Pursuant to Article 4.8 of the Law on Transmission of Electric Power, Regulator and System Operator in Bosnia and Herzegovina (Official Gazette of BIH, 7/02, 13/03, 76/09 and 1/11) and Articles 7 and 9 of the Rule on Tariff Proceedings (Official Gazette of BIH, 44/05), deciding upon the application of Independent System Operator in Bosnia and Herzegovina number 50/20 of 26 October 2020, at the session held on 29 December 2020, the State Electricity Regulatory Commission adopted a

DECISION

ON TARIFFS FOR SYSTEM AND ANCILLARY SERVICES

Article 1 (Subject)

This Decision defines a tariff for system service and a tariff for excessive take-on of reactive power from the transmission system of Bosnia and Herzegovina.

Article 2 (System Service)

- (1) The financial scope of the system service in 2021 shall be set to the amount of BAM 53,011,207 and the tariff for system service shall amount to 0.4789 fening/kWh.
- (2) The funds collected on the basis of the tariff for system service shall be used exclusively for procurement of secondary and tertiary control capacity reserve on the market as well as procurement of electricity to cover transmission system losses and compensation of unintended deviations towards the neighbouring control areas.

Article 3 (Excessive Take-on of Reactive Power)

It is determined that the tariff for excessive take-on of reactive power from the transmission network shall amount to zero (0) fening/kvarh.

Article 4

(Calculation of Deviations from Daily Schedule by Balance Responsible Parties)

Values of deviations from a daily schedule by balance responsible parties shall be calculated on an hourly basis. The Independent System Operator in Bosnia and Herzegovina (ISO BIH) shall calculate deviations in energy and financial terms pursuant to the Market Rules (Official Gazette of BIH, 48/15) and relevant procedures.

Article 5 (Calculation and Billing of Ancillary and System Services)

- (1) Pursuant to the Market Rules and relevant procedures, the ISO BIH shall make calculation of ancillary and system services based on which billing and payment of services shall be made.
- (2) The calculation referred to in Item (1) of this Article shall be submitted to ancillary service providers, suppliers of customers connected to the transmission system, distribution system operators in BIH and SERC. The calculation shall include financial and energy positions of the ISO BIH and market participants.

(3) With the aim of making an accurate calculation, distribution system operators shall be obligated to provide the ISO BIH with all required data and information in a timely manner.

Article 6 (Final Provisions)

This Decision shall enter into force on the day of the adoption and it shall be applied as of 1 January 2021.

The operative part of the Decision shall be published in the *Official Gazette of BIH* and the official gazettes of the Entities and Brčko District of BIH.

Statement of Rationale

The Independent System Operator in Bosnia and Herzegovina (hereinafter: the ISO BIH) is one of the regulated entities in the electric power sector with the task to manage the transmission system operation in Bosnia and Herzegovina. The ISO BIH competences and functions have been defined by the Law on Transmission of Electric Power, Regulator and System Operator in Bosnia and Herzegovina (Official Gazette of BIH, 7/02, 13/03, 76/09 and 1/11) and the Law Establishing an Independent System Operator for the Transmission System of Bosnia and Herzegovina (Official Gazette of BIH, 35/04).

The ISO BIH is a holder of the licence for performance of the independent system operator activity pursuant to the Decision of the State Electricity Regulatory Commission (hereinafter: SERC), number 05-28-12-17-19/19 of 27 June 2019 (Official Gazette of BIH, 45/19). Pursuant to Article 21 of the Tariff pricing methodology for services of electricity transmission, operation of independent system operator and ancillary services – Consolidated version (Official Gazette of BIH, 93/11, 61/14 and 95/16 – hereinafter: Tariff Methodology), the purpose of the tariff for ISO operation is to cover the costs of ISO BIH operation incurred by performance of the activities as set forth in Articles 2 and 7 of the Law Establishing an Independent System Operator for the Transmission System of Bosnia and Herzegovina.

Pursuant to Article 22 of the Tariff Methodology, the tariff is determined on the basis of costs for performance of a regulated activity and a physical scope of services within that activity. Costs for performance of the regulated activity and physical scope of services provided by the regulated entity are determined on the basis of data included in the tariff application. When determining tariffs, SERC may also use additional data if it deems necessary.

While reviewing the tariff application through tariff proceedings, the basic principles prescribing that tariffs will be just and reasonable, non-discriminatory, based on objective criteria and justified costs and set in a transparent manner have to be respected to the maximum extent possible. An applicant seeking approval for a tariff application is obligated to prove that the proposed tariff meets all the requirements of BIH laws and SERC rules and regulations.

The tariff proceedings for setting of the tariff for operation of an independent system operator and the tariffs for system and ancillary services were initiated at the request of the ISO BIH, number 50/20 of 26 October 2020 (received on 28 October 2020 under number 04-28-5-357-1/20).

In the submitted application, the ISO BIH did not specify a requested amount of the tariff for system service but during the tariff proceedings it provided data on the prices of individual

ancillary services reached at the tender, i.e. auctions for 2021 which were held in the first half of December 2020.

The application also includes the planned physical scope of services in the BIH transmission network in 2021, which relies on the data from the Power Balance in the BIH Transmission Network for 2021 (received by SERC on 30 November 2020 under number 04-28-5-357-30/20) according to which the planned delivery of electricity from the transmission system in 2021 amounts to 10,281,712,413 kWh while planned generation in the transmission network amounts to 15,728,166,713 kWh.

Following the documentation review, the completeness of the ISO BIH application was confirmed by the SERC Conclusion on initiating tariff proceedings for the operation of an independent system operator and tariffs for system and ancillary services number 04-28-5-357-2/20 of 11 November 2020, of which the ISO BIH was informed accordingly by the letter number 04-28-5-357-3/20 of 11 November 2020 so the tariff proceedings could proceed through evaluation of all submitted proofs with SERC keeping the right to ask for additional data and information if deemed necessary.

The ISO BIH application was resolved by conducting a formal public hearing pursuant to the Rules of Hearing Procedures (Official Gazette of BIH, 38/05), in accordance with the provision in Article 45 thereof, by a short notice in the daily newspapers and on its website SERC informed the public of a summary of the submitted application and the possibility to get familiarised with the application directly and submit comments on the subject of the tariff proceedings in writing, while the entire documentation of the tariff application was published on the SERC website. By the public notice the persons interested to participate in the formal hearing as interveners were also invited and asked to provide the evidence of their interest in writing beforehand, and the formal hearing on the application was announced.

After the submission of requests for intervener status, by its Conclusion number 04-28-5-357-14/20 of 19 November 2020, in order to hear their respective positions and interests SERC allowed the following entities to participate in the tariff proceedings in the capacity of interveners: MH "Elektroprivreda Republike Srpske" Parent Company a.d. Trebinje, JP "Elektroprivreda Bosne i Hercegovine" d.d. Sarajevo, JP "Elektroprivreda Hrvatske zajednice Herceg Bosne" d.d. Mostar, and "B.S.I." d.o.o. Jajce.

None of the four mentioned interveners used the right to have a direct insight into the complete documentation of the tariff application at the SERC premises.

A preliminary hearing on the submitted ISO BIH tariff application was held on 26 November 2020 via an internet communication platform due to the Covid-19 pandemic. At the preliminary hearing a list of questions to be discussed at the hearing was specified (63 questions in total) and the course of the formal hearing was defined. At the formal public hearing which was also held via an internet communication platform on 2 December 2020, the parties to the proceeding presented their respective proofs for the purpose of determining all relevant facts. Every question was processed by dividing the questions into 17 thematic groups and by a successive reply of the applicant and comments thereon by the interveners and the Presiding Officer.

The Presiding Officer's report describes the course of the proceeding, offered proofs and established facts, relevant legal provisions and recommendations to the Commissioners (hereinafter: Commission) and it was delivered to the applicant and the interveners whose status as such was legally acknowledged by SERC. An analysis of costs and revenues as presented in the Presiding Officer's Report confirmed, rejected or adjusted the individual

items, values or methods used while preparing the tariff proposal in accordance with the SERC discretionary rights in the tariff proceedings.

The Commission concludes that the Presiding Officer's Report provided reasonable grounds for the Commission to pass its final decision on the tariffs for system and ancillary services after a careful review and assessment of the data, arguments and explanations provided in the Report as well as comments of the ISO BIH made on the proposal of this Report. Regarding the subject-matter of this Decision, the intervener MH "Elektroprivreda Republike Srpske" Parent Company a.d. Trebinje had some comments and remarks on the section of the Presiding Officer's Report pertaining to the system service, i.e. ancillary services.

In the comments of MH "Elektroprivreda Republike Srpske" Parent Company a.d. Trebinje the issues pertaining to the balancing market operation and ancillary services procurement are pointed out. Specifically, the question was raised as to what extent the level of transmission system loss is affected by electricity transit and domestic consumption and the manner (strategy) of procuring energy to cover losses was considered with the aim of achieving lower prices at tenders, i.e., auctions. Furthermore, the need was expressed for resolving the issue of high voltage levels in the transmission system and finding the way to stimulate generators, particularly thermal power plants, to work in the capacitive operation mode, through an appropriate valorisation of voltage control ancillary service.

In the submitted comments on the Presiding Officer's Report, the ISO BIH points out that a more significant increase in costs, which would cause an increase in the tariff of operations of an independent system operator, may be considerably compensated by reducing the tariff for system service, which was also proposed by the Presiding Officer.

When passing a decision in the tariff proceedings for setting of the tariffs for system and ancillary services, the Commission has to focus its analysis on all elements of the cost structure as pointed out by the applicant, the analysis of costs and revenues as presented in the Presiding Officer's Report as well as on the applicant's and interveners' comments presented during the whole proceedings and make a decision about the submitted application after a comprehensive analysis. In line with these obligations, the Commission presents the following points of view:

The results of the ancillary services procurement for 2021 indicate that following the 2018 and 2019 price increase and a small price decrease in 2020, in 2021 the trend of decreasing prices of ancillary services on the market continued. This development was expected taking into consideration that the developments on the wholesale market are regularly reflected on the balancing market.

The planned costs for the procurement of ancillary services in 2021 total BAM 53,011,207.12. These procurement costs per service and month are presented in the following table (BAM):

Month	Secondary control reserve in peak and off- peak periods	Upward tertiary control reserve	Downward tertiary control reserve	Energy losses in the transmission system
January	1,239,420	374,187	72,503	3,866,610
February	1,045,005	337,976	65,486	2,859,220
March	1,098,687	373,685	72,405	2,515,860
April	989,116	362,117	70,164	2,134,400
May	918,976	374,931	76,104	2,103,420
June	933,088	388,656	73,649	2,168,100
July	921,360	684,740	76,104	2,997,810

August	858,485	473,511	76,104	3,044,860
September	900,270	473,803	73,649	2,872,010
October	1,078,373	382,550	76,206	3,220,620
November	1,092,002	369,173	70,164	3,277,400
December	1,239,420	376,345	72,503	3,789,980
Total	12,314,202	4,971,674	875,041	34,850,290

The calculation of tariff is based on offers and results of the completed bidding procedures of the ISO BIH for 2021 as well as the trend in revenues and costs in the period from January 2016 to December 2020, which is presented through the balance of services, in accordance with the following table:

1.	Secondary control reserve (BAM)	12,314,202
2.	Upward tertiary control reserve (BAM)	4,971,674
3.	Downward tertiary control reserve (BAM)	875,041
4.	Total amount of secondary and tertiary control reserve in 2021 (BAM) 1+2+3	18,160,917
5.	Total amount of losses in the transmission system in 2021 (BAM)	34,850,290
6.	Total planned costs in 2021 (BAM) 4+5	53,011,207
7.	Balance of services in 2016 (BAM)	9,532,807
8.	Balance of services in 2017 (BAM)	4,826,023
9.	Balance of services in 2018 (BAM)	-10,021,408
10.	Balance of services in 2019 (BAM)	-774,047
11.	Balance of services in 2020, with an estimate for December (BAM)	6,000,000
12.	Balance of services in the previous period (BAM) 7+8+9+10+11	9,563,375
13.	Revenues based on balance of imbalances and balancing energy (BAM)	6,500,000
14.	Total for calculation of tariff for system service (BAM) 6-12-13	36,947,832
15.	Energy (kWh)	10,372,412,413
16.	Tariff for system service (fening/kWh)	0.3562

According to the calculation from the table presented above, by the application of the tariff for system service amounting to 0.3562 fening/kWh the accumulated surplus of revenues over expenditures would reach zero (0) BAM by the end of 2021. Taking into consideration that the amount of funds in the account for ancillary services has been reduced by 3.1 million BAM due to unpaid debts of "Aluminij" d.d. Mostar, that an amount of approximately 1 million BAM is continuously moved into the account of the Indirect Taxation Authority due to some legal circumstances, having regard to the precautionary principle due to a high number of variables affecting revenues and expenditures in the balancing mechanism, the tariff for system service is adjusted to an amount of 0.4789 fening/kWh. The tariff for system service is reduced by 7.7% herewith, while the positive financial effect for the electric power entities paying this tariff amounts to BAM 4,138,593 on an annual basis.

As revenues and expenditures depend on a high number of factors such as electricity consumption, i.e. withdrawal of energy from the transmission system, a physical scope of losses in the transmission service, the scope of provided ancillary services in comparison to the planned one, the price of control energy and engagement thereof, prices and scopes of imbalances, the application of the tariff will be monitored continuously as well as trends of revenues and expenditures and developments on the electricity balancing market, and an adjustment of the tariff for system service will be initiated when appropriate.

Taking into account that the problem of reactive power surplus causes high voltage in the transmission system, in the 220 kV and 400 kV networks in particular, and that this problem has become even more evident due to a significant reduction of electricity withdrawal by the customer Aluminij d.d. Mostar, given that the required investments in the relevant infrastructure have not been made (shunt reactors) in the past period, which would resolve the issue of the existing surplus of reactive capacity and power in the transmission system, the Commission is of the opinion that it is not justified to charge excessive withdrawal of reactive power. Namely, the users that withdraw reactive power in these situations actually help the power system operation, which is the reason why the Commission decides that the tariff for excessive withdrawal of reactive power from the transmission system amounts to zero (0) fening/kvarh, with the obligation to carefully monitor the application thereof and make adjustments if required.

Taking into consideration the fact that the balancing market in Bosnia and Herzegovina is one of few functional markets in the region of Southeast Europe and that the trends on the regional wholesale market have the significant impact on its operation and prices of services, SERC will continuously monitor the implementation of this Decision and rules regulating this field.

Pursuant to Article 14 of the Rule on Tariff Proceedings, the applicant as a regulated entity is obligated to enable public access to the officially approved tariff by making tarrifs approved by a decision accessible to the public at its main business office during working days and publishing them on its website.

Pursuant to Article 9.2 of the Law on Transmission of Electric Power, Regulator and System Operator of Bosnia and Herzegovina, proceedings may be initiated before the Court of Bosnia and Herzegovina against this Decision by filing a lawsuit within sixty (60) days of receipt thereof.

Number: 04-28-5-357-43/20 29 December 2020 Tuzla Chairman of the Commission

Nikola Pejić