



Response to ERO Consultation paper on Loss reduction target_2017

Introduction

In energy systems losses refer the difference of electricity entered into the system with energy that is distributed to end customers, respectively it is the amount of electricity injected into the network that is not paid by the customers. Total losses are made of two components, technical losses and non-technical losses (commercial losses). Technical losses occur naturally during passing of electricity through elements of system as are distribution lines, transformers and measuring systems. Commercial losses are caused from actions outside energy system and are made mainly from electricity thefts and errors in accounting and record-keeping. These categories of losses are considered differently also as commercial losses.

Optimization of technical losses in the systems of transmission and distribution of electricity is engineering problem that includes classical methods of planning and modeling of system. Purpose and basic criterion of planning and modeling of transmission and distribution systems of electricity is to minimize the net present value of investment costs plus costs of technical losses.

Technical losses also represent an economic loss for the country, so their optimism should be seen from the state perspective despite institutional organization of the sector and ownership of the electricity operators¹.

Commercial losses represent one avoidable financial loss for operator of electricity distribution in case the legislation and respective institutions support the company for fighting and eliminating the commercial losses. Although the amount of electricity included in commercial losses is consumed by users that don't pay for it, experience shows that a considerable percentage of this amount decreases once the customers are requested to pay for the electricity. Such, decrease of demand (request) has accurately the same effect that it has the decrease of technical losses, respectively less electricity need to be purchased. So from perspective of country also the decrease and elimination of non-technical losses is very positive².

From social point of view commercial losses have a very negative effect, as regular customers subsidize also the users who do not pay for the electricity they consume. There is a wide range

¹ World Bank Group, Energy Sector Strategy, Reducing Technical and Non-technical Losses in the Power Sector, 2009

² World Bank Group, Energy Sector Strategy, Reducing Technical and Non-technical Losses in the Power Sector, 2009



of situations that create non-technical losses. Classic cases are electricity thefts by unauthorized connections and manipulations of measuring equipment. It is clear that these actions constitute criminal offenses prosecuted according to the laws in force, but in cases where operators do not have enough support from regulatory framework and justice system operates very slowly, operators find it very difficult to eliminate the bad social and economic effect that cause non-technical losses³.

Reduction of technical losses is a result of the large capital investment and proper maintenance of the distribution system. Capital investments require deep analysis and diagnosis of the system, identification of the current situation, defining the most problematic areas, the cost-benefit analysis, etc. In distribution systems very outdated (old) in which are not done required capital investments and are not systematically maintained it is difficult to obtain satisfactory results with respect to reducing technical losses in a short period of time.

Losses through years

Distribution network was privatized in 2013 and KEDS has inherited a very damaged and old network, due to the lack of investments before the war (1999), as well as neglecting investments in the first decade of the year 2000. When KEDS privatized the distribution services the parameters of the first regulatory period were already decided.

Based on the ERO Consultation paper regarding Distribution loss target, issued in 2011, technical losses over the period 2006 to 2010 have remained fairly static at around 16% to 17%, indicating that although there has been investment in the network to increase capacity and connect new customers this has had little effect in reducing technical losses. Commercial losses, on the other hand were very high compared to international standards; countries with good metering, billing and revenue collection practices have commercial loss levels below 10%. Main focus of the Regulator at that time was to decrease commercial losses, although in the long-term, Regulator's desire was to decrease distribution losses in Kosovo to around 15%, or a reduction of 25% (points) from current levels. The report stresses that such reductions will take considerable time to be achieved as illustrated by ERO's report itself, respectively by the apparent lack of impact on loss levels from the investments done in the network.

By Decision V_399_2012, ERO decided that a curve of loss reduction allowance was applied during the first regulatory period, based on the value of losses recorded in the distribution network in 2011. According to that decision, the losses in the one-year transitional period and in each year of the regulatory period should be reduced by a certain number of percentage points, compared to last year's losses, respectively: 3 percentage points in the transitional year, 3 percentage points in each of The first two years of the regulatory period, and 2.5 percentage points in each of the three following years of the first regulatory period.

³ World Bank Group, Energy Sector Strategy, Reducing Technical and Non-technical Losses in the Power Sector, 2009



It is important to emphasize that KEK in the year 2012 (who was the license holder for distribution services) has achieved the actual level of distribution losses at 32.3% from energy entered in distribution system, or an under-performance of 1.9%, compared to the target of 3% as per ERO decision V_399_2012. This shows that indicative targets set by ERO for reduction of losses in year 2012 were not fulfilled during the time when distribution and supply were under KEK management as a public and bundled company. Knowing the fact that KEDS started its operations on May 8, 2013, it meant that KEDS had to lower losses by 5% until the end of December 2013.

Lowering losses for 5% was not foreseen during discussion for closing the privatization transaction; hence in this regard KEDS on June 4, 2013 has sent an official letter at ERO for reviewing regulatory parameter which had to do with indicative targets for reducing losses, by requesting from ERO Board to re-calculate the starting point of allowed losses based on actual level of losses achieved in the year 2012, and lowering them by 3% (point percentage) in the year 2013, which would have ensured that KEDS as a new license holder wouldn't be penalized for KEK-s underperformance. The same letter was sent also to all decision-makers and representatives of the privatization unit under the Ministry of Economic Development, however KEDS never received an answer from any addressing parties.

Below we have compared actual losses achieved by Distribution operator vs allowed level of losses based on Decision V_399_2012, and actual level of losses and renewed losses in 2012. It must be emphasized that 1.9% of the inherited losses from 2012 has a compound effect on losses in yearly basis, with a different of 11.4% (percentage points)

	2012	2013	2014	2015	2016	2017
Loss Target	-3.00%	-3.00%	-3.00%	-2.50%	-2.50%	-2.50%

	2012	2013	2014	2015	2016	2017*	Total compound
Total of losses realized	32.30%	31.03%	28.46%	26.55%	24.45%	22.90%	
Decrease		-1.27%	-2.57%	-1.91%	-2.10%	-1.55%	
Allowed losses from ERO	30.40%	27.40%	24.40%	21.90%	19.40%	16.90%	
Difference Allowed vs ACT	1.90%	3.63%	4.06%	4.65%	5.05%	6.00%	25.29%
Renewed Losses in 2012	32.30%	29.30%	26.30%	23.80%	21.30%	18.80%	13.89%
New Difference	0.00%	1.73%	2.16%	2.75%	3.15%	4.10%	
Difference of the total compounds							11.40%

*Expected

KEDS was and will be committed to reduce losses as much as possible. In this regard KEDS within the first regulatory period has invested over 100 million €, which resulted in technical loss reduction of 3.26% (percentage points). This shows a positive trend of investments and



hard work and willingness of the company to reduce technical losses, especially compared to the data provided in the Consultation paper of the First Regulatory period for the reduction of actual losses for the period 2006-2010, when lots of donations were provided for improving the network system. It is important to emphasize that costs for reduction of technical losses are very high. The amount of technical losses can be influenced by the network operators at least in the medium term and by appropriate investments in the networks⁴. KEDS during this period has shown a positive improving trend and is willing to continue if the marginal costs for the reduction of losses align with the marginal costs of network losses.

On the other hand, studies and practices shows, that reducing commercial losses is less costly and much easier and faster, compared to the reduction of the technical losses. Knowing this, KEDS has put lots of effort and dedication, and in this regard it has also created a special Department for lowering losses. However, lowering losses requires as well the support of law enforcement institutions, respectively this can be achieved by applying strict disconnection measurements, by disconnecting permanently all customers that misuse electric energy and perform other illegal actions. During the first regulatory period KEDS has reduced the commercial losses from 15.9% in 2012 to 11.41% in 2016, a total reduction of 4.5% (percentage points). But Kosovo is very weak in application of the Rule on Law, which is one of the very important support of the distribution operators towards lowering the commercial losses. All national and international reports, emphasize that the main obstacles and challenges for Kosovo remain weak rule of law and corruption⁵. If we take into consideration also the economic under-development of the country, high unemployment and poverty, it is quite normal that commercial losses remain high, and yet even in this conditions KEDS achieved to lower the commercial losses to a reasonable level compared to the ones before privatization process.

Now in the process of market liberalization, legislative changes, which are supporting even more customers, proposing a loss reduction to 13.2% by the year 2022, an expected reduction of 12.5% (percentage points) compared to actual losses reduced until 2016 is very optimistic and unrealistic.

KEDS proposal

In order to keep losses at a low and reasonable level, regulators design incentive mechanisms which deliver rewards (or penalties) for network operators whenever losses are below (or above) a pre-set target level. These mechanisms are justified by the fact that network operators have, to some extent, the ability to control losses since they are responsible for several activities such as network design, maintenance and investment decisions regarding the

⁴ European Regulator Group for Electricity & Gas (2008), Treatment of Losses by Network Operators, ERGEG Position Paper for Public Consultation, Ref: E08-ENM-04-03, 2008

⁵ European Commission, Progress Report on Kosovo, 2016, https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/pdf/key_documents/2016/20161109_report_kosovo.pdf



installation of network elements that play a significant role in the determination of losses. Therefore, it is important to ensure that network operators face adequate incentives so that they make an appropriate effort on evaluating the costs and benefits of reducing losses and, hence, optimize the level of losses in the most efficient way⁶.

In this regard, taking into consideration all the above stated arguments, KEDS proposes the following scenario, which is evaluated as reasonable, achievable and very real, and which would furthermore ensure delivery of the qualitative services to end-customers, as well as would ensure the sustainability of the company.

Proposal:

Re-setting the targets, by taking into consideration the actual losses achieved in 2017, respectively taking into consideration the actual losses for 2016, and correcting the difference between this estimate and the realized value of the year 2017 when available at a later stage, and setting a target of 1% reduction of total losses per year, as presented in the table below.

2016 Actual	2017 Expected				
24.45%	22.90%				

	2018	2019	2020	2021	2022
Target	-1.0%	-1.0%	-1.0%	-1.0%	-1.0%
Losses	21.90%	20.90%	19.90%	18.90%	17.90%

Difference					5.0%
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By the year 2022, the total losses would account for 17.9%, or a difference of 5% (percentage points) lower losses from the actual one. This proposal would help DSO regarding the compound effect which DSO had to face over these year, due to under-performance of the previous license holder and neglecting of the institutions to re-sett the losses target as per actual level achieved in 2012. Moreover, this proposal is similar to the achieved results in Macedonia during the same period and with the same starting point.

The proposal of the regulator not to restate the target but to keep it as the target at the end of current tariff period is not acceptable as it will continue the burden to KEDS from the aggressive targets estimated in 2012 as well as the inherited higher losses from KEK for 2012. While the proposed approaches by KEDS, we would ensure the financial suitability of the distribution company, which would further allow the operator to focus on performing the investments, and improving the quality of services.

⁶ European Regulator Group for Electricity & Gas (2008), Treatment of Losses by Network Operators, ERGEG Position Paper for Public Consultation, Ref: E08-ENM-04-03, 2008



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In a handbook prepared by PA Consulting Group for USAID in November 2004⁷, are stated the critical conditions for success in sustainable reduction of losses in electricity distribution, emerging from a comprehensive review of international experiences in developing countries. Among others, one of the critical conditions is the Holistic approach, which says that success depends in part of creating and motivating institutions to fulfill their roles in a restructures sectoral environment. Respectively, the approach used by the regulators should encompass technical aspects, process, and human capacities and willingness to produce results. Targeting one aspect without considering how that element interact with or influences the balance of the sector can lead to ineffective, suboptimal, or even destructive results.

ERO in its proposal is increasing financial pressure on KEDS, and is not considering many important issues and facts, such as its own statements provided in its consultation paper for the first regulatory period regarding decrease of technical losses; it is excluding the facts that Kosovo's electricity consumption is mainly consisting of household consumption (over 60%); the economy is under-developed; the high unemployment; and weak Rule of Law.

Therefore, KEDS, with kindness requests from ERO to review once again its proposal and the influence that such decision might have in operations of the DSO in the following 5 years

⁷ USAID 2009, Improving Power Distribution Company Operation to Accelerate Power Sector Reform