



Republika e Kosovës
Republika Kosova - Republic of Kosovo

ZYRA E RREGULLATORIT PËR ENERGJI
REGULATORNI URED ZA ENERGIJU
ENERGY REGULATORY OFFICE



Methodology ERO/No. 01/2023

METHODOLOGY FOR DETERMINING THE MAXIMUM FIXED PREMIUM, MAXIMUM STRIKE PRICE AND MAXIMUM FEED-IN TARIFF

13 December 2023

The Board of Energy Regulatory Office Board, based on Article 9, paragraph 1, sub-paragraph 1.7, Article 15, Article 26, paragraph 1, sub-paragraph 1.1 of the Law on Energy Regulator no. 05/L-084, Article 8, paragraph 9 of the Law on Electricity No. 05/L-085 and Article 9, paragraph 6 of the Administrative Instruction no. 01/2023 on Promotion of the Use of Energy from Renewable Sources, in the session held on 13 December 2023 approved the following:

METHODOLOGY FOR DETERMINING THE MAXIMUM FIXED PREMIUM, MAXIMUM STRIKE PRICE AND MAXIMUM FEED-IN TARIFF

CHAPTER I GENERAL PROVISIONS

Article 1 Purpose and Scope

1. This methodology defines the principles for calculation of Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff for support schemes for electricity produced from renewable energy sources, implemented through a competitive bidding process.
2. This Methodology sets:
 - 2.1. Basic principles according to which the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff will be calculated; and,
 - 2.2. Method for calculation of Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff.

Article 2 Definitions and Interpretations

1. The terms used in this methodology have the following meaning:
 - 1.1. **Renewable Energy Sources** - means non-fossil resources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tides, waves and other energy from the ocean, hydropower, biomass, gas from landfills, gas from waste water treatment plants and biogas;
 - 1.2. **Strike Price** - means the final price that the privileged producer of electricity will benefit, as the result of being awarded in a competitive bidding process;
 - 1.3. **Maximum Strike Price** – means the maximum price that a privileged producer can be awarded through the competitive bidding process;

- 1.4. **Organized Market Price** - means the price which is determined in organized markets as a result of supply and demand;
- 1.5. **Reference Market Price** – means the hourly price settled in the Kosovan Day-Ahead Market operated by the Albanian Power Exchange. If the settled price of the previous day cannot be established, the reference price shall be determined by the Regulator, through a secondary legislation based on a methodology for setting the reference price. In case the reference price is negative, it shall be considered zero for the purpose of financial settlement under a contract for difference;
- 1.6. **Reference Market Price set by the Regulator** – is the reference price calculated based on the Methodology for Calculation of Referent Price for Energy Produced by RES” no. 01/2020.
- 1.7. **Contract for Difference** – means a type of financially settled Contract for Support whereby a sliding premium, constituted by the difference between the Reference Price and the Strike Price, is settled between the Renewable Energy Operator and the Privileged Producer. If the Reference Price is lower than the Strike Price, the Renewable Energy Operator pays the difference to the privileged producer. If the Reference Price is higher than the Strike Price, the Privileged Producer pays the difference to the Renewable Energy Operator;
- 1.8. **Contract for Support** – means the contract on the basis of which the privileged producer is granted support under a Support Scheme in the form of either a PPA, a Contract for Premium or a Contract for Difference or Feed-in Tariff. A model for each type of Contract for Support is drafted by the Renewable Energy Operator and is published following the approval by the Regulator;
- 1.9. **Contract for Premium** – means a type of financially settled Contract for Support whereby a fixed premium on top of the market price is paid by the Renewable Energy Operator to the Privileged Producer for the electricity generated by the Privileged Producer;
- 1.10. **Power Purchase Agreement (PPA)** - means a type of physically settled Support Contract, where the Renewable Energy Operator as designated recipient guarantees the mandatory purchase of electricity produced by the privileged producer at a predetermined price;
- 1.11. **Renewable Sources Energy Operator** - means the entity designated to be the counterparty of the Renewable Energy Producers benefiting from the Support Scheme and is responsible for the management of the Renewable Energy Support Fund;
- 1.12. **Maximum Fixed Premium** – means the maximum fixed amount, on top of the day-ahead market price which can be awarded to a privileged producer, through the competitive bidding process, based on a Contract for Premium;
- 1.13. **Sliding Premium** - means the difference between the guaranteed purchase price and the price at which the Privileged Producer sold the electricity produced on the local exchange;

- 1.14. **Competitive Bidding Process** - means a transparent, non-discriminatory bidding process that foresees the participation of a sufficient number of companies and where financial support is allocated on the basis of the most successful offers submitted by bidders in a competitive process;
 - 1.15. **Renewable Energy Sources Producer** – means the physical or legal person that produces electricity from the renewable energy sources;
 - 1.16. **Privileged Producer** – means any producer of renewable energy that benefits from a support scheme;
 - 1.17. **Regulator** – means the Energy Regulatory Office of the Republic of Kosovo established as an independent agency according to the law on Energy Regulator;
 - 1.18. **Support Scheme** - means any instrument, scheme or mechanism applied by the Republic of Kosovo, which promotes the use of energy from renewable sources by reducing the cost of that energy, guaranteeing the price at which it can be sold, or increasing the volume of this purchased energy, including, but not limited to, investment assistance, tax exemptions or deductions, tax refunds, as well as direct price support schemes, including feed-in tariffs, sliding or fixed payments of premiums;
 - 1.19. **Maximum Feed-In Tariff**– means the maximum guaranteed price that a privileged producer can be awarded through the competitive bidding process with a feed in tariff;
2. Other terms used in this Rule have the same meaning as the Law on Energy Regulator, Law on Energy, Law on Electricity, and other applicable laws in Kosovo.

Article 3 Main Principles

1. The Regulator shall set the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff in the competitive bidding process.
 - 1.1. The Maximum Fixed Premium is used when the competitive bidding process utilizes a contract for premium, through a fixed premium.
 - 1.2. The Maximum Strike Price is used when the competitive bidding process utilizes a contract for Maximum Strike Price.
 - 1.3. The Maximum Feed-in Tariff is used when the competitive bidding process utilizes a Feed-in Tariff Mechanism.
 - 1.4. Bids that exceed the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff shall be excluded from the competitive bidding process.

2. The Regulator shall aim to set the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff at a level which allows sufficient competition within the competitive bidding process and limits excessive privileged producer gains while ensuring that sufficient capacity can be contracted.
3. The Regulator shall consider the duration of the Contracts for Support, set for the specific auction, to set the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff.
4. In determining the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff, the Regulator shall refer to, but is not bound by or limited to:
 - 4.1. Necessary data for evaluation of the price for the respective process;
 - 4.2. Past volumes and costs from previous similar renewable energy projects and support schemes in Kosovo and countries elsewhere in Europe, taking account of the similarities and differences between projects;
 - 4.3. The results from previous renewable energy support schemes;
 - 4.4. Historical data on the electricity market in Kosovo and countries elsewhere in Europe; and,
 - 4.5. Future projections of the electricity market in Kosovo and countries elsewhere in Europe; and
 - 4.6. Data and calculations of any specific project;

Article 4

Options to analyze and set the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff

1. The Regulator can utilize, but is not limited to, one or a combination of the following options to set the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff:
 - 1.1. Setting the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff through the referent price set by the Regulator;
 - 1.2. Setting the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff using the market price established in the previous competitive bidding process for the same renewable source technology; and,
 - 1.3. Setting the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff through the Levelized Cost of Electricity (LCOE) Methodology.
2. ERO may adjust the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff resulting from the methodologies mentioned in Article 4, paragraph 1, based on results from previous Support Schemes project, expert knowledge and regional experience.

Article 5

Setting the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff according to Reference Market Price set by the Regulator

1. The Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff set in the reference price determined by the Regulator, take into consideration the data from the past, to evaluate the avoided costs resulting from a project.
 - 1.1. The Regulator shall utilize the “Methodology on Calculation of Reference Price for Energy Generated from RES” no. 01/2020, to set the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff through this option.
 - 1.2. The Regulator may use data from the past year or averages from multiple past years for their evaluation of the reference price, according to this article.
 - 1.3. For technology specific competitive schemes, the Regulator shall utilize technology and project specific energy production profiles, on an hourly basis. The production of electricity shall consider all losses up to the metering point.
 - 1.4. For technology neutral competitive schemes, the Regulator shall utilize market average historical reference prices on a yearly basis.
2. The Maximum Fixed Premium set through this option is set at 0 (zero), since the reference price presents the adjusted market price on a merit basis.

Article 6

Setting the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff using the market price established in the previous competitive bidding process

1. The Regulator may utilize this method when the conditions of the current competitive bidding process do not differ significantly from the previous competitive bidding process. This includes:
 - 1.1. Similar technology of competitive bidding process;
 - 1.2. Contributions by the Government of Kosovo (such as land use, grid connection etc.);
 - 1.3. Duration of support contracts;
 - 1.4. Ownership of facility after Contract for Support ends;
 - 1.5. Size and complexity of the project;
 - 1.6. Geographical and weather conditions;
 - 1.7. Costs of technology, materials and labor;

2. The Regulator shall use the market price set at the previous competitive bidding process, at an over-capacity of at least 50% of the previous competitive bidding process target capacity.
 - 2.1. If the previous competitive bidding process did not result in an over-capacity of 50%, then the Regulator may use the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff of the latest bidding process that fulfills this criteria.

Article 7

Setting the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff through the Levelized Cost of Electricity Methodology (LCOE)

1. By utilizing this method, the Regulator shall assess all applicable costs for the planned project, construction period and the duration of the Contract for Support of the project. This can include but is not limited to:
 - 1.1. Technology costs;
 - 1.2. Operation and maintenance costs;
 - 1.3. Engineering, procurement and construction costs (including technology transportation costs);
 - 1.4. Grid connection costs and fees for use of grid;
 - 1.5. Reasonable return on investment, considering the level of risk;
 - 1.6. Financing costs and capital costs (debt, equity);
 - 1.7. Applicable balancing costs;
 - 1.8. Cost of land;
 - 1.9. Decommissioning costs (if applicable); and,
 - 1.10. All applicable fees, levies, and taxes.
2. The Regulator may base their estimation on data from similar implemented projects.
3. The production of electricity shall consider all losses up to the metering point.
4. The duration of the Contract for Support from the specific competitive bidding process, shall be considered as the lifetime of the project to set the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff through the LCOE method.
5. The Maximum Fixed Premium set through the method of the levelized cost of energy shall evaluate all applicable costs for the project, and will exclude the forecast financial revenues for the electricity sold by the producer in the market.

- 5.1. The Regulator may utilize predictions or past data on market prices to estimate forecasted revenues from electricity sold in the market.
6. The Maximum Strike Price and Maximum Feed-in Tariff shall be set at the LCOE resulting from this calculation.
7. The method for calculation of the Maximum Fixed Premium, Maximum Strike Price and Maximum Feed-in Tariff through LCOE, is described in Article 8.

CHAPTER II

METHODOLOGY FOR CALCULATION OF THE MAXIMUM FIXED PREMIUM AND MAXIMUM STRIKE PRICE

Article 8

The method of calculation through the Levelized Cost of Electricity Methodology (LCOE)

1. The Maximum Fixed Premium set through the LCOE method utilize the following equation:

$$\text{Maximum Fixed Premium} = LCOE_p$$

$$LCOE_p = \frac{\text{Total cost of the project} - \text{Revenues from the market}}{\text{Total project output}}$$

$$\text{Total project cost} = \sum_{t=1}^n \frac{C_t}{(1+r)^t}$$

$$\text{Revenues from the market} = \sum_{t=1}^n \frac{P_t \times E_t}{(1+r)^t}$$

$$\text{Total project output} = \sum_{t=1}^n \frac{E_t}{(1+r)^t}$$

$$LCOE_p = \frac{\sum_{t=1}^n \frac{C_t - (P_t \times E_t)}{(1+r)^t}}{\sum_{t=1}^n \frac{E_t}{(1+r)^t}}$$

Where:

$LCOE_p$ Levelized Cost of Electricity, to set the Maximum Fixed Premium;

C_t Costs/expenditures in year t (including, but not limited to expenditures mentioned in Article 6, paragraph 1 of this methodology), incurred during construction and during the period of the Contract for Support;

E_t Electricity generated at the metering point, in year t,;

- P_t Average estimated price of electricity in year t;
- r Discount rate;
- n Duration of the Contract for Support, set for the specific auction.

2. The Maximum Feed-in Tariff and Maximum Strike Price set through the LCOE Methodology Shall utilize the following equation:

$$\text{Maximum Strike/Feedin Price} = LCOE_S$$

$$LCOE_S = \frac{\text{Total Project Cost}}{\text{Total Project Output}}$$

$$\text{Total cost} = \sum_{t=1}^n \frac{C_t}{(1+r)^t}$$

$$\text{Total output} = \sum_{t=1}^n \frac{E_t}{(1+r)^t}$$

$$LCOE_S = \frac{\sum_{t=1}^n \frac{I_t + O_t + \dots}{(1+r)^t}}{\sum_{t=1}^n \frac{E_t}{(1+r)^t}}$$

Where:

- $LCOE_S$ Levelized Cost of Electricity, to set the Maximum Feed-in Tariff / Maximum Strike Price;
- C_t Costs/expenditures in year t (including, but not limited to expenditures mentioned in Article 6, paragraph 1 of this methodology), incurred during construction and during the period of the Contract for Support;
- E_t Electricity generated at the metering point, in year t;
- r Discount rate;
- n Duration of the Contract for Support, set for the specific auction.

CHAPTER V
FINAL PROVISIONS

Article 9

Modification

1. The Regulator is entitled to change or modify any provision of this rule.
2. The procedures for changing or modifying this rule shall be the same as for its approval.

Article 10

Interpretation

In case there are uncertainties concerning the provisions of this rule, the Board shall issue explanatory information.

Article 11

Entry into force

This Rule shall enter into force upon its approval by the Board of Energy Regulatory and will be published on the official website of the Regulator.

Board of Energy Regulatory Office:

Ymer Fejzullahu, Chairman

Lutfije Dervishi, Member

Gani Buçaj, Member

Arta Qorolli, Member

Adnan Preniqi, Member