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

Consultation Paper

The Tenth Electricity Tariff Review

ETR10 (2016-2017)

Maximum Allowed Revenues (MAR) and Regulated Generator Charges Calculation (Relevant Year 4)

DISCLAIMER

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

24 February 2016

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1 Introduction

The Energy Regulatory Office (ERO) is currently conducting the Regular Adjustment and Annual Update process of the Maximum Allowed Revenue (MAR) of the Regulated Companies in the Electricity Sector under the Tenth Electricity Tariff Review (ETR10). In the first part of this process, ERO reviews the proposed Maximum Allowed Revenues (MAR) to be recovered from regulated charges for sales by KEK (Kosovo Energy Corporation, the owner and operator of Kosovo A and B power plants[1] and the associated mine) to the Public Electricity Supplier (the Kosovo Electricity Supply Corporation or KESCO). These will subsequently be used as an input to the calculation of the total revenues to be recovered from regulated tariffs to be applied from April 2016.

This paper describes ERO's assessment of the proposed MAR as submitted by KEK and ERO's decision on the value of the Regulated Generator MAR to be included in allowed revenues recovered from regulated tariffs. The paper is organized into three parts. The first reviews the proposals from KEK and provides ERO's comments on them. The second contains ERO's calculation of MAR including the correction of errors identified in the calculations submitted by KEK. The third contains comments on the allocation of risks between the Regulated Generator and PES that have been raised as a concern.

Stakeholder comments

ERO strongly believes that public consultation is at the heart of effective regulatory policy. ERO hereby presents the Regulated Companies and Consumers with the opportunity to examine the evidence and views presented in this Consultation Paper, with which they may disagree, and to comment on them by correcting a factual error, putting forward counterarguments or providing new data which ERO may not have already considered. Parties who wish to express their opinions on ERO's position are invited to submit their comments in writing to ero.pricing-tariffs@ero-ks.org no later than **09 March 2015.** Alternatively, comments can be mailed to:

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Departamenti për Tarifa dhe Çmime
Rr. Dervish Rozhaja Nr. 12
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[1] These are defined in the Law on Electricity as power plants that are obliged to make their capacity available to the licensed Public Electricity Supplier at a regulated price provided that this capacity is required by the PES to fulfil its supply obligations.

Relevant Documents

ERO's initial assessment of KEK's application forms, submitted under Periodic Review process	http://ero-ks.org/Price%20and%20Tariffs/2012/albanian/Vleresimi_fillestar_KEK_shqip.pdf
ERO's temporary assessment of KEK MAR under Periodic Review process – detailed assessment	http://ero-ks.org/Tarifat/2012/Vleresim_i_perkoshem_KEK_Gjenerim.pdf
KEK MAR final assessment under Periodic Review Process – detailed assessment	http://ero-ks.org/Tarifat/2013/Proceset%20e%20Shqyrtimit/Vlersimi_perfundimtar_per_Gjenerim_22Mars2013.pdf
Consultation Paper of Extraordinary Review by ERO	http://ero-ks.org/Tarifat/2014/Raport_vleresues_shqyrtimi_i_jashtzakonshem_10_8_2014.pdf
KEK's application on Regulated MAR, submitted under Regular Adjustment 3 (ETR9)	http://www.ero-ks.org/Tarifat/2015/Aplikacioni_i_KEK_ut_2015.pdf
Ero's consultation paper on Regulated Generator MAR for relevant year 3 (ETR 9)	http:// www.ero-ks.org/Tarifat/2015/Gjenerimi_Raport_konsultativ_06_03_2015.pdf
KEK's comments on ERO's consultation Paper on Generated Regulator MAR for Relevant year 3 (ETR 9)	http:// www.ero-ks.org/Tarifat/2015/Komentet_KEK.pdf
ERO's reply to stakeholders comments for relevant year 3 (ETR9)	http:// www.ero-ks.org/Tarifat/2015/Pergjigjeje_ndaj_komenteve_03_04_2015.pdf
KEK's application on Regulated MAR, submitted under Regular Adjustment 4 (ETR 10)	http://www.ero-ks.org/2016/Tarifat/Propozimi_per_te_hyrat_e_lejuara_dhe_ngakresat_per_vitin_2016_final.pdf

Price Control Overview

The Energy Regulatory Office (ERO) is an independent institution which sets price controls for regulated companies which operate in the Kosovo regulated electricity market. Ideally, ERO would only set price controls for those segments of the electricity sector which are natural monopolies (Transmission and Distribution networks). However, as competition in Generation and Supply has not developed to a level which would produce a competitive price, ERO regulates these segments as well by setting tariffs which imitate competition.

Price Controls are the tools employed by ERO in order to set the amount of cash (Maximum Allowed Revenues – MAR) that the Regulated Companies are allowed to recover for providing a regulated service. The MAR is set during Periodic Reviews by thoroughly analyzing the expenditures and investments that the Companies plan to make during the length of the price control. The level of the MAR is set to allow the companies to cover reasonable costs of operating and maintaining their assets and earn a reasonable return if they deliver the investment results approved upfront. Additionally, ERO sets efficiency targets which aim to increase the companies' operating efficiency and provide incentives or penalties if the companies fail to meet these targets.

The last Periodic Review was conducted by ERO in 2012 (ETR7) and set Regulated Generator MAR for a four-year period, namely until 2016. Perceiving the need for intensive capital investment program to improve the safety of supply and maintain outdated mining and generation infrastructure, ERO approved Regulated Generator plan to invest more than 208 million Euros in its Generation and Mining activities in the next four years, namely until 2016. A quick glance in ETR 7 allowed values is given below.

Table 1 ETR7 KEK MAR in a glance

KEK Mining	KEK Generation
€ 105.8 million investments in 4 years	€ 102.5 million investments in 4 years
Key projects include investments in heavy machinery, repairing of two excavators and construction of carrier lines for new mine in South-west Sibovc.	Key projects include capital regulation of units A3, B1 and B2, hydraulic transport of ash for Kosova A and an outer layer for a high pressure turbine in B1 unit.
Annual efficiency factor of 4% is applied in all Operating and Maintenance Costs of Mine during four years.	Annual efficiency factor of 4% is applied in all Operating and Maintenance Costs of Regulated Generator during four years.

2 The Regular Adjustment process

In 2013 ERO conducted the Periodic Review Process (ETR7) during which it set the Maximum Allowed Revenues for the next four Relevant Years for the Regulated Generator (KEK), and five years for the Transmission System and Market Operator (KOSTT) and the Distribution System Operator (DSO). According to the Pricing Rules, a Regular Adjustment process shall be undergone between each Relevant Year of the Regulatory Period in order to calculate the permitted change in Maximum Allowed Revenues. The Regular Adjustment Process differs from a full-blown Periodic Review in which ERO would undergo a detailed review of the Allowed Operating and Maintenance Costs, allowed losses and efficiency factors and Allowed Capital Expenditure Programs. Instead, during Regular Adjustments, ERO only mechanically adjusts for differences between allowed and actual values of what has already been allowed during Periodic Reviews. During this Regular Adjustment process ERO will:

1. Index the Allowed Operating and Maintenance Costs of all licensees for the Efficiency Factor which is set during the Periodic Review process and for Annual Inflation which is set using the Harmonized Index of Consumer Prices (HICP) for All Items in the Eurozone;
2. Set the Availability Target of the Regulated Generator;
3. Set the Energy Charge and the Capacity Charge of the Regulated Generator;
4. Update the Allowed Lignite Supply Costs (LGSCt) of the Regulated Generator. This update includes the pre-set Operating and Maintenance Costs, Depreciation and Allowed Return of the Mine by following the same principles as for the Regulated Generator. The pre-set LGSCt will include the difference between actual and allowed lignite supply costs in the first Relevant Year of the Regulatory Period;
5. Update the Other Fuel Costs (OTFCt) of the Regulated Generator to include differences between allowed and actual costs in the first Relevant Year of the Regulatory Period;
6. Calculate the Wholesale Power Purchase Costs which include the cost of purchasing power from the Regulated Generators, Imports and the Retail Margin. These are updated to reflect the difference between allowed and actual power purchase costs in the previous Regulatory Period;
7. Set the Allowed Cost of Losses (LSSCt) for the Transmission System and Market Operator (KOSTT) and update these to include the difference between allowed and actual cost of losses for the previous Regulatory Period, which may have arisen due to changes in wholesale power costs or changes in the flows of electricity in the transmission system;
8. Update TSO MAR to reflect revenues generated through the Inter-TSO Compensation Mechanism;
9. Update TSO MAR to reflect the difference between Allowed and Actual Regulated Revenues in the previous Relevant Year (t-1);
10. Set the Transmission Use of System, Market Operator and System Operator Charges;
11. Set the Allowed Cost of Losses (LSSCt) for the Distribution System Operator (DSO) and update these to include the difference between allowed and actual cost of losses for the previous Regulatory Period, which may have arisen due to changes in wholesale power costs or changes in the flows of electricity in the Distribution system.

12. Update DSO MAR to reflect the difference between Allowed and Actual Regulated Revenues in the previous Relevant Year (t-1);
13. Set the Distribution System Operator Charges;
14. Calculate the Allowed Retail Costs of the Public Electricity Supplier, which include the costs of operating and maintaining the PES activity, corporate costs, depreciation allowances and other reasonable costs of the PES;
15. Set the new PES MAR by including the difference between allowed and actual billing in the previous relevant year (t-1);
16. Set the new Retail Tariffs;

3 Review of KEK's application

KEK's application for approval of a MAR for 2016-17 was submitted on 4th December 2015. The application contains a calculation of the annual adjustment following the formulae contained in the Regulated Generator Pricing Rule issued by ERO. However, it also contains a number of requests by KEK to be included in next relevant year MAR. ERO's attitude in relation to KEK's requests is presented below.

3.1 Recovery of Lost Revenues after incident in Kosova A

KEK has requested that it be allowed to recover an additional amount of €15,464,570 in its MAR representing the loss of revenues as a result of explosion in Kosova A power plant in 2014.

In the Extraordinary Review of wholesale purchase costs , ERO established the principle that KEK should not be compensated for additional costs incurred as a result of this incident in an absence of a report by competent bodies which would prove that the causes of explosion were out of KEK's control. Following the absence of such a report, ERO will continue to keep the same attitude.

3.2 Efficiency factor

The Annual Adjustment calculation applies an efficiency factor (the "E-factor") in determining allowed operating and maintenance costs. This factor is currently set at 4%. In its application, KEK requests that it be reduced to 1% in order to recognise increasing costs including from the need to replace experienced staff, to unbundle its operations and to bear the costs of social obligations.

Under the Pricing Rule, the efficiency factor is set at Periodic Reviews and maintained constant for the period between reviews. The next Periodic Review for the Regulated Generator (KEK) will start in 2016 and decisions of this Review will be effective starting from April 2017. Given this, ERO cannot amend the efficiency factor without first amending its own Pricing Rules. As the efficiency factor and allowed operating and maintenance costs will be reviewed in the next Periodic Review , ERO considers there is no need to make an immediate adjustment.

3.3 Recovery of financing costs

In its application, KEK states that in 2016 it will pay €7.3 million in debt service (interest and principal repayments) on loans from the Government of Kosovo. KEK also notes that according to the Law on

Debt Forgiveness it made debt expiation in an amount of €250 million where as a result it would risk the liquidity of the company which relates to the payment of previously mentioned loan.

ERO's observations are that:

- KEK does not provide information on the interest rate payable in its application. However, ERO considers that debt cost included in Weighted Average Cost of Capital (WACC) actually allowed for KEK is not lower than the interest rate cost.
- KEK has also not provided evidence to show that the increased debt service costs will lead to it incurring negative cash flows, which might justify a temporary adjustment by ERO to ensure it remains financially viable. In this regard, ERO notes that KEK's allowed return is currently approximately €20 million annually or almost three times the claimed cost of debt service. Therefore, KEK should be able to absorb these costs without any impacts on its financial viability.
- Given that KEK has been unable for many years to collect the receivables recently written-off, it seems unrealistic to assume that it would have repaid the loans from this source and should, therefore, be compensated for the loss of future cash receipts following the write-off.

Given this, ERO does not consider there any need for an adjustment to be made to the calculated MAR with regards to KEK's claims regarding financing costs.

3.4 Community Support in Municipality of Obiliç

KEK has requested that costs related to infrastructure projects around the mine, such as: asphalting the road, regulation of river banks, greenery and sports club support and public lightening in an amount of € 1 million to be included in operational expenditures, under KEK MAR. ERO, considers that it is reasonable to allow costs causes by KEK Mining activities, but on the other hand it considers that costs of community projects which are not directly related to Mining impact are not allowed. However, ERO encourages KEK to support the greening of surrounding space across the mine, costs which will be included in the next Periodic Review in the form of capital investments.

Under the Pricing Rules, operational and capital costs are set during Periodic Review Process, therefore costs related to improvement of infrastructure and greenery of surrounding spaces across the mines cannot be included during Annual Updates.

3.5 Implementation of the Collective Agreement

Following the entry into force of a new Collective Agreement in January 2015, KEK is now required to pay a salary supplement for the working experience of its employees at a rate of 0.5% per year compared to 0.3% previously. KEK estimates that this will increase its costs in 2015 by € 1.66 million and in 2016 by €1.67 million and requests these sums to be added to the allowed MAR.

The general principle that has been applied by ERO is that changes in costs resulting from changes in legal obligations can be passed through in the form of changes in MAR but increased costs under Collective Agreement are not sufficient to start an extraordinary Review Process but increased costs under the new Collective Agreement are not enough to trigger the Extraordinary Review process. Therefore, these should be carried forward to the next Periodic Review.

3.6 Insurance of assets

KEK has requested that MAR is adjusted to include €300,000 for the costs of a feasibility study on insuring its assets. It has also noted that the annual premiums for such insurance are estimated at € 2 million.

ERO's position in regarding to obtaining the insurance for such a feasibility study is part of continuous regular business operations of KEK, in the same way as are other studies for projects and their costs must be recovered by KEK's existing operations and maintenance costs allowance.

ERO considers that it is very desirable for KEK to insure its assets in order to have a cover for technical failure of assets as the recent explosion in Kosovo A power plant in 2014 . Furthermore, the insurance of assets is also one of the obligations deriving from the license. Despite possible difficulties in conducting such a contract, ERO encourages KEK to perform a feasibility study which will prove that such insurance is possible and economically reasonable, then its cost will be included in KEK MAR.

If KEK is able to provide evidence of the reasonable and efficient costs of insurance premiums then ERO will consider the inclusion of these in MAR as part of the Periodic Review.

3.6 Obligations charged by Independent Commission for Mines and Mining

KEK has stated that, under new decisions issued by the Independent Commission for Mines and Minerals (ICMM), costs on behalf of bank guarantee must be 12.ooo €/hectare of the mine and on behalf of insurance of "third party risks"€ 1.5 shall be deposited in bank account. According to ERO pre-calculations, monetary value that shall be deposited, results to be around €30 million. KEK submitted a complaint in regarding to ICMM decisions, requesting their repeal and if their request is not approved by ICMM, KEK asks from ERO to find a solution during Periodic Review.

KEK's application does not clarify if KEK has to deposit the full sum in cash with ICMM or to provide bank guarantee which would have much lower cash costs. KEK also notes that it is challenging the decisions but provides no information on the progress of this challenge or the basis for the challenge

ERO agrees with KEK to review this request after ICMM response to KEK's complaint.

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4 Calculation of MAR

The calculation of MAR is based on KEK's application and values set in Periodic Review Process , but with a number of corrections and amendments as are set in Rule on Pricing for Regulated Generators as described below.

4.1 Technical Corrections

The formulae applied by KEK in its calculations of operating and maintenance costs (the OPMC component of MAR) and for lignite supply pass-through costs (the PSTC component in the LGSC calculation) do not follow those applied in the calculation of MAR for 2015[2]. These formulae have been corrected accordingly.

A number of the values are shown as 'hard' inputs rather than calculations in the spreadsheet model provided by KEK. To prove the accuracy of these data, ERO made calculations applying formulas in accordance with ETR 9.

4.2 Updating of values

4.2.1 Consumer price index

Annually, allowed operating and maintenance costs are adjusted in line with inflation less an efficiency factor. The inflation value used is the annualised change in the *Harmonised Indices of Consumer Prices (HICP) – All items* for the Eurozone as published by Eurostat for 2015 which results to be 0.2%. This value has been applied as the inflation adjustment in the MAR calculation.

4.2.1 Interest rate for adjustments

The interest rate applicable to annual adjustments to the MAR of the Regulated Generator[3] in any Relevant Year is calculated based on EURIBOR plus S% where S is a value determined by ERO at Periodic Reviews which and is kept constant throughout the Regulatory Period.

The current value of S is 15.0%. The current value of EURIBOR quartet maturity EURIBOR is -0.131% Therefore, ERO has applied an interest rate of 14.87% for the purposes of calculating annual adjustments.

4.3 ERO's calculation of Regulated Generator MAR

ERO's calculation of MAR, applying the above changes, is shown below. This totals €146,882,249 million.

The final MAR for the Regulated Generator is dependent on the approved system and market operator (SMO) charges levied by the Kosovo Transmission System and Market Operator (KOSTT),

[2] Refer to: Consultation Paper, Ninth electricity tariff review, ETR9 (2015-2016), Calculation of Maximum Allowed Revenues for the Regulated Charges of the Regulated Generator (third relevant year)

[3] This interest rate reflects the costs of borrowing by the Regulated Generator to cover differences between allowed revenues and actual costs in the preceding year pending the adjustment made to compensate for these.

which are paid by generators. These charges will be determined in March 2016 following the review of KOSTT's allowed revenues. Therefore, a further slight revision to the MAR shown here will be made following the determination of these charges.

Table 2: Regulated Generator (KEK) MAR calculation

Category		Unit	Period
Actual value of inflation	CPIt	%	0.2%
Efficiency Factor in Relevant Year t	Et	%	4.00%
Profiling Factor in Relevant Year t	Pt	%	0.00%
Interest rate for the Relevant Year t	It	%	14.87%
Euribor with a quartet maturity	EURIBOR	%	-0.131%

Category			Value in Euros
Allowed operating and maintenance costs in Relevant Year t	**OPMCt**	**€**	**18,989,612**
Actual value of inflation in Relevant Year t-1	CPIt-1	%	0.2%
Efficiency Factor in Relevant Year t	Et	%	4.0%
Allowed depreciation in Relevant Year t	**DEPCt**	**€**	**23,321,223**
Actual value of inflation in Relevant Year t-1	CPIt-1	%	0.2%
Allowed return on capital in Relevant Year t	**RTNCt**	**€**	**9,298,366**
Actual value of inflation in Relevant Year t-1	CPIt-1	%	0.2%
Allowed lignite supply costs in Relevant Year t	**LGSCt**	**€**	**85,363,354**
Allowed other fuel supply costs in Relevant Year t	**OTFCt**	**€**	**6,184,360**
Pass-Through Costs in Relevant Year t	**PSTCt**	**€**	**4,879,626**
Health Insurance Costs for 2015			-103,000
Ash Revenues Power PP B			-264, 201
Cogeneration Revenues PP B			-993,958
Metal Remains Revenues PP A			-62,030
Steam Revenues PP C			**-166,535**
Health Insurance			**435,433**
Maximum Allowed Revenues in Relevant Year t	**MARt**	**€**	**146,882,249**

5 Regulated Generator risks

ERO has previously expressed its concerns that, under current arrangements, KEK faces significant risks over its ability to recover its MAR in full. While these are not directly related to the annual adjustment process, these concerns are summarized here. ERO expects that this matter will be addressed as part of the 2016 Periodic Review for the Regulated Generator (KEK).

The risk arises because of differences in interpretation of the requirements of the BSA between KEK and KESCO. In summary:

- The approved MAR for KEK is recovered through energy and capacity charges, which are calculated in accordance with principles established in the Pricing Rules. These are that the energy charge recovers fuel and variable operating costs. The capacity charge recovers capital costs (depreciation and return) and fixed operating costs.
- The capacity charge is calculated by determining what part of the MAR is considered fixed. This is then divided by the available capacity of the generators multiplied by the number of hours that they are expected to be available (the Availability Target) to give a charge in €/kW/hour.
- Under the BSA, KEK is obliged to make its full capacity available to KESCO. At the day-ahead stage, KESCO nominates the quantity of capacity that it requires for the following day.
- KESCO's interpretation of the BSA is that it is only obliged to pay the capacity charge for capacity that it has nominated and is subsequently dispatched. Therefore, where nominated capacity is less than KEK's available capacity, the revenues received from KESCO based on nominated capacity will be less than the approved MAR expected to be recovered in the same period based on available capacity. This is frequently the case in summer months.
- In principle, KEK can sell the output from capacity that is available but not nominated by KESCO to other buyers at unregulated prices and recover its costs in this way. However, in practice, this has proven to be very difficult:
    - As KEK only knows day-ahead how much capacity is available for sale to third parties, following KESCO's nomination, it has little time to identify buyers. There is also no organised exchange into which KEK can readily sell. Therefore, it is forced into either 'spilling' energy or into agreeing export contracts from a bargaining position of extreme weakness.
    - The mismatch between available and nominated capacity is most likely to occur in summer nights. These are also the periods when regional electricity market prices are at their lowest in comparison with winter period. Therefore, the price that KEK can achieve for its exports is generally below that required for it to recover the fixed costs of the capacity being used for export.

A number of options have been proposed to address this situation. These are:

- Calculating the capacity charge using expected nominated capacity rather than available capacity as the denominator. This would mean that KEK would expect to fully recover its fixed costs from payments made by KESCO for nominated capacity.

- Introducing a time-of-day or seasonal element into capacity charges so that these are highest in periods when nominated capacity is highest (winter days) and lower or even zero in periods when available capacity is likely to exceed nominated capacity (summer nights).

- Allowing KEK to earn a premium above its variable costs from the energy charge during peak periods from which it can recover part of its fixed costs. This will offset its inability to recover fixed costs in full in off-peak periods when not all available capacity is required to meet demand.

- Requiring KESCO to nominate its required capacity much further ahead (eg, one month-ahead or more). This will give more time for KEK to identify export opportunities and will let it offer firmer contracts to buyers which should allow it to achieve better prices. It continues to leave KEK at risk that is cannot fully recover the difference between its approved MAR and its revenues from supplies to KESCO from export revenues.

- Requiring KESCO to take all available capacity but allowing it to keep all or part of the profits from exporting output from capacity not required to meet Kosovan demand. This would transfer the export risk from KEK to KESCO. Such a transfer can be justified on the basis that KESCO is better placed to manage this risk than KEK is given KESCO's control of KEK's availability for exports and KESCO's existing expertise in trading activities which KEK lacks.