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**METHODOLOGY ON DETERMINATION OF SYSTEM
OPERATOR TARIFFS**


-SO Tariff Methodology-

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1.0 INTRODUCTION

1.1 Purpose

This document sets out the methodology to be used by KOSTT to determine the tariffs that System Users pay to the System Operator¹ (SO Tariffs).

Transmission system connection taxes are governed by the Transmission Connection Charging Methodology, which is issued separately from KOSTT and approved by ERO².

1.2 Scope

This document covers:

1. Legal and Regulatory framework on System Operator Tariffs;
2. The definition of System Operator Services;
3. System Operator Cost Allocation;
4. System Operator Tariffs Calculation.

1.3 Legal and Regulatory Requirements

This Methodology takes into account and complies with requirements provided under:


- Law No. 05/L-081 on Energy;
- Law No. 05/L-085 on Electricity;
- Law No. 05/L-084 on Energy Regulatory;

This methodology has also been prepared in accordance with the following documents:

- Transmission System Operator license;
- Market Operator license;
- Rule on Maximum Allowed Revenues of Transmission System Operator and Market Operator (TSO/MO Revenues Rule);
- Rule on General Conditions of Energy Supply;

¹ System Users are set forth by the Law on Electricity.

² ERO - Energy Regulatory Office

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- Principles on Determination of Transmission and Market Use of System Tariffs and Connection Taxes;

1.4 TSO/MO types of Tariffs and Taxes

- **Transmission Use of System Tariffs (TUOS)** - The manner for deriving these tariffs is set out in the TUOS Charging Methodology.
- **System Operator Tariffs** - The methodology for deriving these tariffs is set out in this document.
- **Market Operator Tariffs** - The methodology for deriving these tariffs is set out in the MO Tariff Methodology.
- **Connection Taxes** - The methodology for deriving these taxes is set out in the Methodology on Determination of Taxes for Connection to Transmission System;

2.0 LOSSES IN THE NORTH

In the TSO/MO Maximum Allowed Revenues Rule, it is determined that losses in northern part of Kosovo will be incorporated for a while into transmission tariffs, until political barriers are removed. Provisions related to these costs are defined in the TSO/MO Maximum Allowed Revenues Rule.


3.0 CONTRACTUAL ARRANGEMENTS

The Rule on General Conditions of Energy Supply determines the general conditions of energy supply to customers, and the duties and obligations of energy enterprises and customers. It described the general principles of connections and use of the system, reading, metering, billing and collection and unauthorized use of energy.

According to the Market Rule the payment of obligations to KOSTT is mandatory. Market Rules set out the procedures to be followed in cases of disputes relating to tariffs or non-payment of tariffs.

4.0 LEGAL AND REGULATORY BASIS FOR DETERMINING TARIFFS

Rule on Maximum Allowed Revenues of Transmission System Operator and Market Operator (MAR) sets the ground for determining of Maximum Allowed Revenues in each relevant year, pursuant to the Law on Energy Regulatory and Transmission Charging Principals.

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Pursuant to Article 3 (TSO/MO Revenues Rule), the TSO/MO shall propose Transmission Use of System Tariffs (TUOS), System Operator Tariffs (SO), and Market Operator Tariffs (MO), such that within each Relevant Year the revenues that it expects to earn from these tariffs are equal to Maximum Allowed Revenues approved by the Regulatory;

Under Article 19 (TSO/MO Revenue Rule), the TSO/MO shall propose Transmission Use of System tariffs (TUOS), so that the TSO/MO can cover the costs of the system operator for the performance of the system operator services, as authorized by the TSO license; Allowed loss costs are included in the costs of the system operator and are covered by the system operator costs;

Under Article 20 (TSO/MO Revenues Rule), the System Operation Tariffs Methodology is approved by the Regulatory; This Methodology and any its subsequent, TSO/MO shall submit to the Regulatory for further approval at least 15 Business Days³ prior to its proposed date of effectiveness.

4.1 Transmission System Operator License

The TSO license requires from KOSTT that during the determination of prices to be charged to the transmission system users, the licensee should not have preference for any users or categories of users, and should not unreasonably discriminate any user or category of users and should not impose unjust and sever terms for connection into the system or its use

Also, this license requires that in the process for determination of tariffs for transmission system use and connection tariffs, the licensee shall ensure appropriate signals for non-discriminatory pricing so as to encourage new parties for connection to transmission network and access to energy market.


The licensee in his internal accounting shall keep an accounting for his activity as a whole and for other activities. Regulatory accounting will be in compliance with regulatory accounting guidelines issued by the ERO.

4.2 System Operator Services

System operator services are set out in the Transmission System Operator licence and in the Law on Electricity. The same include as follows:

- System Operational planning;
- Dispatch of generation;
- Balancing of the electro-energy system;

³ Business Days means all working days of the week as defined in applicable Law of the Republic of Kosovo.

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- Establish and maintain operational security standards;
- Procurement of balancing services for balancing the system;
- Procurement of energy to cover losses;
- Managing of interconnectors with other countries and the imports, exports and transit flows across those interconnectors, including development of rules for managing congestion.


5.0 MAXIMUM ALLOWED REVENUES (MAR)

5.1 General principles determining maximum allowed revenues

KOSTT levied revenues through tariffs in a year are determined by ERO through MAR review process. This process comprises a periodic review, and a regular adjustment for indexation of allowed costs and revenues, and adjustments for over and under recovery of costs (see Article 3 of the TSO-MO Revenues Rule).

Following these processes, ERO sets out MAR for Transmission System and Market Operator (TSO/MO), and then allocates these costs to each activity separately for the purpose of setting tariffs. In addition, the TSO/MO is allowed to receive other unregulated revenues which are excluded during the calculation of the MAR. These Other Revenues are from the following sources:

- **Grants:** ERO does not take into account grant income from grants upon calculation of depreciation and allowed returns. Assets funded by grants are not included in Regulated Assets Base;
- **Connection Revenues:** Connection assets funded by the customer are not included in depreciation and allowed returns, respectively are not included in MAR of TSO/MO. Treatment of funds received from this activity is provided under Transmission Connection Charging Methodology;
- **Transit Revenues/expenditures:** Net revenues, respectively the difference between transit revenues and expenditures is included in calculation of maximum allowed revenues;
- **Revenues from the Cross-Border Capacity Allocation:** Revenues from capacity allocation whenever there are such activities will be dealt with during the determination of maximum allowed revenues;
- **Revenues from the Use of Optical Fibre Capacities:** In the future, KOSTT is expected to have revenues from the rental of fibre optic infrastructure;

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5.2 Allocation of MAR to activities

The first stage in the calculation of user tariffs is to allocate the MAR defined in the periodic tariff review/regular adaption to the separate TUOS activities, System Operator and Market Operator activities. Annex 1 describes SO cost allocation process in detail.

6.0 STRUCTURE OF SYSTEM OPERATOR TARIFFS

6.1 Key features

The key features of the structure of the Transmission tariffs are set out in the Transmission System User and Charging Principles (Article 7).


The key features related to System Operator tariffs are:

- TSO shall cover tariffs for Market Operator and System Operator services through a separation coefficient of generation and supply, depending on their share in the amount of energy in the transmission:
- - *When this allocation results in the average annual price of the transmission fee paid by the generator to be greater than € 0.5/MWh, then the allocation in the MO and SO tariffs should be updated in such a way that the average tariffs paid by the generator shall not exceed the value of 0.5 €/MWh.*
- Tariffs should be set so as to differentiate the costs of providing and maintaining the Transmission System available at different voltage levels.
- SO tariffs do not vary with the voltage level at which the connection is made.
- Generators who are connected to the distribution system should not bear the cost of transmission losses.

6.2 Charging basis

In order to determine the SO tariffs applicable to an individual user, charging metrics need to be defined. KOSTT considers that the following metrics are consistent with Transmission Charging Principles:

- The TSO/MO will calculate the SO tariffs annually, prior to the start of the relevant year in accordance with Articles 19 and 20 of the TSO-MO Revenues Rule.
- Subject to approval of the tariffs by ERO, KOSTT will publish its SO tariffs.

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- The tariffs will be levied per kWh and applied to the user's monthly throughput.
- The costs for which tariffs are to be levied are not related to location on the transmission system.

As noted above, KOSTT does not consider it appropriate to charge distribution embedded generators for the cost of procuring the energy required to cover the energy losses of the transmission system. Therefore, separate SO tariffs are calculated for such generators.

6.3 Formulas for the calculation of SO tariffs

System Operator Revenues formula:

$$A = B + C + D$$

SO tariffs formula:

$$T-OS_p = (A - C - D) / X_p / (E + F) + (C + D) / X_p / E$$

$$T-OS_{psh} = (A - C - D) / X_{psh} / (E+F)$$

$$T-OS_{f/sh} = A / X_{f/sh} / G$$

Description and units:

A – SO Revenues - **€**

B – SO costs - **€**

C – Transmission Losses Costs - **€**

D – Ancillary Services Costs - **€**

E – Transmission Embedded Generation – **GWh**

F – Distribution Embedded Generation – **GWh**


G – Sales to end-customers and direct customers + Distribution losses – **GWh**

T-OS_{pt} –SO Tariffs for Generator - **€/MWh**

T-OS_{psh} – Distribution Generator SO Charge – **€/MWh**

T-OS_{f/sh} –SO Tariffs for Suppliers and Distribution - **€/MWh**

X_p – Cost allocation factors for the transmission embedded generator

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X_{psh} – Cost allocation factors for the distribution embedded generator

$X_{f/sh}$ – Cost allocation factors for the supplier and distribution

6.4 SO Tariffs Types

The following table shows the charging quantities referenced in the Market Rules (by name and variable) and the charging metrics in this document to which they relate.

Tariff type in SO Charging Methodology and Units	Market Rule Variable	Tariff name based on Market Rule
OS _{pt} Tariff (for the Transmission Embedded Generation) - €/MWh	TGSO	Generator System Operator Tariff
OS _{psh} Tariff (for the Distribution Embedded Generation) - €/MWh	TGDSO	Distribution Generator System Operator Tariff
OS _f Tariff (for the Suppliers and Distribution) - €/MWh	TSSO	Tariffs of the Supplier and Distribution System Operator for System Operation

7.0 PURCHASE OF THE ANCILLARY SERVICES

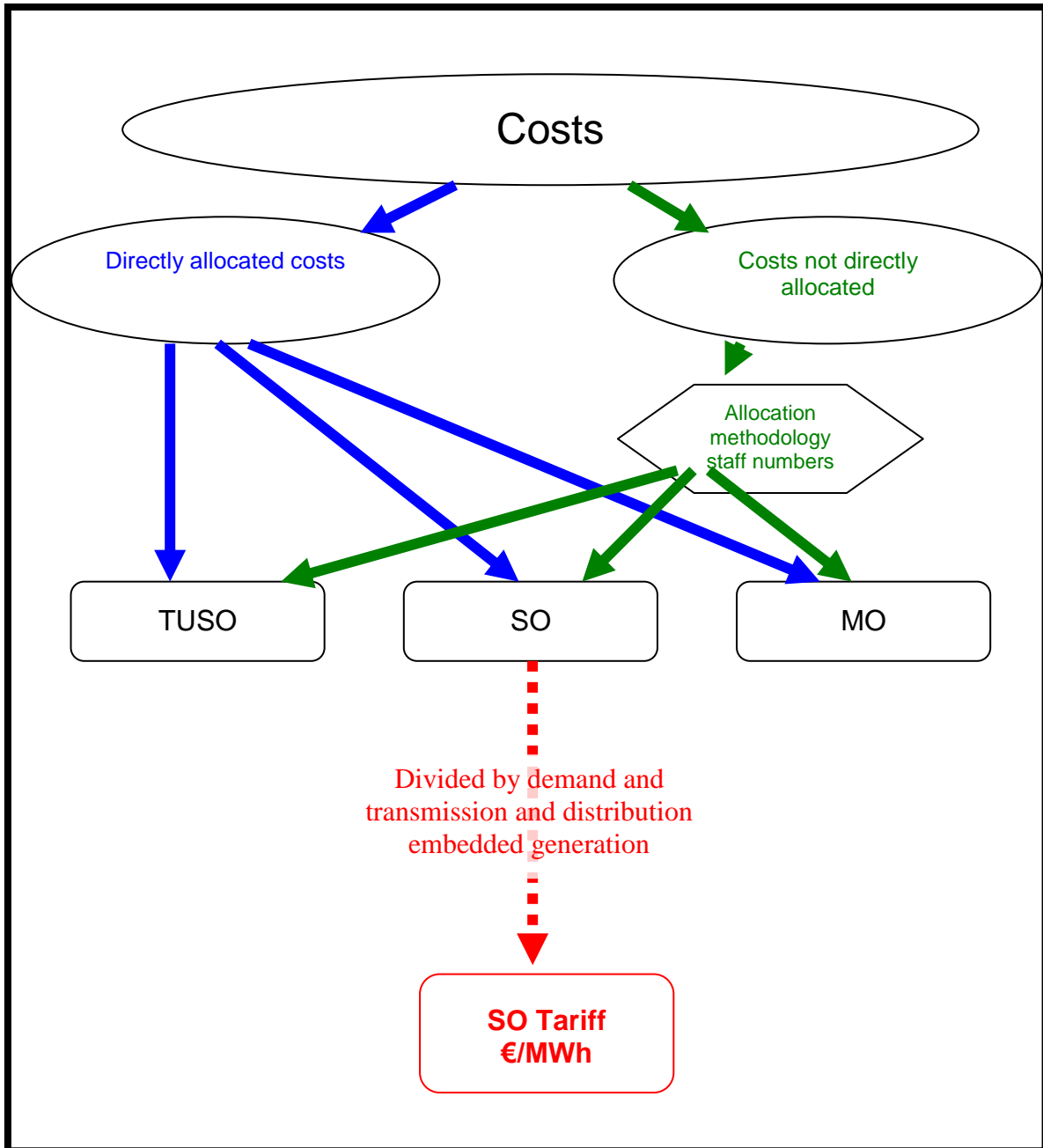
KOSTT is responsible for procuring the ancillary services necessary for operation of the transmission system. The costs of procuring ancillary services are part of the System Operator function and are subject to the approval by the ERO.

8.0 ADJUSTMENT FOR OVER/UNDER RECOVERY OF MAR

This charging methodology does not explicitly take account of any over or under recovery of MAR (or the element of MAR attributable to TSO/MO activities) in a relevant year. The mechanism for adjusting for under or over recovery is through the calculation of the overall maximum allowed revenue each year as set out in the TSO/MO Revenues Rule.

ANNEX 1: COSTS ALLOCATION

The following graph indicates the principle of cost allocation by activities: Use of Transmission System, System Operator and Market Operator.



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