Republika e Kosovës
Republika Kosova - Republic of Kosovo

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

Loss reductions target– Consultation Paper

Input Values Periodic Review for TSO/MO and DSO

(2018-2022)

DISCLAIMER

This Initiation Paper has been prepared by ERO for the purpose of informing energy sector stakeholders. The Paper does not represent a decision by the ERO and should not be interpreted as such.

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1 Introduction

The Energy Regulatory Office (ERO) is conducting the second Periodic Review for the Second Multi-Year Tariff (MYT2) to set the Maximum Allowed Revenues (MAR) for the Transmission System Operator (TSO), Market Operator (MO) and the Distribution System Operator (DSO) for the period 1 April 2018 to 31 March 2023. KOSTT J.S.C. is the TSO and MO and KEDS J.S.C. the DSO. The current allowed revenues were established at the first Periodic Review in 2013 (MYT1).

As part of this review, ERO will determine a number of key input variables to the MAR calculation in advance in order to provide adequate time for public consultation on these. This follows the practice applied for MYT1. The input values concerned are:

- **The starting level and expected rate of reduction in transmission and distribution system losses, the subject of this consultation paper**.
- The expected rate of efficiency improvements in operating costs of the TSO and DSO.
- The Weighted Average Cost of Capital (WACC) of the TSO and DSO.
- The appropriate asset lives to be used for the purposes of calculating regulatory depreciation of new investments.
- Loss Sharing Factor.
- Savings Sharing Factor which is applied for savings which exceed the efficiency factor, and
- Any other input parameter that the Regulator may deem necessary.

This paper is issued for public consultation. Any comments can be submitted in electronic form by email at ero.pricing-tariffs@ero-ks.org or submitted in hard copy at the following address:

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Comments must be submitted by interested parties by 18 July 2017 at the latest.

ERO reserves the right to publish any comments received in full or in part unless identified as confidential.

Related documents

Law on Electricity	http://ero-ks.org/2016/Ligjet/LIGJI_PER_ENERGJINE_ELEKTRIKE_ang.pdf
Law on Energy Regulator	http://ero-ks.org/2016/Ligjet/LIGJI_PER_RREGULLATORIN_E_ENERGJISE_ang.pdf

TSO/MO Pricing Rule	http://ero-ks.org/2017/Rregullat/TSO-MO%20Pricing%20Rule.pdf
DSO Pricing Rule	http://ero-ks.org/2017/Rregullat/DSO_Pricing_Rule.pdf

2 Regulatory Mechanism

The MAR values established for the TSO, MO and DSO at each price review are prepared according to a 'building-block' methodology. Under this, each entity is permitted to earn from the tariffs an amount equal to the sum of its efficient operating costs, the depreciation of its Regulated Asset Base (RAB), a return on the RAB, the cost of losses, a License Fee, and the cost of any public service obligations and other expenses incurred and not otherwise recovered.

The cost of losses concerns the cost of energy purchased by the TSO and the DSO, for recovering the losses in the transmission and distribution networks, respectively. Losses in a network are defined as the difference between the energy entering the network and the energy leaving the network. Losses for each network are expressed as a percentage of the energy entering the respective network. Losses comprises technical losses and unauthorized consumption of electricity (commercial losses) and the target for their reduction includes both of them.

Given that transmission and distribution networks are regulated, it is under the competence of the Regulator to set incentive mechanisms for reduction of losses. The appropriate mechanism is setting the targets for mid-terms periods or long-term periods. The aim of the targets for reduction of losses is based on the basic regulatory principle that customers shall be provided efficient service with minimal costs and the companies shall have benefits as a result of improving the performance.

3 Decision for First Regulatory Period Input Values (MYT1)

In MYT1 ERO decided as follows, regarding the allowance for losses:

- The allowed level of losses in the transmission network was set at 1.8% for each year of the first regulatory period[1].
- An allowed loss reduction curve was applied over the first regulatory period, based on the value of distribution network losses recorded in 2011[2]. According to that decision, losses in the one-year transition period and in each year of the regulatory period should be reduced by a specified number of percentage points, compared to the losses of the previous year, namely: 3 points in the transition year, 3 points in each of the first two years of the regulatory period , and 2.5 points in each of the subsequent three years of the first regulatory period.

[1] http://ero-ks.org/Tarifat/2013/Proceset%20e%20Shqyrtimit/eng/Evaluation_KOSTT_22_March_2013.pdf.

[2] http://ero-ks.org/Vendimet/English/2012/D_399_2012.pdf.

4 Assessment of MYT1 Outcomes

The actual and allowed losses in the transmission network are presented in table 1. As shown in the table, during MYT 1, the actual losses were in line with the level of allowed losses of 1.8%.

Table 1: Actual losses in the transmission network

	2013	2014	2015	2016	2017*
Allowed losses	1.80%	1.80%	1.80%	1.80%	1.80%
Actual losses	1.70%	1.84%	1.77%	1.86%	1.75%
Difference	-0.1%	0.04%	-0.03%	0.04%	-0.05%

(*) Forecast
Source: KOSTT

Table 2 presents the actual and allowed losses in the distribution network, comprising technical and commercial losses, and the difference with the corresponding allowed losses by ERO.

Table 2: Actual and allowed losses in the distribution network

	2011	2012	2013	2014	2015	2016
Technical losses	16.8%	16.3%	16.1%	15.6%	15.4%	13.04%
Commercial losses	16.7%	15.9%	15.0%	12.9%	11.1%	11.41%
Actual total losses	**33.50%**	**32.26%**	**31.03%**	**28.46%**	**26.55%**	**24.45%**
Losses allowed by ERO	--	30.4%	27.40%	24.40%	21.90%	19.40%
Difference	**33.50%**	**1.86%**	**3.63%**	**4.06%**	**4.65%**	**5.05%**

Source: ERO calculation of KEDS data

As shown in the table actual losses exceeded allowed losses, in each of the MYT1 years. It is understood from the composition of total losses that the main improvement in losses reduction between 2011 and 2016 was due to the decrease of commercial losses, by 5.33 percentage points, compared to a decrease of 3.72 percentage points of technical losses.

5 Options for MYT2

In order to set the loss allowance for the transmission and distribution networks the starting value and the loss reduction target will have to be set.

5.1 Setting the starting value

There are two options for the specification of the starting value, namely:

- ***Roll-forward using the approved loss reduction targets for MYT1, regardless of whether they were achieved or not***. In practice, by this option, the starting value for KEDS would be 16.9%. This option does not reward KEDS' failure to achieve the loss reduction targets in MYT1. On the other hand, it increases the financial risk, especially for KEDS, as it requires it to accelerate loss reductions, in MYT2, in order to catch up with missed targets from the previous period. As no loss reduction targets were set for KOSTT under MYT1, the implied rolled-forward target would be the same as the value at the start of MYT1, which exceeds current losses.

- ***Reset targets to actual values for 2017***. In practical terms, this would mean estimating a value for 2017, based on actual losses for 2016, and correcting for differences between this estimate and the actual value of 2017 when available at a later stage. The advantage of this option is that it aligns the starting point for the MYT2 with the actual losses realised at the current tariff period, regardless of whether the targets set have been achieved (as in the case of KOSTT) or not (as in the case of KEDS). On the other hand, it limits the exposure of KEDS (as the licensee that failed to achieve the MYT1 loss reduction targets) to the consequence of that failure, and reduces its incentive to achieve the targets.

5.2 Setting the annual loss reduction target

For the specification of the loss reduction target there are three options:

- ***Roll forward the MYT1 targets***. For KOSTT this would result in no change in losses from the approved starting value for MYT2, as no targets for year-on-year reductions were set for MYT1. For KEDS, this would imply a loss reduction target of 2.5 percentage points, each year, over the previous. This approach would be consistent with ERO's previous assessment of efficient reductions. On the other hand, further loss reductions (in the distribution network) at this rate may not be achievable and may increase financial pressure on KEDS.

- ***Set an annual target based on the actual rate of loss reductions achieved under MYT1***. For KOSTT, this would imply a *negative* target, given that reported losses increased between 2013 and 2016. For KEDS, this would imply an annual distribution network loss reduction target of approximately 1.9 percentage points, corresponding to the actual average loss reductions achieved. The advantage of this approach is that it appears more realistic, as licensees have demonstrated that such loss reductions are achievable. On the other hand, it practically rewards past inefficiency in achieving loss reduction targets or, in KOSTT's case, increasing losses over the period of MYT1. In addition, the technical feasibility of maintaining the previous period's loss reduction rates is not examined.

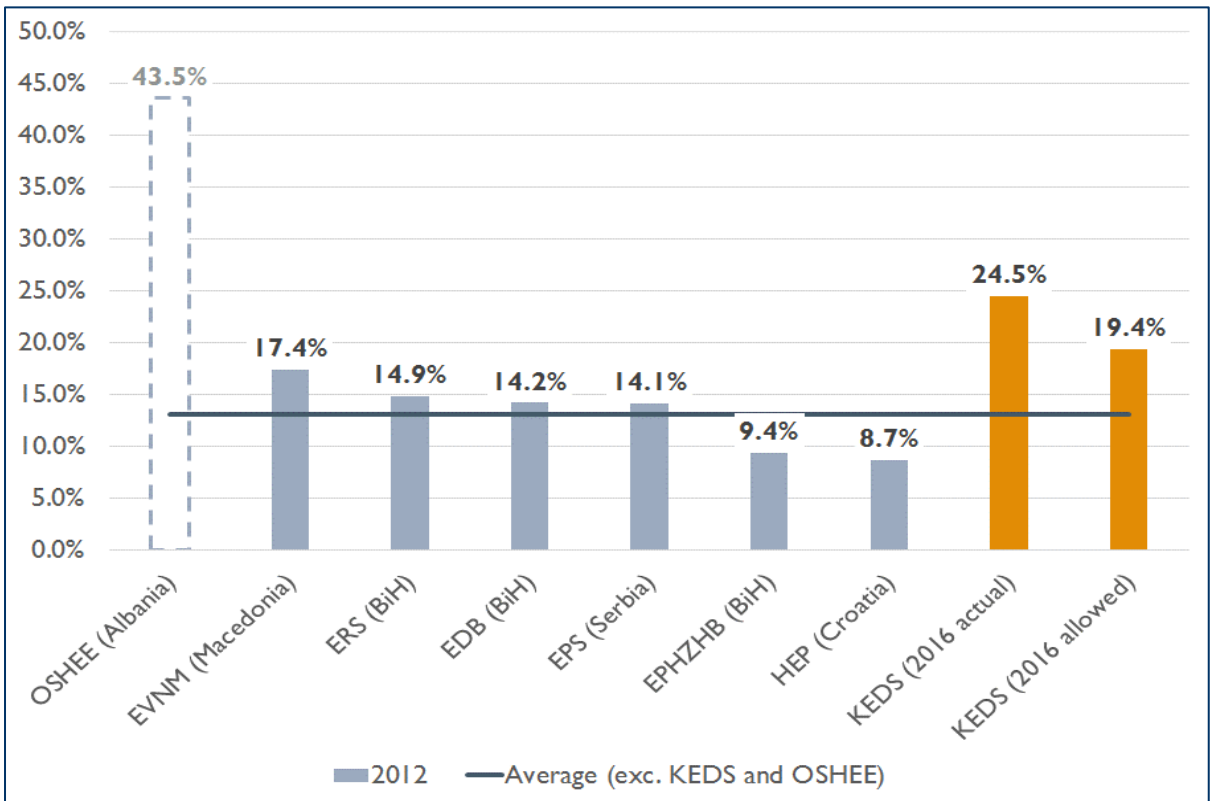
- ***Set an end-target for MYT2 based on an external benchmark and calculate an appropriate rate of reduction to achieve this***. In practice, this would only be applicable to KEDS and KOSTT's reported loses are already below the regional average[3]. The advantage of this approach is that it uses verifiable external benchmarks, independently of the actual

[3] *Status Review of Main Criteria for Allowed Revenue Determination for transmission, distribution and regulated supply of electricity and gas*, December 2013, ECRB.

performance of the licensees. On the other hand, it partly ignores structural and other differences of the neighbouring systems with those of Kosovo, and does not examine the actual potential for loss reduction.

For illustration, regional distribution losses in 2012 are shown below. The regional average was 13.24% (unweighted average). This compares with KEDS actual losses in 2016 of 24.5% and allowed losses of 19.4%

Figure 1: South-East Europe distribution losses (2012)



Source: ERO analysis of data presented in the *South East European Distribution System Operators Benchmarking Study*, April 2015, USAID.

6 Proposed Approach for MYT2

6.1 Allowed losses for KOSTT

ERO proposes to set the allowed level of transmission losses for MYT2 at 1.7%, the actual lowest value achieved in MYT1. This is a level that KOSTT has demonstrated it can achieve. It also does not reward KOSTT for the increase in losses from this level seen over the period of MYT1.

6.2 Allowed losses for KEDS

ERO considers it reasonable to expect KEDS to be able to achieve the average losses in 2012 seen across South-East European DSOs by the end of MYT2, in 2022. By that date, KEDS will have had the benefit of 10 years including significant capital expenditures which have been funded by customers to catch up to the rest of the region.

However, ERO is also mindful of the need to strike a balance between only allowing licensees to recover the efficient costs of service and avoiding unreasonable financial stress to licensees. Given that KEDS is currently failing to achieve allowed losses, there is obvious financial risk if these targets are made immediately more challenging.

Given this, ERO proposes to set allowed distribution losses for MYT2 as follows:

- In 2018 and 2019, the first two years of MYT2, allowed losses will be maintained equal to the allowed value for 2017 (the end of MYT1) or 16.9%. This 'stand-still' will allow KEDS time to catch-up with expected loss reductions under MYT1.

- Between 2020 and 2022, KEDS will be expected to reduce allowed distribution losses to the 2012 regional average (excluding Albania). This means that KEDS will be achieving comparable losses at the end of this period to those delivered elsewhere in the region 10 years before. As other DSOs can be expected to continue to improve their performance over the same period, this will still leave KEDS with allowed losses in excess of the 2022 regional average.

  Due to political circumstances and safety, losses in the northern part of the Republic of Kosovo are not handled in this document.

The resulting allowed losses for KEDS are shown below. While substantial, it should be noted that the annual reductions in allowed losses expected by ERO are less than those actually delivered by KEDS under MYT1.

Table 3: Proposed allowed losses for KEDS under MYT2

	MYT1	MYT2				
	2017	2018	2019	2020	2021	2022
Allowed losses	16.9%	16.9%	16.9%	15.7%	14.5%	13.2%
Annual loss reduction target	--	0.0%	0.0%	-1.2%	-1.2%	-1.3%