Republika e Kosovës
Republika Kosova - Republic of Kosovo

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

Consultation Report on Maximum Allowed Revenues within MYT3

Periodic Review for DSO

Third Regulatory Period (2023-2027)

DISCLAIMER

This Consultation Report is prepared by ERO with the purpose of informing stakeholders on the proposal of ERO on Maximum Allowed Revenues. The report does not present a decision of ERO and shall not be interpreted as such.

16 February 2023

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1 Introduction

Energy Regulatory Office (ERO) is in the Periodic Review Process for the Third Regulatory Period (PRR 3) which includes the determination of Maximum Allowed Revenues (MAR) for the period 2023-2027. The Periodic Review shall determine the Maximum Allowed Revenues for the Transmission System and Market Operator (TSO/MO KOSTT JSC) and Distribution System Operator (DSO – KEDS JSC).

This Consultation Report provides the proposals of ERO on MAR which reflects the forecast costs for the calendar years 2023-2027. The approved Maximum Allowed Revenues shall determine the use of network tariffs which are applied for the relevant tariff year (1 April – 31 March 2023).

This Consultation Report provides the proposal of ERO on the MAR to be recovered by DSO during the third regulatory period PRR3. The approved Maximum Allowed Revenues shall determine the tariffs for distribution use of system which shall be charged to distribution system users. The costs resulting from the use of the Distribution System shall be included in the electricity tariffs of final customers.

The report is structured as follows:

- Chapter 2 summarizes the purpose of the periodic review and its difference to annual adjustments;
- Chapter 3 reviews the summary of the periodic review process;
- Chapter 4 reviews the regulatory asset base and investment plan for the upcoming regulatory period.
- Chapter 5 reviews the operating and maintenance expenditures for the upcoming regulatory period;
- Chapter 6 reviews the cost of losses and unregulated revenues;
- Chapter 7 presents the calculations of ERO for regular annual adjustment and for the extraordinary review of tariffs; and
- Chapter 8 summarizes the MAR for the upcoming regulatory period;

Comments of stakeholders

Consultation with stakeholders is essential in compilation of sustainable regulatory policies. ERO invites stakeholders, civil society, regulated companies and other interested parties to review the data and position of ERO provided in this Report, with which they may not agree, and to provide comments on them by providing facts, counter-arguments and new data which ERO may not have taken into consideration. The comments on this Consultation Report can be submitted in electronic form via e-mail at ero.pricing-tariffs@ero-ks.org or submitted as a hard copy at the following address:

Energy Regulatory Office
Tariffs and Pricing Department

St. Bekim Fehmiu (former-Fazita Building 2nd floor, 10000 Pristina, Kosovo
Comments must be submitted by 3 March 2023 at the latest.

Following the review of the received comments, ERO shall publish the Final Report along with the Reponses to Comments. The comments received on this Consultation Report shall be published along with the Final Report.

Relevant documents

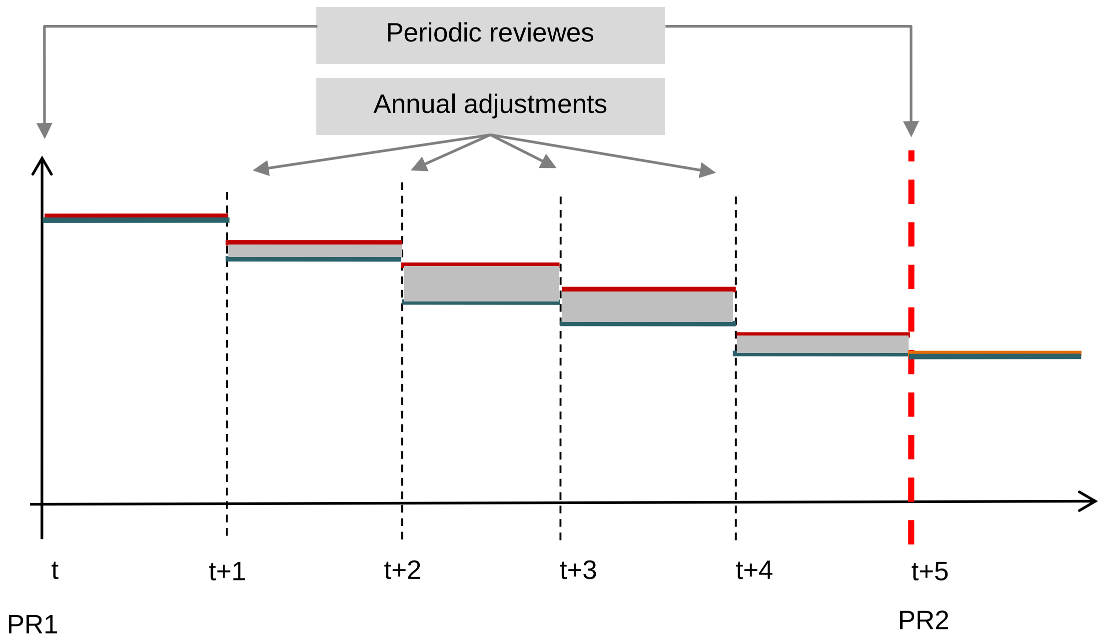
Title of the document	Link
Law No. 05/L-084 on the Energy Regulator	https://www.ero-ks.org/zrre/sites/default/files/Legjislacioni/Ligjet/LIGJI_PER_RREGULLATORIN_E_ENERGJISE.pdf
Rule on Maximum Allowed Revenues for the Distribution System Operator	http://ero-ks.org/2017/Rregullat/Rregulla%20per%20te%20Hyrat%20e%20OSSH.pdf
The letter on initiation of periodic review	https://www.ero-ks.org/zrre/sites/default/files/Konsultimet%20Publike/Tarifat%20Ngrohje%20Qendrore/Dokument%20inicues_Shqyrtimi%20Periodik%20i%20OST-OT%20dhe%20OSSH%20(00000003).pdf
Final Report on Determination of Input Values – Weighted Average Cost of Capital (WACC) V_1634_2022 - Weighted Average Cost of Capital (WACC) for TSO/MO and DSO for the Third Regulatory Period (PRR3)	https://www.ero-ks.org/zrre/sites/default/files/Publikimet/Pjesemarresit%20ne%20Treg/Furnizim/Raport%20perfundimtar_Pergjigje%20ndaj%20raportit%20konsultativ%20per%20WACC.pdf https://www.ero-ks.org/zrre/sites/default/files/Publikimet/Vendimet/Vendimet%202022/V_1634_2022.pdf
Final Report on Determination of Input Values – Level of Network Losses Decision V_1636_2022 Loss reduction target and the curve of allowed losses in PRR3 in transmission and distribution network PRR3	https://www.ero-ks.org/zrre/sites/default/files/Publikimet/Pjesemarresit%20ne%20Treg/Furnizim/Raport%20perfundimtar_pergjigje%20ndaj%20komenteve_%20per%20humbje.pdf https://www.ero-ks.org/zrre/sites/default/files/Publikimet/Vendimet/Vendimet%202022/V_1636_2022.pdf
Final Report on Determination of Input Values – Efficiency Factor V_1635_2022 - Efficiency factor for TSO/MO and DSO for PRR3	https://www.ero-ks.org/zrre/sites/default/files/Publikimet/Pjesemarresit%20ne%20Treg/Furnizim/Raport%20perfundimtar_fakori%20i%20efikasiteti_pergjigje%20ndaj%20komenteve.pdf V_1635_2022.pdf (ero-ks.org)
Development and Investment Plan of the Distribution System for the period 2023-2027	https://www.ero-ks.org/zrre/sites/default/files/Lajmet/njoftimet/Plani%20Pes%C3%ABvje%C3%A7ar%20Zhvillimor%20dhe%20Investiv%20i%20Operatorit%20t%C3%AB%20Sistemit%20t%C3%AB%20Shp..._0.pdf

2 Periodic Reviews and Annual Adjustments

The Law on Energy Regulator sets the basic regulatory framework and the principles that shall be followed during the determination of Maximum Allowed Revenues (MAR) of regulated operators. The law determines that Maximum Allowed Revenues shall be sufficient to recover the justifiable costs of the system and the regulated tariffs shall be set at a level which covers the system cost.

The Rule on Determination of Maximum Allowed Revenues of Distribution System Operator transposes the requirements of the primary legislation and sets the base for multi-year regulation of tariffs. According to this rule, the main components of MAR are set during Periodic Reviews and are not changed during the multi-year tariff period (the so-called Regulatory Period) which in Kosovo is set for five years. These can be the components of costs related to depreciation costs, operating and maintenance expenditures and the allowed return on investments. In addition to these components, and in the interest of increasing the predictability of MAR and the financial stability of the sector, ERO determines the main regulatory parameters such as the weighted average cost of capital, the allowed level of losses and the level of the efficiency factor applied to operating expenses. The consultation on the Regulatory Parameters has already been concluded and the proposals of ERO are published on ERO’s website.

***Figure 1** Periodic reviews and annual adjustments within the multi-year tariff system*



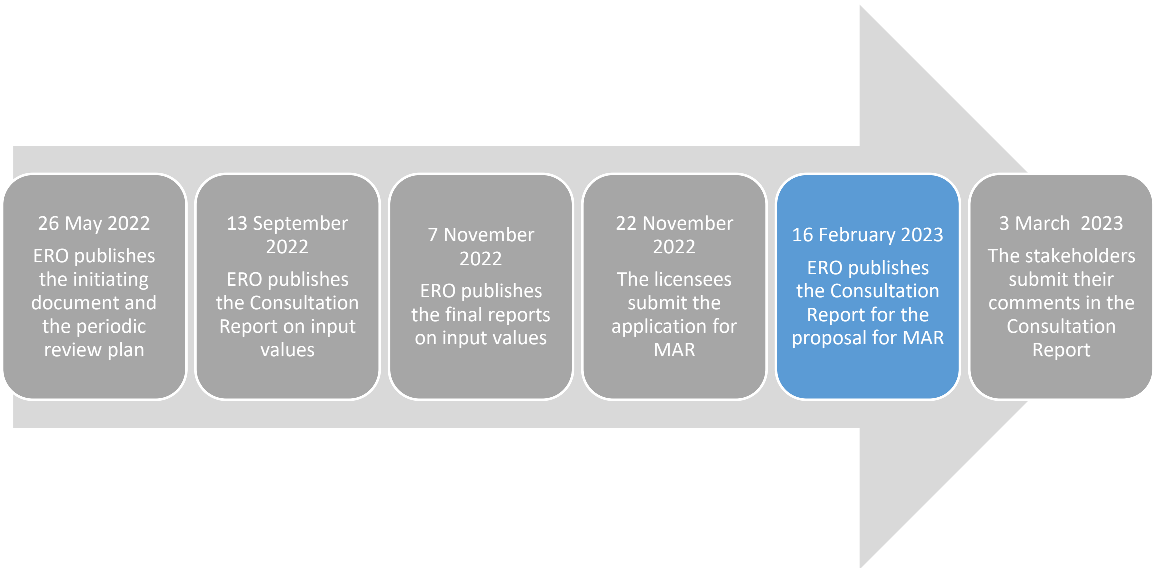
Through the multi-year tariff framework ERO aims to maintain the predictability of system costs and maintain sustainable and predictable prices for customers. At the same time, ERO takes into account that several cost factors - such as the cost of purchase of energy losses, volume of losses or inflation - can vary beyond five -year predictions. For this reason, the Maximum Allowed Revenues are adjusted each year during the annual adjustment process to coordinate the differences between the forecast values and realized ones of these costs. The annual adjustment for the last tariff year of the previous regulatory period (PRR2) is provided in Chapter 7 of this report.

The last two years have been characterized by extremely high prices and unprecedented fluctuations in electricity markets. The global energy crisis has had a significant increase in the cost of purchasing energy to cover losses in the distribution network. The difference between the forecast energy purchase cost and the realized ones exceeds the 5% materiality threshold set in the Rule on Maximum Allowed Revenues of the Distribution System Operator. The extraordinary review process and the impact on MAR of the distribution system, are explained in Chapter 7 of this report.

3 Summary of the periodic review process

The periodic review process began in May 2022 and is now at an advanced level. ERO has approved the values of regulatory parameters that are input values in determining the main components of the Maximum Allowed Revenues.

***Figure 2** Periodic Review Process*



ERO's proposals for regulatory parameters, the comments of stakeholders as well as ERO’s responses on them are published on ERO's website. A summary of the determined values is given in sub-chapters 3.1-3.4, below.

3.1 Lifespan of assets

The lifespan of assets is one of the input parameters that shall be determined by ERO during periodic reviews. The lifespan of assets is an important regulatory parameter as it determines the time during which the assets invested by the company must be covered by tariffs to replace the asset following its technical depreciation.

ERO has established the categories of assets and their lifespan during the last periodic review (PRR2) and does not consider it necessary to change them. A summary of the defined asset categories is provided in the following table:

Table 1 *Categories of assets and their lifespan*

No.	Categories of assets	Lifespan
I	Administration buildings	50
II	MV networks, substations , energy transformers and equipment	30
III	LV networks, substations, energy transformers and equipment	25
IV	Transformer stations (TMRR and TMT)[1] and equipment	15
V	Meters and metering devices, trucks, cherry pickers and work machinery	10
VI	Furniture, office equipment	7
VII	Work equipment, reading devices, cars, computers, IT equipment, software	5

3.2 Weighted Average Cost of Capital (WACC)

The weighted average cost of capital (WACC) represents the percentage of return that regulated operators must benefit to be compensated for the risk they undertake by investing in regulated infrastructure assets.

Approved WACC for the third regulatory period is summarized as follows:

Table 2 *WACC determined for PRR3 for TSO/MO (KOSTT) and DSO (KEDS)*

Parameter	PRR **2**	PRR **3**
Real risk-free rate	3.70%	3.65%
Debt premium	3.50%	2.09%
Real cost of debt	7.20%	5.74%
Tax rate	10%	10%
Equity beta	1	0.88
ERP	4.50%	5.04%
Net capital costs, real pre-tax	9.10%	8.98%
Gearing	40%	40%
WACC, real pre-tax	**8.30%**	**7.69%**

[1] TMRR and TMT are the metering transformers of electricity and voltage

3.3 Allowed losses

Allowed losses consist of the allowed share of losses in the network that can be covered through Maximum Allowed Revenues. ERO has determined that the level of allowed losses for PRR3 for DSO is reduced from 15.1% (in the first year) to 11.1% (in the last year of the regulatory period). The sharing factor of differences between the allowed and realized losses is set to be 50 to reflect the increasing risk due to the exposure to the fluctuations of energy purchase costs.

The allowed level of losses for the regulated operators is summarized in the following table:

Table 3 *Allowed losses in the networks for the third regulatory period 2023-2027*

Allowed losses	Unit	2023	2024	2025	2026	2027
Allowance of losses for TSO	%	1.75	1.75	1.75	1.75	1.75
Loss reduction target	%		-	-	-	-
Loss sharing factor	%	50/50	0	0	0	0
Allowance of losses for DSO	%	15.1	14.7	13.3	12.1	11.1
Loss reduction target	%	-	0.4	1.4	1.2	1.0
Loss sharing factor	%	50/50	0	0	0	0

3.4 Efficiency factor

The efficiency factor presents ERO's expectations for improving the operating efficiency of regulated companies as a result of improvements in business processes, economies of scale or technological advancements.

In order to promote more efficient operation of operators, ERO has set a savings factor for operating and maintenance expenses for savings that exceed the efficiency factor. These savings are shared between the licensee and the customers according to the 50/50 factor.

The efficiency level for regulated operators is provided in the following table:

Table 4 Efficiency factor for regulated companies

Input values- Efficiency factor	Unit	2023	2024	2025	2026	2027
TSO/MO - KOSTT	%	1.5	1.5	1.5	1.5	1.5
DSO - DSO	%	1.5	1.5	1.5	1.5	1.5

4 Regulatory Asset Base (RAB) and Investment Plan

During each periodic review, ERO reviews the factual implementation of the investment plan of the previous regulatory period (PRR2) and coordinates the Regulatory Asset Base to reflect the changes between planned investments and those realized during that period. Following the evaluation of the coordinated base of regulated assets, ERO reviews the proposed investment plan for the upcoming regulatory period (PRR3) and analyzes its technical and financial reasonability. ERO's analysis is summarized in this chapter and is organized as follows:

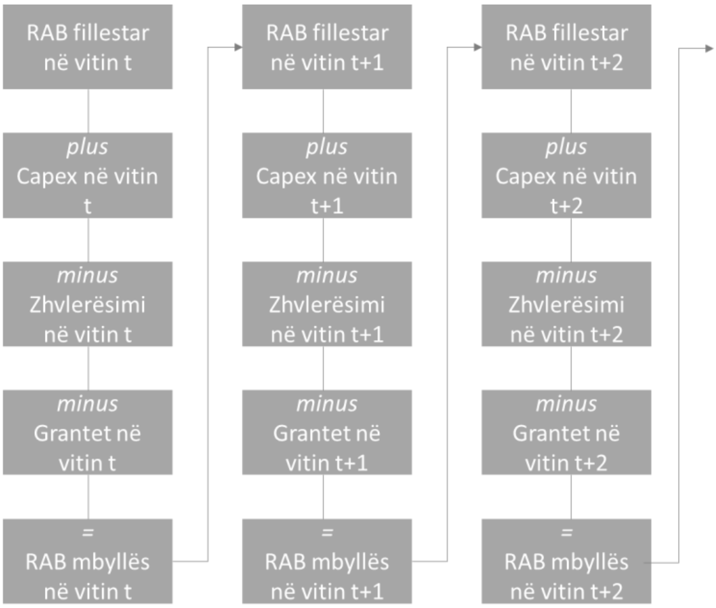
- Sub-chapter 4.1 provides a summary of coordinated principles of RAB value;
- Sub-chapter 4.2 provides a summary of RAB of the previous regulatory period (PRR2), investment plan and realization of investments from DSO;
- Sub-chapter 4.3 summarizes existing ending RAB until the closure of the previous regulatory period (PRR2);
- Sub-chapter 4.4 reviews the investment plan proposed by DSO for the upcoming regulatory period (PRR3) and ERO's position towards it; and
- Sub-chapter 4.5 summarizes the final RAB for the upcoming regulatory period that includes the coordination of the existing RAB and investments approved by ERO.

4.1 Principles of coordination of RAB value

This sub-section of the Consultation Report summarizes the basic principles of RAB coordination. They are:

- The Regulatory Asset Base is updated during each periodic review (every five years) to reflect the changes between the projected and realized investment plan. The five-year RAB is modeled for each year starting from the opening RAB, adding investments during that year, and deducting depreciation on assets. Grants and donations are not part of RAB.
- The investment plan approved during the periodic review must not change during the entire regulatory period. In cases where the plan changes then the regulated operators are obliged to provide the required evidence to ERO that the alternative plan offers equivalent or better benefits to customers compared to the initial plan.
- The changes between the predicted and realized values of the investment plan, which may occur for reasons beyond the control of the regulated operator, are coordinated with interest.

Figure 3 *Update of RAB during each year of the regulatory period*



4.2 Initial RAB in the previous regulatory period (PRR 2)

The opening value of RAB at the beginning of the previous regulatory period was €159 million. The allowed investments during this period were in the amount of €131 million. The allowed RAB in PRR2 is summarized in the following table:

Table 5 *Summary of RAB in the regulatory period PRR2*

€000s	- - - - - - - - - - - - -	PRR2	- - - - - - - - - - - - -		
	2018	2019	2020	2021	2022
	Proposed	Proposed	Proposed	Proposed	Proposed
Opening RAB	159,650	176,130	195,650	209,056	213,481
Investments (Supplements)	28,483	33,737	28,846	20,510	19,867
Depreciation	12,003	14,218	15,440	16,085	17,467
Closing RAB	176,130	195,650	209,056	213,481	215,881

The DSO has reported differences between the forecast and realized plan in PRR2. The differences between the allowed and realized investments are shown in the following table:

Table 6 *Differences between approved and realized investments in PRR2*

Capital investments	**€000s**
PRR2- approved	131,443
PRR2 - realized	107,277
Added to the opening RAB for PRR2	**77,577**

The investments made in the amount of €29.7 million are not investments approved by ERO. Therefore, ERO will not include them in the RAB of PRR2, but will transfer them to PRR3.

4.3 Update of RAB for the previous regulatory period (PRR2)

The differences between the predicted values and those realized during the implementation phase of investments during the previous regulatory period have resulted in a change in the value of RAB for DSO. The impact of these changes is the adjustment of MAR for €28.4 million (for more details see Appendix 1 of this Report).

The final RAB for the previous regulatory period is given in the following table. The closing value of assets for PRR2 is €142 million.

The main differences between allowed and updated RAB in PRR2 consist of:

- Indexation of RAB for HICP;
- Differences as a result of realized investments compared to allowed ones;
- Update of depreciation costs which reflects the updated RAB and actual investments.

The ending RAB for DSO for the second regulatory period is presented in the following table:

Table 7 *Ending RAB for the second regulatory period*

€000s	- - - - - - - - - - - - - - PRR2 - - - - - - - - - - - - - -				
	2018	2019	2020	2021	2022
	Updated	Updated	Updated	Updated	Updated
Opening RAB	162,412	152,897	141,816	138,229	138,402
Investments (additions)	21,161	14,720	13,390	13,965	14,342
Depreciation	11,314	11,448	10,169	9,880	10,653
Closing RAB	172,260	156,168	145,037	142,315	142,090

4.4 Investment plan for the upcoming regulatory period (PRR3)

In evaluation of capital projects that should be included in the regulatory period 2023-2027, ERO and DSO have had continuous consultations to examine the required investments. Furthermore, in the evaluation of capital projects for PRR3, ERO has taken into consideration the investment drivers, relevant studies and analysis that prove the needs and measure the benefits, unit costs for project categories, as well as experiences from the potential of DSO in implementing projects during two regulatory periods.

A general overview of the evaluation of capital projects for PRR3 is elaborated below:

- ERO has requested information from DSO on unit costs for different categories of implemented projects, and following the review of average unit costs of DSO for the main investment items towards regional operators to evaluate the reasonability of costs. This review has concluded that the proposed DSO costs are within acceptable limits.

- ERO, in principle agrees with DSO's strategy for the transition of the operating voltage level from 10kV to 20kV. In this regard, ERO has agreed with the list of projects foreseen for PRR3 which, as a merit basis, had the ranking based on the scoring of the evaluation criteria, however, in the evaluation of costs, ERO requires from DSO that during PRR3, it should compile a proper feasibility study and a detailed implementation plan identifying the substations that support such transition as well as defining investment modalities including the adaptation of existing 10/0.4kV substations that are owned by customers. As a result, ERO in this proposal has conducted the required cost adjustments as a result of the lack of information for TS that support such transition by adjusting the costs for this category.

- The category of low voltage projects represents the largest group of investments requested by DSO for PRR3. The review of ERO for this group of investments does not dispute the needs for investments, but addresses the possibilities of implementing a large number of projects in this period. While ERO considers such projects to be reasonable, at the same time it considers the possibility of their implementation based on previous periods. For the purpose of evaluating the list of projects in this group, ERO considers as meritorious the projects that are in the implementation process from 2020 and the projects that are expected to be tendered in 2024 and 2025 can be commissioned during PRR 3.

- Meters – DSO has planned the installation of 453,000 meters during PRR3. ERO, in its review, has requested information from DSO regarding the number of meters installed in PRR3, this in order to evaluate the needs of the number of meters that may need to be installed as a new connection or even replacement. Also, according to the information of DSO, electronic meters now have a wide scope, or about 90% of customers are now equipped with such a meter. Regarding the smart meters, ERO emphasizes that according to the legislation in force there is no legal obligation for the installation of smart meters, without a proper study as defined in the Law on Electricity.

- Smart Grid (GIS) - ERO has allowed projects of this category in PRR 1 and PRR 2, but DSO has not implemented it. According to the evaluation of ERO, the non-implementation of some of the projects of this category has not presented a priority and has not affected the efficiency of operation, therefore in PRR3, ERO has reviewed the projects that are related to SMART GRID.

- IT projects - Based on the lifespan of PCs, laptops and the expiration time of licenses, ERO has recognized projects for these two sub-categories. Based on the consultations with DSO, ERO has also accepted the other investments planned for this category of projects.

- Other operational CAPEX – ERO has received projects related to vehicles and other machinery required for operation based on the need to increase the efficiency of the DSO in cases of breakdowns, smooth operation, etc. ERO has requested and suggests to the DSO that in the annual CAPEX updates, it shall review the needs for machinery based on the requirements of the districts and sub-districts so that effective operation serves the increase of quality and the needs of final customers.

- The construction and reconstruction of buildings – Due to the absence of genuine justification, ERO has partially recognized some of the projects.

A summarized evaluation of the investment plan proposed by DSO and revised by for the next regulatory period is presented in the following table:

***Table 8** Investment plan proposed by DSO and ERO for PRR3*

No.	Classification of projects according to asset categories	DSO Proposal mil€	ERO Proposal mil€
I	Administration buildings	2.5	0.3
II	LV Networks, substations, energy transformers, and equipment	59.0	55.6
III	LV networks, substations, energy transformers, and equipment	69.7	41.3
IV	Transformer stations (TMRR and TMT) and equipment	-	-
V	Meters and metering devices, trucks, cherry pickers and work machinery	26.6	16.5
VI	Furniture, office equipment	-	
VII	Work equipment, reading devices, cars, computers, IT equipment, software etc.	8.9	8.6
Total		**166.9**	**122.1**

After including also the investments made in PPR2 and passed through to PRR3, the final CAPEX value of PRR3 turns out to be €151.7 million.

DSO's capital investments and their commissioning plan are given in the following table:

Table 9 Investment plans and their commissioning PRR3[2]

€000s	Total	- - - - - - - - - - - - - -		PRR2	- - - - - - - - - - - - - -	
		2023	2024	2025	2026	2027
		Proposed	Proposed	Proposed	Proposed	Proposed
Submitted by DSO						
Capital expenses	**166,868**	37,276	36,210	35,214	33,161	31,559
ERO proposals						
Capital expenses	**151,771**	28,571	37,695	36,056	29,384	20,065

4.5 Ending RAB for the upcoming regulatory period

During the upcoming regulatory period, a total of €152 million is expected to be invested. These investments and the value of the final RAB for DSO for the next regulatory period are summarized in the following table:

Table 10 Ending RAB for the upcoming regulatory period

€000s	- - - - - - - - - - - - - -		PRR3	- - - - - - - - - - - - - -	
	2023	2024	2025	2026	2027
	Proposed	Proposed	Proposed	Proposed	Proposed
Opening RAB	204,888	216,239	234,850	249,809	257,303
Investments (Supplements)	28,571	37,695	36,056	29,384	20,065
Depreciation	17,219	19,084	21,097	21,890	23,067
Closing RAB	216,239	234,850	249,809	257,303	254,300

5 Operating and maintenance costs

The operating and maintenance expenses (OPEX) of DSO are comprised of repair and maintenance costs and other operational costs.

The value of operating and maintenance expenses (OPEX) of DSO is set as follows:

- Baseline Opex value for the first year of the upcoming regulatory period (PRR3) takes into account the closing Opex value in the last year of the previous regulatory period and adjusts this to reflect changes in costs due to the fact that they are outside the control of the DSO or as a result of its additional obligations to fulfill legal obligations.

[2] The proposal of ERO also includes the projects in proces.

- The base OPEX value is indexed to the inflation rate for 2022 for 8.4%.
- An efficiency factor of 1.5% is applied to the adjusted base value, set as a regulatory parameter that reflects the efficiency improvement expectations for the next regulatory period.
- Costs for the "Repairs and Maintenance" line are evaluated as a separate OPEX line. The basis for the evaluation of these costs is the average level realized in the years 2018-2022.
- The OPEX line "Other operating expenses" is calculated as the difference of the total OPEX from the line "Repairs and Maintenance" and "Insurance".
- The evaluated operating expenses for 2023 are then projected for the remainder of the PRR3 period, adjusting for expected annual efficiency improvements.

  Adjustment of OPEX for DSO PRR3 are summarized below:

  - Non-controllable Opex is determined based on asset insurance and health insurance costs in 2022 recommended as the recommended base year.
  - The costs for the line "Lease for Trepça's assets" known during PRR2 have been removed in PRR3 based on DSO information about the realization of Opex during PRR2.
  - The costs for shared services are not part of DSO's OPEX, depending on the arrangements that may occur regarding these services, ERO will update DSO's OPEX.
  - An efficiency factor of 1.5% is applied to controllable opex.

  The DSO Opex for the upcoming regulatory is summarized in the following table:

***Table 11** OPEX for the upcoming regulatory period*

€000s	- - - - - - - - - - - - - - PRR3 - - - - - - - - - - - - - -				
	2023	2024	2025	20226	2027
	Proposed	Proposed	Proposed	Proposed	Proposed
Proposed by DSO					
Repair and maintenance & materials	7,000	7,000	7,000	7,000	7,000
Other operating expenses	24,727	25,511	26,152	26,730	27,227
Insurance, health insurance	1,966	2,028	2,079	2,126	2,165
Total OPEX	**33,693**	**34,540**	**35,232**	**35,856**	**36,392**
ERO proposals					
Repair and maintenance & materials	4,352	4,287	4,223	4,159	4,097
Other operating expenses	21,595	21,271	20,952	20,638	20,328
Insurance, Health insurance	2,033	2,033	2,033	2,033	2,033
Total OPEX	**27,981**	**27,591**	**27,208**	**26,830**	**26,459**

6 Losses and unregulated revenues

6.1 Cost of energy losses

The Maximum Allowed Revenues of DSO must be sufficient to cover the costs of a reasonable level of network losses. The level that ERO considers reasonable has been approved during the determination of regulatory parameters and ERO expects that the allowed losses of DSO will approach a level that can be considered more reasonable by the last year of the upcoming regulatory period. The costs of losses will be adjusted during each regulatory year to reflect:

- The difference between forecast and realized energy volumes;
- The difference between forecast and realized energy price; and
- The difference between allowed and realized level of losses;

6.1.1 Cost of energy losses

The cost of energy losses is the result of the production between the volume of losses, originating from the energy balance, and the Weighted Average Power Purchase Cost (WAPPC).

In the past, WAPPC has been set as the weighted average of the costs of purchasing power from domestic capacity and the estimated cost of purchasing power from imports. The past two years have been characterized by unprecedented increases in electricity prices and significant price fluctuations. This has caused the materiality threshold estimated at 5% to be violated due to fluctuations in the cost of purchasing losses in the network.

Given that the costs of losses are not a fixed parameter during the regulatory period but are subject to regular annual adjustments, the table below shows the proposal of the cost of losses only for 2023.

A summary of the costs of energy losses is given in the following table:

***Table 12** Costs of losses for the first regulatory year of PRR3*

€000s Inputs for calculation	Unit	2023 Proposed - DSO	2023 Proposed -ERO
Energy entering distribution	GWh	6,562.4	6,220
Allowance of losses	%	15.1%	15.1%
Losses	GWh	990	939
Purchase price	€/MWh	155	86
Total costs	**€000s**	**154,928**	**80,906**

6.2 Unregulated revenues and excluded costs

Unregulated revenues are revenues that DSO benefits from the use of regulated assets and that are deducted from the Maximum Allowed Revenues. While the costs for the conduct of any service (including services around electric lines or installations) that is designated as an excluded service represent the excluded costs.

Given that the forecast OPEX allows recovery of all costs, ERO, in order to avoid double counting, deducts these revenues and costs from the final MAR.

The evaluation of these revenues and costs was based on ERO permits and the realizations reported by DSO during PRR2. ERO evaluates as reasonable the value of €5.4 million as the value close to the lower limit of the unregulated revenues realized in PRR2, including the value of €0.4 million of excluded costs. These are constant values that are applied to the forecast for each year of PRR3.

ERO will similarly adjust unregulated revenues and excluded costs based on current data.

7 Annual adjustment and extraordinary review

As explained in chapter 2 of this Report, the Maximum Allowed Revenues of the operators are adjusted between the regulatory years to reflect the changes in the forecast and realized values of some cost components.

Rule on Determination of Maximum Allowed Revenues of the Distribution System Operator (Rules on DSO Revenues), Article 7 for Extraordinary Reviews states that when realized costs differ from forecast ones to an extent of a predetermined materiality threshold, which in Kosovo is set to be 5% of the Maximum Allowed Revenues, then ERO is obliged to take into account these impacts in future annual adjustments. The data provided by DSO prove that this materiality threshold has been exceeded, and ERO has already started the extraordinary tariff review process. Under normal circumstances, tariffs would only be changed during regular annual adjustments. Due to the date of submission of this application, and the process of its implementation, the effectiveness of the extraordinary review will be the same as that of the regular annual adjustment.

Although the revenue correction factor (KREV) summarizes the differences between costs and revenues allowed during 2022, ERO has presented the calculations for the annual adjustment of MAR in this chapter, which is organized as follows:

- Sub-chapter 7.1 presents the indexation of costs with inflation;
- Sub-chapter 7.2 addresses the adjustment of the cost of losses;
- Sub-chapter 7.3 addresses the unregulated revenues;
- Sub-chapter 7.4 addresses KREV; and,
- Sub-chapter 7.5 addresses the extraordinary review of MAR

7.1 Indexation with inflation rate

According to the tariff methodology, some components of DSO costs must be indexed every year to reflect the annual inflation rate. The inflation rate takes into account the Harmonized Index of Customer Prices published by *Eurostat*. The value published in January 2023 for 2022 is 8.4[3].

The costs impacted by indexation in inflation are provided in the following table:

Table 13 *Indexation of costs with HICP*

Line	Unit	Allowed	HICP	Adjusted costs
OPEX	mil€	26.18	8.4%	2.20
Depreciation	mil€	18.36	8.4%	1.54
Return	mil€	17.17	8.4%	1.44
Total	**mil€**	**61.71**		**5.18**

7.2 Adjustment of the cost of losses

Energy purchase costs must be adjusted annually to reflect changes in forecast and realized input values. The main changes derive from changes in realized energy purchase prices and realized volumes of energy flow in the network. Changes in the energy purchase cost are reimbursed with interest between the DSO and customers.

Adjustment of the cost of losses is summarized as follows:

Table 14 *Adjustment of the cost of losses*

DSO MAR	Unit	2022 Allowed	2022 Realized
Indexation parameter			
It	%		8.51
Allowed losses (LSSCt)			
LSSAt	%	15.1	15.1
REUEt	GWh	6,109.7	6,196.4
WHEAt	€/MWh	115.6	126.5
LSSCat-1	mil€		37.78
LSSCft-1	mil€	106.65	118.35
Adjusted costs	mil€		**12.59**

[3]https://ec.europa.eu/eurostat/databrowser/view/PRC_HICP_AIND__custom_4860030/default/table?lang=en

7.3 Unregulated revenues

Revenues from unregulated sources are adjusted during each regulatory year to reflect changes between their forecast and realized values.

The value of revenues from excluded services following the application of the interest rate turns out to be -8.77 million euros, therefore this value will be returned to customers through the application of tariffs in PRR3.

7.4 KREV- Revenues Correction Factor

All differences between actual allowed costs and allowed revenues are adjusted through the revenue correction factor. The annual adjustments of the Maximum Allowed Revenues for 2022 are summarized through KREV, which are then transferred to PRR3.

The adjustment for regulatory year 2022 is provided in the following table:

Table 15 *Revenues correction factor*

Revenues Correction Factor - KREV	Unit	Value
AAC_{at-1}	mil€	189.00
ARR_{t-1}	mil€	166.02
I_t	%	8.51
KREV = $(AAC_{at-1} - ARR_{t-1})*(1+I_t)$	**mil€**	**24.94**

KREV summarizes all cost components including those described above which are adjusted for inflation. The resulting difference between costs and revenue is passed-through as profiled in the regulatory period 2023-2027.

7.5 Extraordinary Review of DSO MAR

Extraordinary reviews are regulatory tools used for tariff interventions when realized costs differ from those anticipated to an extent beyond a predetermined threshold of materiality. This threshold of materiality in Kosovo is set to be 5% of the Maximum Allowed Revenues. ERO has already concluded two extraordinary tariff reviews[4].

On 5 December 2022, DSO submitted to ERO the request for the extraordinary review of distribution tariffs as a result of the increase in the cost of energy for the purchase of losses. Following the evaluation of costs, ERO concluded that the deviation exceeded the materiality threshold and, on 11 January 2023, notified the parties on the commencement of the extraordinary review. The application

[4] The extraordinary review to address the explosion in the Thermal Power Plant Kosova A (2014) and the Review to address the energy purchase costs (2022)

of the DSO, and the position of the ERO on the impact of the extraordinary review, are provided in this sub-chapter of the Consultation Report, structured as follows:

- Sub-chapter 7.5.1 presents the evaluation of DSO for extraordinary review;
- Sub-chapter 7.5.2 presents the evaluation of ERO;

7.5.1 Application of DSO for extraordinary review

On 5 December 2022, ERO received the request for an Extraordinary Review of Maximum Allowed Revenues for the Distribution System Operator (DSO). Among other things, in its request, DSO states that the prevalence of high import prices, their instability and insufficient revenues have forced DSO to operate below cost, making its financial situation difficult.

Based on the request of DSO, the main indication for exceeding the materiality threshold is based on the lack of revenues realized by DSO, this is mainly because the tariffs for using DSO's network have been applied since 9 February 2022, which has presented the earliest possibility of the entry into force of these tariffs.

The table below shows the impact on MAR of the extraordinary event according to the evaluation of the DSO:[5]

Table 16 *Materiality threshold*

MAR 2022	Unit mil€
Cost of losses	117.39
Other costs	71.10
MAR	188.50
Other costs	165.77
Total impact	22.72
Impact in %	**12.65 %**

7.5.2 Evaluation of ERO on the impact of increasing costs of energy purchase

ERO agrees that the factual data prove that the materiality threshold has been exceeded and has reacted in time to initiate the extraordinary review.[6] However, due to the date of submission of this application, and the process of its implementation, the effectiveness of the extraordinary review will be the same as that of the regular annual adjustment.

[5] https://www.ero-ks.org/zrre/sites/default/files/Publikimet/Pjesemarresit%20ne%20Treg/Furnizim/OSSH.pdf

[6] https://www.ero-ks.org/zrre/sites/default/files/Publikimet/Pjesemarresit%20ne%20Treg/Furnizim/Njoftim-Shqyrtimi%20i%20Jashtezakonshem%20i%20Te%20Hyrave%20te%20Lejuara%20Maksimale%20per%20Operatoret%20e%20Rregulluar.pdf

The Regulator, in accordance with the Rule on DSO Revenues will also take into account the ongoing impacts of extraordinary events (that cross the materiality threshold) in this periodic review.

8 Maximum Allowed Revenues (MAR) for the regulatory period

This chapter of the Consultation Report presents ERO's proposal for the Maximum Allowed Revenues of DSO for the regulatory period 2023-2028.

The Maximum Allowed RevenueS will be calculated based on the formula given in the Pricing Rule:

$$MAR_t = OPMC_t + DEPC_t + RTNC_t + LSSC_t + LICC_t - NTFR_t + ADJ_t + KREV_t$$

Ku:

MAR_t - *Maximum Allowed Revenues in year t*

$OPMC_t$ - *Operating and maintenance costs in year t*

$DEPC_t$ - *Depreciation costs in year t*

$RTNC_t$ - *Allowed return costs in year t*

$LSSC_t$ - *Costs of losses in year t*

$LICC_t$ - *Licensing costs in year t*

$NTFR_t$ - *Unregulated revenues in year t*

ADJ_t - *Adjustment of costs in year t*

$KREVt_t$ - *Difference of KREV in year t*

The calculations of ERO are provided in the following table:

Table 17 *DSO MAR for the upcoming regulatory period*

€000s	- - - - - - - - - - - - - -	PRR3		- - - - - - - - - - - - - -	
	2023	2024	2025	2026	2027
	Proposed	Proposed	Proposed	Proposed	Proposed
Opex Base	27,981	27,591	27,208	26,830	26,459
Cost of losses	80,906	80,690	73,499	67,492	62,648
Depreciation	17,219	19,084	21,097	21,890	23,067
Allowed return	14,870	16,238	17,746	18,825	19,214
Excluded costs	-408	-408	-408	-408	-408
Non-tariff revenues	-5,000	-5,000	-5,000	-5,000	-5,000
Obligations towards SO and MO	1,934	1,934	1,934	1,934	1,934
Licensing tax	90	90	90	90	90
Initial MAR	**137,592**	**140,220**	**136,165**	**131,654**	**128,004**
Adjustments 2022 and PRR2	85	85	85	85	85
Total proposed MAR	**137,677**	**140,305**	**136,251**	**131,739**	**128,089**

Annex 1: Adjustments for capital investments in PRR2

There are a number of capital projects which were included in the approved investment plan for PRR2 but which have not been implemented. In these cases, ERO applies the adjustment of the 'return' of the allowed depreciation and the allowed return related to these projects which were included in the MAR of PRR2. Customers will be compensated for these adjustments during PRR3. This prevents the DSO from benefiting from the proposal of investment projects whose costs are included in MAR but which have not actually been implemented. As in other adjustments, the calculations are made taking into account the time value of money.

The value of PRR2 adjustments is -28.7 million euro. The details of calculations are provided as follows:

***Table 18** Adjustment for capital investments PRR2*

Actual	Unit	2018	2019	2020	2021	2022	Total
Depreciation	mil€	0.59	1.64	2.49	3.37	4.37	12.46
Return	mil€	11.43	12.11	12.43	12.73	13.03	61.73
Allowed		**2018**	**2019**	**2020**	**2021**	**2022**	**Total**
Depreciation	mil€	1.11	3.32	5.38	7.05	8.43	25.29
Return	mil€	11.72	13.39	14.95	15.90	16.37	72.33
Difference							**Total**
Depreciation	mil€	-0.52	-1.68	-2.89	-3.68	-4.06	**(12.82)**
Return	mil€	-0.28	-1.28	-2.53	-3.17	-3.35	**(10.60)**
HCIP - allowed PRR1 and 2			1.73%	1.19%	0.26%	8.39%	
It		7.49%	7.38%	7.30%	7.12%	8.51%	
Total adjustment	mil€	(1.15)	(4.04)	(6.83)	(7.97)	(8.71)	**(28.70)**
Average in years	**mil€**	**(5.74)**	**(5.74)**	**(5.74)**	**(5.74)**	**(5.74)**	**(28.70)**

***Table 19** Adjustment for OPEX for the lease in assets of SS Trepça*

€000s	-------------	Adjustment for the lease in Trepça --	-----------		
	2018	2019	2020	2021	2022
	Proposed	Proposed	Proposed	Proposed	Proposed
Allowance	246	246	246	246	246
Realization	267	151	-	-	-
Difference	21	(95)	(246)	(246)	(246)
HICP		1.73%	1.19%	0.26%	8.39%
It	7.49%	7.38%	7.30%	7.12%	8.51%
Total adjustments	**30**	**(129)**	**(310)**	**(287)**	**(289)**