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



Loss Reduction Target

Responses to Comments

Periodic Review of Input Values for TSO/MO and DSO

(2018-2022)

DISCLAIMER

This Report of Responses is prepared by ERO with the purpose of informing stakeholders in the energy sector. The report does not represent a decision of ERO and should not be interpreted as such.

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1 Introduction

Energy Regulatory Office (ERO) is carrying out the Periodic Review for the Second Regulatory Period (PRR2) to determine the Maximum Allowed Revenues (MAR) for Transmission System Operator (TSO), Market Operator (MO) and Distribution System Operator (DSO) for the period 1 April 2018 until 31 March 2023. KOSTT JSC carries out the activities of TSO/MO, whereas KEDS those of DSO. The current allowed revenues were determined in the First Periodic Review in 2013 for the First Regulatory Period (PRR1) 2013-2017.

As part of this review, ERO will determine a number of key input variables for calculating the MAR in advance, in order to provide sufficient time for their public consultation. The same practice was also applied for PRR1. The values of the inputs in question are:

- **The starting level and expected rate of reductions in transmission and distribution system losses, which is the subject of this Consultation Report;**
- The expected rate of efficiency improvements in operating costs of TSO/MO and DSO;
- The Weighted Average Cost of Capital (WACC) of TSO/MO and DSO;
- Appropriate asset lifespan to be used for the purposes of calculating the regulatory depreciation of new investments;
- Loss sharing factor;
- Savings sharing factor which is applied for the savings which exceed the efficiency factor; and
- Any other input parameter that the Regulator may deem necessary.

ERO published a Consultation Report with its proposals for system losses in 04 July 2017. Two groups of comments were received- from KOSTT and KEDS. Both groups of comments were published on the official website of ERO along this Report.

This Report of Responses summarizes the comments received from KEDS and KOSTT on the proposed network losses to be recovered in the Regulatory Period PRR2 and ERO's responses on them.

Following the publication of this Report, ERO Board will review and carry out the final determination of allowed level of losses and the target for their reduction, which will be included in the MAR for DSO and TSO/MO for the Second Regulatory Period (PRR2).

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



Rule on TSO/MO Revenues	http://ero-ks.org/2017/Rregullat/TSO-MO%20Pricing%20Rule.pdf
Rule on DSO Revenues	http://ero-ks.org/2017/Rregullat/DSO_Pricing_Rule.pdf
Consultation Report of ERO on Loss Reduction Target in PRR2	http://ero-ks.org/2017/Tarifat/Raport_Konsultativ_per_reduktimin_e_humbjeve_04072017.pdf
KEDS Comments in the Consultation Report of ERO for Loss Reduction Target in PRR2	http://ero-ks.org/2017/Tarifat/Komentet%20ndaj%20Raportit%20Konsultative%20t%C3%AB%20ZRRE%20per%20cakun%20e%20reduktimit%20t%C3%AB%20humbjeve_KE_DS.pdf
KOSTT Comments on the Consultation Report of ERO for Loss Reduction Target in PRR2	http://ero-ks.org/2017/Tarifat/Komente%20ndaj%20Raporteve%20Konsultative%20te%20Vlerave%20Hyrese%20per%20WACC%20humbje%20dhe%20jetegjatesin%20e%20aseteve_KOSTT.pdf

2 Distribution System Operator Losses

2.1 Summary of KEDS Comments

In its comments, KEDS raised three main issues:

- When KEDS assumed control of the distribution system following privatization, actual losses already exceeded ERO's target loss level by 1.9 percentage points owing to the failure of the state-owned enterprise, KEK, to achieve the expected loss reductions. This has placed KEDS at a financial disadvantage relative to expectations.
- Since taking control, KEDS has invested heavily in the distribution system to reduce technical losses, which have decreased by 3.26 percentage points.
- KEDS has been able to reduce commercial losses (theft) by 4.5 percentage points. However, its ability to make further reductions has been constrained by the weak rule of law in Kosovo, making enforcement difficult, as well as the high levels of unemployment and poverty that make theft attractive.
- For PRR2, KEDS proposes that this situation is recognized by resetting the base distribution losses allowance at the beginning of PRR2 equal to the forecast value for 2017 of 22.9% ¹ and then reducing this by one percentage point per year from year 2018 onwards. At the end of the PRR2 period in 2022, this would mean a losses allowance of 17.9% compared to ERO's proposal of 13.2%.

¹ The value of 22.9% was KEDS forecast, even though the realization of 2017 is 24%.



In this section, ERO has reviewed KEDS proposals. ERO 's conclusions are provided at the end of the section.

2.2 Failure of KEK to achieve loss targets

KEDS claim that it has been financially disadvantaged by KEK's failure to achieve loss reduction targets implies a request for some form of compensation through lower losses reduction targets in PRR2. To consider this, it is important to understand the background to the original setting of losses reduction targets. ERO established a multi-year path for allowed distribution losses in response to the requirements of the transaction advisers to the Government who considered this necessary to provide certainty to bidders for KEK's distribution and retail businesses.

Therefore, the targets of losses were known in advance of the transaction and the information on which they were based was available to all potential bidders as part of their evaluation process. The evaluation of the risks that these targets will not be achieved by KEK or following privatization was a matter for the bidders and the cost of residual risks would be factored into their bid prices. Given this, ERO considers that there is no justification for any implied compensation to KEDS.

2.3 Achievements in PRR1 and implications for PRR2

While KEDS failed to achieve the target reductions in losses during PRR1, ERO acknowledges that it has managed to significantly reduce distribution losses. Between 2012 and 2017, losses fell by 8.3 percentage points representing an annual average reduction of 1.7 percentage points.

It is not clear from KEDS comments why it expects this rate of losses reduction to slow in PRR2, as is implied by its own proposal on allowed losses. If anything, it would be expected that the benefits of previous and ongoing investments in the distribution system and greater experience in cooperating with Kosovo judicial authorities should enable more rapid reductions in losses than have previously been achieved. Therefore, a similar loss reduction rate as in PRR1 should be seen as the minimum expected level of performance.

2.4 Conclusions and ERO's proposal for DSO losses

In conclusion, ERO does not consider as justifiable either an upward revision to the base value of losses for PRR2, from the target value at the conclusion of PRR1, or the slower rate of loss reduction proposed by KEDS, by 1.0 percentage points annually. However, ERO does note that if KEDS was able to simply maintain the trend rate of losses reduction of 1.7-1.9 percentage points annually (excluding the realization of 2017), it could expect to reduce losses from the realized level of 24% in 2017 to 13.5% in 2022. This is almost identical to the target value proposed by ERO of 13.2% (based on the regional average of 2012). This means that KEDS will achieve comparable losses at the end of this period with those secured in other countries in the region 10 years ago.



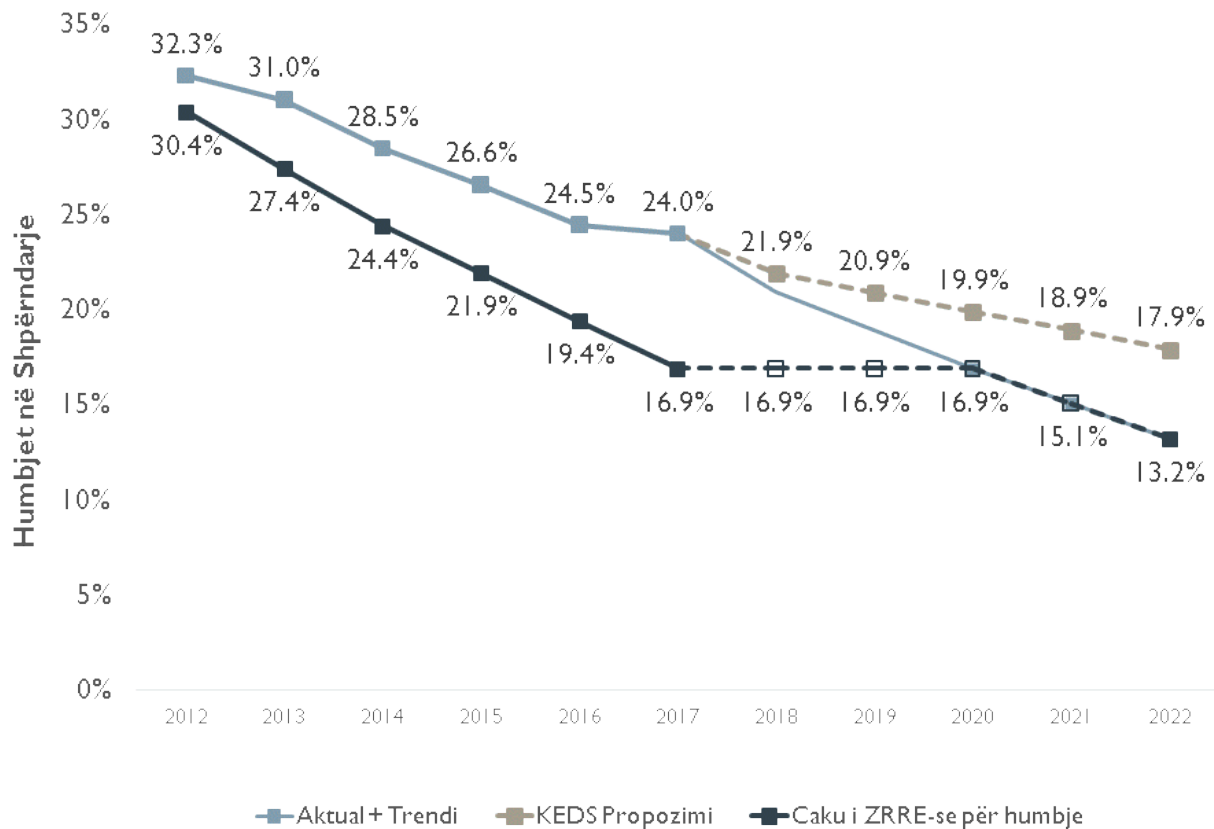
Taking this into account, ERO proposed to carry out a small modification in the initial proposal for distribution losses.

- The 'stand-still' period during which there were no further reductions in allowed losses from the PRR1 target end-value of 16.9%, is extended for one to end three years into PRR2 (i.e, by 2020). Assuming that KEDS can maintain the same trend rate of loss reduction as under PRR1 (of 1.7-1.9 percentage points annually) then this will mean actual and target losses converge by the end of this date.
- Between 2020 and 2022, the allowed level of losses reduces to ERO's target end value for PRR2 of 13.2%. This implies two years of annual reductions in losses of 1.9 percentage points, approximately in line with the trend rate in PRR1.

In ERO's view, this represents an appropriate balance between setting challenging but achievable targets for losses reductions by KEDS and not rewarding KEDS for past failures to achieve expected losses reductions.

The trajectory of the proposal of allowed or target losses by ERO, actual losses and KEDS proposal for PRR2 are presented below:

Figure 1: Distribution losses allowances





3 Transmission System Operator Losses

3.1 Summary of KOSTT's Comments

In its comments, KOSTT raised three main topics:

- KOSTT losses have generally been decreasing from 2007 to 2012, however have subsequently increased due to the displacement of the technical and commercial boundary between the TSO and the DSO. Since April 2012, KOSTT is now responsible for losses incurred in the 220/35/10 kV and 110/35/10 kV transformers. This has led to an increase in transmission losses of 18 to 20 GWh per year.
- KOSTT's current work in investing in new substations (Prishtina 6, Fushe Kosova, Mitrovica, Drenas, Dragash, additional transformers in SS Gjilani 5, SS Klina and SS Lipjan) will affect the reduction of losses in the distribution network however the higher number of transformers will increase losses in the transmission network.
- New projects will continue to affect the configuration of the network during their implementation (between 2018 and 2020) which will consequently increase transmission network losses.

For PRR2, KOSTT proposes that these factors are taken into account requesting that an average allowed losses rate of 1.84 is applied during the Second Regulatory Period PRR2.

In this section, ERO has reviewed the proposals of KOSTT. ERO's conclusions are provided at the end of the section.

3.2 ERO's position on KOSTT comments

ERO has relied on the advice of its technical consultants to provide an opinion on the technical nature of KOSTT's comments and their request to increased allowed losses. The findings of this analysis found KOSTT's arguments well-grounded for the following reasons:

- Electricity transits are caused by the third-party activities, but at the same time have significant influence on the internal transmission network losses. Therefore, transits should be taken into account in the network loss definition and should be clarified. Until the defining of the status of KOSTT as regulatory area, they will not be taken into account in the calculation.
- Despite the fact that energy entering the transmission system has not changed much during 2013-2016, there has been an increase in transmission losses during 2016. The reason given by KOSTT is based on the unfavourable operation conditions during the implementation of network investment projects which required opening of 110 kV rings. The results of the power system simulations performed using the same SECI PSS/E models suggested that, during maximum system load regime, the opening of 110 kV rings indeed resulted with transmission losses increase by few MW compared to closed ring operational regime. Based on the technical consultant's opinion, KOSTT's comments on other influential factors on the transmission network losses increase (open circuit of the OHL 400 kV Kosova B-Tirana 2,



transformers' losses i.e. inadequate level of metering accuracy of previous KEDS' metering) are also found as well justified.

3.3 Conclusions and ERO's Proposal for TSO losses

ERO notes that KOSTT has managed to keep TSO losses within the level of allowed losses of 1.8% throughout the first Regulatory Period (PRR1) 2013-2017. This achievement of KOSTT is comparable to other EU TSO's results, even lower than some other regional TSOs. The ENTSO-E average transmission network losses in 2016 were 1.65%.

Based on the technical analysis presented above, ERO proposes to allow KOSTT to recover average network losses of 1.78% (average realized in PRR1) throughout the Regulatory Period PRR2. The trajectory for the proposal of allowance of losses from ERO and the proposal of KOSTT for the Second Regulatory Period PRR2 is provided below.

Figure 2 Allowance of losses for Transmission System Operator for PRR2

