



BOSNIA AND HERZEGOVINA  
STATE ELECTRICITY  
REGULATORY COMMISSION

# ANNUAL REPORT 2020





Bosnia and Herzegovina

**STATE ELECTRICITY REGULATORY COMMISSION**

**REPORT ON ACTIVITIES  
OF THE STATE ELECTRICITY REGULATORY COMMISSION  
IN 2020**

Tuzla, December 2020

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*Report on Activities of the State Electricity Regulatory Commission follows the reporting approach 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 occurrence of the new coronavirus, SARS-CoV-2, which has caused the COVID-19 pandemic, made the year 2020 one of the most challenging years in recent world history. It was a year during which habits and beliefs, relationships and expectations in all life areas were reassessed. Faced with a number of uncertainties, mankind was forced to learn a myriad of new things and test how strong we are and ready to cope with whatever life throws at us in all life areas.

The electricity sector has gone through a similar transformation both at the global and local level. Business operations have been adjusted to the new circumstances and carried out in compliance with epidemiological measures against the COVID-19 pandemic defined by the competent authorities. Electricity disconnections for unpaid bills and the charging of default rates were suspended, periods of planned disconnections were reduced, the payment method was adapted, meter readings were done on a bi-monthly basis (using the method of estimation) in order to reduce direct contacts to the minimum, stricter epidemiological and protective measures were applied etc. In the periods of the increased spread of coronavirus, some key operational processes were organised through the so-called closed cycles in isolation, which lasted between 10 and 14 days.

Further sector reforms have not lost any of their importance even under these circumstances. In the forthcoming period, it is necessary to continue the alignment of energy legislation with the European Union (EU) *acquis*, integrated development of energy and climate policies and implementation of the energy sector reform in Bosnia and Herzegovina (BIH) at all administrative levels in line with respective constitutional competences.

During 2020, the State Electricity Regulatory Commission (SERC) continued its regulatory mission in the sector creating the conditions for unhindered trade in electricity and reliable electricity supply in compliance with international treaties, national laws, the relevant European regulations and directives and other internal electricity market rules. In the past year SERC continued to cooperate with a high number of the institutions of Bosnia and Herzegovina, its Entities and District as well as numerous international institutions whose work has impact on or pertains to electricity market regulation. Under the circumstances as a result of the COVID-19 pandemic, SERC performed its jurisdictions and responsibilities with inevitable and required adaptation which did not affect SERC's efficiency.

In spite of all challenges brought on by the new coronavirus, the BIH electric power system operated steadily and without any bigger problems throughout 2020. All system users were able to operate functionally in line with the defined quality standards. The security of supply was ensured for the customers, which was of particular importance under the circumstances of the pandemic.

*The State Electricity Regulatory Commission is an independent institution of Bosnia and Herzegovina, which acts in accordance with the principles of objectivity, transparency and non-discrimination, 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.*

In 2020, several projects on construction, reconstruction and rehabilitation of transmission facilities were implemented. At the beginning of October 2020, a new 110/30 kilovolts (kV) Podveležje substation (SS) was put into operation, which was constructed with the aim of connecting the Podveležje wind power plant with installed capacity of 48 megawatts (MW), the trial operation of which is expected at the beginning of 2021. Since 2 March 2020, generator G2 at the hydro power plant (HPP) Dubrovnik has been reconnected directly to the BIH electric power system, after all damage caused by the tragic fire on 10 January 2019 was repaired. After repairs of a breakdown, the 220 kV Prijedor 2 – Jajce 2 transmission line (TL) was put into operation on 7 September 2020.

In the previous year, generation reached 15,391 gigawat-hours (GWh), which is 683 GWh, or 4.3% less than in 2019. The poor hydrological conditions resulted in generation of only 4,276 GWh by hydro power plants, which is 24.3% less in comparison to the previous year. On the other hand, generation by thermal power plants increased by 8.6%, reaching 10,443 GWh. In 2020, the first two wind power plants connected to the transmission system – Mesihovina and Jelovača, injected into the network 262 GWh. Small-scale renewable generation (small hydropower plants, wind power plants connected to the distribution system, solar and biofuel plants) recorded a 25.6% decrease amounting to 399 GWh, which is the result of a significant drop in generation by small hydro power plants. Industrial power plants produced 10.15 GWh.

Total electricity consumption amounted to 11,330 GWh, or 8.1% less than in the previous year. Consumption of customers connected to the transmission system decreased even by 49.2% amounting to 890 GWh, while consumption of customers connected to the distribution network slightly decreased (1.5%) amounting to 9,993 GWh.

The maximum load of the power system in the past year amounting to 1,804 MW was reported on 2 December 2020 at the 14<sup>th</sup> hour, which is less than the historic maximum of 2,207 MW reported at the 18<sup>th</sup> hour on 31 December 2014. Minimum load of 605 MW was reported on 25 May 2020 at the 4<sup>th</sup> hour, which is the lowest value in the past several decades.

Total electricity in the transmission network amounted to 18,128.7 GWh, which is 0.71% less than in 2019. Transmission losses amounted to 317.2 GWh, or 1.75% of total energy in the transmission network. The trend of reducing distribution losses continued which amounted to 912.6 GWh or 9.13% in relation to gross consumption by customers connected to the distribution network, which is the lowest level in the history of the BIH power sector.

In 2020, electricity exports amounted to 5,543 GWh, or 5.7% less than in the previous year. Furthermore, electricity imports recorded a significant decrease of 29.9% and amounted to 1,496 GWh.

## 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

- Mrs. Branislava Milekić, with a five-year term (from August 2020).

Until the election of Mrs. Milekić, the function of the Commissioner was performed by Mr. Milorad Tuševljak.

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 2020, this function was performed by Mr. Suad Zeljković. Mr. Nikola Pejić is the current Chairman of the Commission until 30 June 2021.

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*. 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 dimensions.

The European Union (EU) energy *acquis*, which becomes mandatory for Bosnia and Herzegovina in line with the mechanisms established under the Treaty establishing the Energy Community, 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 on an annual basis during the rotation of the Commissioners in the position of the Chairman.

The work of the State Electricity Regulatory Commission 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 departments participate.

In 2020, the work of the State Electricity Regulatory Commission was adapted to the situation caused by the COVID-19 pandemic. Primarily, the number of physical meetings and business trips was reduced to a minimum and communication via various internet platforms became dominant. During the application of the *Decision on organisation of work under extraordinary circumstances caused by the new corona virus*, in the period from March to May 2020, home-based work was enabled with the use of communication tools. All SERC activities were implemented in compliance with the epidemiological measures prescribed by the competent authorities due to the COVID-19 pandemic.

The new adapted work environment and intensified digital communication via internet stressed the importance of enhancing the protection of information-communication systems. With the aim of protecting these systems properly and improving cyber security, in 2020 SERC purchased part of the relevant equipment and software for prevention, detection and response in cyber space. The procurement of required equipment will continue in the upcoming year.

Following the requirements of regulatory practice, electronic communication technologies were also used in improving knowledge and experience, that is, strengthening professional capacities of SERC. The improvement of knowledge is achieved by participation in different professional symposiums, conferences and thematic seminars. 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 (ERRA),





*Report on Activities of the State Electricity Regulatory Commission in 2019 was submitted to the Parliamentary Assembly of Bosnia and Herzegovina and the Ministry of Foreign Trade and Economic Relations of BIH on 9 April 2020.*

*The Report was considered at the sessions of both Houses of the Parliamentary Assembly of Bosnia and Herzegovina, at the 9<sup>th</sup> session of the House of Representatives held on 10 June 2020, and at the 10<sup>th</sup> session of the House of Peoples held on 21 July 2020.*

the Mediterranean Energy Regulators (MEDREG) and the Council of European Energy Regulators (CEER), and seminars of the Directorate for European Integration aimed at the process of accession and integration of BIH into the EU.

A particular contribution to professional training in 2020 was provided by the *United States Agency for International Development* (USAID) through regional initiatives and *USAID Energy Policy Activity* under which several educational workshops were organised covering different topics.

SERC will remain dedicated to ensuring continuous professionalism of human resources through the well-established as well as new training methods and the use of modern communication tools. The justification of this approach is 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 informed and shared its experiences on regulatory practice in a proper manner 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.

Large volumes of different documents are created as a result of SERC activities. The number of documents and information has been constantly increasing. SERC, as the creator, organises the 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 applying a modern method of organising records management in its work, and in compliance with the prescribed standards and rules of the BIH Council of Minister, continued 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.

Acknowledging the importance of free access to information as a fundamental characteristic of transparent and accountable action by any public authority, and remaining committed to acting along

these lines on a permanent basis, SERC allows the wider public to have an insight into its work and decision-making processes, going beyond the mandatory framework in this field stipulated by the *Law on Freedom of Access to Information in Bosnia and Herzegovina*. SERC fulfils these commitments by publishing all relevant information on its official website in a timely manner, including also print media, through the presentation of SERC drafts documents, and notices and invitations to the public to participate in the creation thereof.

In addition to a proactive approach as the generally accepted standard in its activities, SERC also acts reactively, handling submitted requests for access to information in a timely manner, starting from the position that in any concrete case the public interest must prevail over the constraints stipulated by the mentioned Law and any private interest. SERC did not receive any request for access to information in 2020.

SERC also meets other obligations stipulated by the *Law on Freedom of Access to Information in BIH* and submits required reports to the Institution of Human Rights Ombudsmen of BIH.

Communication with the public plays a key role in creating perceptions, that is, the ways for the public to understand how institutions function. Communication is of particular importance in the period of reforms and structural changes. In the process of sector liberalisation, deregulation and market opening it is necessary both to inform the public in a timely manner of the major phases and to continuously communicate with all key stakeholders about the reform and educate them about the way the sector as a whole functions.

It is good practice of regulatory commissions in the energy sector to implement public outreach activities to explain and clarify the changes brought by the liberalisation of the sector and market opening. In line with this, in BIH as well, the State Electricity Regulatory Commission (SERC), the Regulatory Commission for Energy in the Federation of BIH (FERK) and the Regulatory Commission for Energy of Republika Srpska (RERS) which as unbiased organisations protect the interests of customers by regulating relationships in the sector and electricity market, have a key role in raising awareness of the changes in the sector and regulators' activities in the liberalisation process.

### 3. KEY ACTIVITIES

In 2020, the State Electricity Regulatory Commission held 18 regular sessions, 33 internal meetings and organised nine public hearings, of which eight were of general and one of formal nature.

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 comments 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

##### *Wholesale Market Integrity and Transparency*

Electricity produced by power plants is often bought and sold several times on the wholesale market before delivery to the end customer. These transactions in electricity normally take place in large quantities and include electricity producers, traders, suppliers, large customers and even investment banks. Gas is traded in a similar manner. In Europe several hundreds of companies are included in wholesale trading in electricity and gas conducting tens of thousands of transactions on the market on a daily basis.

Wholesale prices are very sensitive to the availability of production and transmission because energy has to be generated when needed. Prices may be affected by spreading false information on availability or reduced generation.

Given that large quantities of energy are traded across borders, traditionally it is difficult to discover possible price manipulations of this kind as national regulators did not have access to cross-border data. As a response to these facts, *Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency (REMIT)* was adopted in the European Union. This Regulation introduces a common European framework on wholesale markets for:

*Documents under regulatory competences are reviewed and defined 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.*

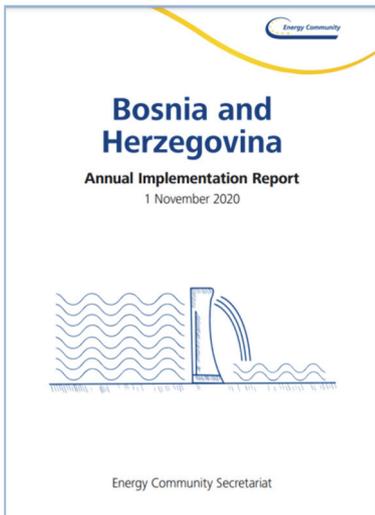
- Definition of market abuse with regard to market manipulation, attempts to manipulate the market and insider trading,
- Introduction of the explicit prohibition of market abuse,
- Establishment of a new framework for the registration of market participants and wholesale market monitoring with the aim of detecting and preventing market manipulation and insider trading, and
- Definitions of prohibitions and the application of penalties at national level if market abuse is detected.

REMIT is applied to all market participants whose activities affect wholesale energy markets, that is, all natural or legal persons (including transmission system operators) carrying out or conducting transactions on one or several wholesale energy markets. All market participants with the seat in any EU country as well as those with the seat outside the EU if trading or placing orders on one or several EU markets are subject to this Regulation.

The Ministerial Council Decision of 29 November 2018 expanded the Energy Community *acquis* by including *Regulation (EU) on wholesale energy market integrity and transparency* with required adaptations to the Energy Community legal framework and defining the obligation to implement it by 29 May 2020.

With regard to the obligations under REMIT specified for national regulatory authorities, it should be pointed out that pursuant to Article 4.2 point k) of the Law on Transmission of Electric Power, Regulator and System Operator of Bosnia and Herzegovina, SERC competences include creation and maintenance of competitive markets, and prevention and punishment of any predatory or anti-competitive conduct. Starting from the obligations of national regulatory authorities defined in this Regulation and on the basis of the aforementioned SERC competences, in 2019 SERC launched activities on transposition and implementation of REMIT in the electricity sector. In this context, the translation of the adapted Regulation into the languages officially used in Bosnia and Herzegovina was prepared and published. In the middle of December 2019, a *Draft decision on transposition of the Regulation on wholesale energy market integrity and transparency* was passed, defining the terms and conditions for transposition and implementation of the part of the Regulation which is under SERC competence.

Acknowledging the competences of the Ministry of Foreign Trade and Economic Relations of BIH, and the need to coordinate activities between the Competition Council of BIH and SERC, in particular due to their complementary competences in the field of electricity market, the State Regulatory Commission called upon these institutions to provide their observations and comments on the Draft decision by the end of January 2020.



*The State Electricity Regulatory Commission (SERC) continued to be proactive in implementing the acquis. This deserves particular acknowledgement having in mind that SERC is the only Contracting Party regulator whose set-up does not comply with the Third Package requirement for a single regulatory authority for electricity and gas. SERC adopted the electricity Network Codes and is the only Contracting Party regulator that complies with the obligation to publish criteria based on which derogations from these Network Codes can be granted. SERC is also a front-runner in transposing and implementing the REMIT Regulation.*

*From Annual Implementation Report of the Energy Community Secretariat, Vienna, 1 November 2020*

On 12 February 2020, a *Decision on transposition of the Regulation on wholesale energy market integrity and transparency* was passed by the State Electricity Regulatory Commission, defining the terms and conditions for transposition and implementation of the part of the adapted REMIT Regulation which is under SERC competence pursuant to the aforementioned Law.

Pursuant to this Decision, on 11 March 2020, SERC defined *Draft rules on wholesale electricity market integrity and transparency*. SERC had consultations with the relevant institutions in Bosnia and Herzegovina and the Energy Community Secretariat, and collected comments and opinions of the expert community and wider public on the prepared text within a general public hearing. This hearing was held on 7 May 2020 via an on-line communication platform due to the COVID-19 pandemic. *Rules on wholesale electricity market integrity and transparency* were adopted on 14 May 2020.

At the session held on 3 September 2020, SERC adopted the *Decision on the Register of participants in the wholesale electricity market* with the corresponding forms. This Decision contains the following forms in its attachment:

- Form REMIT R-1: Registration request for participants in the wholesale electricity market in Bosnia and Herzegovina,
- Form REMIT R-2: Data for the Register of participant in the wholesale electricity market in Bosnia and Herzegovina,
- Form REMIT P-1: Reporting any potential abuse or manipulation in the wholesale electricity market in Bosnia and Herzegovina,
- Form REMIT P-2: Reporting delayed publication of inside information, and
- Form REMIT P-3: Reporting the use of exemptions related to insider trading and publication of inside information.

On 8 October 2020, in cooperation with the Energy Community Secretariat SERC organised an Educational Workshop on REMIT Implementation via an on-line communication platform for all relevant institutions and market participants.

Having established the *Register of participants in the wholesale electricity market*, SERC successfully completed its activities on transposition and implementation of the adapted REMIT Regulation in the electricity sector. At the end of 2020, this Register includes all required data on 21 participants in the wholesale electricity market in Bosnia and Herzegovina.

## ***Connection Network Codes***

Harmonisation, that is, unambiguous regulation of a whole set of rules for network operation was recognised in the Third Energy Package of the EU.<sup>1</sup> In line with this, the EU Member States, with full participation of the European Network of Transmission System Operators for Electricity (ENTSO-E), the European Network of Transmission System Operators for Gas (ENTSO-G) and the Agency for the Cooperation of Energy Regulators (ACER) conducted a complex activity of developing codes and guidelines for operation of networks (*Network Codes*). The set of these codes in the electricity sector includes codes on market, system operation and connection:

### *Market Codes*

- Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management (CACM),
- Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation (FCA), and
- Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing (EB).

### *System Operation Codes*

- Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (SO), and
- Commission Regulation (EU) 2017/2196 of 24 November 2017 establishing a network code on electricity emergency and restoration (ER).

### *Connection Codes*

- Commission Regulation (EU) 2016/1388 of 17 August 2016 establishing a Network Code on Demand Connection (DCC),
- Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators (RfG), and
- Commission Regulation (EU) 2016/1447 of 26 August 2016 establishing a network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules (HVDC).

Network codes and guidelines are technical rules adopted with the aim of establishing joint rules for the reliable system operation, and market functioning and integration. These legal acts supplement the existing *acquis* of the European Union and are directly applicable in the EU Member States. They are the key element for efficient functioning of a pan-European market which puts electricity customers at the forefront.

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<sup>1</sup> Establishment of network codes is defined in Article 6 of Regulation (EC) 714/2009, that is, of Regulation (EC) 715/2009.



In the Energy Community, activities on adopting decisions by the Permanent High Level Group (PHLG) for transposition of these codes into the *acquis* were carried out in the previous years. On 12 January 2018, PHLG adopted the decisions transposing the connection codes into the Energy Community *acquis*, that is, Commission Regulation (EU) 2016/631, Commission Regulation (EU) 2016/1388 and Commission Regulation (EU) 2016/1447. For this reason, the issue of transposition and implementation of the network codes and guidelines was imposed as one of the key activities in the work of the relevant institutions in BIH, including SERC and the ISO BIH.

In this context, in June 2018, the State Electricity Regulatory Commission adopted the *Decision on transposition of network codes on connection*, which defined the terms and conditions for transposition of the three aforementioned European Commission Regulations as adapted to the Energy Community legal framework by the PHLG decisions in the electricity sector of Bosnia and Herzegovina. On that occasion, these Regulations were published in the languages officially used in Bosnia and Herzegovina on the SERC website ([www.derk.ba](http://www.derk.ba)).

In this Decision the Independent System Operator in Bosnia and Herzegovina was called upon to submit without delay the Grid Code and innovated rules which ensure the application of the provisions of these Regulations with shorter deadlines for implementation, and to ensure the compliance of its rules with all requirements under these Regulations in the forthcoming period. In its Decision SERC called upon the Regulatory Commission for Energy in the Federation of Bosnia and Herzegovina, the Regulatory Commission for Energy of the Republika Srpska and other relevant authorities to ensure the compliance of their relevant acts with the requirements under the connection codes.

Respecting the Energy Community requirements regarding the deadlines for transposition and implementation of the provisions of the regulations which have been prioritised by the Permanent High Level Group decisions and required the implementation without delay, following a general public hearing, in coordination with the ISO BIH in February 2019 SERC adopted the *Rules on Connection Network Codes*. In line with the competences of the State Electricity Regulatory Commission defined pursuant to Article 4.2 of the Law on Transmission of Electric Power, Regulator and System Operator of Bosnia and Herzegovina, by these Rules one part of the Energy Community network codes was transposed into the legal system of Bosnia and Herzegovina. This pertains to the provisions which, pursuant to the relevant Permanent High Level Group decisions, should be implemented without delay. At the same session, a new *Grid Code* was approved by which a part of the connection network codes under ISO BIH competence had been transposed.

The provisions to be implemented without delay include, *inter alia*, Article 61(1) of Commission Regulation (EU) 2016/63151, Article 51(1) of Commission Regulation (EU) 2016/1388 and Article 78(1) of Commission Regulation (EU) 2016/1447. In accordance with the aforementioned Articles of the adapted Regulations, each regulatory authority will specify, after consulting relevant system operators, power-generating facility owners, demand facility owners and other stakeholders, the criteria for granting derogations in accordance with the relevant provisions of the Regulations. Subsequently, pursuant to the *Rules on Connection Network Codes*, at the SERC session held on 27 March 2019 the following decisions were passed:

- *Decision specifying Criteria for granting derogations from application of rules for connection of generating modules*
- *Decision specifying Criteria for granting derogations from application of rules for connection of demand facilities, and*
- *Decision specifying Criteria for granting derogations from application of rules for connection of new and existing high voltage direct current systems and direct current-connected power park modules.*

SERC published the specified criteria on the its official website and notified the Ministry of Foreign Trade and Economic Relations of BIH and the Energy Community Secretariat on 10 April 2019 thereof, as the only regulatory authority in the region which fulfilled its part of the obligations within the defined timeframe. With this, transposition of the provisions which are under SERC competence and which should be implemented without delay was completed.

Taking into consideration that mentioned rules regulate the substance which is also under competence of other authorities, it is necessary to ensure the coordination of activities of all competent institutions, including the Entity Regulatory Commissions and all distribution system operators, besides the Independent System Operator in Bosnia and Herzegovina (ISO BIH) and Elektroprenos Bosne i Hercegovine (Company for the Transmission of Electric Power in BIH). Furthermore, the complexity of the content of connection network codes as well as the complex administrative structure in the BIH energy sector impose the need for an active role and concrete support of the state and entity line ministries and the Directorate for European Integration of the BIH Council of Ministers in further activities on the complete and efficient fulfilment of obligations of Bosnia and Herzegovina before 12 July 2021, that is, the date by which full implementation of the connection network codes should be ensured.

In this context, of particular importance is technical assistance provided within the *USAID Energy Policy Activity*, through activities of the *Working Group on Connection Network Codes* which comprises representatives of the regulatory commissions and power utilities.

In 2020, under these activities *Classification of Generators by Installed Capacity and Voltage Level at Connection Point, A*

*Simplified Procedure for Connection of Micro Power Plants for Self-Consumption in BIH, Analysis of Grid Code Compliance with Network Code for Grid Connection of Generators* were prepared as well as analyses of compliance of rules with the network code on requirements for grid connection of generators and BAS EN 50549 technical standards pertaining to the connection of power plants to the distribution network.

### ***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 ISO BIH 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 to finalise the existing regulatory framework for the provision of ancillary services for the power system balancing. The Concept includes solutions for energy and financial calculation of imbalances, i.e. daily schedule deviations by balance responsible parties, while with the introduction of a system service tariff the financial settlement is enabled between the ISO BIH as the balancing market operator and the market participants who provide their services on that market.

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 into the formerly fully regulated method of providing ancillary services and the BIH power system balancing. In this manner, the functionality of open wholesale and retail electricity markets in Bosnia and Herzegovina was enhanced (please see Section 3.7).

In the past five years, the electricity balancing 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, SERC closely monitored its operation and modified the documents regulating its operation as appropriate.

In this context, the ISO BIH also amended the supporting documents of the Market Rules several times (*Procedures for Ancillary Services and the Rules on Daily Balancing Energy Market Operations*), which further encouraged ancillary services providers to nominate bids for balancing energy.



Furthermore, with the aim of developing the market, a Study on the improvement of the balancing mechanism, balancing market and preparation of the Market Rules revision was developed. The Study is the result of joint activities of SERC and the ISO BIH which were actively supported by the *USAID Energy Investment Activity* in the previous period.

A detailed analysis of the balancing mechanism implementation and BIH balancing market functioning focused in particular on legal-regulatory, organisational, technical and financial aspects with the aim of preparing proposals to improve the existing solutions. Having regard to the commitment to continuously improve rules and procedures under its competence, SERC continues activities on the development of organised functioning of the balancing market, and further improvement, efficiency, cost-effectiveness and stability of the BIH power system operation. While doing so SERC will closely cooperate with the ISO BIH on the implementation of recommendations and conclusions of the mentioned Study to harmonise required amendments to the acts under competences of both institutions which define the balancing mechanism.

With the successful balancing market development, the offer of services increased significantly and the needs for ancillary services in 2021 had already been met to a significant extent through annual bids organised by the ISO BIH in December 2020 (electricity to cover loss in the transmission system as well as reserve capacity for upward and downward tertiary control are fully provided, and secondary control in the peak period is provided in full while secondary control in off-peak periods is provided in an amount of 80.2%, which is considerably more in comparison to the previous year when 67.6% of required volumes was purchased through an annual bid). The missing volumes of secondary control reserve capacity in the off-peak period will be purchased on a monthly basis.

The results of ancillary service purchases for 2021 indicate that the downward trend in electricity prices, which was present in wholesale markets in the region in 2020, reflected on the balancing market in BIH, and a decrease in average purchase prices of all services was recorded. An average price of energy for covering of losses in the transmission system reached at the bid for 2021 amounts to 56.21 EUR/MWh, which is 12.64% less than an average purchase price for 2020 which amounted to 64.34 EUR/MWh.

Furthermore, prices of secondary and tertiary reserve capacity also decreased, for example, upward tertiary reserve was purchased at an average price of 1.48 EUR/MW/h, which is 17.9% less than in the previous year when that price amounted to 1.80 EUR/MW/h. The price of downward tertiary reserve also recorded a decrease from 0.89 EUR/MW/h to 0.75 EUR/MW/h, i.e. a 16.1% decrease.

### ***Integration of Capacity from Variable Energy Sources***

The integration of renewable energy sources from the aspect of the possibility to control the system, and the maximum capacity for their integration have been central to the work of the State Electricity Regulatory Commission for years.

Pursuant to the *Decision on approval of maximum capacity for the integration of variable energy sources* of 14 March 2019, the Independent System Operator in Bosnia and Herzegovina is obligated to continuously make necessary analyses and provide SERC with modified well-grounded proposals for maximum capacity for the integration of variable energy sources in accordance with the sector and electricity market developments in Bosnia and Herzegovina and the region.

In accordance with this obligation, at the end of 2019, the ISO BIH submitted a new proposal for maximum permissible capacity for the integration of variable energy in terms of the possibility to control the system. As this proposal had a declaratory content and taking into consideration that an increase of maximum permissible integration capacity had been approved a bit more than half a year ago, pursuant to the provisions of the given decision, SERC asked that a detailed analysis be submitted which would justify the change in circumstances or assumptions in comparison to those used in calculation of the applicable maximum permissible integration capacity. On that occasion, it was emphasised that the analysis should clearly present the methodology used in defining the new proposal, including all input data and parameters.

On 22 January 2020, the ISO BIH submitted a document which was titled *an Analysis of the integration of variable energy sources into the power system of BIH*.

Having regard to the existing practice and extremely high interest in this issue of both individual entities in the sector and the wider public, the ISO BIH was called to organise a public hearing on the new proposal for maximum permissible integration capacity from variable electricity sources, with a particular emphasis to extend the analysis with economic and financial considerations.

The public hearing at which the expert community had an opportunity to learn of the approach used in developing this Analysis as well as the methodology and input data, was held only on 23 June 2020 due to the COVID-19 pandemic, after which SERC reiterated its request for an extended analysis, which was submitted on 25 August 2020.

On 3 September 2020, SERC passed a *Decision on approval of maximum capacity for the integration of variable energy sources* approving the submitted proposal according to which these values from the aspect of the possibility to control the system amount to:

- 840 MW for wind power plants, and
- 825 MW for photovoltaic power plants.

SERC called on the relevant authorities of the Federation of Bosnia and Herzegovina and the Republika Srpska to agree upon the mutual allocation in accordance with the existing practice leaving the possibility to trade-off one technology for the benefit of the other, but in compliance with the values defined by this Decision.

In accordance with the sector and electricity market developments in Bosnia and Herzegovina and the region, the Independent System Operator in Bosnia and Herzegovina remains obligated to continuously make necessary analyses and provide SERC with modified well-grounded proposals for maximum capacity for the integration of variable energy sources. Furthermore, the ISO BIH was called on to inform SERC of all aspects of implementing this Decision on a continuous basis, or at least once every six months, including the availability of control reserves, status of regional initiatives and projects of the European Network of Transmission System Operators for Electricity (ENTSO-E) which are related to cross-border exchange of balancing energy as well as economic and financial considerations of the integration of variable energy sources into the power system of Bosnia and Herzegovina.

Furthermore, it was specified that Elektroprenos BIH is obligated to submit on a six-month basis an excerpt from the Register of applications filed by users for connection to the transmission network which pertain to variable energy sources as well as an overview of such facilities connected to the transmission network. The State Electricity Regulatory Commission also called on other institutions to undertake activities within their respective competences aimed at increasing electricity generation from variable energy sources.

### ***Cyber Security***

The security of supply is one of the key tasks of regulatory authorities in the electricity sector and a must when developing, adopting and implementing regulatory rules and regulations. There is a causal link between cyber security with the security of supply, and any cyber threat or risk is an important influential factor for the security of supply. It is of paramount importance for the reliable system operation and the protection of data in the electricity sector to acknowledge the need for proper measures for prevention, detection and response to all security challenges in the cyber space in a timely manner. Lack of a strategic framework and systemic rules regulating this issue does not relieve the regulatory authorities of the obligation to work on the protection of the electricity infrastructure and, consequently, the security of supply, by adopting their rules and taking appropriate measures.

In the previous period, the State Electricity Regulatory Commission contributed significantly to the preparation of several

documents in this field, including *Cybersecurity Capacity Review* and *Guidelines for a Strategic Cybersecurity Framework in Bosnia and Herzegovina*.

In 2019 and 2020 SERC actively participated in the regional projects of the United States Agency for International Development (USAID) and the National Association of Regulatory Utility Commissioners (NARUC) *Effective Regulation of Cybersecurity* and *Digitalisation and Cybersecurity*, activities of the Energy Community Working Group on Cyber Security and supported the work of the Computer Emergency Response Team for the institutions of BIH (CERT).

The participation in these activities and several workshops dealing with various cyber security aspects created the preconditions for the regulator to define a strategic approach to cyber security in the electricity sector. Consequently, in 2020 SERC developed *Guidelines for a Strategic Framework on Cyber Security in Bosnia and Herzegovina Electricity Sector from Regulatory Perspective*.

Taking into consideration a complex structure of the electricity sector and a specific regulatory framework in Bosnia and Herzegovina, it is found necessary to have coordinated action of the State and Entity Regulatory Commissions to establish an efficient regulatory approach to the field of cyber security in the BIH electricity sector. Ultimately, the objectives of the Guidelines are to have information and communication systems of the entities in the BIH power sector protected, and cyber security of the regulatory authorities ensured.

### 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.<sup>2</sup> 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.

The consumption forecast in the *Indicative Generation Development Plan for the Period 2021 – 2030* was prepared on the basis of data provided by the transmission system users and ISO BIH own analyses (forecast in accordance with the gross domestic product and extrapolation through the characteristic function of consumption). In accordance with the Grid Code, the new generating facilities were balanced in line with the applicable Connection Conditions, while certificates of the competent Entity institutions were required for wind power plants confirming that a power plant complies with the maximum permissible integration capacity from the aspect of the possibility to control the system. The conducted analyses lead to the conclusion that the power balance was reached for all consumption scenarios and the planned generation of the existing and new balanced generation capacities with the construction of new thermal power plants.

The ISO BIH organised a public hearing on the Draft document on 15 April 2020 via an on-line communication platform due to the COVID-19 pandemic, after which, on 30 April 2020, the ISO BIH submitted the *Indicative Generation Development Plan for the Period 2021 – 2030* to SERC for approval. While considering the submitted text, the State Regulatory Commission recognised a quality presentation of consumption forecasts and scenarios as well as different generation development scenarios which were anticipated for the first time in this planning document.

The State Electricity Regulatory Commission adopted a *Decision on approval of the Indicative Generation Development Plan for the Period 2021 – 2030* on 27 May 2020.

SERC expects that the next Indicative Plan, whose development started in November 2020, would be updated with all latest and relevant data and information available during its development.

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<sup>2</sup> TYNDP 2020, that is, the latest *European Ten-Year Transmission Network Development Plan* is subject to a public consultation process in the period from 6 November 2020 to 4 January 2021. Subsequently, it will be revised at the very beginning of 2021 while in February 2021 the opinion by the Agency for the Cooperation of Energy Regulators (ACER) will be prepared pursuant to Regulation 714/2009. According to the plan, TYNDP 2020 will be published in April 2021.





## ***Long-Term Transmission Network Development Plan***

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 Elektroprivreda BiH prepares its annual investment plan and submits it to SERC for approval by the end of November for the following year. The development of a Long-Term Plan also 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.

The Long-Term Transmission Network Development Plan should define the required reinforcements 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 transmission network planned in this manner provides the same conditions for the users already connected and those to be connected to the transmission network. It implies uniform conditions related to the condition of the transmission network in terms of lifespan and refurbishment of equipment, construction of new facilities and operational readiness of facilities used for the transmission of electricity.

At the end of December 2020, Elektroprivreda Bosne i Hercegovine submitted the *Long-Term Transmission Network Development Plan for the Period 2021 – 2030* to the Independent System Operator in Bosnia and Herzegovina for review, revision and approval, which is followed by final SERC approval.

Acknowledging the importance of this document, through the Licence Conditions for performance of the activity of an independent system operator SERC prescribed the obligation of holding a public hearing on a revised Long-Term Plan, thus enabling the public to have an insight into and give comments and observations on the prepared material. This public hearing is expected to be held in the first quarter of 2021.

### ***Market and Grid Codes***

The State Electricity Regulatory Commission closely monitored the implementation of the Market and Grid Codes in 2020.

The *Market Code* regulates relationships between the ISO BIH and licensed participants on the electricity market. The purpose of the Code is to create conditions for safe operation of the BIH power system, including efficient procurement of ancillary services and provision of system service, balancing of the BIH system at the

lowest possible costs, and efficient functioning and further development of the wholesale and retail electricity markets in BiH.

The Market Code is an exceptionally demanding technical document which includes the basic concept of market design, normative 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 (demand management, 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 good European practice.

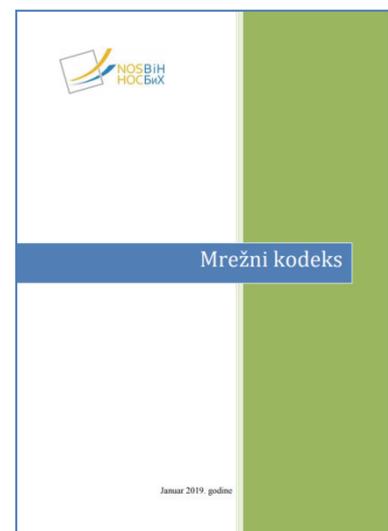
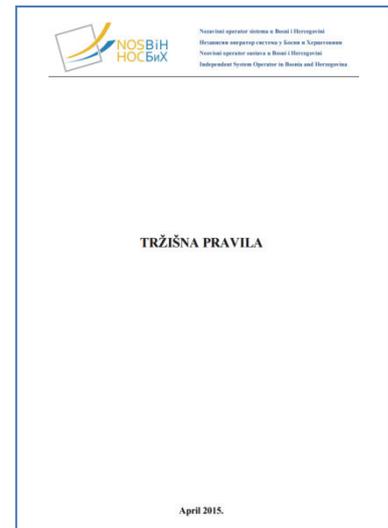
The new Grid Code, approved last year, represents a quality step forward in structural and normative terms, additionally defines the preparation of planning documentation and connection procedures and takes over to a significant extent the standards defined by the network codes and guidelines including the provisions of the connection network codes which are under competence of the system operator (Please see Section 3.1).

### ***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 of Bosnia and Herzegovina with Montenegro and Croatia were organised.

In 2020, SEE CAO continued to organise its activities in line with auction rules for capacity allocation as approved by separate decisions of competent national regulators in the region, including the State Electricity Regulatory Commission. These rules include:

- Harmonised Allocation Rules for long-term transmission rights pursuant to Article 51 of Regulation (EU) 2016/1719 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 several occasions, at national and international gatherings, SERC expressed its support to the successful operation of SEE CAO and its expectation that the geographic scope would include operators from all countries of South East Europe.

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 4 November 2020, 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 control areas of EMS AD Beograd (EMS) and the and the Independent System Operator in Bosnia and Herzegovina (ISO BIH), and*
- *Rules for daily auctions for allocation of transmission capacities on the border between control areas of EMS AD Beograd (EMS) and the Independent System Operator in Bosnia and Herzegovina (ISO BIH).*

As SEE CAO operations do 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 control 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 control areas of the Independent System Operator in Bosnia and Herzegovina (ISO BIH) and EMS AD Beograd (EMS).*

Furthermore, it was set in the same decision that *Rules for intraday allocation of transmission capacities on the border between control areas of the Croatian Transmission System Operator (HOPS) and the Independent System Operator in Bosnia and Herzegovina (ISO BIH)*, which were approved by SERC earlier, continue to apply.

The allocation of transmission capacities on the border with Serbia through annual and monthly auctions will be conducted by

Elektromreža Srbije (EMS) also in 2021 while daily and intraday auctions will be conducted by the ISO BIH. Intraday auctions on the borders with Croatia and Montenegro will be conducted by HOPS and the ISO BIH respectively.

### ***Cross-Border Tertiary Control***

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. At the beginning of 2018, 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 Montenegro* was prepared, which was approved by SERC on 13 March 2018.

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 neighbouring power systems. In this manner, the cross-border exchange of one of the products on the balancing market, formerly known as ‘emergency exchange’, is formalised.

A virtual transmission line registered in the SCADA systems of the two operators for simulation of exchange is 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. A part of the obligations of Bosnia and Herzegovina regarding the measures under the *Road Map for the implementation of Western Balkans 6 Initiative* (the so-called *WB6 Initiative*) pertaining to cross-border exchange of balancing services is fulfilled through the implementation of these contracts.

In 2020, SERC monitored the cross-border exchange of tertiary control energy. In accordance with the signed contracts, 590 MWh was delivered to Elektromreža Srbije (EMS), while 140 MWh was delivered to the Montenegrin Electric Transmission System (CGES). The value of delivered control energy amounts to EUR 66,519, of which the values of energy delivered to EMS and CGES amount to EUR 53,918 and EUR 12,601 respectively.

In 2020 the ISO BIH did not purchase cross-border control energy because all needs were met through the offers of domestic generators. In accordance with this favourable situation on the

supply side of control reserve and energy during 2020, there was no cross-border exchange of electricity under the *Agreement on common control reserve in the SHB Control Block* (Slovenia – Croatia – Bosnia and Herzegovina) which defines the operation of the three system operators (ELES – Slovenian Transmission System Operator, HOPS – Croatian Transmission System Operator and ISO BIH – Independent System Operator in Bosnia and Herzegovina).

### 3.3 Licensing Proceedings

In 2020, SERC granted six licences for various activities, while at the time of creating this Report, it was intensively working on the application for issuance of a licence for the international electricity trading activity filed by GEN-I d.o.o. Sarajevo.

In October 2020, a licence for the electricity distribution activity in the territory of the Brčko District of Bosnia and Herzegovina was granted to the Public Utility *Komunalno Brčko* d.o.o. Brčko, which is valid until 31 October 2030.

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

- Petrol BH Oil Company d.o.o. Sarajevo (January 2020),
- LE Trading BH d.o.o. Banja Luka (July 2020),
- Danske Commodities BH d.o.o. Sarajevo (November 2020),
- HEP Energija d.o.o. Mostar (November 2020), and
- Interenergo d.o.o. Sarajevo (December 2020).

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 licence, 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 address of the seat by LE Trading BH d.o.o. Banja Luka, in March 2020 SERC adopted a decision on an extension of use of the licence at the newly registered address for this licensee.

After a decision on suspension of temporary licence for the international trading activity was adopted for Aluminij Trade d.o.o. Mostar at the request of the licensee in March 2019, in March 2020 the suspension of this licence was prolonged until its expiry, that is, until 31 May 2020.

On 11 March 2020, SERC adopted a Decision on rejection of application of the Company *Inozemni centar trgovine* d.o.o. Široki Brijeg (ICT) for issuance of a licence, after it had been indisputably determined in an open and transparent procedure that the applicant conducted its business operations until 13 September 2018 under the name *Proenergy* d.o.o. Mostar and had the licence for performance of the international electricity trading activity from 28 March 2015, which was revoked by the SERC Decision number 05-28-12-36-3/18 of 7 February 2018 at the request of this Company. The imperative character of the provision of Article 51 paragraph 6 of the Licensing Rule – Consolidated Version was taken into consideration while adopting the Decision on rejection of application, which leaves no space to SERC for any discretionary decision and free assessment of the impact of the revocation and the reasons which lead to the revocation of the previous licence on the decision on the new application for issuance of the licence and the suitability of its issuance.

At the end of 2020, the following 16 companies were registered for the international electricity trading activity in the Register of valid licences: GEN-I d.o.o. Sarajevo, Alpiq Energija BH d.o.o. Sarajevo, EFT – Rudnik i Termoelektrana Stanari d.o.o. Stanari, HSE BH Energetsko preduzeće d.o.o. Sarajevo, JP Elektroprivreda Hrvatske zajednice Herceg Bosne d.d. Mostar, MH Elektroprivreda Republike Srpske – Parent Company, a.d. Trebinje, JP Elektroprivreda Bosne i Hercegovine d.d. Sarajevo, Energy Financing Team d.o.o. Bileća, G-Petrol d.o.o. Sarajevo, Ezpada d.o.o. Mostar, Axpo BH d.o.o. Mostar, Petrol BH Oil Company d.o.o. Sarajevo, LE Trading BH d.o.o. Banja Luka, HEP Energija d.o.o. Mostar, Danske Commodities BH d.o.o. Sarajevo and Interenergo d.o.o. Sarajevo.

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 an 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, comparing the previous year's status 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 2020. In March 2020, a Conclusion on update of annexes to the Licence Conditions for the electricity distribution activity was adopted, that is, overviews of facilities used for this activity in the Brčko District of BiH.

### 3.4 Monitoring of Activities of Licensed Entities

The State Electricity Regulatory Commission continuously monitors operations of the licensed entities and their compliance with the licence conditions. Monitoring is performed through analysis of regular and special reports submitted by all licensed entities as well as by visits to the licensees. The licensees submit annual, semi-annual, monthly and daily reports on individual activities of a financial, technical and organisational nature. 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 October 2020, with particular attention paid to the epidemiologic measures imposed due to the COVID-19 pandemic, the following regulated entities were visited:

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



The compliance of the Independent System Operator in Bosnia and Herzegovina with the obligation to monitor voltage quality, which should be maintained within the prescribed limits through operations control, is of a particular interest to SERC. Regarding the multiannual occurrence of high voltage levels in the BiH power system, the ISO BiH is requested to find a permanent systemic solution, in proactive cooperation with Elektroprenos BiH, to ensure that the voltage levels in the network are within the allowed limits. The competences of the ISO BiH which are set by the law are not reduced only to dispatching but require taking a much bigger commitment to ensure the long-term stability of the transmission system, including maintaining the voltage levels within the prescribed limits.

The ISO BiH prepares reports on emergencies in the power system. In case of events resulting in zero-voltage of busbars, practice of providing detailed reports on individual events should be continued (per event) as well as summary reporting within a document on the status of the control system and quality of supply, which would include a statistical overview of the main values (number, duration and quantities of energy not supplied, i.e. not produced) and a proposal of measures to reduce these events, in particular when it

comes to the 110 kV network and the areas with radial supply, and outages of generation facilities.

In the function of the security of supply, the ISO BIH was called on to develop standardised procedures which are in the function of enhancing physical and cyber security of all information-communication systems used by the ISO BIH.

SERC closely monitors all judicial proceedings involving the ISO BIH, and, in this context, insists on delivering all of the relevant information in a timely manner.

As part of regulatory monitoring, SERC pays particular attention to reviewing financial performance indicators of the ISO BIH, of which SERC gives its opinion during decision-making process in the proceedings for setting of the tariff for operation of an independent system operator and tariffs for system and ancillary services (Please see Section 3.6).

Under regulatory monitoring, the obligations of Elektroprenos BIH to develop long-term transmission network development plans for a ten-year period and develop and adopt annual investment plans were pointed out in particular. The obligation of Elektroprenos set under the law is to enable continuous electricity supply in accordance with the defined quality standards. In this context, SERC insists on more active engagement of the regulated company in realising the approved investments, and using accumulated funds for that purpose, and hiring necessary personnel.

SERC has been pointing out for years that the voltage levels in the BIH power system are very often above the prescribed limits. In this context, the State Electricity Regulatory Commission is of the opinion that it is necessary to put maximum efforts to speed up the activities on solving the issue of high voltage levels through the activities which already started.

Regarding the stated position of Elektroprenos BIH on equating financial obligations of system users when connecting to the transmission network in case of the construction of a 110/x kV substation, the regulated company was asked to submit to SERC a short analysis and practice of neighbouring countries and other transmission system operators. In addition, this document should include a financial analysis of revenues realised by distribution system operators, that is, Elektroprenos BIH, when connecting new customers.

The State Electricity Commission is of the opinion that the focus of investments by Elektroprenos BIH should be, *inter alia*, the removal of all 'interim' solutions from the previous period with the requirement to ensure full coordination with the distribution system operators in finding appropriate solutions for the supply of consumers.



As part of regulatory monitoring, SERC pays particular attention to reviewing financial performance indicators of Elektroprenos BIH, of which SERC gives its opinion during decision-making process in the proceedings for setting of the tariffs for electricity transmission services (Please see Section 3.6).

SERC permanently insists on enhancing cooperation between the ISO BIH and Elektroprenos BIH and improving the coordination of their activities, in particular the international activities from which the BIH power system may have benefits.

As part of regulatory monitoring of JP Komunalno Brčko, on several occasions the State Electricity Regulatory Commission reiterated the necessity of developing the legal framework in the Brčko District of BIH, i.e., passing a new electricity law in accordance with the Third Energy Package as well as laws on renewable energy sources and efficient cogeneration and energy efficiency. The failure to pass the new legislation slows down and prevents further development of the sector to a significant extent and jeopardises the security of supply in the District area. As a significant amount of work on the preparation of new laws had been completed, SERC called on all relevant institutions to make additional efforts to pass the new laws.

A particular problem is the failure to regulate mutual ownership relationships between the competent bodies of the Brčko District of BIH and JP Komunalno Brčko over the fixed assets in the function of electricity distribution and supply.

In 2020 SERC continued to emphasise the necessity of full unbundling of accounts for distribution and supply activities as well of these activities and other non-energy activities (water production and distribution, landscaping and maintenance of public areas and collection, transport and disposal of waste materials). SERC pointed out that the content of the official website of Komunalno Brčko should provide the information on unbundling of the activities in a clear manner.

The obligation of filing the request for update of annexes of the licence in a timely manner was emphasised to the regulated company in particular, and of informing SERC of any change in the network without delay. The licensee was advised to submit any information on changes in a timely manner, immediately upon the issuance of a use permit.

### **3.5 Technical Aspect of Transmission System Operation**

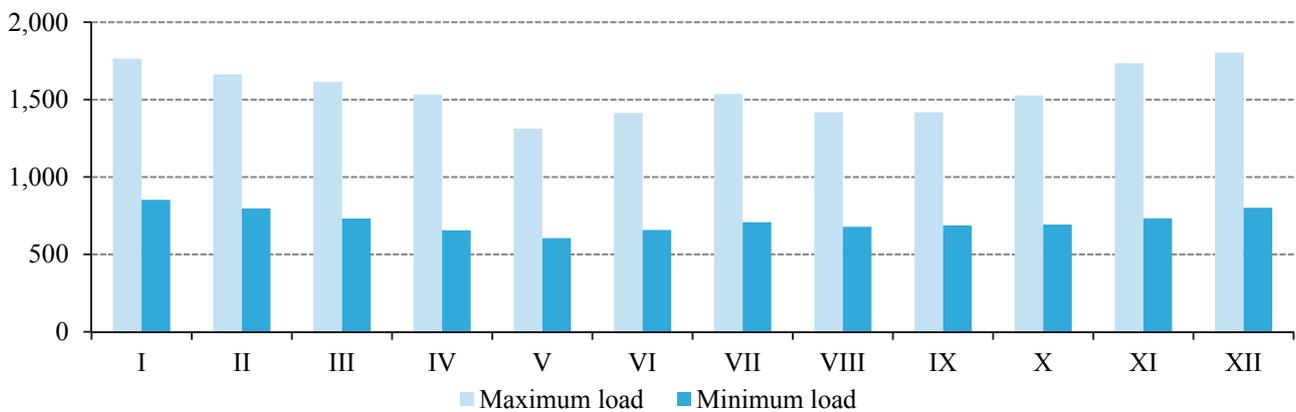
The BIH electric power system operation in 2020 was stable and without any bigger problems. All system users were able to operate functionally in line with the defined quality standards. The planned works as well as those additionally requested in the transmission

network were completed in the function of the current and investment maintenance.

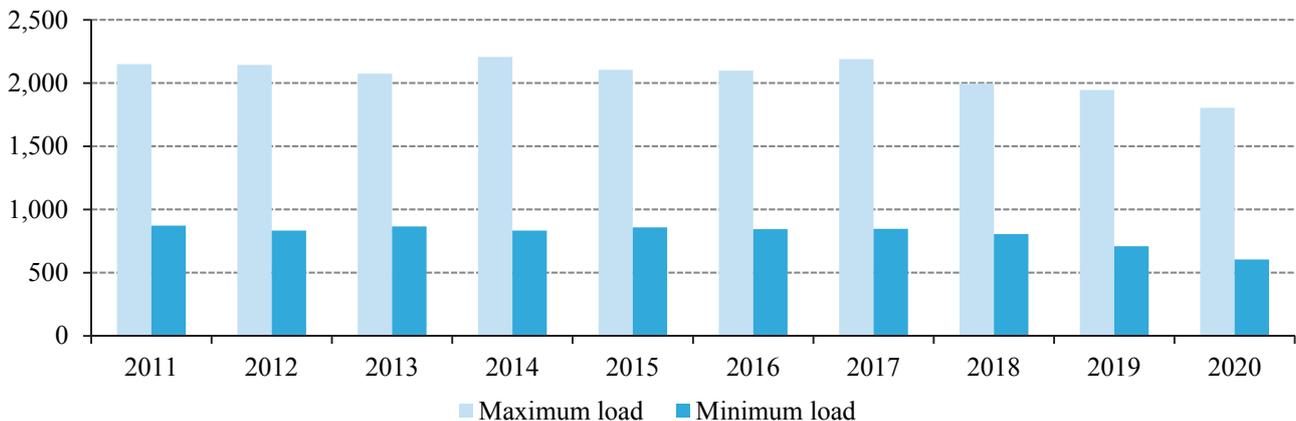
In the previous year, a maximum load of the electric power system amounting to 1,804 MW was recorded on 2 December 2020 at the 14<sup>th</sup> hour, which is also the day when a maximum daily consumption was recorded amounting to 35,786 MWh. The recorded load was below the historic maximum of 2,207 MW recorded on 31 December 2014 at the 14<sup>th</sup> hour. A minimum load of 605 MW was recorded on 25 May 2020 at the 4<sup>th</sup> hour, which is the lowest load in the past several decades. Minimum daily electricity consumption of 20,946 MWh was recorded on 24 May 2020. Maximum and minimum loads in 2020 and over the past ten years are presented in Figures 1 and 2 respectively.

Unintended deviations from declared exchange schedules towards the neighbouring power systems in 2020 amounted to 29 GWh at hours when an electricity deficit was registered in the BIH control area and a total of 53 GWh at hours when an electricity surplus was registered. Monthly deviations of the BIH power system in 2020 are presented in Figure 3. A maximum hourly electricity deficit (downward deviation) was recorded in

**Figure 1. Maximum and minimum monthly load in 2020 (MW)**



**Figure 2. Maximum and minimum annual load in the period from 2011 to 2020 (MW)**



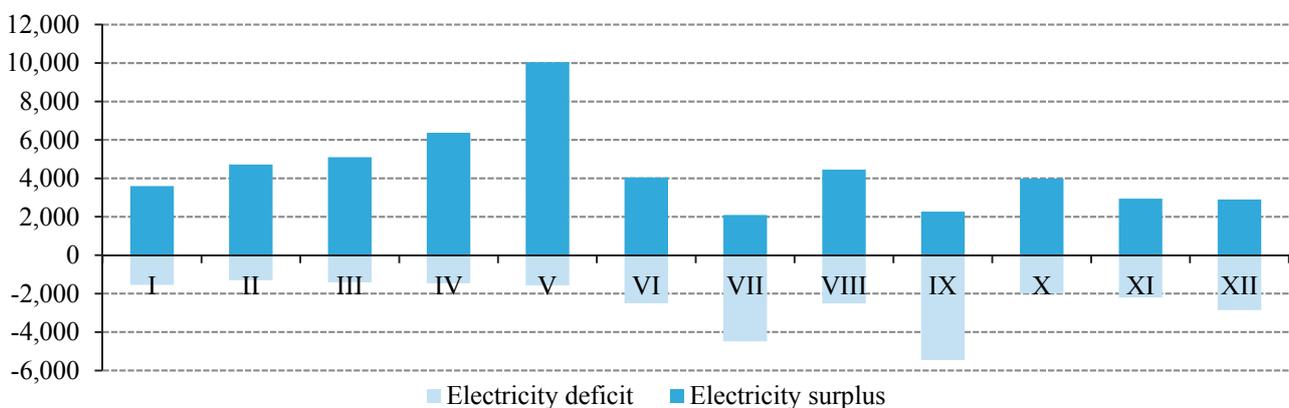
May 2020 amounting to 149 MWh/h as well as a maximum surplus (upward deviation) amounting to 218 MWh/h.

Total electricity in the transmission network amounted to 18,128.7 GWh, which is 0.71% less than in 2019. Transmission losses amounted to 317.2 GWh, or 1.75% of total energy in the transmission system. The trend of reducing distribution losses continued in 2020 and they amounted to 912.6 GWh or 9.13% 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 in the period from 2011 to 2020 is presented in Figure 4.

In 2020 PHP Čapljina withdrew 113 GWh from the transmission system, while total production of this power plant amounted to 413 GWh.

Data on energy not supplied (ENS) due to unplanned interruptions ( $ENS_{unpl}$ ), as well as energy not supplied due to planned interruptions ( $ENS_{pl}$ ) in the BIH power system over the past five years are provided in Table 1. Total energy not supplied, after last year's slight decrease, recorded a significant decrease in 2020.

**Figure 3. Monthly deviations of BIH power system in 2020 (MWh)**



**Figure 4. Transmission and distribution losses**

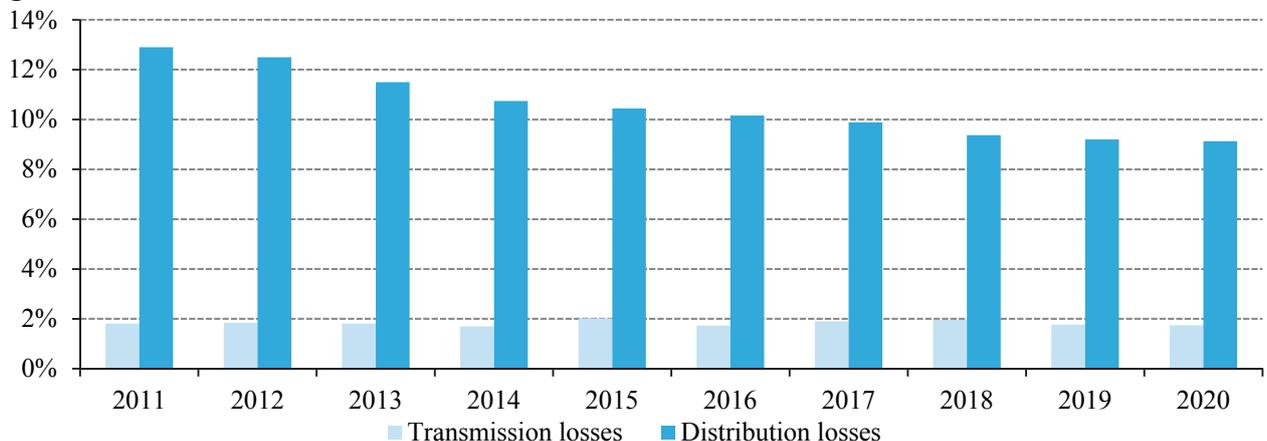


Table 1. Energy not supplied due to interruptions in the transmission network

	2016		2017		2018		2019		2020	
	MWh	min	MWh	min	MWh	min	MWh	min	MWh	min
ENS <sub>unpl</sub>	528.46	15,975	1,362.35	16,594	1,181.83	13,661	1,095.03	21,370	393.01	11,825
ENS <sub>pl</sub>	287.16	25,032	1,633.75	24,817	1,377.39	24,297	1,100.55	17,178	543.35	9,998
<b>Total</b>	<b>815.62</b>	<b>41,007</b>	<b>2,996.10</b>	<b>41,411</b>	<b>2,559.22</b>	<b>37,958</b>	<b>2,159.59</b>	<b>38,548</b>	<b>936.36</b>	<b>21,823</b>

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

Month	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
AIT <sub>2016</sub>	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 <sub>2017</sub>	5.3071	2.7625	3.0089	11.4069	4.2718	10.4772	9.7140	4.2352	8.5023	15.9486	3.2145	4.8497
AIT <sub>2018</sub>	0.2046	9.5267	3.2354	1.7183	2.2664	6.3035	3.0782	5.2013	3.3805	0.1153	3.1875	0.2781
AIT <sub>2019</sub>	0.1233	14.0321	8.8927	10.0696	3.3278	9.0077	13.4418	3.6580	9.3859	6.2718	0.6274	0.9416
AIT <sub>2020</sub>	0.5982	5.3980	1.4336	1.0986	3.6368	7.3068	4.3183	2.5052	12.0331	4.7252	3.1260	2.2014

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

In 2020, several contracts on construction, reconstruction and rehabilitation of transmission facilities were implemented. At the beginning of October 2020, a new SS 110/30 kV Podveležje was put into operation, which was connected to the transmission network with the entry/exit system to TL 110 kV Jablanica – Mostar 2, thus forming two new transmission lines, TL 110 kV Jablanica – Podveležje and TL 110 kV Podveležje – Mostar 2. This substation was constructed with the aim of connecting the Podveležje wind power plant to the transmission network. The trial operation of this, third wind power plant in Bosnia and Herzegovina, with installed capacity of 48 MW (15×3.2 MW), is expected at the beginning of 2021.

During a tragic fire in the hydropower plant Dubrovnik on 10 January 2019, facilities of generators G1 and G2 were damaged. After rehabilitation of generator G2, which is directly connected to the transmission system of Bosnia and Herzegovina, required inspection and testing of the generator and transmission line bays TL 220 kV Trebinje – HPP Dubrovnik 2 were done. As of 2 March 2020, generator G2 has been included in daily schedules of MH Elektroprivreda Republike Srpske, a.d. Trebinje.

After repairs of a breakdown, the 220 kV Prijedor 2 – Jajce 2 transmission line (TL) was put into operation on 7 September 2020, which was out of order due to the breakdown on a circuit breaker in SS Jajce 2. In 2020, the procedure for repairs of the 400/110 kV, 300 MVA transformer at the SS Višegrad was initiated. It is estimated that the transformer will be operational again as of 2022, with the cost of EUR 1.23 million.

The secondary control services in 2020 were provided by JP Elektroprivreda Bosne i Hercegovine d.d. Sarajevo, MH Elektroprivreda Republike Srpske, a.d. Trebinje and JP Elektroprivreda Hrvatske zajednice Herceg Bosne d.d. Mostar. During the year, tertiary control was activated 43 times, of which 32 times as upward tertiary control and 11 times as downward tertiary control, of which 11 times in July 2020. However, the nominated tertiary control volumes were often insufficient.

In 2020, 563 outages were registered in the transmission network at 400, 220 and 110 kV voltage level, of which 146, 246 and 170 at 400 kV, 220 kV and 110 kV transmission lines respectively, and ten outages of 400/220 kV, 400 MVA transformers and 14 outages of 220/110 kV, 150 MVA transformers. There were no outages of 400/110 kV, 300 MVA transformers registered.

In the past year, 557 failures of thermal power blocks and 24 outages of hydro generators were registered. Missing energy in the system was compensated through the activation of tertiary reserve.

Similar to the previous years, in 2020 voltage levels in the power system often exceeded the values prescribed by the Grid Code, in particular in the 400 kV and 220 kV network. The highest voltage levels in the 400 kV network were registered at SS Mostar 4 in August when the measured voltage level reached 454.79 kV. In June, the highest voltage level in the 220 kV network was measured at the Tuzla 4 substation (267.71 kV) while in August the highest voltage level in the 110 kV network was measured at the Mostar 4 substation (129.44 kV).

The main reason for occurrence and duration of high voltage levels was under-loaded 400 kV transmission lines during low demand periods which generate large volumes of reactive power. The occurrence of high voltage levels is a regional problem and, consequently, solutions to this problem are sought at regional level. With the aim of contributing to a long-term and quality solution to this problem, SERC continues to insist on conducting investment activities for the instalment of shunt reactors in the BIH power system, in addition to implementing all other measures to keep the voltage levels within the prescribed limits.

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 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.

*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

	2016	2017	2018	2019	2020	
SAIFI	Planned interruptions	0.55	0.92	0.76	0.64	0.42
	Unplanned interruptions	0.97	0.81	0.69	0.99	0.53
	<i>Total</i>	1.52	1.73	1.45	1.63	0.95
SAIDI	Planned interruptions (min/customer)	92.92	114.66	94.68	73.71	39.71
	Unplanned interruptions (min/customer)	68.61	48.55	53.31	63.24	31.67
	<i>Total(min/customer)</i>	161.53	163.21	147.99	136.95	71.38

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

	2016	2017	2018	2019	2020	
SAIFI	Planned interruptions	3.53	3.93	3.33	2.76	2.57
	Unplanned interruptions	5.78	7.01	4.96	4.93	4.63
	<i>Total</i>	9.31	10.94	8.29	7.69	7.19
SAIDI	Planned interruptions (min/customer)	399.12	324.97	255.11	239.55	189.52
	Unplanned interruptions (min/customer)	371.99	465.81	314.55	453.10	382.64
	<i>Total (min/customer)</i>	771.18	790.78	569.66	692.68	572.16

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 Annexes A and B respectively.

### 3.6 Tariff Proceedings

#### *Tariffs for Electricity Transmission Services*

On 11 November 2019, Elektroprenos Bosne i Hercegovine filed the application for modification of the electricity transmission tariffs in which the Company presented requests for revenues and expenditures as well as costs that the Company plans to charge for its services. An average tariff for electricity transmission amounting to 6.054 EUR/MWh was requested in the application, which would be a 33.2% increase.

Tariffs are set pursuant to the criteria 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.

A formal public hearing at which facts in the tariff proceedings were determined was held on 17 December 2019. With the electricity market development in BIH, 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 participated in these proceedings, which enabled them to directly participate in the proceedings before the regulatory authority. At the end of December 2019, the *Presiding Officer's Report* was submitted to all participants in the proceedings.

A final decision in this proceeding had not been adopted, so the SERC Decision effective as of 1 May 2017 was applicable in 2020. Consequently, the part of the transmission network charge pertaining to energy remains 2.955 EUR/MWh while the part of the transmission network charge pertaining to capacity amounts to 0.753 EUR/kW (an average transmission network charge amounts to 4.545 EUR/MWh). Elektroprenos Bosne i Hercegovine did not file a new application for modification of the electricity transmission tariffs by the end of 2020.

#### ***Tariffs for Operation of an 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 its tariffs, in on 31 October 2019 the ISO BIH filed such an application, which it presented and explained planned revenues, expenditures and costs in 2020. The revenue requirement for 2020 amounting to EUR 2,925,779 was requested, the requested tariff for operation of an independent system operator paid by customers for electricity withdrawn from the transmission system amounted to 0.486919 EUR/MWh (a 69.15% increase), while the tariff paid by producers for electricity injected into the transmission system amounted to 0.035831 EUR/MWh (a 49.11% increase). The proposed tariff for system service amounted to 3.7115 EUR/MWh, which is 39.92% more than the tariff for system service determined on 31 December 2019.

A formal public hearing in these tariff proceedings, in which, in addition to the regulated company, five interveners actively participated, was held on 16 December 2019. At the end of December 2019, the *Presiding Officer's Report* was distributed to the regulated company and all interveners for comments.

Based on the analyses of the applicant's required costs and expenditures and all other available documents, the State Electricity Regulatory Commission passed a *Decision on tariff for operation of an independent system operator and a Decision on tariffs for system and ancillary services* on 25 March 2020.

The Decision sets forth that the tariff for operation of an independent system operator is paid by producers for energy injected into the transmissions system in an amount of 0.0256 EUR/MWh (a 6.38% increase) while customers for energy withdrawn from the transmission network pay the tariff in an amount of 0.3456 EUR/MWh (a 20% increase).

While determining the tariff for system service, based on the available data the tariff in an amount of 2.611 EUR/MWh was calculated, or 1.6% less than the previous tariff which amounted to 2.6526 EUR/MWh. The financial scope of the system tariff for 2020 was set to an amount of EUR 28,057,801. Taking into account that there was a high degree of uncertainty regarding the realisation of values which have an impact on the revenues, primarily consumption, i.e. withdrawal of electricity from the transmission system, the Commission decided to keep the tariff for system service at the existing level of 2.6526 EUR/MWh announcing that it would initiate the adjustment of the tariff for system service at the appropriate moment if needed.

On 26 October 2020, the Independent System Operator in Bosnia and Herzegovina filed a new application in which it presented and explained the planned revenues, expenditures and costs for 2021. The requested tariff for operation of an independent system operator paid by customers amounted to 0.5711 EUR/MWh (a 69% increase), while the tariff paid by producers amounted to 0.0414 EUR/MWh (a 65% increase) with the revenue requirement for 2021 amounting to EUR 6,522,478. The ISO BIH did not propose any modification of the tariff for system service.

A formal public hearing in these tariff proceedings, in which, in addition to the regulated company, four interveners actively participated, was held on 2 December 2020 via an internet communication platform due to the COVID-19 pandemic. The *Presiding Officer's Report* was distributed to all participants in the proceedings for comments.

On the basis of the Presiding Officer's Report, received comments of the regulated company and the interveners, and following the analyses of the applicant's required costs and expenditures and all other available documents, the State Electricity Regulatory Commission passed a *Decision on tariff for operation of an independent system operator and a Decision on tariffs for system and ancillary services* on 29 December 2020.

It is determined that the annual revenue requirement of the Independent System Operator in Bosnia and Herzegovina in 2021

amounts to EUR 4,571,335. The Decision specifies that the tariff for operation of an independent system operator is paid by producers for energy injected into the transmissions system in an amount of 0.0291 EUR/MWh (a 14% increase) while customers for energy withdrawn from the transmission network pay the tariff in an amount of 0.4003 EUR/MWh (a 15.8% increase).

According to the *Decision on tariffs for system and ancillary services*, the financial scope of the system service in 2021 amounts to EUR 27,104,200 and the tariff for system service is set in an amount of 2.4486 EUR/MWh (a 7.7% decrease).

### ***Tariffs for Electricity Customers in the Brčko District of BIH***

The proceedings for setting of the tariff rates for electricity distribution services and electricity supply within the universal service in the Brčko District of BIH were initiated on 13 November 2019, following an application by the regulated company submitted on 8 November 2019.

JP Komunalno Brčko, as the public supplier in the Brčko District of BIH which purchases all the electricity for the supply of its customers on the wholesale electricity market requested an increase in the tariffs which had been applicable since 1 January 2018, i.e., the amendments to the decisions on tariffs which would enable the following:

- A 6.97% increase in the costs of distribution network charge,
- A 6.96% increase in an average price for the supply within the universal service for the category ‘other consumers’ (small customers, that is, commercial customers connected to 0.4 kV) and households by 5.6% and 7.4% respectively,
- A profit of the public supplier amounting to 2% of electricity purchase costs for the supply within the universal service, and
- A price increase in the tariff element ‘active electric power’ for the first tariff group under the category ‘other consumers’.

A formal public hearing in these proceedings, in which there were no requests for intervener status, was held on 11 December 2019. At the end of the same month, the *Presiding Officer’s Report* was distributed to the regulated company for comments.

Having received all additionally requested information, including the costs of electricity purchase in the forthcoming period, on 11 March 2020 SERC passed the decisions on the tariffs for electricity distribution and supply within the universal service in the Brčko District of BIH, which will apply as of 1 April 2020. According to these decisions, an average electricity distribution tariff remained at the same level, while an average price for supply of households and commercial customers connected at 0.4 kV increased by 4.5% and 0.5% respectively.

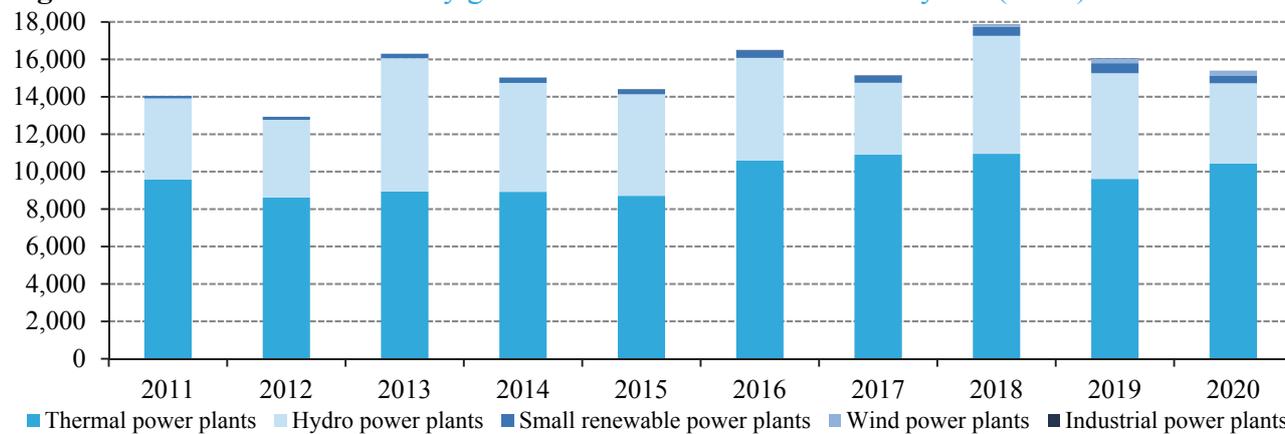
### 3.7 Electricity Market

In Bosnia and Herzegovina, in 2020, electricity generation amounted to 15,390.67 GWh, which is 683GWh, or 4.3% less in comparison to the previous year. Unlike in 2019, when hydrological conditions were within the limits of a ten-year average, in 2020 the hydrological conditions were significantly poorer, which resulted in generation by hydropower plants amounting only to 4,276 GWh, which is a decrease of 1,373 GWh, or 24.3%.

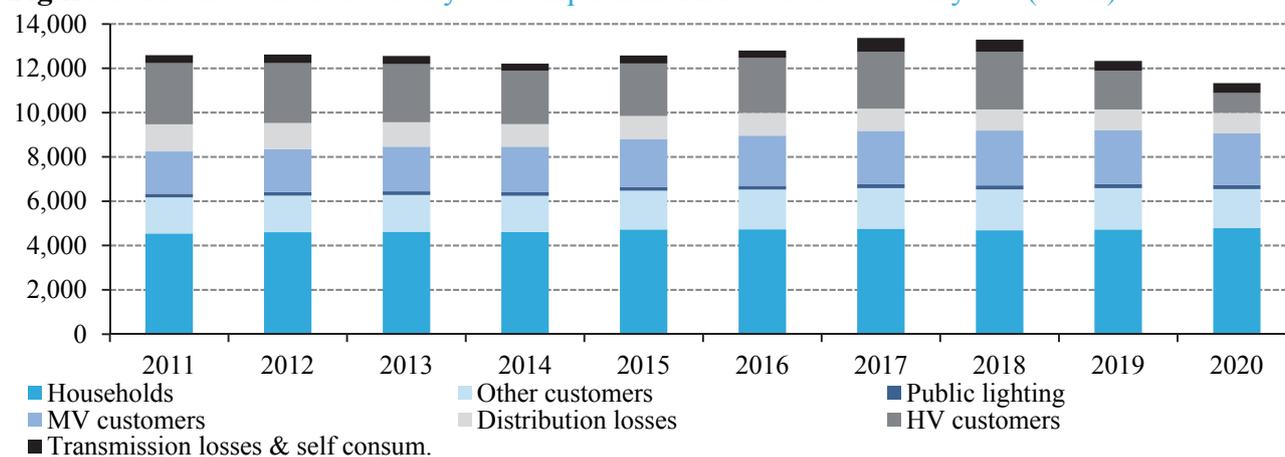
On the other hand, generation by thermal power plants increased by 8.6% in comparison to 2019 amounting to 10,443 GWh. A decrease in generation was recorded in all thermal power plants except in Stanari.

Total generation of the two existing wind power plants located in the south-west of BIH, Mesihovina and Jelovača, amounted to 262 GWh, or 3,2% more than in the previous year. Small-scale renewable generation amounted to 399.25 GWh, or 25.6% less in comparison to 2019. The poor hydrological conditions affected generation in this category, in which the dominant share is held by small hydro power plants with 341.02 GWh (497.99 GWh in

**Figure 5.** Breakdown of electricity generation in BIH over the last ten years (GWh)



**Figure 6.** Breakdown of electricity consumption in BIH over the last ten years (GWh)



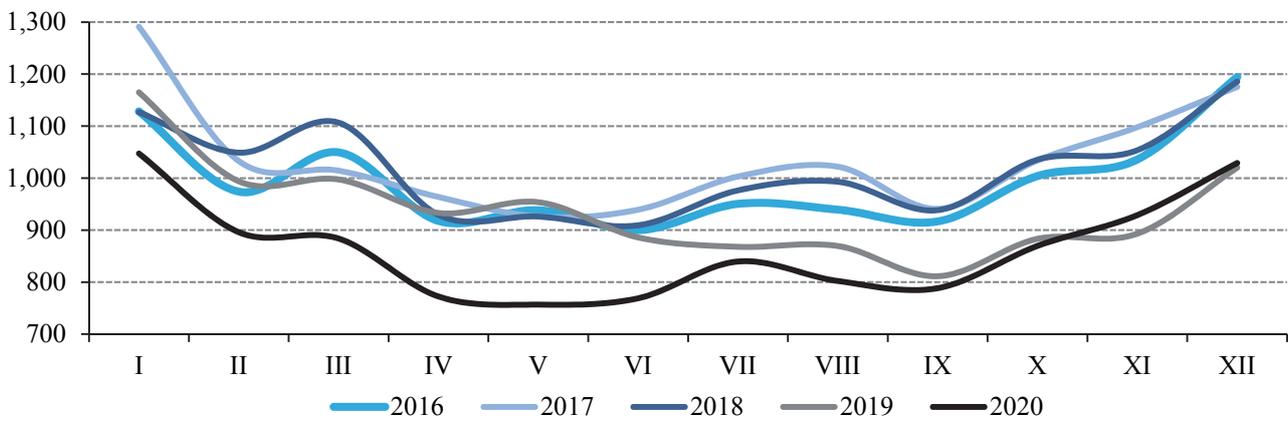
2019). Solar power plants, biomass and biogas power plants and wind power plants connected to the distribution system produced 45.62 GWh (30.04 GWh in 2019), 12.56 GWh (8.84 GWh in 2019) and 0.05 GWh (0.07 GWh in 2019) respectively.

Independent producers have a significant share in small-scale renewable generation, whose facilities produced 305.13 GWh (76.4%), while the remaining share (23.6%) was produced by power plants owned by the public utilities. Industrial power plants produced 10.15 GWh. A breakdown of generation over the last ten years is provided in Figure 5 while a breakdown of consumption in BIH is provided in Figure 6.

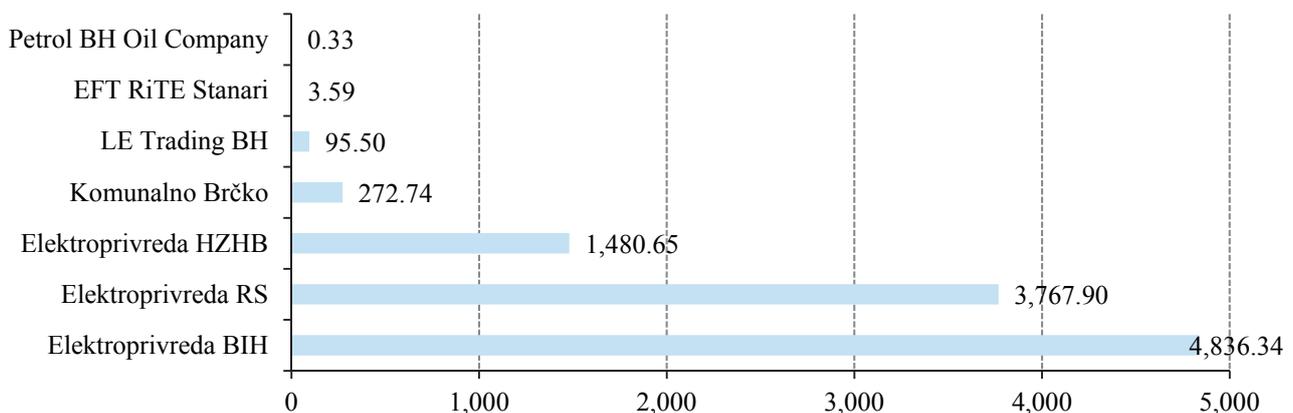
Total electricity consumption in BIH, after a 7.3% decrease in 2019, continued to decline in 2020 and amounted to 11,330 GWh, or 8.1% less than in the previous year. Consumption of customers connected to the transmission network (HV customers) decreased by 49.8% amounting to 890 GWh.

This large drop of consumption is mostly the consequence of the closure of Aluminij d.d. Mostar and the difficulties faced by other large customers in their business operations, such as B.S.I. d.o.o. Jajce and R-S Silicon d.o.o Mrkonjić Grad, due to unfavourable

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



**Figure 8. Energy withdrawn from the transmission network in 2020 per supplier (GWh)**

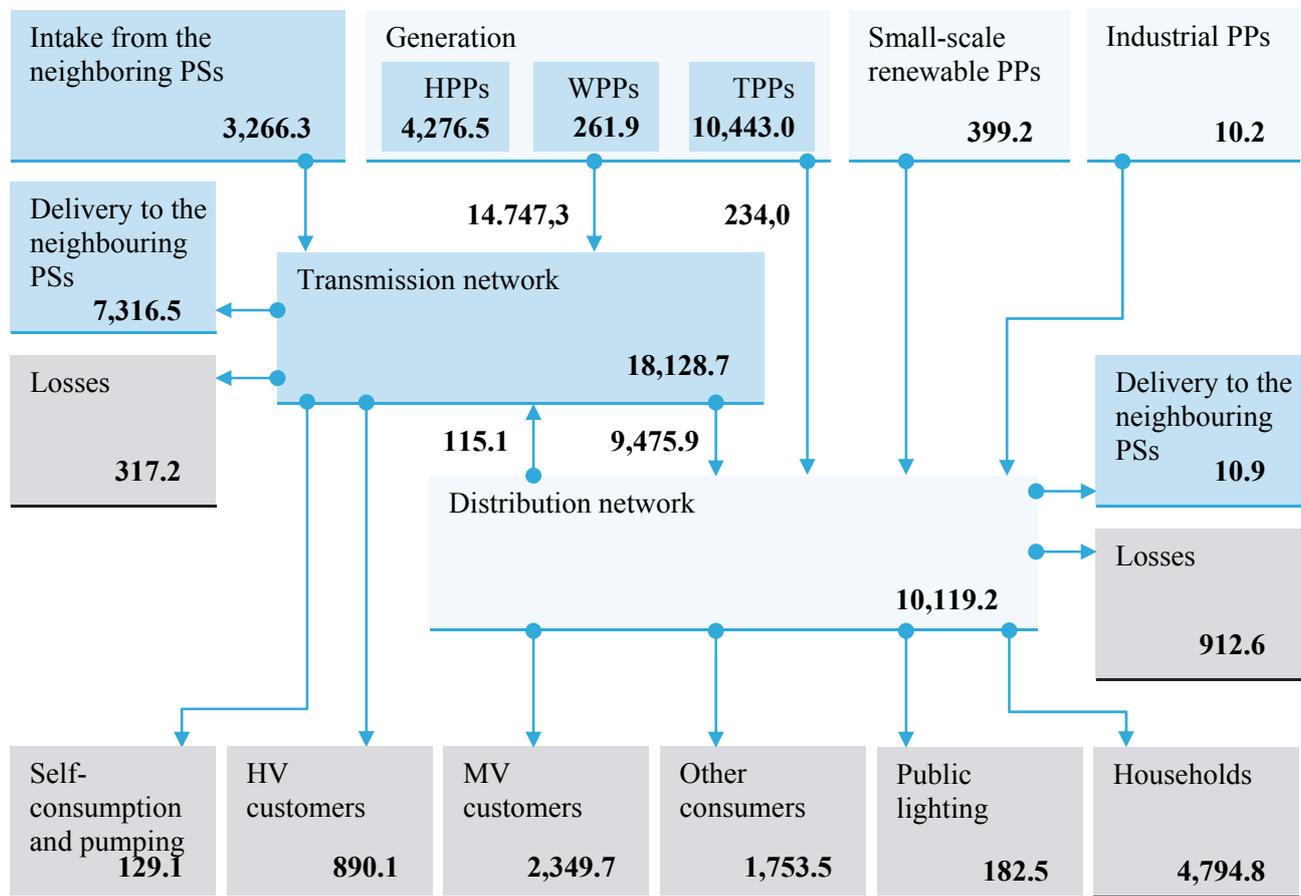


trends on the global metal market caused by the COVID-19 pandemic. Consumption of customers connected to the distribution network decreased by 1.5% amounting to 9,993 GWh. A decrease in consumption was recorded by all categories of customer connected to the distribution system except by households. The consumption of this category amounted to 4,795 GWh, or 1.5% more than in 2019, which is mostly the result of the measures imposed by the competent authorities due to the pandemic.

A total of 10,495 GWh of electricity was withdrawn from the transmission system, which is 875 GWh or 7.7% less in comparison to 2019. Data on energy withdrawn from the transmission system 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 2020 amounted to 4,061 GWh, or 379 GWh more than in the previous year. With this, BIH recorded the highest balance surplus in South East Europe and took the leading position from Bulgaria where expensive greenhouse gas emissions permits have to be bought for generation due to the implementation of the EU *Emissions Trading System* (ETS). An overview of electric power balance volumes realised in 2020 is provided in Figure 9. The detailed balance values and electric power indicators of BIH are provided in Annexes C and D respectively.

**Figure 9. Balance volumes realised in 2020 (GWh)**



## ***Regional Electricity Market***

On the electricity market in South East Europe, which is of direct interest to electric power entities in BIH, a multiannual downward trend in wholesale electricity prices continued, to which the COVID-19 pandemic contributed significantly in 2020. An average value of the HUPXDAM index, which is dominant in the region, in 2020 amounted to 39 €/MWh, or 22.5% less than in the previous year. It is also indicative that an average price of electricity futures for the upcoming 2021 amounts to 51.8 €/MWh, which is a 10.2% decrease in comparison to the previous year.

When analysing wholesale prices, the factors affecting their growth may not be neglected, primarily the existing energy deficit in the region, which, in spite of the reduced consumption, increased in 2020 due to the poor hydrological conditions. *The EU Emissions Trading System* has even bigger impact thereon, that is, the constant increase in prices for greenhouse gas emissions permits (ranging from 30 to 40 EUR/t in 2020). Consequently, generation by thermal power plants is reduced, which is not followed by construction of renewable sources in the required scope, which leads to even higher deficit in the region. The formation of national power exchanges in the Western Balkans countries and market coupling have not been developing at an expected pace. Furthermore, there is evident congestion on the cross-border lines used to supply the region with the missing energy (border Slovakia – Hungary, Austria – Hungary, Austria – Slovenia), which causes the price difference between the ‘reference’ Hungarian Power Exchange (HUPX) and the European Energy Exchange (EEX). Table 5 provides an overview of electricity prices on the power exchanges of relevance for the region of South East Europe.

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

<i>PX indices</i>	<i>Average price</i>	<i>Maximum price</i>	<i>Minimum price</i>
EPEX Germany	30.46	75.03	-26.13
EPEX Austria	33.19	75.29	-22.75
SIPX	37.55	103.23	7.02
HUPXDAM	39.00	103.46	6.61
OPCOM	39.42	103.46	4.37
SEEPEX	38.98	113.25	8.18
CROPEX	38.04	103.23	7.74

*EPEX Germany – European Energy Exchange (EEX) index for Germany*

*EPEX Austria – European Energy Exchange (EEX) index for Austria*

*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*

## ***Electricity Market in BIH***

In 2020, total electricity consumption in BIH amounted to 11,330 GWh, or 8.1% less than in the previous year. Customers connected to the transmission system withdrew 890 GWh, or 49.2% less, while customers connected to the distribution system withdrew 9,993 GWh, or 1.5% less in comparison to the previous year. Of this amount 9,081 GWh pertain to the withdrawal by end customers and 913 GWh to losses in the distribution network. Total sale to end customers amounts to 9,971 GWh, which is a decrease of 989 GWh, or 9.0%.

The number of electricity customers in BIH continues to grow – during the year it increased by 20,987, thus reaching 1,588,773 at the end of the year (Table 6). The number of household customers increased by 11,582.

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 end 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.

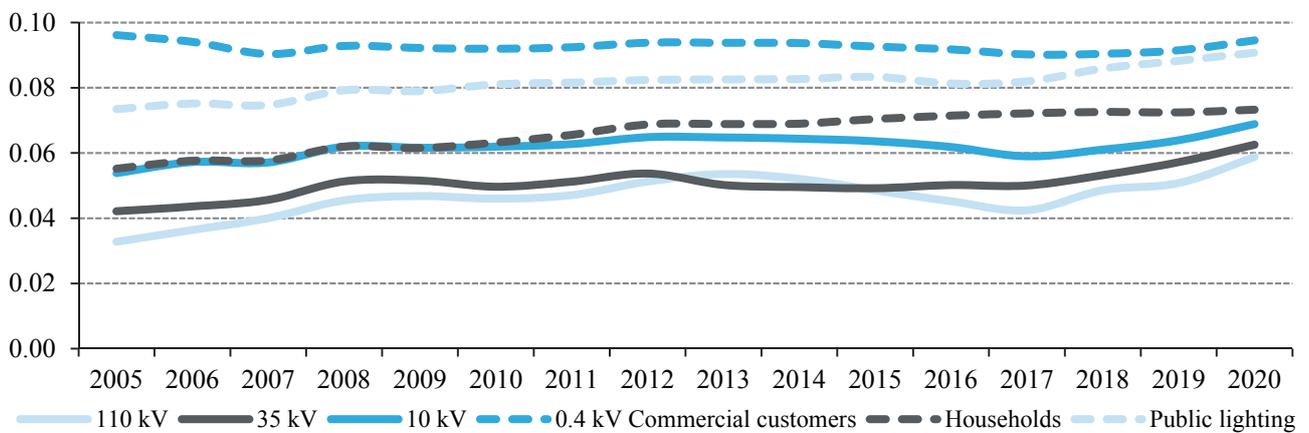
In 2020, the option of being supplied within the universal service was used by all households in BIH and most of the customers belonging to the category of ‘other consumers’. An average electricity price for these customers amounted to 78.99 EUR/MWh and it was slightly higher than in 2019 when it amounted to 77.87 EUR/MWh. An average price for households amounted to 73.32 EUR/MWh (a 1.1% increase), while an average price for customers belonging to the category of ‘other consumers’ was 94.59 EUR/MWh, or 3.3% higher in comparison to 2019.

*Table 6. Number of electricity customers in BIH*

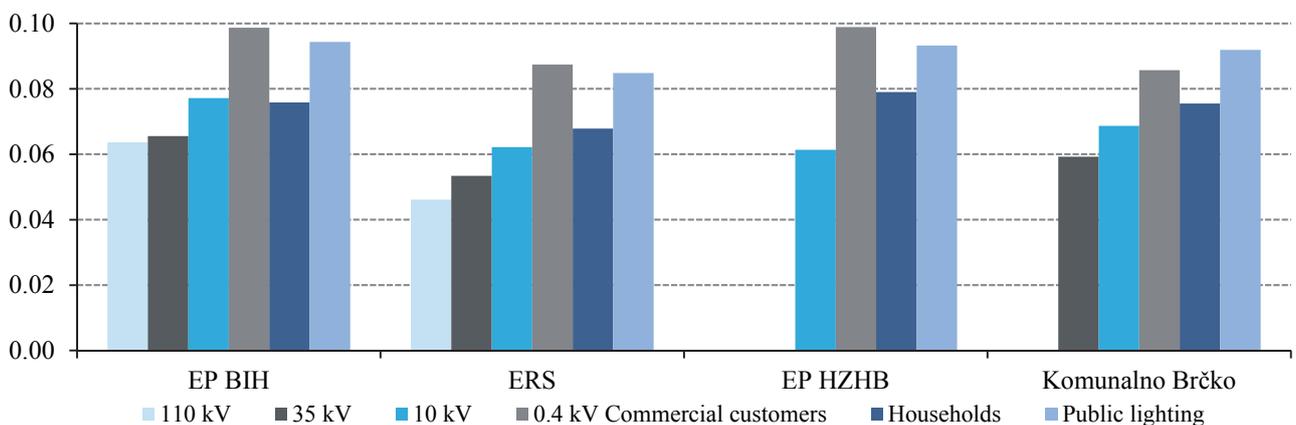
<i>Supplier</i>	<i>110 kV</i>	<i>35 kV</i>	<i>10 kV</i>	<i>Other consumers</i>	<i>Households</i>	<i>Public lighting</i>	<i>Total</i>
Elektroprivreda BIH	8	63	935	65,292	707,925	4,739	778,962
Elektroprivreda RS	5	28	972	39,399	531,634	4,182	576,220
Elektroprivreda HZHB			243	15,543	179,733	1,938	197,457
Komunalno Brčko		1	65	3,755	31,852	444	36,117
Other suppliers	3	1	11	2			17
<b>Total</b>	<b>16</b>	<b>93</b>	<b>2,226</b>	<b>123,991</b>	<b>1,451,144</b>	<b>11,303</b>	<b>1,588,773</b>

The Regulatory Commissions in BIH 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 2020 data, cross-subsidies between commercial customers and households amount to 29% on average, with the lowest values recorded among the customers supplied by Komunalno Brčko (13.5%), while the highest values were recorded among the customers supplied by Elektroprivreda BIH (30.1%). There is an obvious need for further reduction of cross-subsidies through additional measures of the Regulatory Commissions and efficient functioning of the market, thus complying with the basic regulatory principle of reflecting real 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 2020.

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



**Figure 11. Average electricity prices by public utility, excluding VAT (EUR/kWh)**



As of 1 January 2016, on the retail market in Bosnia and Herzegovina the first cases of supplier switching were registered among the customers connected to the distribution system since when their number varies on a monthly basis.

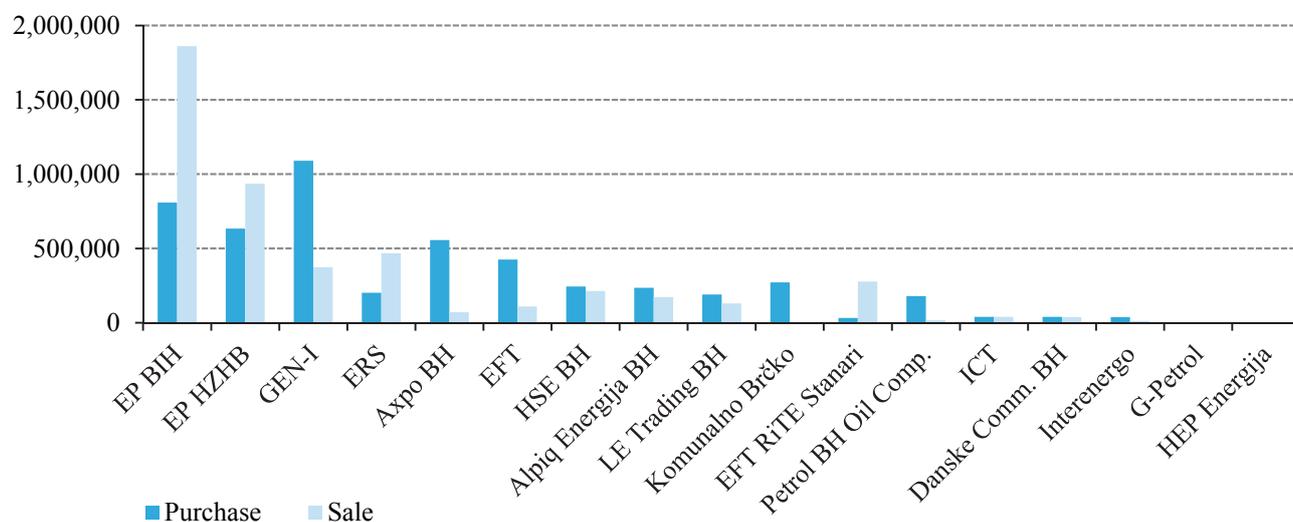
In 2020, the largest number of customers was supplied by their traditional suppliers (the so-called ‘incumbents’). In addition to the incumbents three more suppliers were active on the retail market: HEP Energija d.o.o. Mostar, Petrol BH Oil Company d.o.o. Sarajevo and Energy Financing Team d.o.o. Bileća. They delivered 60.78 GWh and 1.29 GWh to customers at 10 kV and customers falling under the category ‘other consumers’ respectively.

In the transmission system, sales of LE Trading BH d.o.o. Banja Luka to Aluminij d.d. Mostar (6.45 GWh) and B.S.I. d.o.o. Jajce (102.92 GWh) were registered and an amount of 0.33 GWh which Petrol BH Oil Company delivered to the Company FL Wind d.o.o. In addition, Elektroprivreda BIH supplied one 10 kV customer located in the distribution area operated by Elektroprivreda HZHB with a delivery amounting to 3.35 GWh.

To sum up these purchases, in 2020 a total of 157.90 GWh was delivered to customers that switched suppliers, or 1.6% of total energy withdrawn by end customers in BIH. In the previous period, tens of thousands of customers changed the conditions of supply by modifying the contract with their previous traditional suppliers, thus choosing on the open market the supply offer that suited them best.

A total of 6,542.92 GWh was delivered to the customers supplied within the universal service (65.6% of total consumption by end customers), while 3,427.73 GWh (34.4%) was delivered to the customers for whom prices are not regulated.

**Figure 12. Overview of trading on the wholesale market in BIH in 2020 (MWh)**



Trading on the wholesale market in Bosnia and Herzegovina, which is based on bilateral sales contracts between suppliers, is significantly more dynamic (Figure 12.). Although this market has not been institutionalised yet, the result of numerous bilateral contracts is significant – in 2020, a total of 17 licensed entities were active and traded 4,721 GWh. Furthermore, cross-border transactions were also registered totalling 7,039 GWh, of which exports amounted to 5,543 GWh while imports amounted to 1,496 GWh.

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 – the 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 the market principles through annual and monthly tenders while prices of the balancing energy are formed through offers of secondary and tertiary control by suppliers on a day-ahead hourly basis.

The total value of ancillary services purchased on the balancing market in 2020 exceeds EUR 27.35 million of which approximately 70% pertains to the purchase of energy to cover losses in the transmission system.

A 35% increase in the financial scope of downward balancing energy was evident, which is the result of the deviation of the BIH control area in the direction of a surplus (excess) towards the SHB Control Block (Slovenia – Croatia – Bosnia and Herzegovina) amounting to 23.27 GWh.

*Table 7. Values of purchased ancillary services*

<i>Ancillary service</i>	<i>2019 (EUR)</i>	<i>2020 (EUR)</i>	<i>Difference (%)</i>
Secondary control – capacity	5,482,058	4,711,981	-14.0
Tertiary control – capacity	2,651,482	3,171,376	19.6
‘Upward’ balancing energy	3,329,673	1,792,290	-46.2
‘Downward’ balancing energy	-1,082,141	-1,464,158	35.3
Losses in the transmission system & compensations	22,112,535	19,148,939	-13.4
<b>Total</b>	<b>32,493,967</b>	<b>27,360,288</b>	<b>-15.8</b>

As far as imbalances of the balance responsible parties are concerned, deviations in the direction of deficit (shortage) and the direction of surplus (excess) were recorded amounting to 29.32 GWh and 52.59 GWh respectively, which resulted in a surplus in the amount of balance of 23.27 GWh. The average imbalance prices reached amount to 54.15 EUR/MWh (62.77 EUR/MWh in 2019) and 17.26 EUR/MWh (in 2019 20.50 EUR/MWh) for energy deficit and surplus respectively. A drop in imbalance prices is evident, which is also the consequence of the decreased prices on the wholesale market.

At the same time, by the provision of system service to suppliers withdrawing energy from the transmission system and the calculation of deviations from the daily schedule by balance responsible parties, the ISO BIH made an income of EUR 30,894,661 of which EUR 27,838,812 and EUR 3,055,849 were collected for the system service tariff and imbalances respectively. Furthermore, exports of cross-border balancing services were registered amounting to EUR 66,519.

### ***Cross-Border Trade***

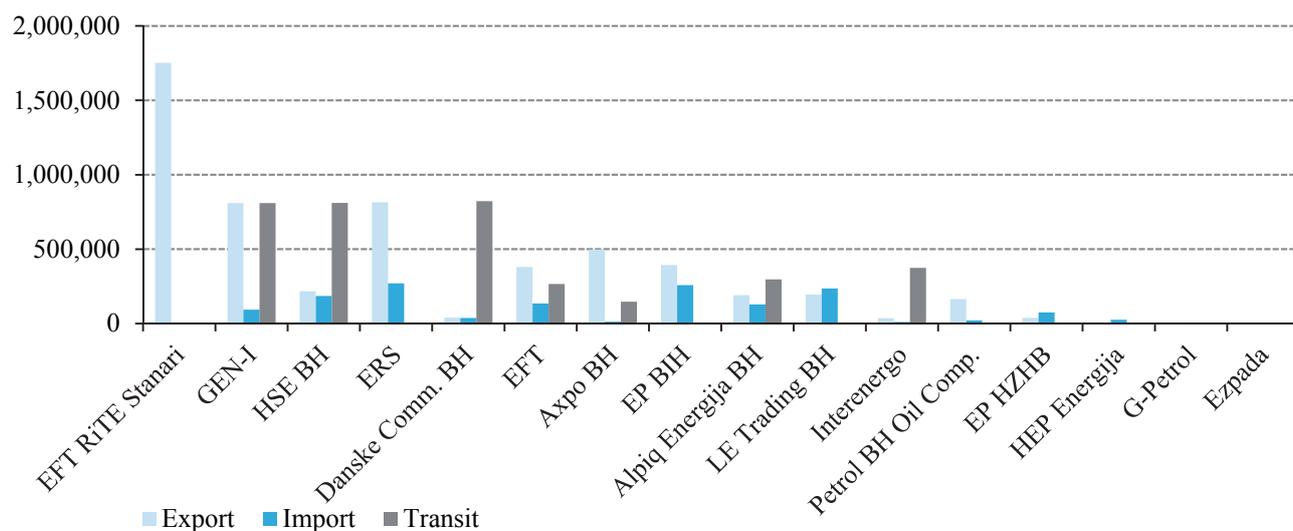
Good connections of the BIH system with the neighbouring electric power systems enable a high level of electricity exchange with the neighbouring countries. In 2020, a total of 5,543 GWh was exported, or 5.7% less than in the previous year as the result of reduced generation. A total of 16 entities exported electricity, among which EFT – Rudnik i Termoelektrana Stanari with 1,752 GWh was the leader in terms of the export scope, followed by Elektroprivreda Republike Srpske, GEN-I, Axpo BH, Elektroprivreda Bosne i Hercegovine with 815 GWh, 810 GWh, 497 GWh, 393 GWh respectively etc.

Electricity imports amounted to 1,496 GWh, which is a 29.9% decrease compared to the previous year. Among the 15 entities importing to BIH, the highest electricity imports were achieved by Elektroprivreda Republike Srpske (270 GWh), Elektroprivreda Bosne i Hercegovine (258 GWh), LE Trading BH (235 GWh), HSE BH Energetsko preduzeće (186 GWh) and Energy Financing Team (135 GWh).

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

<i>Country</i>	<i>Exports</i>	<i>Imports</i>
Croatia	2,794.0	2,964.8
Serbia	3,546.6	1,325.4
Montenegro	2,728.0	730.9
<b>Total</b>	<b>9,068.6</b>	<b>5,021.1</b>

**Figure 13. Overview of cross-border transactions by entities in 2020 (MWh)**



The largest scope of cross-border electricity trading is traditionally achieved with Croatia followed by Serbia and Montenegro (Table 8).

An overview of cross-border transactions by entities in 2020 is provided in Figure 13.

In 2020, registered electricity transits through the BIH transmission system amounted to 3,535 GWh, which is an increase of 788 GWh, or 28.3% in comparison to 2019. 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. The expenditures of BIH on this basis in the first eight months of 2020 total EUR 394,295, and for the first time Bosnia and Herzegovina did not record any revenues in the specified timeframe. According to the ITC mechanism calculation rules, increased transit flows increase revenues, while increased import and export flows reduce revenues, that is, increase expenditures.

In 2020, the *Coordinated Auction Office in South East Europe* (SEE CAO) continued to organise cross-border capacity allocation through auctions 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 2021 amounts to EUR 1,806,487, which is the highest revenue realised on annual auctions so far. Unlike the previous period when the highest price was reached on the border with Croatia in the direction from BIH to Croatia, in the past several years a trend of increased exports on the eastern borders of BIH and higher transmission capacity prices on these

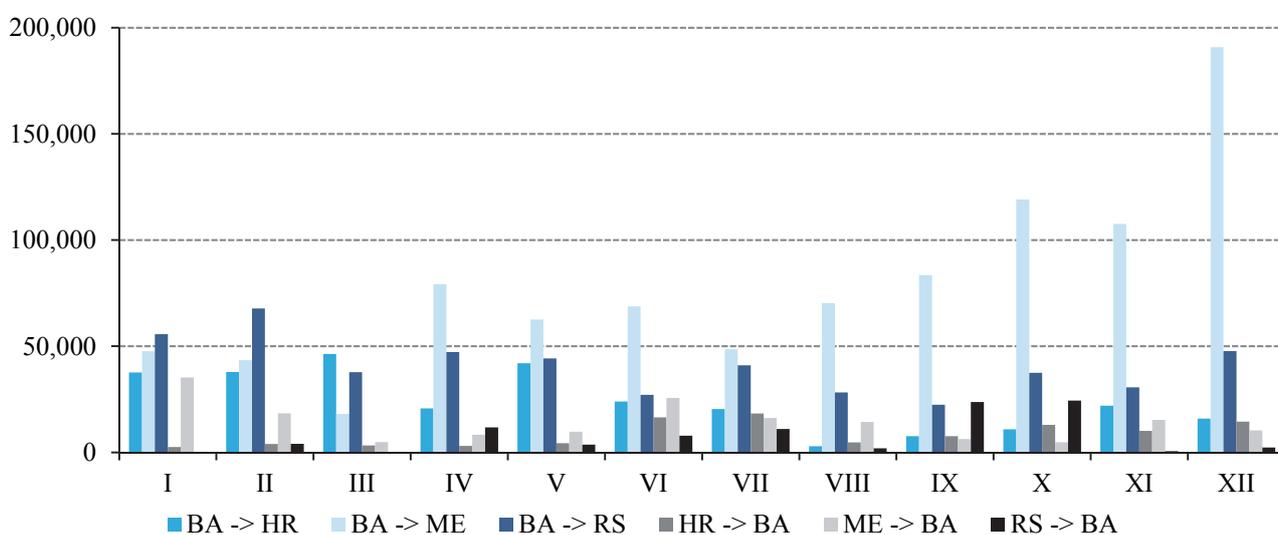
Table 9. Revenues achieved from annual auctions

Year	Revenue (EUR)
2013	1,041,054
2014	1,485,638
2015	558,187
2016	486,765
2017	1,033,461
2018	599,097
2019	1,372,254
2020	1,332,094
2021	1,806,487

borders was noticed. This year the highest price was reached again on the border with Montenegro amounting to 1.17 EUR/MWh in the direction from BIH to Montenegro, which is twice as much in comparison to the previous year.

The revenues achieved to date on the basis of auctions for allocation of cross-border transmission capacities on an annual basis, which are organised by the Independent System Operator in Bosnia and Herzegovina at the end of the year, are provided in Table 9. Figure 14 provides an overview of revenues based on monthly auctions per border and direction. Pursuant to the Tariff Pricing Methodology for services of electricity transmission, operation of an independent system operator and ancillary services, Elektroprenos Bosne i Hercegovine is the user of all revenues based on the allocation of the right to use cross-border transmission capacities as well as revenues achieved by the application of the Inter-TSO Compensation Mechanism, that is, ITC mechanism.

Figure 14. Revenues based on monthly and daily auctions, per border and direction (EUR)

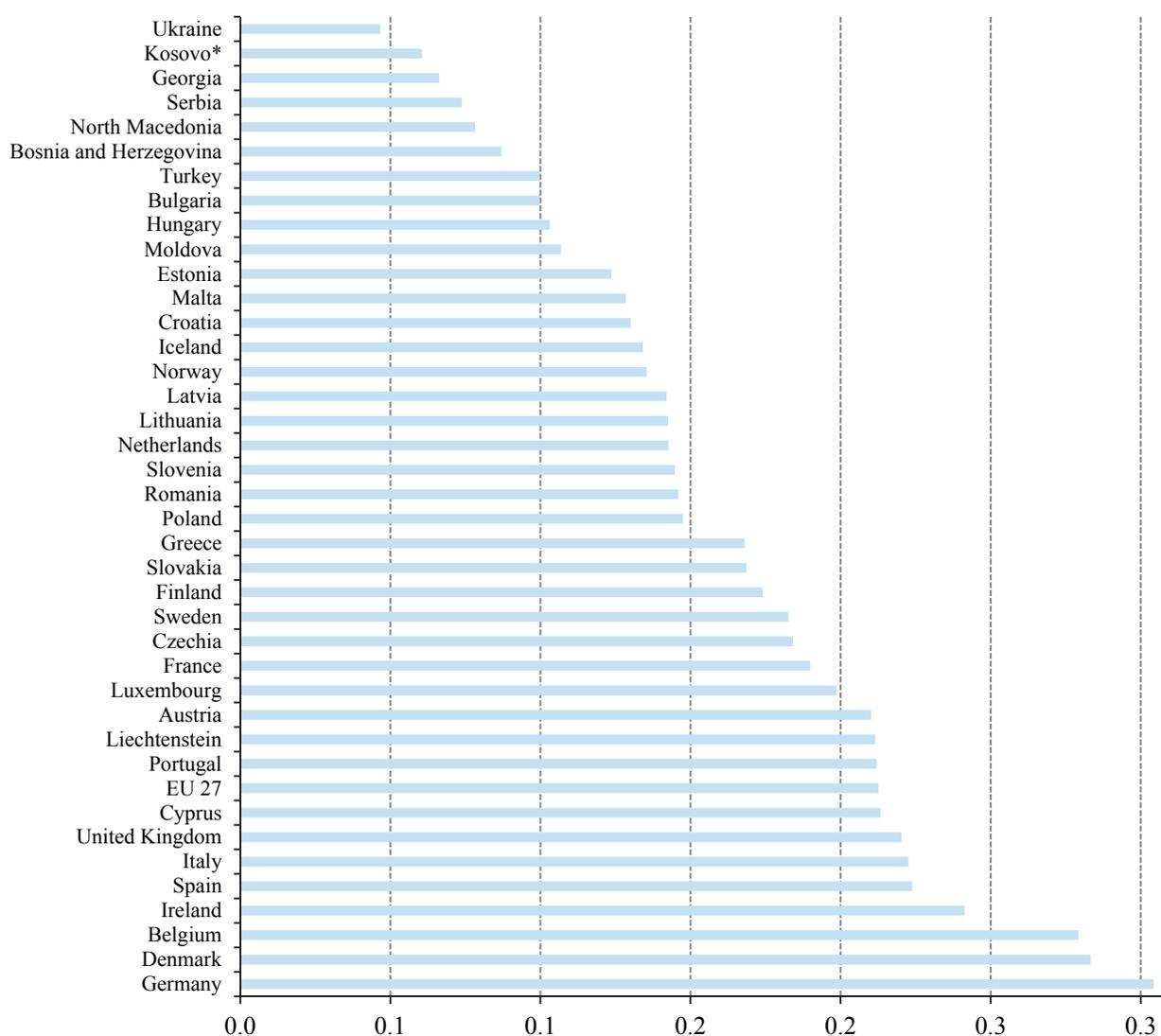


### 3.8 Energy Statistics



Aware of the relevance of objective presentation of data on energy volumes and electricity prices, in 2020 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 (BHAS) with which SERC has been cooperating for many years, in particular with regard to fulfilling the reporting requirement of 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.

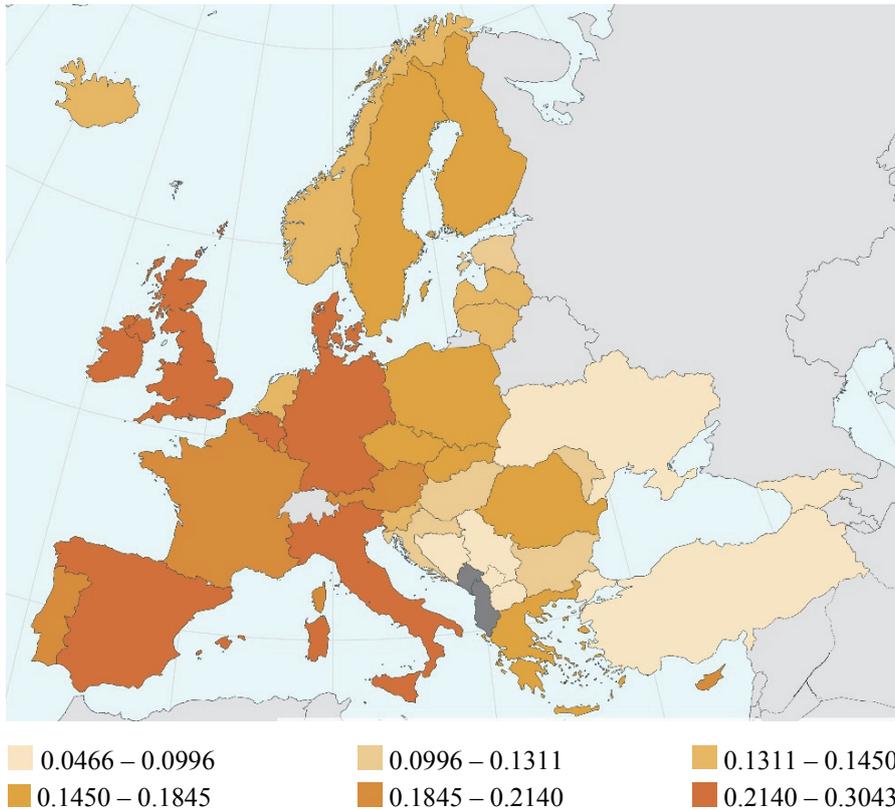
**Figure 15.** Electricity prices expressed in EUR/kWh for households (annual consumption from 2,500 to 5,000 kWh) in the first half of 2020, using Eurostat methodology



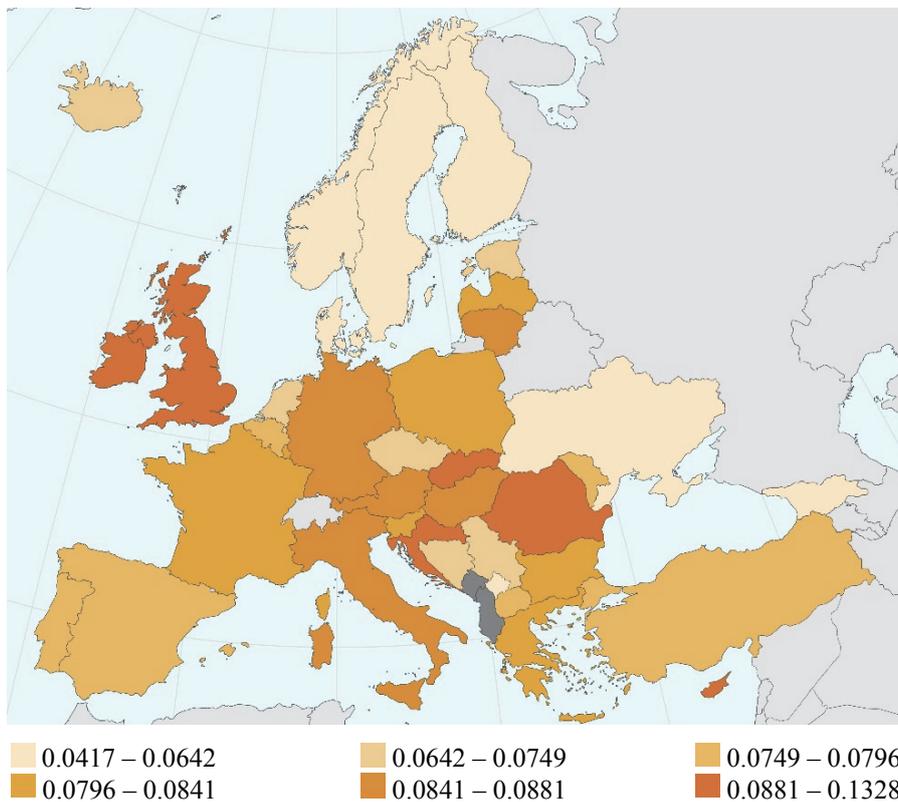
Note: All taxes and levies included

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

**Figure 16.** A geographic overview of electricity prices for households (in EUR/kWh) in the first half of 2020, using Eurostat methodology



**Figure 17.** A geographic overview of electricity prices for industrial customers (in EUR/kWh) in the first half of 2020, using Eurostat methodology





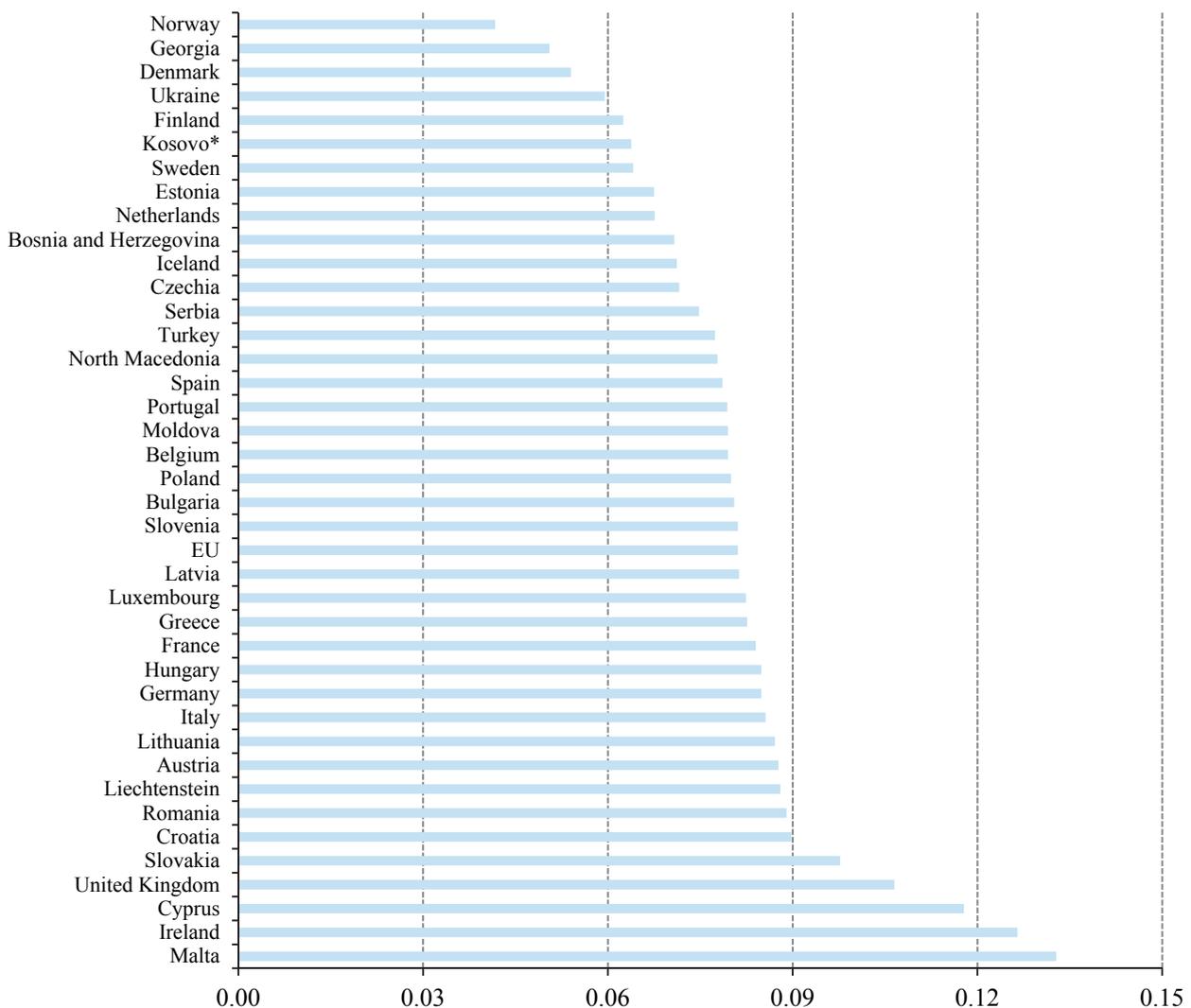
*Eurostat is the statistical office of the European Union situated in Luxembourg. Its task is to provide the European Union with statistics at European level that enable comparisons between countries and regions.*

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 the 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 2019 by presenting statistical data on the electric power sector of Bosnia and Herzegovina.

**Figure 18.** Electricity prices expressed in EUR/kWh for industrial customers (annual consumption from 500 to 2,000 MWh) in the first half of 2020, using Eurostat methodology



Note: All taxes and levies excluded

### 3.9 Judicial and Other Disputes

All six judgements 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 or dispute settlement procedures. In 2020, 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.

One of the regulatory specifics is the adjudicative function of the regulator, that is, the competence to resolve disputes among the users and service providers in the regulated sector. Pursuant to the *Law on Transmission of Electric Power, Regulator and System Operator of BIH*, part of SERC competences and powers includes dispute resolution pertaining to the transmission system. In 2020 there were no new dispute resolution requests under SERC competence.

In addition to directly ensuring the right to fair and non-discriminatory access to the transmission network and the active protection of customers through dispute resolution, the State Regulatory Commission makes every effort to act in an educative and preventive manner and these efforts significantly prevent these disputes. The preventive activities are carried out in several ways – by monitoring the regulated entities and the services they provide, by collecting, analysing and processing data on rules and actions of the regulated entities with regard to access to the transmission network and the protection of customers and by the active participation of SERC representatives in various platforms and educative tools for system users and electricity customers.

By its Conclusion number 04-14-2-319-26/18 of 17 January 2019, with the aim of maintaining liquidity of the regulated entity, SERC approved the ISO BIH to temporarily retain and use part of the funds amounting up to 1.02 million EUR, which are collected on the basis of the ITC mechanism (Inter-TSO compensation mechanism) and auctions for allocation of the right to use cross-border transmission capacities. In the same Conclusion, it was specified that the ISO BIH was obligated to pay in the retained funds to Elektroprenos BIH after it solved the liquidity problem but no later than 31 December 2019. Both regulated entities were informed of this measure of SERC. However, in August 2019, Elektroprenos BIH filed a lawsuit against the ISO BIH for keeping these funds, at the same time claiming also the prescribed default interest on the retained amount. After the ISO BIH paid in the temporarily retained amount to Elektroprenos BIH within the deadline defined in the Conclusion, the plaintiff filed a recast claiming only the prescribed default interest.

Upon the announcement and starting of this civil proceeding, and during presentation of evidence, SERC emphasised its position that by adoption of the Conclusion the user of these funds had not

been changed or the final purpose thereof, but the ISO BIH was allowed to retain part of these funds with the aim of maintaining its liquidity and given a precise deadline for their return. According to the final first-instance judgement of the Court of Bosnia and Herzegovina of 11 November 2020, the claim of Elektroprenos BIH was rejected in whole, and it was concluded that the mentioned Conclusion of SERC produced legal effect for the parties to the civil proceeding, and consequently, the ISO BIH had the right to retain the funds amounting up to 1.02 million EUR, which made the claim for interest as the subject of the recast unnecessary. This judgement confirmed the lawfulness of SERC action on maintaining liquidity of the ISO BIH, stability of the balancing market and security of supply, that is, the previous position of SERC that under the taken regulatory measure the user of these funds had not been changed or the final purpose thereof, which made the insistence on the legally prescribed default interest from the day the given Conclusion was adopted unjustified.

In August 2020, EFT – Rudnik i Termoelektrana Stanari d.o.o. Stanari started a civil proceeding for compensation of damage against the ISO BIH as the first defendant, Elektroprenos as the second defendant and SERC as the third defendant. Namely, the claim pertained to compensation of damage which, as stated in the lawsuit, the plaintiff suffered due to a forced disconnection of Thermal Power Plant Stanari from the transmission network due to high voltage levels recorded on 1 and 2 May 2020. According to the allegations in the lawsuit, this generating facility did not work for 40 hours, and during that period it did not produce and deliver electricity. In the lawsuit, the value of the claim amounted to EUR 370,235 and it included the actual harm amounting to EUR 149,100 and loss of potential profit amounting to EUR 221,135. SERC responded to all allegations in the lawsuit and prepared and filed its response to the lawsuit within the legally prescribed deadline. As the lawsuit was filed before the Commercial District Court in Doboj, in its response to the lawsuit SERC disputed substantive competence of this Court as well as passive legal standing of SERC in this case. Without disputing the occurrence of high voltage levels in the transmission network as a decades-old problem in the power system of BIH, a motion to dismiss for lack of passive standing was based on the fact that potential failures by SERC could not cause high voltage levels either directly or indirectly nor could this event be prevented by any SERC action because the required investments into the transmission network and mechanisms which could contribute to maintaining voltage levels within acceptable scopes are not enforceable by the regulator.

For precautionary reasons, SERC also pointed out that the plaintiff not only failed to suffer any harm in the form of a lost profit but its profit was much higher due to the event in May 2020 than it would have been had it delivered electricity which it

produced on its own, of which appropriate evidence was offered to the court.

In its Decision, the Commercial District Court in Doboj made known that it had no competence in this legal matter, fully accepting and confirming SERC argumentation provided when disputing substantive competence thereof. SERC filed an appeal on this decision to the Higher Commercial Court in Banja Luka due to the violation of civil procedure rules as the Commercial District Court in Doboj failed to consider and approve compensation of costs to SERC which were caused by filing a lawsuit before a court which absolutely had no competence over the case although this claim was clearly and indisputably pointed out in the response of the State Electricity Regulatory Commission to the lawsuit.

### **3.10 Other Key Activities**

The State Electricity Regulatory Commission continued to exchange data with a number of state institutions in 2020, including the Council of Ministers of Bosnia and Herzegovina, Ministry of Foreign Trade and Economic Relations of BIH, Directorate for European Integrations of the BIH Council of Ministers, Competition Council of BIH and BIH Agency for Statistics<sup>3</sup>, 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. In line with its legal powers to act in the area of Brčko District of 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 Regulatory 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.

A proactive approach of SERC to the reform and the power sector development in BIH continued in 2020. The State Regulatory Commission gave a significant contribution to the development of an EU-*acquis* compliant legislative framework for electricity, within which detailed comments on the draft version of the Law on Electricity and Natural Gas Regulator, Transmission of Electric Power and Electricity Market in BIH should be emphasised, which were submitted in May 2020 to the Ministry of Foreign Trade and Economic Relations of BIH, as the competent authority for policy creation under the Law on Transmission of Electric Power, Regulator and System Operator of BIH.

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<sup>3</sup> The State Electricity Regulatory Commission signed Memoranda of Understanding with the BIH Agency for Statistics and Competition Council of BIH on 19 April 2011 and 28 May 2014 respectively.

On that occasion, it was pointed out that this is a law of utmost importance and complexity both in terms of its content and scope, and SERC expressed its commitment to provide support and concrete assistance in the fulfilment of obligations of Bosnia and Herzegovina through these normative activities, based on the obtained regulatory experience in the implementation of applicable laws in the electricity sector and previous education and cooperation with the relevant international institutions. SERC nominated its representatives for the working group for the continuation of activities on the development of this Law.

Furthermore, upon invitation of the Ministry of Foreign Trade and Economic Relations of BIH, SERC nominated its representatives for the Working Group for Energy Transition and Working Group for the Establishment of the Energy Management Information System and Energy Efficiency Information System in the BIH institutions (EMIS).

SERC provided its contribution to the preparation of the terms of reference for an action document of the Instrument for Pre-Accession Assistance (IPA II) titled *EU for Energy* under which support will be provided in the forthcoming period to the alignment of the BIH legislation with the EU *acquis* on energy and the continuation of the energy sector reform, including the development of energy and climate policies in BIH. Within these activities the institutions in Bosnia and Herzegovina at all governmental levels will be strengthened with the aim of performing the roles they have with regard to the transposition and implementation of the *acquis* on energy, energy policy planning and implementation as well as the energy market development. Furthermore, assistance will be provided with the implementation of infrastructure projects and public awareness raising with regard to the relevance of the use of sustainable energy.

Acting in line with its competence, SERC supports the development of an *Integrated Energy and Climate Plan of Bosnia and Herzegovina*. The Ministry of Foreign Trade and Economic Relations of BIH together with the relevant entity ministries is in charge of its development. SERC participates in the activities of an intradepartmental working group established to develop this plan as well as in activities of the Energy Efficiency Task Force, Task Force on Renewables and the Security of Supply and Internal Energy Market Task Force.

Furthermore, SERC provided significant support within the *Program of Integration of Bosnia and Herzegovina into the European Union*, through active participation in the activities under Chapter 15 – Energy, Chapter 21 – Trans-European Networks, and Chapter 28 – Consumer and Health Protection.

SERC representatives also participate actively in the implementation of a World Bank project, under which *Study on the electricity market liquidity in Bosnia and Herzegovina* is prepared, a project

of the German Agency for International Cooperation (GIZ) titled *Decarbonisation of the energy sector in Bosnia and Herzegovina* and in the preparation of *A Study of the Energy Community on the potential of hydrogen technologies and their utilization*.

Acting as a national regulator in representing the interests of Bosnia and Herzegovina, SERC participated in several regional projects in 2020. Among them of particular importance are the projects, that is, initiatives organised by the United States Agency for International Development (USAID) and the National Association of Regulatory Utility Commissioners (NARUC):

- Women's Global Development and Prosperity Initiative: Advancing Women Leaders in Energy,
- Digitalisation and Cybersecurity,
- Enhancing Market Performance, and
- Improving Investment Planning through the Implementation and Enforcement of Quality of Service Standards.

In addition, SERC took part in the implementation of the regional project *Electricity Market Integration* organised by USAID and the United States Energy Association (USEA).

### ***USAID Energy Policy Activity***

In September 2019, the United States Agency for International Development launched a five-year *USAID Energy Policy Activity* (USAID EPA) under which USAID is helping Bosnia and Herzegovina attract investors and integrate its energy market into regional and EU markets. This project provides technical assistance to coordinate, manage, and improve the legal framework and transparency in the gas and electricity sectors. Through these activities, legislative and other measures at all levels of government will be developed and recommended to ensure that the BIH energy sector legislation is compliant with EU requirements. The project also supports a strong public outreach and awareness program to promote a liberalised market-based energy sector and educate general public about the benefits of the changes taking place in the energy sector.

Creating a transparent and competitive legislative and regulatory framework and integrating the BIH energy sector into the regional and EU markets is vital to attract new investments which contribute to the diversification of sources, prevention of corruption and the increased security of supply.

SERC representatives directly participate in the activities under this project which are conducted by the Working Group for Development of Guidelines for Virtual Power Plants, Working Group for Development of Guidelines for Distribution System Operators, Working Group for Network Codes, Public Outreach Working Group and Working Group for Cyber Security in the Energy Sector.





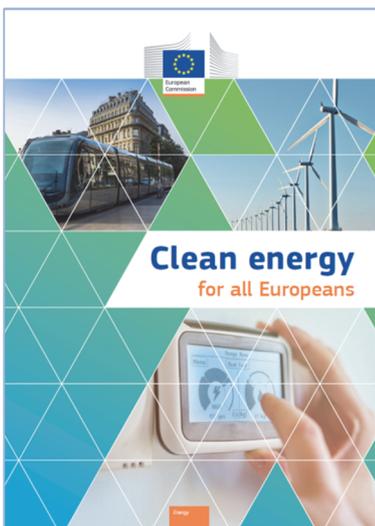
After the successful organisation of the previous Energy Summits whereby a new model of dialogue was established on the latest issues in the energy sector, the USAID EPA team jointly with the British Embassy in Sarajevo and the sponsors of the gathering (Ministry of Foreign Trade and Economic Relations of BiH, State Electricity Regulatory Commission and the Entity Regulators) launched preparations for the Energy Summit in 2020 in Bosnia and Herzegovina which should have been held from 18 to 20 March 2020.

However, due to the COVID-19 pandemic, the planned gathering of a number of partners from the national and entity parliaments, ministries and regulatory authorities, municipalities, electric power utilities, chambers of commerce, small and medium enterprises, non-governmental organisations and representatives of international organisations and donors active in the sector was first moved to autumn and then postponed for 2021.

### ***Clean Energy for All Europeans***

In June 2019, the European Union finalised its new package of energy rules to provide competition needed to facilitate the clean energy transition called *Clean Energy for All Europeans*. This package comprises the following eight acts:

- Directive (EU) 2018/844 of the European Parliament and of the Council of 30 May 2018 amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency,
- Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council,
- Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources,
- Directive (EU) 2018/2002 of the European Parliament and of the Council of 11 December 2018 amending Directive 2012/27/EU on energy efficiency,
- Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC,
- Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators (recast),



- Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (recast), and
- Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast).

These rules include the energy efficiency first principle and set a target to be at least 32.5% more efficient in energy use by 2030 giving a particular emphasis to improving energy performance in the building sector. An ambitious target of at least 32% renewables in total final energy consumption in the EU by 2030 will drive an acceleration of necessary investments and clean energy uptake in all sectors. The new rules establish that the Member States will prepare integrated National Energy and Climate Plans for the period from 2021 to 2030 which include an outline of a long-term strategy for at least next 30 years.

In addition to strengthening customer rights (more transparency in household bills, greater choice and more flexibility to change supplier), the new rules will make it easier for individuals to produce their own energy, store it or sell it onto the grid. The new rules will increase the security of supply thanks to smarter and more efficient solutions on the electricity market which enable flexibility of the system and help integrate renewable energy sources, which will lead to a cleaner, more stable and more competitive electricity sector across Europe.

In 2020, SERC analysed contents and activities stemming from the new package of European Union energy rules the goal of which is to provide competition needed to facilitate the clean energy transition. This approach takes into account the fact that all new EU regulations and directives in the energy sector become binding also for Bosnia and Herzegovina through the mechanisms developed under the Treaty establishing the Energy Community.

## 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\*, Moldova, Montenegro, North Macedonia, Serbia and Ukraine.<sup>4</sup>

In accordance with the expression of interest, the following countries participate in the work of the Energy Community bodies: Austria, Bulgaria, Croatia, Cyprus, the Czech Republic, 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.

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 (Annex E). The Treaty establishing the Energy Community is valid until July 2026.

To ensure an adequate process of establishing and functioning of the Energy Community, the following institutions were established: the Ministerial Council, Permanent High Level Group, Regulatory Board and Secretariat. Whereas the Electricity and Gas Fora were established by the Energy Community Treaty, the Oil Forum was established by a Ministerial Council Decision in 2008. The Law Forum and the most recent Sustainability Forum (2017) and Dispute Resolution Forum (2018) convene on the basis of the Secretariat's initiative.

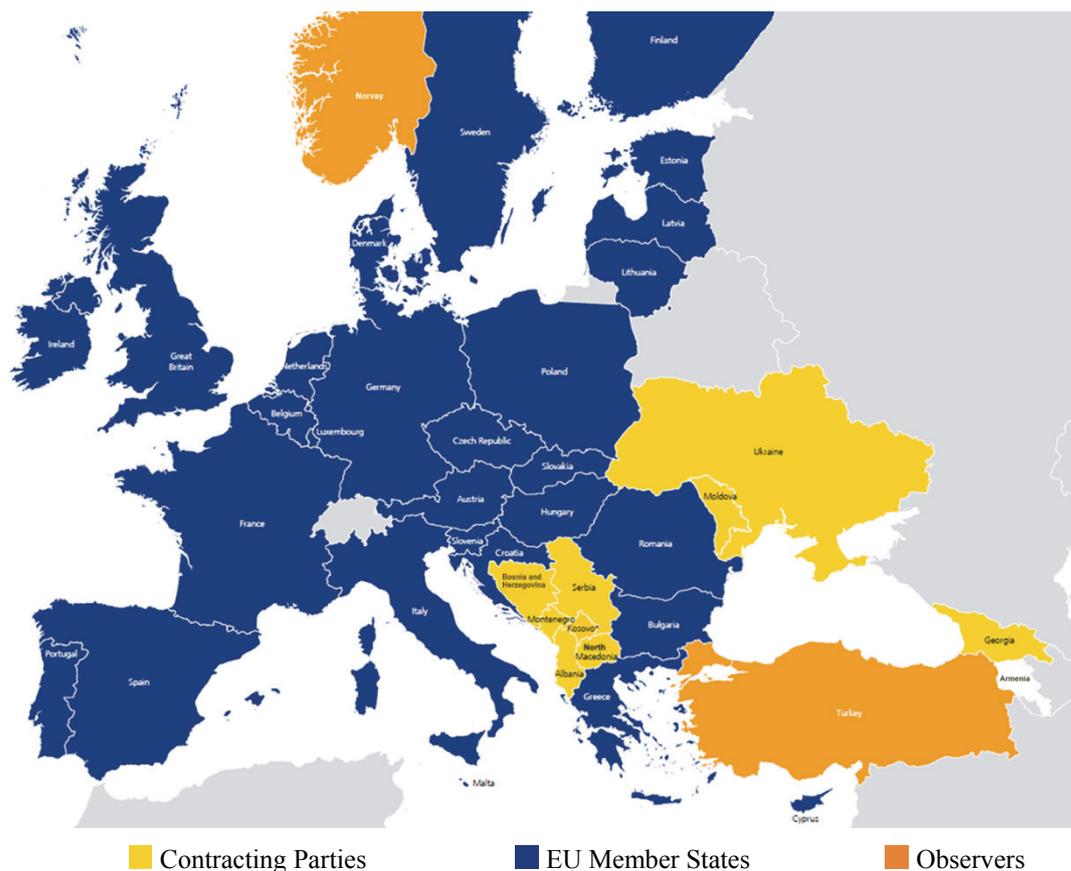
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<sup>4</sup> The list shows the Contracting Parties on 31 December 2020. Moldova, Ukraine and Georgia have Contracting Party status as of 1 May 2010, 1 February 2011 and 1 July 2017 respectively.

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.

*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.*

**Figure 19. Geographic scope of the Energy Community**



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 Commission, 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 European Union is represented by the European Commission, with the assistance of one regulator of each EU participant 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.

The Energy Community Fora bring together all interested stakeholders – 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 supports the work of other institutions. The Secretariat is responsible for reviewing the proper implementation of Contracting Parties' 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, therefore, serves as a model for regional cooperation on energy matters.

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\*, North 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.

The goal of the Berlin Process is to strengthen cooperation between the Western Balkans countries and their integration into the European Union. Cooperation programs in various sectors focus on regional transport and energy infrastructure and reforms. This emphasises that well-connected and functioning infrastructure networks drive economic growth, provide business opportunities, attract investments and generate jobs.

Following the EU-Western Balkans summits held in Berlin, Vienna, Paris, Trieste, London and Poznan, the Seventh Western Balkans Summit was held in Zagreb on 6 May 2020 by video-conference due to the COVID-19 pandemic. On that occasion, the European Union reaffirmed its unequivocal support for the European perspective of the Western Balkans and called for unity and solidarity in the coronavirus crisis.

The joint Declaration stressed that after the COVID-19 pandemic the activities on tackling the socio-economic impact of the crisis would follow. The European Commission was invited to come forward with a robust economic and investment plan for the region. Investment is of utmost importance to spur the long-term recovery of the region and to support the necessary reforms to continue moving on the European path and to close the disparities. The Western Balkans should transform into functioning market economies able to fully link to the EU's single market, to create jobs and entrepreneurial opportunities to improve the business and



investment climate and to promote the rule of law. In this endeavour, a prominent role should be given to the association of the region to the EU's climate-related ambitions, in line with the Paris Agreement, to promoting the Green Agenda for the Western Balkans, as well as to furthering the digital economy and, strengthening connectivity in all its dimensions: transport, energy, digital and people-to-people. Energy security was identified as an individual priority, including the diversification of sources and routes.

In the context of the Berlin process, on 10 November 2020 the Sofia Declaration on the *Green Agenda for the Western Balkans* was signed. By adhering to the declaration, the Western Balkan Contracting Parties committed to implementing measures of economic development, energy and mobility, biodiversity, sustainable agriculture and food production, and the prevention of climate change and pollution. The first concrete steps will include the stimulation of taxes on carbon dioxide emissions, development of market designs to increase the use of renewable energy sources as well as gradual elimination of coal subsidies. Albania, Bosnia and Herzegovina, Montenegro, Kosovo\*, North Macedonia and Serbia committed to working together with the European Union towards the 2050 target of carbon-neutral Europe. The Regional Cooperation Council, Sarajevo will coordinate the preparation of an action plan to implement the Declaration.

Under the Montenegro Presidency, the Energy Community Ministerial Council held an official meeting on 17 December 2020 via an internet communication platform due to the COVID-19 pandemic. On that occasion, steps were taken to further joint efforts towards the clean energy transition in the Energy Community aiming at climate neutrality in line with the Paris Agreement. It was emphasised that in line with the General Policy Guidelines on the 2030 Targets and Climate Neutrality at the next Ministerial Council meeting in 2021, binding targets for the next ten years will be adopted for the Energy Community and its Contracting parties in the field of energy efficiency, renewables and the reduction of greenhouse gas emissions. The proposal on the 2030 targets is expected in the first half of 2021, alongside the relevant legislative package. At the meeting no agreement was reached on the reform of the Treaty establishing the Energy Community, which was announced for 2020. The Ministerial Council endorsed six Projects of Energy Community Interest (PECI) and eleven Projects of Mutual Interest (PMI) in electricity, gas and oil.

The Energy Community priorities in the next year include energy sector reforms, the development of a common market of electricity and natural gas, the establishment of mandatory stocks of crude oil and petroleum products and the development of energy infrastructure. In particular, the relevance of decarbonisation was emphasised, that is, the creation of a climate-neutral Europe by 2050. In this context, the finalisation of integrated national energy and climate plans is of particular importance.



### ***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 additional efforts should be made at different administrative levels in Bosnia and Herzegovina 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 (Annex E).

This is also indicated by the Ministerial Council Decision of 29 December 2020 according to which the rights of Bosnia and Herzegovina to participate in the decision-making on matters of budget and enforcement for a period of two years are suspended, unless it rectifies in the meantime the breaches which pertain to the provisions of the Second Energy Package in the gas sector, the transposition of the Third Energy Package, and the reduction of sulphur dioxide resulting from the combustion of heavy fuel oils and petroleum-derived liquid fuels.

Furthermore, there are other infringement cases in progress in the Energy Community initiated by the Energy Community Secretariat, which pertain to guarantees issued by the Federation of BIH for the construction of Block 7 of the Tuzla Thermal Power Plant, the environmental impact assessment procedure of the planned Thermal Power Plant Ugljevik 3, legal and functional unbundling of distribution system operators, energy end-use efficiency and energy services and the failure to transpose Regulation (EU) No 347/2013 on guidelines for trans-European energy infrastructure.

### ***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 SERC chairmanship of the ECRB Customers and Retail



Markets Working Group since 2007 contributes to the affirmation of Bosnia and Herzegovina.

In 2020, during which the Regulatory Board held three meetings via an internet communication platform due to the COVID-19 pandemic, it gave a significant contribution to the creation of Energy Community policies in the field of regulatory initiatives in promoting investments, and enhancing regulatory independence. In the past 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).

The ECRB organises a considerable part of its activities through several working groups (Customers and Retail Markets Working Group, Electricity Working Group, Gas Working Group and Wholesale Energy Market Integrity and Transparency – REMIT Working Group), with the support of the ECRB Section at the Secretariat.

#### 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 has 34 full members and 14 associate members, of which some are regional associations, which enables regulators from 62 countries to participate in ERRA activities (Figure 20).



**Figure 20. ERRA membership**



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 worldwide experience on regulation of energy activities. ERRA also promotes and organises training courses in the field of energy regulation.

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.

This year ERRA celebrated its 20th anniversary of existence with a virtual central event due to the COVID-19 pandemic. During the Jubilee day, the two decades of ERRA's productive operation were summarised and objectives for the increasingly challenging future were presented. It was emphasised that for nearly 20 years the Association had been a reliable, professional framework connecting an ever-growing network of energy regulators. ERRA played a vital role in accelerating reform in the energy sector and market development in some of its member countries, by actively assisting these processes. ERRA continues its mission by providing capacity building, networking opportunities and continuous professional and dedicated cooperation.

With the aim of facilitating higher and more productive engagement of its technical working bodies, ERRA made a decision to rearrange their setup, so starting from May 2020 a new scheme of organization is implemented which includes Electricity Markets and Economic Regulation Committee, Renewable Energy Committee, Natural Gas Markets and Economic Regulation Committee and Customer Protection Working Group.

Under the new circumstances caused by the COVID-19 pandemic, in 2020 SERC representatives continued to actively participate in the work of the General Assembly and the ERRA working bodies via internet platforms. The most relevant topics discussed in 2020 include, *inter alia*, regulatory activities in the context of the pandemic and its implications on RES production, wholesale market regulatory monitoring, issues of electric vehicles, REMIT implementation, responsive end-user-based demand side management, support schemes for prosumers, price regulation mechanisms on electricity markets in transition and regulatory support to renewable sources.

In addition to participating in ERRA bodies, the State Electricity Regulatory Commission fulfils its role as an ERRA member by providing relevant information on the power sector in BiH and regulatory practice in particular.

### 4.3 Mediterranean Energy Regulators – MEDREG

The Association of 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, Lebanon, Libya, Malta, Montenegro, Morocco, the Palestinian Authority, Portugal, Slovenia, Spain, Tunisia and Turkey (Figure 21).

The main objective of the Association is the promotion of clear, stable and harmonised legal and regulatory frameworks in the Mediterranean region with the aim of facilitating investments in energy infrastructures and supporting market integration. Towards this goal, MEDREG promotes a permanent exchange of know-how, data collection and diffusion of expertise through comprehensive studies, recommendation reports and specialised training sessions in the field of energy regulation. The Association is also dedicated to consumer protection focusing on access to information and awareness-raising regarding changes in the sector.

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 Consumer Issues. MEDREG carries out its activities through an effective internal and external cooperation process with the objective to implement the conditions for the establishment of a Mediterranean Energy Community.



*Mr. Petrit Ahmeti,  
MEDREG President:*

*“MEDREG is a technical hub of high-level experts that work together to achieve integration in the Euro-Mediterranean energy markets. Our Institution leads the dialogue on key areas of energy regulation in the region, fostering cooperation, information exchange and assistance among its Members.”*

**Figure 21. Geographic scope of MEDREG**



Under the specific working conditions due the COVID-19 pandemic, during this year SERC representatives participated in the work of the General Assembly and Working Groups' activities 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 39 national regulatory authorities (30 full members and nine observers) from European Union Member States, European Free Trade Association (EFTA) and EU accession countries including Contracting Parties of the Energy Community Treaty.

The overall aim of CEER is to facilitate the creation of a single, competitive, efficient and sustainable internal market for gas and electricity in Europe. The Council of European Energy Regulators acts as a platform for cooperation, information exchange and assistance between Europe's national energy regulators in the energy sector.

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's 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 activities of 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 270 regulatory authorities are included in the ICER's membership through 13 regional regulatory associations (Figure 22). SERC participates in and follows the activities of ICER through ERRA, MEDREG and CEER, and provides support to ICER's activities 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.

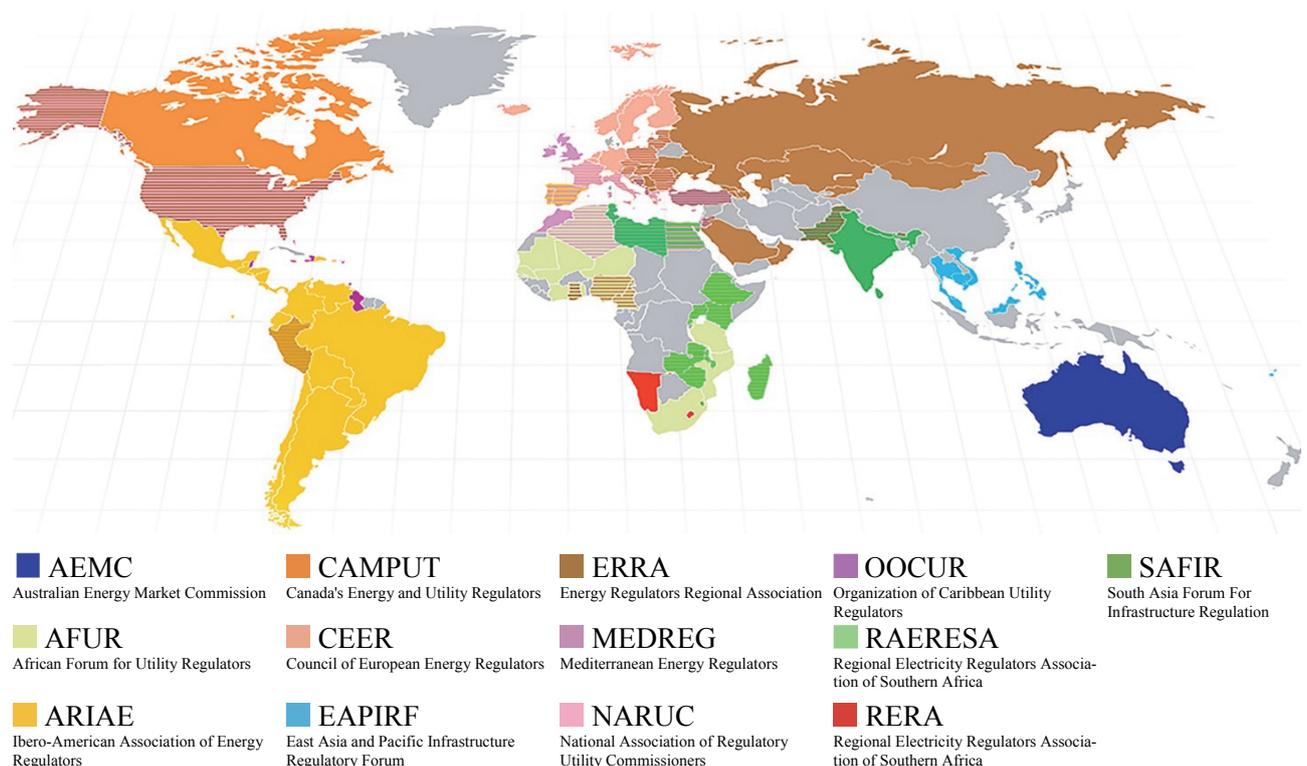
ICER’s work is focused around several key areas, in line with the topics defined during each World Forum on Energy Regulation (WFER), the leading international conference on energy regulation, held once every three years. The Seventh World Forum on Energy Regulation held in March 2018 in Cancun, Mexico focused on disruptive innovations which are currently transforming the fundamentals of the energy value chain worldwide. Furthermore, the most relevant current regulatory issues including empowered consumers, dynamic markets and sustainable infrastructure were addressed. The Forum promoted 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.

Due to the COVID-19 pandemic, the upcoming World Forum on Energy Regulation has been postponed by one year, so the Eighth World Forum on Energy Regulation will be held in Lima, Peru, in March 2022. The main theme of this Forum is “The Energy Transformation Challenge” with four main pillars: competitiveness, institutionality, universal access to energy and energy transition.



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 has been 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.

**Figure 22. ICER Members**



## 4.6 Cross-Regional Cooperation

Various forms of cooperation between regional energy regulators associations exist for a certain period of time through organisation of joint training events, workshops and relevant working group meetings. While some regulators are members of several associations of energy regulators at the same time, these associations operate in regions that substantially differ in their degree of integration, meaning that common challenges are often met with different means. At the same time some common memberships of the associations promote convergence of goals and principles. This is the reason why cooperation of these associations in terms of exchanging experiences and regulatory practices becomes more important.

Recognising the relevance of these forms of cooperation and the commitment to foster a compatible and transparent energy regulation by promoting best practices and exchanging experiences, the Council of European Energy Regulatory (CEER), the Energy Community Regulatory Board (ECRB) and the Association of Mediterranean Energy Regulators (MEDREG) signed a *Cooperation Arrangement* on 12 December 2018 in Vienna.

The year 2020 was marked by the COVID-19 pandemic, and all associations prepared their reports on the measures taken under the extraordinary circumstances focusing on the role of regulators. Regulators will continue to share experiences among themselves on measures to keep the security of supply which they take in cooperation with their governments and relevant stakeholders in the energy sector. The impact of the COVID-19 pandemic on the energy sector was analysed in a joint ERRA-CEER-USAID-NARUC webinar. First of all, the analysis focused on how the regulators reacted to the new circumstances and their decisions and recommendations for the regulated entities. Furthermore, electricity and natural gas market signals were analysed in order to draw first conclusions on market response.

Under the existing cooperation arrangement, in 2020 the ECRB, CEER and MEDREG held an on-line conference to discuss their work on consumer issues and reinforce their mutual cooperation and exchange of information on the impact of the COVID-19 pandemic on consumers. Furthermore, a virtual trilateral ECRB-CEER-MEDREG workshop on consumer issues and power losses was organised during which, with presentation of practical cases, the elements related to consumer issues and power losses were analysed, focusing on the role of energy regulators in identifying the types of losses and in contributing to their reduction.

The State Electricity Regulatory Commission is a member of both the ECRB and MEDREG and has observer status at CEER. This position of SERC will further strengthen its professional capacities in terms of gaining more knowledge and exchanging

experience and regulatory practice. Furthermore, it will give more opportunities to continue the successful engagement of SERC experts in providing professional training for the staff of other regulators.

## 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 2020 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 of BIH. The regulatory fee is determined 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 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 2020 by the Auditing, Accounting and Consulting Company Revik d.o.o. Sarajevo with which a contract was concluded in accordance with public procurement procedures.

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

*“In our opinion, the annual financial reports show realistically and objectively the financial standing of SERC on 31 December 2019, its financial performance and cash flow for the year which ended at that point, in accordance with the Law on Accounting and Auditing of the Federation BIH and the International Financial Reporting Standards (IFRS).”*

REVIK d.o.o., Sarajevo,  
27 March 2020

**Revik d.o.o. Sarajevo**

Member of  **HLB** International

Based on the collected data, the independent auditor gave a positive assessment of SERC financial reports for 2019. 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 applicable 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 errors 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, under an *Internal Audit Agreement* signed with the Internal Audit Unit of the Ministry of Foreign Trade and Economic Relations of BIH, SERC expects objective and professional assistance in facilitating the organisation of business. The aim of using internal auditing services is to ensure the development of *ex-ante* audit of defined processes as well and strengthen the overall risk management process (so-called risk management). In the reporting period there was no internal auditing.

Through external auditing, SERC ensures an independent and reliable report on the use of property and management of revenues and expenditures. Lead by the commitment to the principles of objectivity and transparency in its work, with the aim of providing information on its financial standing and business results, the State Electricity Regulatory Commission publishes its auditing report on an annual basis. The audited financial reports for 2019 were published in the Official Gazette of BIH, 24/20 and on the SERC website.



## 6. MAIN ACTIVITIES IN 2021

The State Electricity Regulatory Commission will continue its activities on ensuring the conditions for free trade and unhindered electricity supply in accordance with the pre-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 2021, SERC will continue to cooperate with the Parliamentary Assembly of Bosnia and Herzegovina (PABIH), in particular with the Committee on Traffic and Communications of the House of Representatives of PABIH and the Committee on Foreign and Trade Policy, Customs, Traffic and Communications of the House of Peoples of PABIH. 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 2021 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 Competition Council 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 analysis of the regulatory rules already adopted and the existing practice, together with review and revision of SERC acts,
- Monitoring the procurement of ancillary service and provision of the system services and balancing of the BIH power system, and, on a needs basis, continuing the development of a design 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 in BIH,
- 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 2022 – 2031* and 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 network codes and guidelines and the Regulation on wholesale energy market integrity and transparency,
- Regulatory activities regarding the improvement of cyber security in the BIH power sector,
- 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 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 electricity sector as specified in the reports of the European Commission on BIH.

In line with its competences, SERC 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. SERC will continue to participate in the *Program of Integration of Bosnia and Herzegovina into the European Union*, through active contribution to the activities under Chapter 15 – Energy, Chapter 21 – Trans-European Networks, and Chapter 28 – Consumer and Health Protection.

SERC will participate in supporting and implementing regional priorities and Energy Community projects as well as 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*. SERC will fully contribute to the implementation of measures in the energy sector as agreed 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 continued implementation of several regional projects of the United States Agency for International Development (USAID) and the National Association of Regulatory Utility Commissioners (NARUC).

In 2021, the multiannual *USAID Energy Policy Activity* will continue so SERC will follow up its activities and participate in the implementation of some components which are of relevance for the regulatory activities. Furthermore, SERC plans to actively participate in the next Energy Summit in BIH, which will be held in 2021 under this project.

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,
- ERRA – the Energy Regulators Regional Association,
- MEDREG – the Mediterranean Energy Regulators,
- CEER – the Council of European Energy Regulators, and
- ICER – the 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 the contents and activities stemming from the new package of European Union energy rules the goal of which is to provide competition needed to facilitate the clean energy transition (*Clean Energy for All Europeans*). This approach takes into account the fact that all new EU regulations and directives in the energy sector become binding also for Bosnia and Herzegovina through the mechanisms developed under the Treaty establishing the Energy Community.

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

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

### Basic Data on Installed Capacity of Generating Units

Total installed capacity of generation units in Bosnia and Herzegovina amounts to 4,530.64 MW, with 2,076.6 MW, 2,065 MW and 86.6 MW installed in the major hydro power plants, thermal power plants and larger wind power plants respectively. Installed capacity of small hydro, solar, biogas and biomass power plants and small wind power plants amounts to 172.19 MW, 34.89 MW, 2.11 MW, 0.40 MW respectively, while installed capacity of industrial powers plants amounts to 92.85 MW.

#### Major generating units

Hydro power plants	Capacity of power unit (MW)	Total installed capacity (MW)
Trebinje I	2×54+63	171
Trebinje II	8	8
Dubrovnik (BIH+Cro)	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
<i>Tuzla G3</i>	100	85
<i>Tuzla G4</i>	200	182
<i>Tuzla G5</i>	200	180
<i>Tuzla G6</i>	215	188
KAKANJ	450	398
<i>Kakanj G5</i>	110	100
<i>Kakanj G6</i>	110	90
<i>Kakanj G7</i>	230	208
GACKO	300	276
UGLJEVIK	300	279
STANARI	300	283
Wind power plants	Capacity of power unit (MW)	Total installed capacity (MW)
Mesihovina	22×2.3	50.6
Jelovača	18×2	36

### Basic Data on the Transmission System

*transmission lines*

Nominal voltage of transmission lines	Length (km)
400 kV	865.93
220 kV	1,520.09
110 kV	4,034.62
110 kV – cable line	34.06

*substations*

Type of substation	Number of substations	Installed capacity (MVA)
SS 400/x kV	10	5.980,5
SS 220/x kV	8	1.423,0
SS 110/x kV	135	5.642,0

*interconnections*

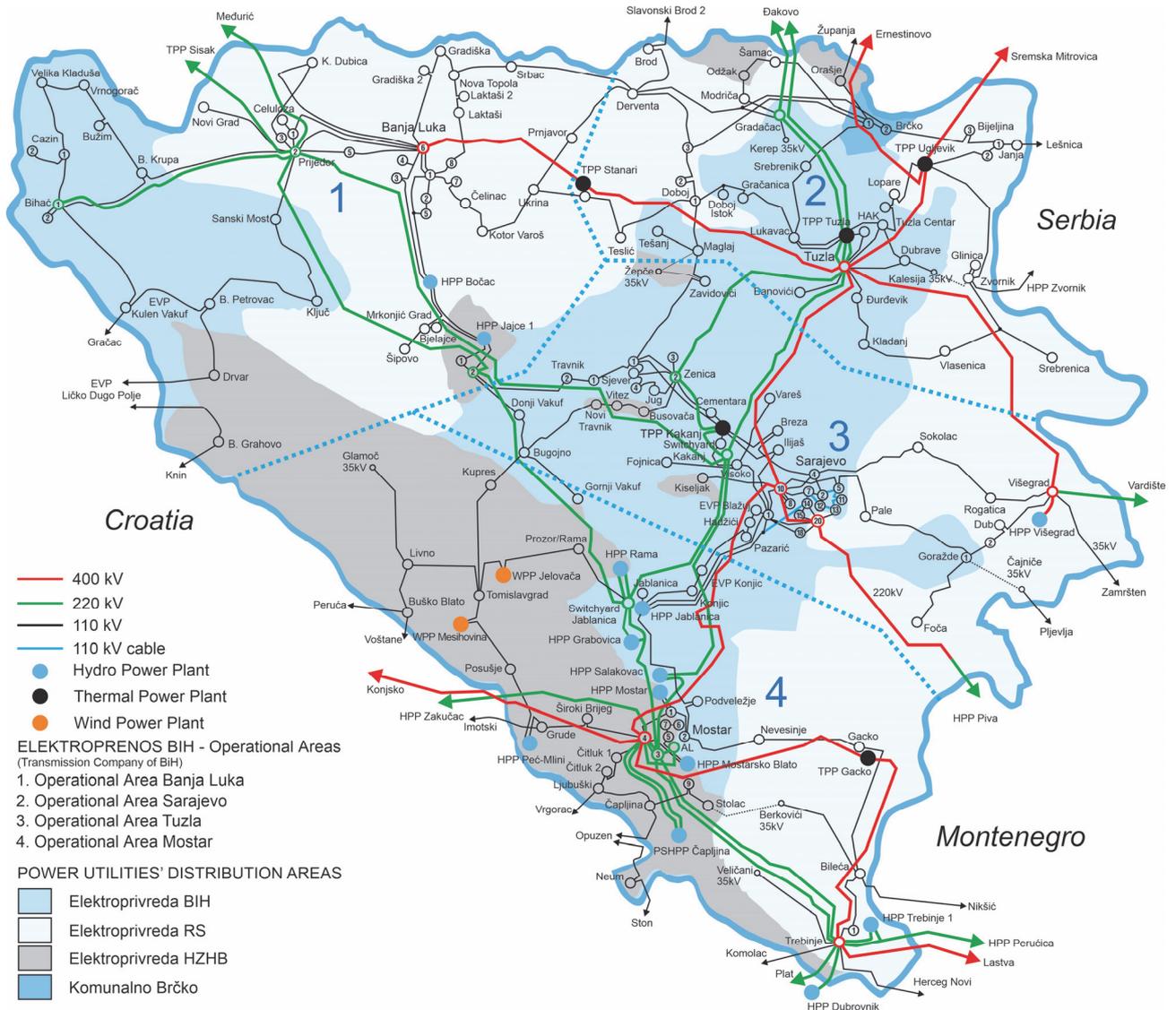
Nominal voltage of transmission lines	Number of interconnectors
400 kV	4
220 kV	10
110 kV	23
<i>Total</i>	37

*transformers*

Transmission ratio of transformers	Number of transformers	Installed capacity (MVA)
TR 400/x kV	14	4,900.0
TR 220/x kV	13	1,950.0
TR 110/x kV	250	6,195.5



**ANNEX 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 2020)**





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

(GWh)

Year 2020	EP BIH	ERS	EP HZHB	Komunalno Brčko	Other entities	BIH
Generation in hydro power plants	1,024.07	1,677.83	1,533.93		40.65	4,276.48
Generation in thermal power plants	5,155.80	3,285.61			2,001.57	10,442.98
Generation in larger wind PPs			147.50		14.31	261.81
Generation in small and industrial PPs	58.05	36.07			315.28	409.40
<b>Generation</b>	<b>6,237.92</b>	<b>4,999.51</b>	<b>1,681.43</b>		<b>2,471.81</b>	<b>15,390.67</b>
Customers connected to distr. network	4,677.57	3,690.32	1,352.59	272.74		9,993.22
Transmission losses						317.16
Large customers	560.62	216.72	17.20		95.50	890.04
PPs self-consumption and pumping		12.57	112.59		3.92	129.08
<b>Consumption</b>	<b>5,238.19</b>	<b>3,919.61</b>	<b>1,482.38</b>	<b>272.74</b>	<b>99.42</b>	<b>11,329.50</b>
Year 2019	EP BIH	ERS	EP HZHB	Komunalno Brčko	Other entities	BIH
Generation in hydro power plants	1,443.95	1,604.74	2,537.38		63.53	5,649.60
Generation in thermal power plants	4,527.31	3,017.35			2,068.32	9,612.98
Generation in larger wind PPs			165.98		87.69	253.67
Generation in small and industrial PPs	62.52	47.24			448.00	557.76
<b>Generation</b>	<b>6,033.78</b>	<b>4,669.33</b>	<b>2,703.36</b>		<b>2,667.54</b>	<b>16,074.01</b>
Customers connected to distr. network	4,737.34	3,726.24	1,407.10	271.87		10,142.55
Transmission losses						323.95
Large customers	493.33	374.32	571.41		311.52	1,750.58
PPs self-consumption and pumping		13.83	96.28		2.94	113.05
<b>Consumption</b>	<b>5,230.67</b>	<b>4,114.39</b>	<b>2,074.79</b>	<b>271.87</b>	<b>314.46</b>	<b>12,330.13</b>
Year 2018	EP BIH	ERS	EP HZHB	Komunalno Brčko	Other entities	BIH
Generation in hydro power plants	1,533.61	2,729.05	1,984.86		52.56	6,300.08
Generation in thermal power plants	5,648.34	3,249.42			2,056.00	10,953.76
Generation in larger wind PPs			103.50			103.50
Generation in small and industrial PPs	63.46	50.58			401.61	515.65
<b>Generation</b>	<b>7,245.41</b>	<b>6,029.05</b>	<b>2,088.35</b>		<b>2,510.18</b>	<b>17,872.99</b>
Customers connected to distr. network	4,705.96	3,770.48	1,392.22	270.02		10,138.68
Transmission losses						398.77
Large customers	464.34	361.65	131.09		1,646.73	2,603.81
PPs self-consumption and pumping		11.77	137.43		3.49	152.69
<b>Consumption</b>	<b>5,089.64</b>	<b>4,143.91</b>	<b>1,650.44</b>	<b>270.02</b>	<b>1,650.22</b>	<b>13,293.95</b>
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 larger wind PPs	60.38	42.21			298.98	401.57
Generation in small and industrial PPs	7,009.02	4,488.13	1,287.41	0	2,366.84	15,151.40
<b>Generation</b>	<b>4,730.02</b>	<b>3,772.64</b>	<b>1,399.58</b>	<b>276.86</b>		<b>10,179.10</b>
Customers connected to distr. network						341.52
Transmission losses	1,225.42	339.99	3.40		993.01	2,561.82
Large customers		14.03	266.11		3.82	283.96
PPs self-consumption and pumping	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 larger wind PPs	68.99	55.02			307.63	431.64
Generation in small and industrial PPs	7,244.66	5,814.91	1,540.38		1,908.99	16,508.94
<b>Generation</b>	<b>4,548.29</b>	<b>3,721.07</b>	<b>1,364.62</b>	<b>270.08</b>	<b>83.65</b>	<b>9,987.72</b>
Customers connected to distr. network						333.30
Transmission losses	458.05	281.29	1,503.02		226.59	2,468.94
Large customers		11.87	51.73		11.53	75.13
PPs self-consumption and pumping	5,006.34	4,014.23	2,919.37	270.08	321.77	12,865.10



## ANNEX D: Electric Power Indicators of Bosnia and Herzegovina

		2016	2017	2018	2019	2020
Electricity generation	(GWh)	16,508.94	15,151.40	17,872.99	16,074.02	15,390.67
Net imports	(GWh)	3,144.55	3,428.16	3,118.73	2,824.96	3,266.28
Net exports	(GWh)	6,788.40	5,213.15	7,697.77	6,568.84	7,327.44
Total electricity supplied	(GWh)	12,865.10	13,366.40	13,293.95	12,330.13	11,329.50
Gross electricity consumption	(GWh)	12,865.10	13,366.40	13,293.95	12,330.13	11,329.50
Transmission losses	(GWh)	333.30	341.52	398.77	323.95	317.16
Transmission losses	(%)	1.75%	1.90%	1.96%	1.77%	1.75%
Distribution losses	(GWh)	1,024.76	1,005.92	950.00	933.29	912.62
Distribution losses	(%)	10.26%	9.88%	9.37%	9.20%	9.13%
PPs self-consumption and pumping	(GWh)	75.13	283.96	152.69	113.05	129.08
Final consumption of electricity	(GWh)	11,431.90	11,735.00	11,792.50	10,959.84	9,970.65
	<i>Non-households</i>	6,698.88	6,978.87	7,107.16	6,233.91	5,175.82
	<i>Households</i>	4,733.02	4,756.13	4,685.33	4,725.94	4,794.83
Maximum system load	(MW)	2,098.00	2,189.00	1,994.00	1,945.00	1,804.00
Net maximum capacity of power plants	(MW)	4,351.88	4,384.77	4,462.23	4,506.53	4,530.64
Coal-fired power plants		2,156.23	2,156.23	2,156.23	2,156.23	2,156.23
Hydropower plants in total		2,180.24	2,207.47	2,235.60	2,238.84	2,248.79
	<i>small hydropower plants</i>	96.74	124.00	159.00	162.24	172.19
	<i>pumped storage power plants</i>	420.00	420.00	420.00	420.00	420.00
Total of other renewable sources		15.41	18.06	71.39	111.46	124.00
	<i>wind</i>	0.30	0.30	51.00	87.00	87.00
	<i>solar</i>	14.12	16.52	18.15	22.35	34.89
	<i>biomass</i>	0.00	0.25	0.25	1.12	1.12
	<i>biogas</i>	0.99	0.99	0.99	0.99	0.99
Transmission network	(km)	6,320.94	6,371.11	6,402.10	6,409.71	6,420.64
	<i>380 kV</i>	864.73	864.73	865.93	865.93	865.93
	<i>220 kV</i>	1,520.38	1,520.38	1,520.09	1,520.09	1,520.09
	<i>110 kV</i>	3,935.83	3,986.00	4,016.07	4,023.69	4,034.62
Number of interconnectors		37	37	37	37	37
Substation capacity	(MVA)	12,758.50	13,022.00	12,903.00	12,783.00	13,045.50
Electricity customers		1,531,501	1,541,968	1,553,439	1,567,786	1,588,773
	<i>Non-households</i>	126,303	127,553	126,508	128,224	137,629
	<i>Households</i>	1,405,198	1,414,415	1,426,931	1,439,562	1,451,144
Eligible customers		1,531,501	1,541,968	1,553,439	1,567,786	1,588,773
Customers that switched supplier		58	56	31	16	17
Electricity supplied	(GWh)	321.77	1,859.97	1,737.69	365.92	157.90
Share in final consumption	(%)	2.81%	15.85%	14.74%	3.34%	1.58%
Customers for whom prices are not regulated		10,133	10,521	9,784	10,091	13,640
Electricity supplied	(GWh)	4,908.68	5,148.53	5,265.27	4,371.07	3,423.61
Share in final consumption	(%)	42.94%	43.87%	44.65%	39.88%	34.34%



## ANNEX 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, renewable energy sources, environment, energy efficiency, oil, infrastructure, competition and statistics. 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 2016/1447 of 26 August 2016 establishing a network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules (deadline: 12 July 2021, except for Articles 4(2) points (a) and (b), 5(4), 75, 76 and 78(1) for which the deadline is 12 July 2018),
- Commission Regulation (EU) No 2016/1388 of 17 August 2016 establishing a network code on demand connection (deadline: 12 July 2021, except for Articles 4(2) points (a) and (b), 6(4), 51(1), 56 and 57 for which the deadline is 12 July 2018),
- Commission Regulation (EU) No 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators (deadline: 12 July 2021, except for Articles 4(2) points (a) and (b), 7(4), 58, 59, 61(1), 68(1) and 69(1) for which the deadline is 12 July 2018),
- 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 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency (deadline: 29 May 2020),
- 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*

- Commission Regulation (EU) No 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas (deadline: 28 February 2020, except for Chapters II, III and IV for which the deadline is 31 May 2021),
- Commission Regulation (EU) No 2017/459 of 16 March 2017 establishing a network code on capacity allocation mechanisms in gas transmission systems (deadline: 28 Feb. 2020, except for Chapters II, III and IV for which the deadline is 31 May 2021),
- Commission Regulation (EU) No 2015/703 of 30 April 2015 establishing a Network Code on Interoperability and Data Exchange Rules (deadline: 1 October 2018),
- Commission Regulation (EU) No 312/2014 of 26 March 2014 establishing a network code on gas balancing of transmission networks (deadline: 12 December 2020),
- Regulation (EU) No 1227/2011 (please see *Acquis on Electricity*),
- 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, except for Annex I for which the deadline is 1 October 2018).

### *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 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).

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#### *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.

#### *Acquis on Energy Efficiency*

- Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU (deadline: 1 January 2020),
- 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).

#### *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 Infrastructure*

- Regulation (EU) 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).

#### *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.

\* The abovementioned provisions are contained in Articles 101, 102, 106 and 107 of the Treaty on the Functioning of the European Union.

#### *Acquis on Statistics*

- Commission Implementing Regulation (EU) 2019/803 of 17 May 2019 concerning the technical requirements regarding the content of quality reports on European statistics on natural gas and electricity prices pursuant to Regulation (EU) 2016/1952 of the European Parliament and of the Council (deadline: 15 June 2022),
- Regulation (EU) 2016/1952 of the European Parliament and of the Council of 26 October 2016 on European statistics on natural gas and electricity prices and repealing Directive 2008/92/EC (deadline: 1 March 2018),
- Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics (deadline: 31 December 2013).

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.

*Note: Texts of EU rules provided in this Annex are available on the website of the State Electricity Regulatory Commission ([www.der.k.ba](http://www.der.k.ba)).*

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*Additional information on the activities and procedures conducted by the State Electricity Regulatory Commission may be obtained on the website at [www.derk.ba](http://www.derk.ba), by phone on +387 35 302060 and +387 35 302070, fax +387 35 302077, e-mail [info@derk.ba](mailto:info@derk.ba) or at the SERC seat in Tuzla, Đorđa Mihajlovića 4/II.*

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