

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 6, 7 and 9 of the Rule on Tariff Proceedings (Official Gazette of BiH, 44/05), deciding upon the application of the Independent System Operator in Bosnia and Herzegovina, number 80/29 of 24 October 2025, at its session held on 23 December 2025, the State Electricity Regulatory Commission passed a

DECISION

ON TARIFFS FOR SYSTEM SERVICE AND ANCILLARY SERVICES

Article 1

(Subject Matter)

This decision defines a tariff for system service and the method of its use, compensation for operation of generators in the capacitive regime and a tariff for excessive withdrawal of reactive power from the transmission system of Bosnia and Herzegovina.

Article 2

(System Service)

- (1) The financial scope of the system service in 2026 shall be set to the amount of BAM 93,884,394 and the tariff for system service shall be determined in the amount of 0.4789 fening/kWh.
- (2) As a rule, the funds collected on the basis of the tariff for system service shall be used for market-based procurement of the following ancillary services: frequency containment reserve, the automatic frequency restoration reserve, the manual frequency restoration reserve, replacement reserve and market-based procurement of electricity to cover losses in the transmission system as well as other costs related to the system service
- (3) Exceptionally, the funds collected on the basis of the tariff for system service may also be used for the procurement of the missing part of the ancillary services referred to in paragraph (2) in a regulated manner, in case of impossibility to procure them in a market-based manner, that is, through public bidding, In that case, the Independent System Operator in Bosnia and Herzegovina (NOS BIH) shall determine the missing scope and entities to provide the service with related volumes for each ancillary service. The prices of providing the missing volumes shall be equal to weighted average prices of offers accepted in public procurement procedures for the stated services, except for the procurement of electricity to cover losses in the transmission system for which the prices of futures products of the European Power Exchange – EEX-PXE Hungarian Power Futures shall be used.

Article 3

(Regulation of Voltage and Reactive Power)

It is determined that the compensation for operation of generators in the capacitive regime shall amount to zero (0) fening/kvarh.

Article 4

(Excessive Withdrawal of Reactive Power)

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

Article 5

(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 a 15-minute basis. NOS BIH shall calculate deviations in energy and financial terms pursuant to the Market Rules and relevant procedures.

Article 6

(Calculation and Billing of Ancillary Services and System Service)

- (1) Pursuant to the Market Rules and relevant procedures, NOS BIH shall make calculation of the ancillary services and system service, based on which billing and payment of the services is 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 NOS BIH and market entities.
- (3) With the aim of making an accurate calculation, distribution system operators shall be obligated to provide NOS BIH with all required data and information in a timely manner.

Article 7

(Final Provisions)

This decision shall enter into force on the day of the adoption and it shall be applied as of 1 January 2026.

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

Obrazloženje

The Independent System Operator in Bosnia and Herzegovina (hereinafter: NOS 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. NOS 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).

NOS BIH is a holder of the licence for performance of the activity of an independent system operator 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).

According to Article 26 of the Tariff Pricing Methodology for services of electricity transmission, an independent system operator and ancillary services (Official Gazette of BIH, 57/25 – hereinafter: the Tariff Methodology), the tariff for system service and ancillary services serves to cover costs of procuring frequency containment reserve, automatic frequency restoration reserve, manual frequency restoration reserve, replacement reserve, and the costs of procuring electricity to cover losses in the transmission system and other costs pertaining to the system service

While reviewing the tariff application through tariff proceedings, the basic principles prescribing that tariffs should 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 of a tariff 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 service and ancillary services were initiated at the request of NOS BIH, number 80/25 of 24 October 2025 (received on 28 October 2025 under number 04-28-5-306-1/25).

Costs of providing the system service are determined on the basis of data included in the tariff application of NOS BIH. When determining tariffs, SERC may also use additional data if it deems necessary.

In the filed tariff application, NOS BIH stated that according to the projected withdrawal of electricity from the transmission network in 2026 as well as the revenue requirement, the proposed tariff for system service in 2026 amounts to 1.4087 fening/kWh. While calculating this tariff, NOS BIH did not take into account either the amount accumulated on the basis of the balance of all services in the whole period of the use of the balancing mechanism or the planned revenue on the basis of imbalances which is charged by NOS BIH from the balance responsible parties for their deviations from the daily schedule.

The application also includes the planned physical scope of services in the transmission network in 2026, which relies on the data from the Power Balance in the BIH Transmission Network for 2026 (received by SERC on 30 October 2025 under number 04-28-5-310-1/25) according to which the planned withdrawal of electricity from the transmission system in 2026 amounts to 10,461,279,437 kWh, while planned generation of the power plants connected to the transmission network amounts to 14,785,764,950 kWh.

Following the documentation review, the completeness of NOS BIH application was confirmed by the SERC Conclusion on initiating tariff proceedings for the operation of an independent system operator and tariffs for system service and ancillary services number 04-28-5-360-2/25 of 29 October 2025, of which NOS BIH was informed accordingly by the letter number 04-28-5-360-3/25 of 29 October 2025, so it was possible to proceed with the tariff proceedings through evaluation of all submitted proofs with SERC keeping the right to ask for additional data and information if deemed necessary.

NOS 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 04-28-5-360-11/25 of 12 November 2025, in order to hear their respective positions and interests SERC granted the status of interveners in the tariff proceedings to the following entities: MH "Elektroprivreda Republike Srpske" Parent Company a.d. Trebinje, JP "Elektroprivreda Bosne i Hercegovine" d.d. Sarajevo and JP "Elektroprivreda Hrvatske zajednice Herceg Bosne" d.d. Mostar.

None of the three 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 NOS BIH tariff application was held on 18 November 2025. At the preliminary hearing a list of questions to be discussed at the hearing was specified and the course of the formal hearing was defined. At the formal public hearing, which was held on 27 November 2025, 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 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: the 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 based on the data provided, arguments and explanations as well as the comments of NOS BIH made on the proposal of this report after the careful consideration and evaluation thereof. Regarding the subject-matter of this decision, JP "Elektroprivreda Bosne i Hercegovine", d.d. Sarajevo in the capacity of intervener provided comments on the Presiding Officer's Report in which they expressed the position on the prudence of keeping the tariff for system service at the existing level and the awareness of the high level of prices on the regional market in the context of the costs of procuring electricity to cover losses in the transmission system. Furthermore, they expressed the position that they contribute to keeping the tariff for system service at the existing level by paying the imbalances at the prices which are close to the market-based ones, just as other public suppliers. They are also of the opinion that the uncertain costs of the new aFRR-s service should not be recognized until this service is available. In its comments, NOS BIH pointed out that they cannot predict what the income will be based on the imbalance of the balance responsible parties or the expenditure based on the application of the FSKAR calculation. They also emphasized that due to the increase in the price to cover losses, it may be expected that the negative result based on the system service tariff will be higher than in 2025.

When passing a Decision on 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 pass 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 annual procurement of ancillary services for 2026 indicate that the prices of reserve capacities for all types of services have decreased, compared to those in the past year, on average by 2.1%.

Frequency containment reserve (FCR) was procured in the required amount of 15 MW/h (14 MW/h in 2025) for all twelve months in 2026. The average price reached 7.15 BAM/MW/h, which is a 5.0% decrease in comparison the average procurement price in 2025.

Automatic frequency restoration reserve (aFRR) capacity was procured at the prices which were slightly lower than the prices reached in the previous annual procurement of this service. During the procurement, the price reached for the off-peak period (00-06 h) amounted to 42.87 BAM/MW/h (42.95 BAM/MW/h in 2025) and was very close to the price cap of 43 BAM/MW/h, while an average price for the peak period (06-24 h) amounted to 41.04 BAM/MW/h (41.13 BAM/MW/h in 2025). The aFRR reserve for the peak period was procured for all hours of the year in the required quantities. In the off-peak period, the annual

procurement of the required quantities was not fully done due to lack of bids for the 1st, 2nd, 6th, 7th, 8th, 9th, 10th, 11th and 12th month, so the missing quantities (14.6% of the required annual scope in total is missing) will be the subject of the monthly procurements in 2026.

Manual frequency restoration reserve (mFRR) capacity was procured at the price which is lower both for upward and downward reserve in comparison to the previous annual procurement of this service. An average price for upward and downward reserve decreased by 4.8% (from 5.46 BAM/MW/h to 5.20 BAM/MW/h) and by 17.3% (from 1.04 BAM/MW/h to 0.86 BAM/MW/h) respectfully. The required quantities of 196 MW/h of upward mFRR reserve were procured for all months. The downward mFRR was also procured for the whole annual period in the required physical scope of 75 MW/h.

The procurement of energy for covering of losses in the transmission system in 2026 was planned in an amount of 334 GWh. The approximate value of the procurement was determined in accordance with the provisions of the Tariff Pricing Methodology for services of electricity transmission, an independent system operator and ancillary services and the Decision on determination of coefficients and price caps for ancillary services (Official Gazette of BIH, 64/25) by taking into account the annual futures index from the power exchange EEX-PXE, and increasing it by 25%, which resulted in an approximate procurement price of 262.50 BAM/MWh. According to the notification of NOS BIH number 07-1740-1/25 of 16 December 16 2025 on the received offers and the selection of bidders after the public tender for the procurement of energy to cover losses in the transmission network for 2026, all the required quantities were procured in full, with four suppliers having participated in the tender. The average procurement price reached amounted to 203.88 BAM/MWh (104.24 €/MWh), while the planned procurement cost amounts to BAM 68,095,785.

The planned costs of ancillary services procurement in 2025 in the required scope for all services amount to BAM 93,884,394 and they are lower by 2.1 % in comparison to 2025. The breakdown of the procurement costs per service and month is presented in the following table (BAM):

Month	Frequency containment reserve	Automatic frequency restoration reserve during peak and off-peak periods	Upward manual frequency restoration reserve	Downward manual frequency restoration reserve	Electricity losses in the transmission system
January	80,218	1,499,368	629,989	48,025	8,472,285
February	72,455	1,339,820	572,794	43,615	6,800,000
March	80,110	1,331,793	629,143	47,961	5,170,500
April	77,630	1,213,281	609,667	46,476	3,898,000
May	80,218	1,121,003	671,624	48,025	3,860,000
June	77,630	1,111,318	914,119	46,476	4,900,000
July	80,218	1,188,207	972,006	48,025	6,300,000
August	80,218	1,180,209	972,006	48,025	4,590,000
September	77,630	1,102,536	1,015,445	46,476	5,290,000
October	80,326	1,271,510	694,683	48,090	4,875,000
November	77,630	1,443,262	609,667	46,476	6,300,000
December	80,218	1,554,970	629,989	48,025	7,640,000
Total	944,503	15,357,278	8,921,132	565,696	68,095,785

The tariff calculation is based on the bids and results of the completed bidding procedures of NOS BIH for 2026, an assessment for procurements to be conducted later during 2026 as well as the trends of income and costs in the period January 2016 – December 2025, which is presented through the balance of services in the following table:

1.	Frequency containment reserve (BAM)	944,503
2.	Automatic frequency restoration reserve (BAM)	15,357,278
3.	Upward manual frequency restoration reserve (BAM)	8,921,132
4.	Downward manual frequency restoration reserve (BAM)	565,696
5.	Total amount of frequency containment and restoration reserves in 2026 (BAM) 1. to 4.	25,788,609
6.	Total amount for energy for transmission losses in 2026 (BAM)	68,095,785
7.	Total planned costs in 2025 (BAM) 5.+6.	93,884,394
8.	Balance of services in 2016 (BAM)	9,532,806
9.	Balance of services in 2017 (BAM)	4,716,024
10.	Balance of services in 2018 (BAM)	-9,964,041
11.	Balance of services in 2019 (BAM)	-774,077
12.	Balance of services in 2020 (BAM)	6,912,629
13.	Balance of services in 2021 (BAM)	7,867,228
14.	Balance of services in 2022 (BAM)	25,645,915
15.	Balance of services in 2023 (BAM)	16,217,609
16.	Balance of services in 2024 (BAM)	-4,008,653
17.	Correction of values for uncollected receivables in 2020	-3,166,714
18.	Correction of values for uncollected receivables in 2021	-2,984,173
19.	Balance of services in 2025 with an estimate for December (BAM)	-3,500,000
20.	Balance of services in the previous period (BAM) 8. to 19.	46,494,553
21.	Income based on balance of imbalances, balancing energy and FSKAR calculation (BAM)	15,000,000

According to the data in the table above, it is possible to make a correction of the tariff for system service. However, taking into consideration that there is possibility of procuring energy for covering of losses in the transmission system in a market-based manner in the forthcoming period at the prices which may be higher compared to the prices at which energy was procured in the past, that an amount of approximately one (1) million BAM is continuously dislocated to the account of the Indirect Taxation Authority of BIH due to legal obligations, that the amounts on monthly invoices per calculation of deviations towards the SHB LFC Block are measured in millions of BAM (FSKAR calculation), respecting the precautionary principle due to a high number of variables affecting the revenues and expenditure in the balancing mechanism, the tariff for system service is kept at the level of 0.4789 fening/kWh.

As revenues and expenditures depend on a high number of factors such as electricity consumption, that is, withdrawal of electricity from the transmission system, a physical scope of losses in the transmission system, a wholesale price of energy for losses, 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 the trends of revenues and expenditures and developments on the balancing market, and an adjustment of the tariff for system service will be initiated when appropriate.

Under Article 34 of the Tariff Pricing Methodology, generating units connected to the transmission network maintain the voltage within prescribed limits at their own expense in accordance with the Grid Code and their operational charts and, exceptionally, in a situation with increased voltage levels in the transmission system, SERC may prescribe a compensation to be paid to generating units for operation in the capacitive (under-excited) regime providing that the ISO BIH carries out an analysis indicating that such regime of operation of generating units substantially contributes to keeping the voltage levels at 400 kV and 220 kV nodes within the limits prescribed by the Grid Code. Due to lack of this analysis, it is determined that the coefficient of compensation for operation of generating units in the capacitive regime amounts to zero ($k_{RG} = 0$), which means that compensation for operation of generating units in the capacitive regime also equals zero.

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 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. The price coefficient for excessive withdrawal of reactive energy from the transmission system is set to zero ($k_R = 0$) as in a situation with increased voltage levels in the transmission system and the existing surplus of reactive power and capacity, withdrawal of reactive energy from the transmission system has a positive impact on the voltage levels and in this manner withdrawal of reactive energy is further stimulated. In line with the aforesaid, the price for excessive withdrawal of reactive energy from the transmission system is set to zero (0) fening/kvarh.

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 make adjustments of the tariff for system service if needed.

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 tariffs 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: 04-28-5-306-32/25
23 December 2025
Tuzla

Chairman of the Commission
Suad Zeljković