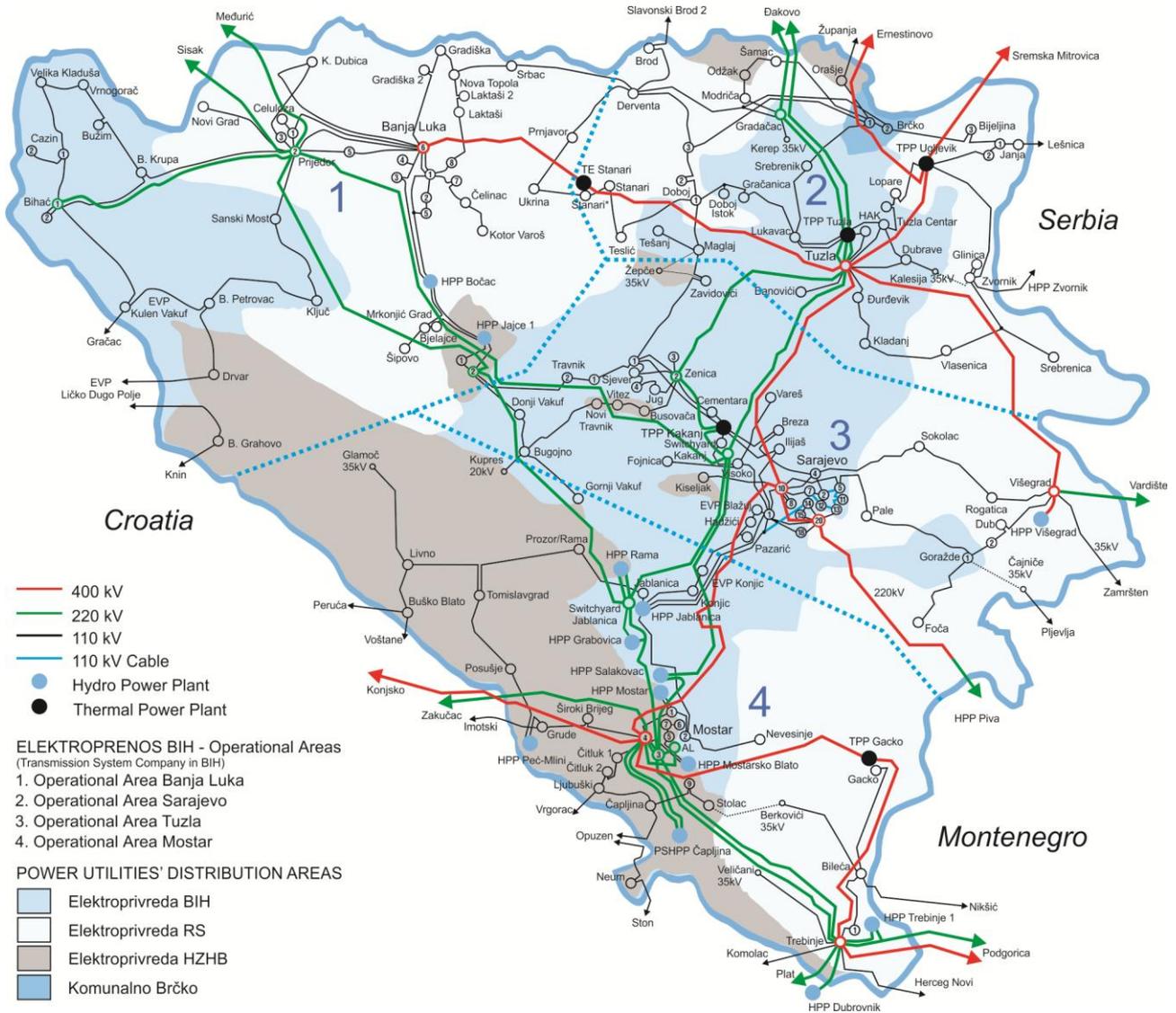
substations

Type of substation	Number of substations	Installed capacity (MVA)
TS 400/x kV	10	6,130.5
TS 220/x kV	8	1,423.0
TS 110/x kV	137	5,468.5

transformers

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	250	6,022.0

ATTACHMENT B: Map of the Electric Power System of Bosnia and Herzegovina with Operational Areas of Elektroprenos BIH and Distribution Areas of Public Electric Power Utilities (31 December 2017)



ATTACHMENT C: Balance Values of the Electric Power Sector of Bosnia and Herzegovina

(GWh)

Year 2017	EP BIH	ERS	EP HZHB	Komunalno Brčko	Other entities	BIH
Generation in hydro power plants	941.41	1,575.30	1,287.41		27.27	3,831.39
Generation in thermal power plants	6,007.23	2,870.62			2,040.59	10,918.44
Generation in small and industrial PPs	60.38	42.21			298.98	401.57
Generation	7,009.02	4,488.13	1,287.41	0	2,366.84	15,151.40
Distribution consumption	4,730.02	3,772.64	1,399.58	276.86		10,179.10
Transmission losses						341.52
Large customers	1,225.42	339.99	3.40		993.01	2,561.82
PPs self-consumption and pumping		14.03	266.11		3.82	283.96
Consumption	5,955.44	4,126.66	1,669.09	276.86	996.82	13,366.40

Year 2016	EP BIH	ERS	EP HZHB	Komunalno Brčko	Other entities	BIH
Generation in hydro power plants	1,395.40	2,498.19	1,540.38		35.41	5,469.39
Generation in thermal power plants	5,780.27	3,261.70			1,565.94	10,607.91
Generation in small and industrial PPs	68.99	55.02			307.63	431.64
Generation	7,244.66	5,814.91	1,540.38		1,908.99	16,508.94
Distribution consumption	4,548.29	3,721.07	1,364.62	270.08	83.65	9,987.72
Transmission losses						333.30
Large customers	458.05	281.29	1,503.02		226.59	2,468.94
PPs self-consumption and pumping		11.87	51.73		11.53	75.13
Consumption	5,006.34	4,014.23	2,919.37	270.08	321.77	12,865.10

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 and pumping		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

ATTACHMENT D: Electric Power Indicators of Bosnia and Herzegovina

		2013	2014	2015	2016	2017
Electricity generation	(GWh)	16,302.55	15,029.84	14,407.86	16,508.94	15,151.40
Net imports	(GWh)	3,166.90	3,177.66	3,965.37	3,144.55	3,428.16
Net exports	(GWh)	6,910.80	5,997.70	5,767.57	6,788.40	5,213.15
Total electricity supplied	(GWh)	12,558.65	12,209.80	12,605.66	12,865.10	13,366.40
Gross electricity consumption	(GWh)	12,558.65	12,209.80	12,605.66	12,865.10	13,366.40
Transmission losses	(GWh)	343.10	304.46	359.37	333.30	341.52
Transmission losses	(%)	1.81 %	1.72 %	2.01 %	1.75 %	1.90 %
Distribution losses	(GWh)	1,105.19	1,017.84	1,035.10	1,024.76	1,005.92
Distribution losses	(%)	11.55 %	10.74 %	10.51 %	10.26 %	9.88 %
Consumption of energy sector	(GWh)	22.00	14.12	27.86	75.13	283.96
Final consumption of electricity	(GWh)	11,088.35	10,873.37	11,183.34	11,431.90	11,735.00
	<i>Non-households</i>	6,464.07	6,267.91	6,456.85	6,698.88	6,978.87
	<i>Households</i>	4,624.28	4,605.46	4,726.49	4,733.02	4,756.13
Maximum system load	(MW)	2,074.00	2,207.00	2,105.00	2,098.00	2,189.00
Net maximum capacity of power plants	(MW)	3,978.86	3,988.58	4,009.14	4,351.88	4,384.77
Coal-fired power plants		1,856.23	1,856.23	1,856.23	2,156.23	2,156.23
Hydropower plants in total		2,120.18	2,127.56	2,150.44	2,180.24	2,207.47
	<i>small hydropower plants</i>	72.18	78.96	95.54	96.74	124.00
	<i>pumped storage power plants</i>	420.00	420.00	420.00	420.00	420.00
Total of other renewable sources		2.45	4.79	9.46	15.41	18.06
	<i>wind</i>	0.30	0.30	0.30	0.30	0.30
	<i>solar</i>	0.00	0.00	8.17	14.12	16.52
	<i>biomass</i>	0.00	0.00	0.00	0.00	0.25
	<i>biogas</i>	0.00	0.00	0.99	0.99	0.99
Transmission network (km)		6309.94	6309.94	6332.66	6320.94	6371.11
	<i>380 kV</i>	864.73	864.73	864.73	864.73	864.73
	<i>220 kV</i>	1,524.80	1,524.80	1,524.80	1,520.38	1,520.38
	<i>110 kV</i>	3,920.41	3,920.41	3,943.13	3,935.83	3,986.00
Number of interconnectors		36	36	37	37	37
Substation capacity (MVA)		12,368.50	12,368.50	12,856.50	12,758.50	13,022.00
Electricity customers		1,492,214	1,505,015	1,517,161	1,531,501	1,541,968
	<i>Non-households</i>	122,662	122,641	124,327	126,303	127,553
	<i>Households</i>	1,369,552	1,382,374	1,392,834	1,405,198	1,414,415
Eligible customers		122,662	122,641	1,517,161	1,531,501	1,541,968
Customers that switched suppliers		1	2	2	58	56
Electricity supplied	(GWh)	884.94	755.93	861.86	321.77	1,859.97
Share in final consumption	(%)	7.98 %	6.95 %	7.71 %	2.81 %	15.85 %
Customers for whom prices are not regulated		16	16	9.139	10.133	10.521
Electricity supplied	(GWh)	2,631.30	2,410.20	4,705.94	4,908.68	5,148.53
Share in final consumption	(%)	23.73 %	22.17 %	42.08 %	42.94 %	43.87 %

ATTACHMENT E: Energy Community *Acquis*

The *acquis*, that is, the Energy Community legal framework 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 the Energy Community 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 security of supply, environment, competition, renewable energy sources, energy efficiency, infrastructure, minimum oil stocks and statistics as well as transparency, that is, obligation to report data on electricity markets.

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 (EU) 2016/802 of the European Parliament and of the Council of 11 May 2016 relating to a reduction in the sulphur content of certain liquid fuels (deadline: 30 June 2018),
- Commission Implementing Decision (EU) 2015/253 of 16 February 2015 laying down the rules concerning the sampling and reporting under Council Directive 1999/32/EC as regards the sulphur content of marine fuels (deadline: 30 June 2018),
- Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU (deadline: 1 January 2019),
- 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 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, as amended by Directive 2006/21/EC, Directive 2009/31/EC and Directive 2013/30/EU (deadline: 1 January 2021),
- 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),
- Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (deadline: 31 March 2018),
- 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.

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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 state 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 (2012/04/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: 30 September 2012),
- 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: 31 December 2011),
- 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 infrastructure

- 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 adaptations 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 F: Infringement Cases: Energy Community – Bosnia and Herzegovina

31 December 2017

Case ECS-1/10

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 it would monitor the implementation of the Law while the infringement case would be closed with the commencement of implementation of state aid rules in the energy sector.

Case ECS-8/11

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. After the *Agreement on the removal of serious and persistent breach of the Treaty establishing the Energy Community in the gas sector* was signed on 13 October 2016, on 14 October 2016 the Ministerial Council passed a decision on suspension of the previously imposed measures against Bosnia and Herzegovina. After the expiry of the deadline for the adoption of the national law in accordance with the signed Agreement and an Action plan, on 1 April 2017 the measures against Bosnia and Herzegovina were imposed again lasting until 14 December when the Energy Community Ministerial Council expressed its regrets because BIH had not made sufficient progress in the implementation of its obligations.

Case ECS-2/13

Case ECS-2/13 initiated by an Opening Letter on 11 February 2013 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 and a Reasoned Request on 13 May 2016. Following a reply by BIH on 31 August 2016, on 14 October 2016 the Ministerial Council of the Energy Community passed a Decision establishing a breach of the Treaty establishing the Energy Community due to failure to implement Articles 3(1) and 4(1) of Directive 1999/32/EC pursuant to Article 16 of the Treaty, inviting BIH to immediately implement the defined obligations.

Case ECS-1/14

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 efficiency and energy services. The deadline for transposition and implementation of this Directive expired at the end of 2011. On 15 March 2017 the Secretariat sent a Reasoned Opinion and invited BIH to remove the observed shortcomings. On 19 May 2017, the case was submitted to the Ministerial Council for decision by way of a Reasoned Request. The Secretariat is of the opinion that certain provisions of the Directive have not been transposed by the adopted entity laws and stresses that the energy efficiency legislation has not been passed by the Brčko District BIH. On 4 December 2017, the Council of Ministers of BIH adopted the *2016-2018 Energy Efficiency Action Plan for BIH*.

Case ECS-1/15

On 28 July 2017, the Secretariat sent an Open Letter to Bosnia and Herzegovina in Case ECS-1/15. The Secretariat takes the preliminary view that the environmental impact assessment procedure of the planned thermal power plant Ugljevik 3 was not carried out in compliance with the Energy Community *acquis*. In particular, the Secretariat took the view that the permitting procedure failed to fully address all direct and indirect impacts of the projects as well as its potential transboundary impacts, as required by Directive 2011/92/EU. Furthermore, the Secretariat found that the provisions on public participation were not fully respected.

Case ECS-6/16

Case ECS-6/16 was initiated by a Reasoned Request on 13 May 2016 for failure to transpose the Third Energy Package of the EU (Directive 2009/72/EC, Directive 2009/73/EC, Regulation (EC) No. 714/2009 and Regulation (EC) No. 715/2009) and failure to notify transposing measures to the Secretariat. The case follows an expedited procedure for non-transposition of the *acquis* pursuant to Article 11(3) of the amended Dispute Settlement Rules. On 14 October 2016, the Ministerial Council passed a decision inviting BIH to undertake all necessary measures to rectify failure to transpose the Third Energy Package and ensure compliance with the Energy Community legal framework until December 2016. In the *Report on the implementation of the acquis under the Treaty Establishing the Energy Community*, of which the Ministerial Council took note on 14 December 2017, the Secretariat concluded that the observed shortcomings had not been removed.

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, Đorđa Mihajlovića 4/II.

