



**METHODOLOGY ON DETERMINATION
OF TRANSMISSION SYSTEM OPERATOR
TARIFFS**

DT-KO-005


ver. 2.0

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**METHODOLOGY ON DETERMINATION OF
TRANSMISSION SYSTEM OPERATOR TARIFFS**


-TUOS 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 to be paid by system users for use of the transmission system¹, (TUOS tariffs)

Transmission system connection taxes are governed by the Methodology on Determination of Taxes for Connection to Transmission System, which is issued separately from KOSTT and approved by ERO².

1.2 Scope

This document covers:

1. The legal and regulatory framework for transmission network use of system tariffs;
2. The definition of Transmission Use of System (TUOS) services;
3. TUOS cost allocation;
4. TUOS 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) ;

¹ System users are defined by the Law on Electricity

² ERO- Energy Regulatory Office

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- Rule on General Conditions of Energy Supply;
- 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 methodology for deriving these tariffs is set out in this document.**
- **System Operator Tariffs** – The methodology for deriving these tariffs is set out in the SO Tariff Methodology.
- **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 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 sets out the procedures to be followed in cases of disputes relating to tariffs or non-payment of tariffs.

3.0 LEGAL AND REGULATORY GROUNDS FOR DETERMINING TARIFFS

Rule on Maximum Allowed Revenues of Transmission System Operator and Market Operator (MAR) sets the ground for determining the 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.

Pursuant to Article 17 (TSO/MO Revenues Rule), TSO/MO shall propose TUOS tariffs, so as TSO/MO may return the allowed revenue not covered by other tariffs.

Pursuant to Article 18 (TSO/MO Revenues Rule), the TUOS tariff methodology is to be approved by the Regulatory. This Methodology and any its subsequent amendments, TSO/MO shall submit to the Regulatory for further approval at least 15 Business Days³ prior to its proposed date of effectiveness.

3.1 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.

TSO license requires from KOSTT to prepare and publish a five year mid-term investment development plan deriving from 10 years mid-term development plan of transmission system.

3.2 Transmission Services

Transmission services are set out in the Transmission System Operator licence and in the Law on Electricity; they include the following:

- Should plan, operate, maintain and develop Transmission System in compliance with the technical codes, rules and legislation in force.
- Is responsible for the efficient, economic and coordinated operation of the Transmission System, including cross-border electricity flows, in accordance with the legislation in force.

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

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- Should provide conditions for connection to the transmission network and transmission system use in compliance with the legislation in force and Rule for general conditions with energy supply. For any possible dispute from connection in the transmission system or transmission system use, shall apply the provisions of the Rule for solving the complaints and disputes in Energy Sector, issued by ERO.


4.0 MAXIMUM ALLOWED REVENUES (MAR)

4.1 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 (sees 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 revenue, i.e. the difference between revenues and expenditures from the transit is included in the calculation of the 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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4.2 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 TSO cost allocation process in detail.

4.3 Split of Allowed Revenues between 400/220kV and 110kV

For the purpose of calculating Transmission Use of System Tariffs (TUOS), the Transmission System Operator allowed revenues are further split between tariffs for use of the 400/220kV part of the transmission system and tariffs for use of the 110kV part of the system. Users connected at 110kV pay for both use of the 110kV part of the system and use of the 400/220kV part of the system; users connected to the 400/220kV part of the system only pay tariffs in respect of use of the 400/220kV system.

To reflect the Law on Electricity requirement that tariffs should be non-discriminatory and provide efficient economic signals to system users KOSTT has determined that the cost reflective approach is to make the allocation of revenues between 400/220kV and 110kV customers based on the values of assets at each voltage level.


5.0 STRUCTURE OF TUOS TARIFFS

5.1 Key features

The key features of the structure of the Transmission tariffs are set out in the Principles on Determination of Transmission and Market Use of System Tariffs and Connection Taxes - (Article 7).

- *The TSO should recover its TUOS tariffs by a weighting of 0% to Generation and 100% to Demand.*
- *TSO should recover its tariffs market operator and system operator services by a sharing coefficient towards generation and supply, depending on their share on the amount of energy in transmission.*

As discussed above, KOSTT proposes to calculate TUOS differently for Users connected to the 110kV system compared to Users connected directly to the 400/220 kV system.

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5.2 Charging basis

In order to determine the TUOS 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 TUOS tariffs annually, prior to the start of the relevant year in accordance with Articles 17 and 18 of the TSO-MO Revenues Rule.
- After the ERO approval, KOSTT will publish its TUOS tariffs.
- Tariffs will be calculated based on the user's expected maximum demand in transmission system.
- Costs about which tariffs are calculated do not relate with the location in transmission system.
- The tariffs to be levied per kW and applied to the supplier expected maximum demand at the time of system peak demand measured monthly and corrected with coefficient versus the participation in the peak demand annual system.

5.3 Formulas for the calculation of TUOS tariffs

Revenue Allocation Formula for 400/220 kV TUOS Revenues and 110 kV TUOS Revenues:

$$B = A * \text{Allocation factor based on assets 400/220 kV}$$

$$C = A * \text{Allocation factor based on assets 100 kV}$$

TUOS tariffs calculation formulas:

$$T\text{-TUOS 400/220 kV} = B / (D + E)$$

$$T\text{-TUOS 110 kV} = (C / E) + T\text{-TOUS 400/220 kV}$$

Description and units:


A – TUOS Revenues - €

B - 400/220 kV TUOS Revenues - €

C –110 kV TUOS Revenues - €

D – Expected load on the 400/220 kV network – **Peak 400/220 kV - MW**

E – Expected load on the 110 kV network – **Peak 110 kV - MW**

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T- SHST 400/220 kV –400/220 kV TUOS Tariffs - €/kW

T- SHST 110 kV –110 kV TUOS Tariffs - €/kW

5.4 TUOS 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.

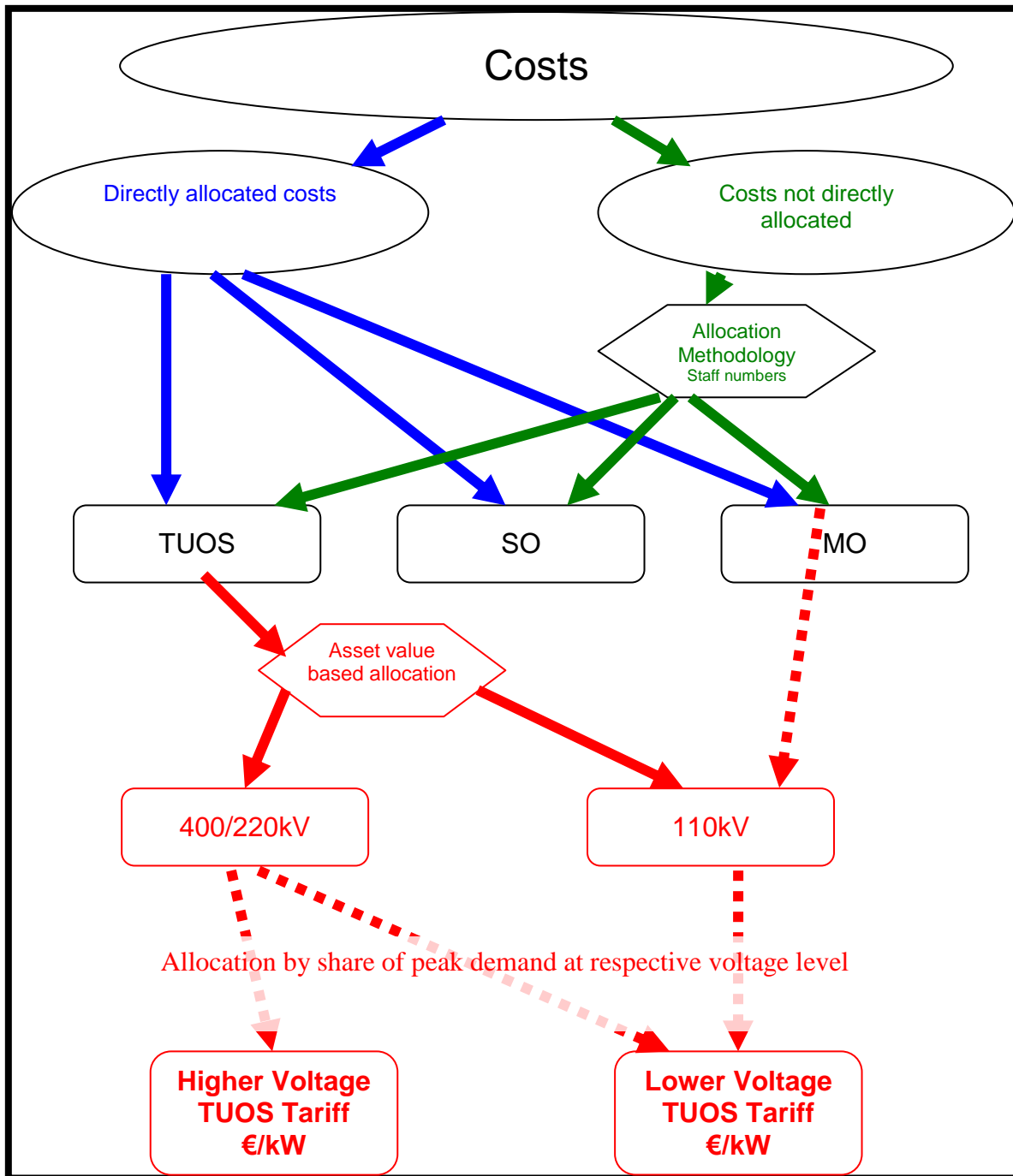
Charging Type in TUOS Charging Methodology and Units	Market Rules Variable	Charging name based on Market Rules
Supplier TUOS Charge 400/220 kV - € / kW	SNC 400/220	Supplier Network Use of System Tariff for Voltage Level 400/220 kV
Supplier TUOS Charge 110 kV - € / kW	SNC 110	Supplier Network Use of System Tariff for Voltage Level 110 kV


6.0 ADJUSTMENT FOR OVER / UNDER RECOVERY OF MAR

This tariff 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: COST 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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ANNEX 2: METHODOLOGY FOR CALCULATION OF TUOS LIABILITIES

Annex 2 is prepared to serve the basis of calculating liabilities of system users towards TSO/MO, to the approval of Market Rules.

$$PF_n = NF_{nh} * \frac{NMS}{\sum_1^n NF_n} * T_{SHST} / 12$$

Where:

PF_n -supplier payment n

NF_{nh} - supplier load at monthly maximum peak demand of system

NMS - Annual maximum load of system

$\sum_1^n NF_n$ - The amount of supplier load at the monthly maximum peak demand of system h -hour when the maximum peak demand during a month occurred.

Divided with 12 for the purpose of calculating monthly liabilities.

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