**REGULATORY REPORT**

**Determination of Maximum Allowed Revenues for District Heating Termokos J.S.C.**

**Heating Season 2020/2021**

*/Draft for Public Consultation/*

Prishtina, September 2020

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# [Introduction](#_1._Hyrje)

According to primary legislation - Articles 47 and 48 of the Law on Energy Regulator, Energy  
Regulatory Office (ERO) is responsible for the determination of tariff methodology and approving  
the tariffs in the regulated energy sector; therein is a set of broad principles such as justification  
and non-discriminatory principles under which energy enterprises should recover all justified  
costs including the reasonable return on their investments. Also, Articles 18 and 19 of the Law on Thermal Energy provide that the Supplier charged with public service carries out the  
supply of thermal energy with regulated tariffs.

District heating sector in Kosovo in transmission and distribution of heat is classified as a natural monopoly, while no competition exists for the time being in heat production and supply. Therefore, the district heating tariff, containing all the above-mentioned components, is subject to approval by ERO.

In line with its legal obligations and powers, the Energy Regulatory Office issued Thermal Energy Pricing Rule. This rule sets the procedures for submission, review of tariff application and approval of tariffs as well as Methodology on Calculation of Allowed Revenues and Tariffs.

For determination of allowed revenues for the heating season 2020-2021 have been considered the following:

- Information provided by DH Termokos in its application of tariffs for the heating season 2020/2021;

- Information provided by DH Termokos in its regulatory reporting - costs and revenues, assets/investments, as well as technical and customer information, that has actually taken place in the heating season 2019/2020 and in the previous seasons;

Procedure of tariff review process:

* **On 30 June 2020** - ERO issued a notice letter on commencement of tariff review for DH Termokos for the season 2020/2021;
* **On 1 July 2020** - ERO sent to DH Termokos, by email, a request for submitting the data and information which include a detailed description of information that DH Termokos shall submit for tariff review, as well as the Plan and Schedule
* **On 07 August 2020** - DH Termokos submitted by e-mail the partial tariff application with some of the data and information required for tariff review;
* **On 12 August 2020 -** DH Termokos submitted additional data, information and documentation within the tariff application for the season 2020/2021;
* **On 28 August 2020** - Following the analysis and evaluation of data and information submitted by DH Termokos, ERO submitted the written comments, where the requirements for correction, amendment and supplementation of the initial application were specified;
* **On 04 September 2020** - DH Termokos resubmitted the application with the corrections, amendments and supplementations required by ERO comments, in response to ERO comments.

# [Principles and Formulation of Tariff Methodology](file:///C:\Users\AppData\Local\Microsoft\Windows\Temporary%20Internet%20Files\Content.Outlook\2X7CP1LE\TE%20ARDHURAT%20E%20LEJUARA%20për%20NQ%20TERMOKOS_SEZONI%202012-13_v1_Shqip.doc)

For the purpose of determination of allowed revenues and thermal energy tariffs for heating season 2020/2021, the Methodology determined in the Thermal Energy Pricing Rule is applied.

Principles

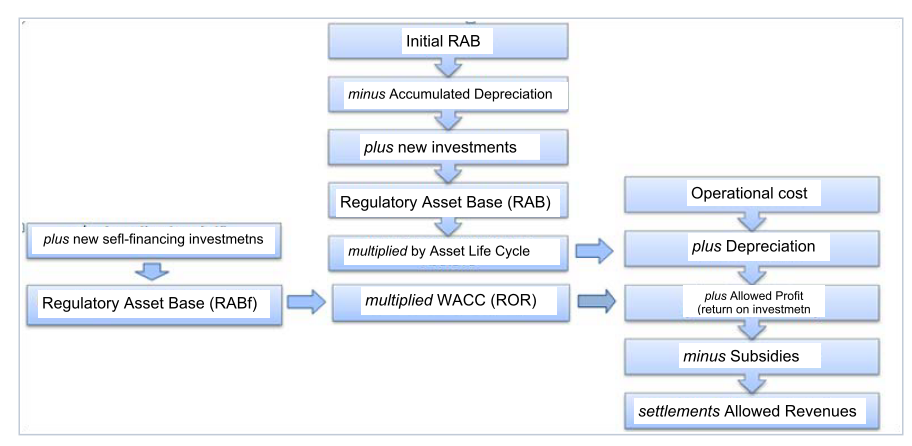
The basic principle of this methodology is that the utility tariffs should cover all reasonable costs - operational and capital so that on one hand consumers should not pay excessively over incurred costs for their services, while on the other hand, the utility should cover all justified costs plus a reasonable rate of return on capital investment. Total cost of service is usually defined to include all of utility operational expenses i.e. to recover the cost of production, distribution and supply (operation and maintenance, fuel, salaries, common costs, taxes, etc.) plus a reasonable return on its investments devoted to the public service provision.

Given that in some cases such a regulation does not provide incentives for enterprises to increase operational efficiency and cost-saving and on contrary may give incentive to over-invest in fixed assets and also considering the obligation of the Regulator to protect the customers, it is required from the enterprise not only to prove the declared “justifiable costs” but also to demonstrate increasing operational and procurement efficiency. Such measures form the basis for reconciliation of tariffs at the beginning of the new tariff season, in which the Regulator rewards or penalizes the enterprise for increasing or decreasing the efficiency and cost control.

**Formulation**

For the purpose of calculation of allowed revenues and final tariff calculation, Thermal Energy Pricing Rule (Annexes 1, 2, 3 and 6) provides the detailed formulation of Tariff Methodology. However, for consistency reasons, the formulation shall be shortly presented in this report.

Schematically, the Tariff Methodology can be shown as below. The costs which enterprise should recover are built up from its operational costs, depreciation representing ability to replace the enterprise assets, costs of network losses and the return on the Regulatory Asset Base (RAB), which in fact represents the allowed profit for the company.



### Figure 1: Allowed Revenues Calculation Scheme

Basic Regulation Formulas: (RABf)

Allowed revenues are calculated according to the formula:

**MAR = OPM + DEP + RTN + LOS + ADJ**

Where:

**MAR** Maximum Allowed Revenues;

**OPM** Allowed Operating and Maintenance Costs;

**DEP** Annual Allowed Depreciation;

**RTN** Allowed Return on Assets;

**LOS** Cost of Network Losses;

**ADJ** Revenue Adjustment.

The Allowed Revenues represent the annual cost of the enterprise and consist of: i) Operational Costs, which are “justifiable”; ii) Annual Depreciation; iii) Cost of Network Losses, and iv) Allowed Return on Regulatory Asset Base (RAB).

Operational Costs consists of the sum of the fixed and variable costs as follows:

**OC = OCF +OCV**

Operational Costs represent the total yearly estimated justified costs, including i)costs of fuel, costs of thermal energy purchase and other costs such as electricity, water treatment chemicals, spare parts; ii) other system operation costs, repairs and maintenance; and iii) personnel costs and common costs. Allowed operational costs do not include: i) subsidies; ii) costs rejected by tax authorities and costs of setting aside and distributing reserves; and iii) lease payments for items not kept in the bookkeeping, financial or other unjustified costs.

Regulatory Asset Base is calculated according to the formula:

**RABnend. = RABnstart. + INVn + WCn - DEPn-1 - DISn-1**

The Regulatory Asset Base (RAB) represents the enterprise assets considered to be used and useful for the provision of public service, that include: i) the Regulatory Initial Asset Base (RABnstart ) which actually represents the final RAB realized in the previous season 2017/18 (n-1); ii) new investments when planned and approved by the Regulator (INVn); iii) working capital sufficient for the company to carry out its activities (WCn); Depreciation of assets incurred in the previous season 2017/18 (n-1) (DEPn-1) and iv) Disposed assets (DISn-1).

ERO will take as a rate of return the value of WACC (Weighted Average Cost of Capital). WACC (%) is the sum of the weighted average of the equity cost and debt cost, and is calculated according to the formula:

**WACC = [(D/V) \* kd] + [(E/V) \* ke]**

Where:

**D/V** - Debt share from the total capital base

**E/V** - Equity share from the total capital base

**V** - Total capital base, which is the total of equity and debt

**kd -**  - Cost of debt

**ke -** - Cost of equity

# [Determination of Allowed Revenues](file:///C:\Users\AppData\Local\Microsoft\Windows\Temporary%20Internet%20Files\Content.Outlook\2X7CP1LE\TE%20ARDHURAT%20E%20LEJUARA%20për%20NQ%20TERMOKOS_SEZONI%202012-13_v1_Shqip.doc)

For determination of Allowed Revenues of DH Termokos JSC for the heating season 2020/2021, according to Thermal Energy Pricing Rule, ERO has undertaken the following:

1. Evaluation and determination of allowed operational costs;
2. Evaluation and determination of depreciation;
3. Determination of Allowed Return on RAB (return on investments), which includes:
   1. Establishment of the RAB – evaluation and approval of company assets, verification and approval of planned investments and working capital; and
   2. Calculation of the allowed Rate of Return (RoR)/WACC;
4. Evaluation and calculation of the allowed cost for network losses.

In determining the Allowed Revenues, ERO has taken into consideration the following:

* Information provided by DH Termokos in its application for tariffs for the heating season 2020/2021 - information regarding estimated revenues from heat-related services, forecasted total costs, forecasted assets and planned investments and forecasted heat production and supply, as well as forecasted heating area;
* Information provided by DH Termokos in its regulatory reporting - costs and revenues, assets/investment, as well as technical and customers information, that has actually taken place in the previous season 2019/2020;
* Information that ERO possesses from tariff reviews and monitoring of realizations and performance of previous seasons/years.

Knowing that forecasted information is the key to the determination of allowed revenues, it should be reliable and realistic. Generally, in forecasting/planning the business a realistic approach should be applied, followed by a comprehensive assessment of multiple factors affecting the business; i.e. assessment of the market and forecasting the expansion of customer base, assessment of production/supply capabilities and financial capabilities of the company. Of course, the proper forecasting/planning has to be based on the past data that the company has realized during a certain period.

It must be noted here that DH Termokos’ tariff application was quite detailed and complete.  
 However, inaccuracies, noncompliance and inconsistencies were noticed in some of the data and information contained in the application, which were improved, clarified and supplemented after the ERO comments and the joint meetings between ERO and DH Termokos.

In fact, as far as forecasted information is concerned (as stipulated in Annex 4 of Thermal Energy Pricing Rule), DH Termokos has submitted to ERO, the statements/spreadsheet consisting of forecasted income and costs, technical and customer data, operational assets and forecasted investments for one year period covering full district heating season: 15 October 2020 - 14 October 2021. While as supporting documents it has submitted: i) Auditor's Report and Statutory Financial Statements for 2019; ii) Consumption measurements recorded in the previous season according to the List of substations - data on heating areas and relevant capacities, as well as other technical data; ii) Asset list - detailed data on fixed assets where initial value (acquisition), accumulated depreciation and the present value of assets are given (submitted in regular annual/seasonal reporting); iii) Investment Planning in one year that includes the season 2020/21; iv) Plans for new connections for the season 2020/2021; v) Customer billing plans based on metered supply/consumption; vi) Recorded measurements for thermal energy produced by co-generation (submitted in regular annual/seasonal reports and vii) Projected data for customer billing 2020/2021 based on realizations - consumption measurement and heating area of customers in the past season 2018/2019, as well as plans for new connections, respectively expansion of the heating area of customers.

ERO has made efforts and has engaged the expertise available to make a realistic evaluation of the forecasted information submitted by Termokos. It made a comprehensive analysis and evaluation of the information presented, followed by a comparison of data from past seasons, in order to make an accurate determination (forecasting) of allowed revenues for the coming season 2020/2021.

## Evaluation and determination of allowed operational costs

Operational costs planning submitted by DH Termokos for the period 15 October 2020 - 14 October 2020, a period covering full district heating season 2020/2021, are structured as variable and fixed costs which is mainly in compliance with provisions of Thermal Energy Pricing Rule as well as advanced accounting principles and Kosovo Accounting Standards.  
In this section will be presented in table all forecasted costs presented by DH Termokos and the allowed operational costs allowed by ERO (Table 1). The table will follow with the analytical explanation of each item of operational costs.

### Table 1: Costs presented by DH Termokos JSC, and those allowed by ERO (In €)



**Operational costs – DH Termokos - season 2020/2021 Proposed by DH Termokos**

Allowed by ERO

Proposed by DH Termokos

Allowed by ERO

Proposed by DH Termokos

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### Figure 2: Schematic presentation of operational costs proposed by DH Termokos and allowed by ERO for the heating season 2020/2021

[Analytical explanation](file:///C:\Users\AppData\Local\Microsoft\Windows\Temporary%20Internet%20Files\Content.Outlook\2X7CP1LE\TE%20ARDHURAT%20E%20LEJUARA%20për%20NQ%20TERMOKOS_SEZONI%202012-13_v1_Shqip.doc)

Detailed explanations and justifications for determination/allowance of each group of costs, namely for the main positions of operational costs, are provided below.

[Variable costs:](file:///C:\Users\AppData\Local\Microsoft\Windows\Temporary%20Internet%20Files\Content.Outlook\2X7CP1LE\TE%20ARDHURAT%20E%20LEJUARA%20për%20NQ%20TERMOKOS_SEZONI%202012-13_v1_Shqip.doc)

* **Cost of thermal energy purchase from cogeneration in TPP Kosovo B - payment component for thermal energy amount**
* DH Termokos proposed the total cost of thermal energy purchase from cogeneration in the amount of € 1,230,610. This cost is based on the reserved capacity according to the Energy Balance planning and planned amount of thermal energy, as well as the respective prices for the capacity and quantity of thermal energy according to the sale agreement on thermal energy between KEK Generation and DH Termokos.

More specifically, the variable pay component for the amount of thermal energy is based on the planned amount of 267,648 MWhTH and the price (charge) of 1.35 €/MWhTH.

* Evaluation - DH Termokos proposal is evaluated to be mainly real and well-grounded. It should also be noted that the payment component for the annual licensing fee is included, which is calculated based on the annual license fee for the production of thermal energy determined according to the Rule on Fees issued by ERO. The calculations result as follows:
* Payment component for the amount of thermal energy: € 361,325; and
* Payment component for the annual licensing fee: € 26,765.

The above-described components result in the payment component for the amount of thermal energy from cogeneration at TPP Kosova B, in the amount of **€ 388,090**, which is allowed for the season 2020/2021.

* It is worth mentioning that the total cost of purchasing thermal energy from cogeneration at TPP Kosova B - which includes the reserved capacity component and the component for the amount of thermal energy - is **€ 1,230,610.**

* **Fuel cost - heavy fuel oil:**
  + The cost of heavy fuel oil proposed by Termokos in the amount of € 320,000 is based on the estimated amount of consumption of 710 ton and estimated purchase price of 450€/ton, as well as the annual licensing fee of € 1,000;
  + Evaluation – Upon the functioning of cogeneration project, the boilers of thermal energy production are a reserve capacity to be activated only during unplanned interruptions of TPP Kosova B. Therefore, their eventual usage would last for short periods until the necessary repairs are done. Considering that the average daily consumption, based on historical data (14 years) is estimated to be around 70 ton/day, then it is evaluated that the estimated quantity of 710 ton is sufficient to produce thermal energy for a period of ten days. Regarding the purchase price, it should be noted that the heavy fuel oil supply price consists of the current market price and the ‘premium’ to cover the supplier's costs. However, considering that the quantity of heavy fuel oil is a reserve from the quantity purchased years ago, then the purchase price was taken at that time (450 €/ton). Based on the foregoing, it can be estimated that the planning for the heavy fuel oil cost proposed by DH Termokos is real and it, therefore, allows the **heavy fuel oil** cost in the amount of **€ 319,500.**

Regarding the cost of heavy fuel oil for its own generation of thermal energy, it shall be emphasized that despite that it was not presented by DH Termokos, ERO has also added the annual licensing tax. This payment is calculated **€ 1,364** based on the projected production of thermal energy from heavy fuel oil of 6,820 MWh and the annual licensing fee of 0.20 €/MWh (according to the Rule on taxes issued by ERO).

* + - **Cost of water for (re)filling of heating system**
* DH Termokos has proposed the cost in the amount of € 94,698, for the estimated amount of water consumption 65,823 m3 for replenishment of system (primary network) as well as the cost for recharging the thermal energy transmission network from cogeneration and the cost for water consumption in substations.
* Evaluation - ERO carried evaluations based on the realization of this cost in previous seasons - namely in the season 2019/2020 the realized water cost was € 90,188 for water consumption of 62,689 m3. Estimates have also taken into account the projected amount of water for recharging the primary distribution network (65,823 m3 - a consumption slightly higher than last season due to network expansion), as well as other water costs for the cogeneration network and substations. Consequently, based on the relevant calculations that take into account the current tariffs for water services for RWC Prishtina - for water supply service: 0.69 €/m3 and for wastewater service: 0.11 €/m3, as well as the cost of water for substations, ERO estimates that the proposed cost of water of **94,698 €,** is real and sufficient for the season 2020/2021.

* + - **Cost of water treatment chemicals**
      * DH Termokosi proposed the cost of water treatment chemicals in the amount of € 15,222, which is an increased cost of only € 754 compared to the cost realized in the last season 2019/2020 (€ 14,468), which reflects the planned increase amount of water to recharge the system.
      * Evaluation - Taking into account the amount of water to be treated, water leaks (losses) and the planned increase of the heating area, ERO estimates that the amount of **€ 15,222** is sufficient to cover the cost of water treatment chemicals.
        + **Cost of electricity**

For the cost of electricity, DH Termokos has proposed a total value of € 596,489 - this cost takes into account the consumption of electricity in system plants and substations. It should be noted that the proposed value of the cost of electricity represents an increase of about 11% compared to the value realized in the last season 2019/2020 (€ 537,378). This increase was justified mainly with the increase of the number of substations due to the increase in customer base, namely the increase of heating area and new equipment.

Evaluation - ERO estimates that the cost planning of electricity is grounded and realistic and that the increase of about 11% corresponds to the increase of the number of substations, namely heating area. Consequently, the presented cost of electricity in the amount of **€ 596,489** is allowed as real and sufficient to cover the total consumption of electricity for the period concerned, including additional costs due to the increase of heating area and installation of additional equipment (new).

* + - * + **Personnel Cost (“direct labour”)**

DH Termokos presented the personnel cost - "direct labour", in the amount of € 978,038, which represents an increase of 16.23% compared to the value allowed last season (€ 841,454). Details of this forecast were provided, which were requested in ERO written comments, and was justified by the planned increase in the number of staff according to the Regulation on the Organization and Systematization of Jobs issued by the Board of PE Termokos at the end of 2019. According to this Regulation, among others, it is foreseen to increase the number of employees (from currently 203 to 248), as well as the addition of some new organizational units, such as the Legal Department and the Capital Development and Investment Department, which are expected to have 24 employees. According to the new organizational chart, an increase in the number of employees in the Distribution Department is foreseen due to expansion of the network in other districts (neighbourhoods) of the city, within the ongoing or planned projects. Regarding the planned increase in the number of employees, it should be noted that, according to information from POE Termokos, new jobs have not yet been filled in both existing and new departments. Also, PE Termokos has not provided any recruitment plan for new staff to fill new positions.

Evaluation - Without wishing to give estimates for the significant increase in the number of employees planned by the new Regulation, which is an exclusive competence of the Board of PE Termokos, ERO emphasizes that the increase of new jobs should be a process that reflects a visible increase of the enterprise operations, as well as considering the cost-effectiveness and related benefits.

From the review of the information provided and the Regulation concerned, it is estimated that, according to the new organization, no significant increase in the number of employees in Production/Cogeneration and Distribution Department is foreseen, and it emphasizes the fact that so far the relevant job positions have not been filled in. Considering these facts and considering that filling of new job positions is a process that requires time for the recruitment of professional staff and which should be undertaken in accordance with the gradual expansion of the operations of the enterprise, it is considered that the proposed increase is not real and allows an increase of 2.8% of this cost compared to allowances for the previous season 2019/2020; consequently, ERO allows **Staff Cost - 'Direct Labour'** in the amount of **€ 865,015.**

The increase of 2.8% reflects the economic growth nationwide for the tariff review period October 2020 - October 2021. According to estimates and projections of the World Bank (<https://dataworldbank.org/country/kosovo>) for 2020, it is estimated that there has been a recession, i.e. a negative GDP growth of -4/5% (due to the COVID19 pandemic), while the projection of GDP growth for 2021 is 5.2%. The weighted average (which includes 3 months of 2020 and 9 months of 2021) results in 2.8%.

* + - * + **Bad debt cost and the annual licensing fee**
* DH Termokos did not present the bad debt cost below the variable costs, but as stated below under the section 'fixed costs', DH Termokos under the item 'sales and other administrative costs' presented the value of € 682,888 as "commission costs of accounts receivable” providing a value corresponding to over 10% of the planned billing.

Whereas the licensing tax for thermal energy production from heavy fuel oil production facilities in the heating plant is presented in the amount of € 1,000 combined with the cost of heavy fuel oil.

* Evaluation - Pursuant to Thermal Energy Pricing Rule, bad debt cost is calculated as a justifiable share of the enterprise revenues (i.e. the billing value from heating sale). This “justifiable share” shall be appointed in a manner to stimulate the enterprise for increasing their efforts in enhancing the share of payment collection by customers but at the same time taking into consideration the fact that a considerable amount cannot objectively be collected, therefore it shall remain a debt that actually will not be realized. From what was stated above, ERO’s opinion is that the share of 5% of the bad debt is justifiable and therefore allows the **bad debt cost** in the amount of € **319,090.**

Regarding the licensing fee, it is calculated based on the planned amount of own production 6,820 MWhTH and the annual fee of 0.20 €/MWhTH according to the Rule on Fees issued by ERO, which results in the amount of **€ 1,364.**

In the light of foregoing, it results that the **Variable Costs** allowed by ERO are set at **€ 2,599,468.**

Fixed costs

* **Cost: Repairs and Maintenance;**
* DH Termokos for the cost of repairs and maintenance has planned the value of € 167,600 - an increase many times higher compared to the realization of this cost in the previous period/season 2019/2020 (€ 45,644). Also, this proposed value is approximately 100% higher than the value allowed in the previous consideration 2019/2020 (€ 85,000). DH Termokos has given a brief justification for this increase where the planned increase of this cost is principally justified by the increase of maintenance and repair works as a result of expansion of the network.
* Evaluation - As the realizations in the previous seasons have been significantly smaller for the position 'maintenance and repairs', and also the increase of the maintenance cost is disproportionate to the increase of expected works related to the expansion of the network, ERO estimates that the proposed value is unreasonable and does not reflect the usual repair and maintenance costs incurred by the enterprise. However, taking into account in part the above reasoning, as well as the need to ensure stable operation of facilities, equipment and network that enables a quality supply, ERO allows a significant increase in the **cost of repairs and maintenance** in the amount of **€ 85,000.**
* **Cost: Materials and Services:**
* The value of € 116,000 has been proposed for this position by DH Termokos; this value represents an increase of about 34% from the value allowed in the tariff review of the previous season (€ 86,500), respectively about 44% higher compared to the realization of this cost in the previous period - season 2019/2020 (€ 80,572).
* Evaluation - Considering that this cost is closely related to the cost of repairs and maintenance, and based on the above comparisons it is estimated that the increase proposed by DH Termokos significantly exceeds the costs incurred in previous seasons, and also does not reflect proportionally the increase of materials and services as a result of the planned expansion of the network. Consequently, ERO allows the cost of **'Materials and Services'** in the amount of **€ 86,500.**
* **Cost of thermal energy purchase from cogeneration of TPP Kosova B - fixed payment component for reserved capacity**
* The payment component for reserved capacity proposed by DH Termokos is based on the reserved electric capacity: 40,800 MWhEL/h and the respective charge (price): 20.65 €/MWhEL/h;
* Evaluation - The proposal of DH Termokos for reserved capacity is evaluated as real and grounded on Energy Balances; from the calculations, it results that the **payment** component **for reserved capacity** is **€ 842,520;**
  + - **Administration Costs:**

* DH Termokos has proposed administration cost in the amount of € 111,090 providing the relevant details. The proposed value shows an increase of 56% compared to the value realized in the previous period (€ 71,257).
* Evaluation - Based on the foregoing and to allow the improvement of services of the enterprise and especially the customer service, ERO decides to allow a small increase (about 8%) from realization in the previous period and fixes this cost at a value of **€ 82,000.**
  + - **Staff Cost ('different from direct labour')**
      * For the cost of administration staff and other supporting services, DH Termokos has proposed the value of € 1,174,450 - an increase of 34% compared to the realization of this cost last season (€ 871,930), while it is also an increase of about 56% compared to the allowed value for this cost in last season consideration (€ 749,608). As for the cost of staff 'direct labour', this increase is justified by the planned increase in the number of staff according to the Regulation on Organization and Systematization of Jobs issued by the Board of PE Termokos at the end of 2019. According to this Regulation, among others, it is foreseen to increase the number of employees (from currently 203 to 248), as well as the addition of some new organizational units, such as. The Legal Department and the Capital Development and Investment Department, which are expected to have 24 employees. According to the new organizational chart, an increase in the number of employees in the Distribution Department is foreseen due to expansion of the network in other districts (neighbourhoods) of the city, within the ongoing or planned projects. Regarding the planned increase in the number of employees, it should be noted that, according to information from POE Termokos, new jobs have not yet been filled in both existing and new departments. Also, POE Termokos has not provided any recruitment plan for new staff to fill new positions.

Evaluation - ERO, without wanting to give estimates to the significant increase in the number of employees planned by the new Regulation, which is an exclusive competence of the Board of PE Termokos, emphasizes that the addition of new jobs should be a process that reflects a significant increase in enterprise operations, as well as considering cost-effectiveness and related benefits.

From the review of the information provided and the Regulation concerned, it is estimated that, according to the new organizational chart, it is foreseen the establishment of 2 new departments (each with 12 positions) which have not yet been filled in - so the relevant staff has not been recruited, as the other positions planned with the new organizational chart have not been filled in either. Considering these facts and considering that filling of new jobs is a process that requires time for the recruitment of professional staff and which should be undertaken in accordance with the gradual expansion of the enterprise operations, it is considered that the proposed increase is not realistic and allows an increase of 2.8% of this cost compared to allowances for the previous season 2019/2020; consequently, ERO allows **Staff Cost - 'Direct Labour'** in the amount of **€ 767,513.**

The increase of 2.8% reflects the economic growth nationwide for the tariff review period October 2020 - October 2021. According to estimates and projections of the World Bank (<https://dataworldbank.org/country/kosovo>) for 2020, it is estimated that there has been a recession, i.e. a negative GDP growth of -4/5% (due to the COVID19 pandemic), while the projection of GDP growth for 2021 is 5.2%. The weighted average (which includes 3 months of 2020 and 9 months of 2021) results in 2.8%.

* **Sales and other administrative costs**
  + This cost was proposed by DH Termokos in an extremely high amount of € 1,022,156; from the details provided, it can be seen that the main part belongs to the sub-component “costs related to the provision of accounts receivable” in the amount of € 682,888. Also, the details show the sub-component “pension insurance contributions” where a very large amount of € 107,624 is presented, as well as “annual license fee costs (cogeneration and own production)” in the amount of € 28,129.
  + Evaluation - As the item “costs related to the provision of accounts receivables” is related to accounts receivable or customer debts, this is a necessary accounting operation to reflect the current non-collection ratio and collection of past debts. In this regard, it should be noted that ERO does not consider these costs as subject to tariff review, due to the fact that in accordance with provisions of provisions of Thermal Energy Pricing Rule, ERO determines/allows a justifiable share of the bad debts share, which is categorized under variable costs as bad debt cost.

As for the component "pension insurance contributions", ERO considers that this value belongs to and is allocated to the 'staff cost'.

For the licensing fee component it should be noted that the payment of licensing fee for thermal energy from cogeneration is calculated in the variable component of the cost of thermal energy from cogeneration (see p.9), as well as the annual licensing fee for the production of thermal energy in the heating plant is allocated under 'variable costs' (see p.10).

* + In the light of foregoing, ERO has assigned the amount of **€ 203,515,** which does not include the above-mentioned components, as the allowed value for Sales and other administrative costs.

From what was stated above, it results that the **Fixed Costs** allowed from ERO, are determined in the amount of **€ 2,067,048.**

- Total allowed operational costs for the season 2020/2021

Allowed operational costs consist of the sum of the fixed and variable costs and are calculated according to the formula written below:

**OC = Variable Costs + Fixed Costs**

From the formula it is calculated:

**Allowed operational costs** in the amount of **€ 4,666,516**

## Determination of the Regulatory Asset Base (RAB)

Determination of RAB is the main factor for calculating the Annual Depreciation and Allowed Return on Assets, which in fact represents the allowed profit from the regulated business activity.

The Regulatory Asset Base - RAB, pursuant to Annex 2 of Thermal Energy Pricing Rule, is calculated according to the following formula:

**RABnend = RABnstart + INVn + WCn - DEPn-1 - DISn-1**

where:

RABnend - represents the assets planned for the season 2020/21 ('n');

RAnstart. - Regulatory Initial Asset Base, which actually represents the final RAB realized in the previous season 2019/20 ('n-1');

INVn - New investments planned and approved by the regulator for the one year including the heating season 2020/2021;

WCn - Sufficient working capital for the company to carry out its activities;

DEPn-1 - Depreciation of assets realized in the previous season 2019/20 ('n-1'); and

DISn-1 - Assets disposed in the previous season 2019/2020 ('n-1').

### 3.2.1 Determination of the Regulatory Initial Asset Base (RABnstart)

RABnstart represents the initial basis for determination of RAB planned for the season 'n' - 2020/21, which, as noted above, is actually the final RAB realized in the previous season 'n-1' - 2019/20.

From the regular monitoring of realizations, focusing mainly on the monitoring of realization of investments in relation to those planned (Realization Monitoring Report for the season 2019/2020), are ascertained the values realized from which is calculated the final RAB realized in the season 'n-1' - 2019/20 in the amount of **€ 45,487,794**, which also represents the initial RAB for the season 'n' -2020/21.

3.2.2 Determination of new allowed investments

Regarding the new investments planned for the tariff review period: October 2020 - October 2021, it should initially be noted that these investments mainly belong to the rehabilitation of the network and substations, as well as the expansion of the network and new substations; DH Termokos presented the total value of **new planned investments** **of** **€ 9,282,000**; this amount includes investments from donations and self-financing investments.

Investments from donations

Investments under international donor projects such as KfW and MCC are presented in a total amount of **€ 7,000,000** - so these projects are planned to be mostly funded by donations, while a small amount with self-financing - the following details:

* KfW project: Rehabilitation of the network and substations, as well as expansion of the network and new thermal substations, is planned in a total amount of about € 14 million, of which many during the period 2018/19 were realized for the rehabilitation of some network segments in the amount of € 1.5 million. This project includes the following components:
* Rehabilitation of network and thermal substations;
* Network expansion and new thermal substations;
* Construction of Heat Reservoirs, as well as chemical water treatment equipment.

For the highly-described components, some preliminary details are given, where it should be noted that the project is currently in the tendering phase for the selection of contractors for execution of works and supervision. It is expected that selection or award of the contract will be completed by December 2020, where it will start with the detailed design phase and supply (purchase of materials), while the construction and installation works will start in April 2021. On the other hand, according to the project implementation plan, it is planned that the works will be completed in October 2022.

In accordance with the implementation plan, during the tariff review period, it is planned the execution of works in the amount of € **5.5 mil.**

* MCC Project: Installation of thermal energy meters - This project in the estimated value of $ 10.9 mil, as a donation from MCC - USA, contains:
* Installation of individual thermal energy meters, respectively heat allocators;
* Installation of thermostatic valves and circulating pumps;
* Development of software for billing and reading of thermal energy consumption;
* Assistance in improving billing services based on metered consumption.

Based on the project implementation plan, it is planned that during the tariff review period the works will be carried out in the amount of **€ 1.5 million.**

Self-financing investments

As mentioned above, DH Termokos also plans self-financing investments, where it has presented self-financing investments in the total amount of **€ 2,282,000**; some of these own investments are part of the above-mentioned rehabilitation projects while the rest are individual investments - the following details:

* Rehabilitation of the network and related equipment in the amount of € 630,000;
* Equipment of generation plants respectively extraction and receiving stations of thermal energy (HES and HRS) in the amount of € 257,000;
* Construction of the Administration Department Building in the amount of € 1,350,000; and
* Computer equipment and software in the amount of € 45,000.

Summary of new allowed investments

**Investments from donations**

ERO has continuously followed the development of these investment projects and in the framework of cooperation with the parties involved in these projects has been informed exactly of the details of these projects. It should be noted that all submitted projects are also included in the Development Plan 2019 - 2029 of DH Termokos, which has been approved by ERO.

A number of these projects, especially donor projects, have a duration of over one year, so it was necessary to evaluate the works that are planned to be carried out within the tariff review period, which is estimated to have been mainly based on dynamic plans for the implementation of these projects. Therefore, for the tariff review period (October 2020 - October 2021), ERO evaluates the following:

* It allows the amount of **€ 5,500,000** for the KfW project based on the updated implementation plan and the current status of the project described above.
* It allows the amount of **€ 1.5000,000** for the MCC project according to the implementation plan updated by MCC.

**New self-financing investments**

From the data and information provided by DH Termokos, ERO has estimated that the new planned self-financing investments are mainly real plans based on the continuous improvement of operations and sustainable supply. The following evaluations:

* Planned investments in the distribution network include network rehabilitation - which specifically includes pipelines and associated equipment. Among other things, the new investments envisage modular substations and valves DN500 and DN600 (as co-financing with donor projects). As such, investments in the distribution network are fully allowed. In the framework of network investments, the drafting of a Conceptual Plan for the study of the network in Kodra e Diellit in the amount of € 20,000 is also planned. For this feasibility plan, no concrete information and relevant details are provided regarding the project development, so in their absence, this investment is not allowed. Consequently, in the light of forgoing, own investments in the distribution network are allowed in the amount of **€ 610,000.**
* The planned investments in thermal power generation plants, respectively in cogeneration plants - HES and HRS, are within the regular investments to maintain the level of cogeneration operation and ensure quality supply of thermal energy. Therefore, ERO allows the presented investment amount of **€ 257,000**.
* In the new self-financing investments, among others, the construction of the building of the central administrative office of DH Termokos is planned. The presented amount of this investment is € 1,300,000 for execution of works and € 50,000 for supervision of the execution of works. In this regard, it should initially be noted that in previous seasons the amount of € 530,000 was presented for the construction of the building, which amount is also envisaged under the long-term Development Plan. Specifically, in the last review for the 2019/2020 season, ERO has allowed the investment in construction of the building in the amount of € 530,000, of which only € 67,980 (12.83%) were realized for the drafting of the Feasibility Study: Assessment of the situation and facilities of PE "Termokos" JSC and drafting of a detailed construction project. In the meantime, in July of this year, the Construction Permit and the Environmental Permit were obtained, while currently, the tendering procedures for the selection of the construction contractor and the construction supervision contractor are ongoing. Regarding the amount of the investment, it should be noted that with the drafting of the detailed project, the concept of construction of the building has changed significantly increasing the size of the building and the number of floors, which of course has resulted in a significantly higher value than the initial value. In this regard, ERO would like to emphasize that any changes should be reflected in the update of the Development Plan, which means receiving approval by ERO, which has not been done by DH Termokos. Furthermore, the relevant pre-approved investment changes must be well reasoned and argued. Taking into account the foregoing, ERO decides to transfer the allowed investment amount in the previous review of € 530,000 to the current tariff review for the season 2020/2021, removing the amount of € 67,980 realized in the previous season, as well as increasing the partial amount for construction supervision of € 20,000. Consequently, for this one-year tariff review period, it allows the investment value for the construction of the new building amounting at **€ 482,000.**

* In the framework of new investments in information technology equipment, ERO allows the proposed amount of **€ 45,000**.

Based on the estimates presented above, ERO approves or allows new planned investments in the total amount of **€ 8,394,000.**

**Division by the way of financing:**

Referring to the financing details described above, the distribution of new allowed investments according to the way of financing is as follows:

* (New allowed investments)DONATION = € 7,000,000; and
* (New allowed investments)SELF-FINANCING. = € 1,394,000.

## 

### 3.2.3 Determination of Working Capital

According to respective provisions of Thermal Energy Pricing Rule-Annex 2, Working Capital is usually determined to allow circulating monetary means for a period no longer than a month, respectively the amount of average monthly revenues. Consequently, ERO determines the ratio 1/12 in the revenues from the sale of heat realized in the season 2019/2020 - € 6,381,802, and allows the **Working Capital** in the amount of **€ 531,817.**

### 3.2.4 Annual Depreciation of Assets - realized in the season 2019/20 ('n-1')

The annual depreciation realized in the season 'n-1' - 2019/20 is calculated based on the Regulatory Asset Base (RAB) realized in that season and the weighted average depreciation rate; more specifically, from the Value of RAB realized in 2019/20 (€ 45,487,794) is deducted the value of realized working capital (€ 524,066), and the amount earned (€ 44,963,728) is multiplied by the weighted average depreciation rate (3.30%). Thus, from this it is calculated the **Annual Depreciation realized in the season 2019/20** in the amount of **€ 1,483,300.**

### 3.2.5 Disposals

Disposal means the assets that the regulated enterprise has removed from usage - the damaged assets that cannot be repaired in order to be reused again, the assets that have been sold/leased (when they were evaluated as unusable) etc. According to the formula given at the beginning of Chapter 3.2, the value of disposed assets is subtracted (minus). Given that for this tariff review no other disposal of assets was reported, the amount of disposals is € 0.

Summary of determination of RAB and RABf

The following table presents the summarized integral components and respective amounts of Regulatory Asset Base (RAB) and the Regulatory Self-financed Asset Base of (RABf)

### Table 2: RAB and its components - DH TERMOKOS - heating season 2020/2021

|  |  |  |
| --- | --- | --- |
| **Regulatory Asset Base (RAB) - DH TERMOKOS** | | **Allowed by ERO [€]** |
| **Heating season 2020-2021** | |
| 3.2.1 | Regulatory Initial Asset Base (RABnstart) | 45,487,794 |
|
| 3.2.2 | New Investments (INVn) | 8,394,000 |
|
| 3.2.3 | Working Capital (WC**n**) | 531.817 |
|
| 3.2.4 | Annual Depreciation of Assets - realized in the season 2019/20 (DEPn-1) | -1,483,300 |
| 3.2.5 | - in the season 2019/20 (DISn-1) | 0 |
|  | **Regulatory Asset Base (RAB)** | **52,930,311** |

Regarding the Regulated Self-financed Asset Base (RABf), it should be noted that the same wording applies as for the general RAB, but here the values of self-financed assets/investments are taken; details in the table below:

### Table 3: RAB and its components - DH TERMOKOS - heating season 2020/2021

|  |  |  |
| --- | --- | --- |
| **Regulatory Self-financed Asset Base (RABf) - DH TERMOKOS** | | **Allowed by ERO [€]** |
| **Heating season 2020-2021** | |
| 3.2.1 | Regulatory Self-financed Asset Base - Initial ( RABf-nsart) | 9,110,869 |
|
| 3.2.2 | New Investments (self-financing - without donations) ((INVf-n) | 1,394,000 |
|
| 3.2.3 | Working Capital (WC**n**) | 531.817 |
|
| 3.2.4 | Annual Depreciation of Self-financed Assets - realized in the season 2019/20 (DEPf-n-1) | -245.337 |
| 3.2.5 | Dispositions of Self-financed Assets - in the season 2018/19 (DISn-1) | 0 |
|  | **Regulatory Self-financed Asset Base (RABf)** | **10,791,349** |

## Evaluation and Determination of Annual Depreciation for the season 2020/2021

Determination of Annual Depreciation for the season 2020/21 ('n') is based on the value of total RAB defined in table '2' (Chapter '3.2') and on the weighted average depreciation rate by asset categorization, presented in the following table '4' and the corresponding values given in table 2. Table 4 summarizes the RAB categorization by asset categories, the respective useful life, i.e., the depreciation rate for each asset category, as well as the weighted average depreciation rate.

### Table 4: Asset Categorization (RAB) and weighted average depreciation rate



As indicated in the table above, the weighted average depreciation rate (NZHMP) is estimated at 3.26%. Based on the total value (RAB – Working Capital) and weighted average depreciation rate, the annual allowed depreciation is calculated, as follows:

**Annual allowed depreciation (DEPn)** = (Total RAB - WC**n)** \*NZHMP = 52,398,494€ \* 3.26% = **1,710,430 €**

## Determination of Allowed Return on RAB (Allowed Profit)

As previously mentioned, calculation/determination of Allowed Return is calculated based on the Regulatory Self-financed Asset Base (RABf) and Rate of Return (RoR), therefore, it includes the following two components

* Determination of the Regulatory Self-financed Asset Base (RABf); and
* Calculation of allowed Rate of Return (RoR), determined in the WACC value.

The first component - RABf is calculated in Chapter 3.2 – table 3, whereas the calculation of the second component - RoR is determined in the following chapter:

### 3.4.1 Calculation of the Allowed Rate of Return (RoR)

The objective of a reasonable Rate of Return (RoR) on the Regulatory Asset Base (RAB) is to provide a guarantee for the district heating enterprises for a profit that allows to continue to invest in their assets, in order to be able to replace and expand them.

A reasonable RoR is considered to be the rate of the “Weighted Average Cost of Capital” (WACC), which is calculated in the components of capital base, taking into account the weights of the sums of these capital components. In other words, WACC is the sum of the weighted average cost of equity and cost of debt.

For the cost of equity, ERO applied the internationally recognized methodology called “Capital Asset Pricing Model” (CAPM). The CAPM expresses the expected equity cost of equity as the risk-free rate (rf) plus an equity risk premium (ERP). We can define ERP as the difference between the equity market risk - i.e. the return expected on the well-developed market – and the risk-free rate of return, expressed in the formula below:

**ERP = (rm - rf)**

The rate of ERP depends on the risk of investing in a particular country’s market.

Value of pre-tax WACC can be calculated according to the following formula:

WACCpre-tax = [(D/V)\*kd] + [(E/V)\*ke]

Where:

**D/V** Debt share of the total capital base (as a percentage)

**E/V** Equity share of the total capital base (as a percentage)

**V** Total capital base, which is the equity and debt share

**kd** Cost of debt

**ke**  Cost of equity

**Cost of debt (kd)** is a contractual commitment and is the interest rate that the enterprise pays on current loans.

**Cost of equity (ke) is** calculated as follows:

**ke = rf +** **βe \* (rm - rf)**

Where:

Rf Risk-free rate and is derived from estimates of Government bond return

Βee “Beta”: risk measure for the respective company

**(rm - rf)** Equity market risk premium minus the risk-free rate of return

“The risk premium” is determined by “beta” and by the expected market risk premium that investors will demand from the market as a whole. The “beta” factor measures the unpredictability of a company’s return relative to the stock market as a whole

Below we estimate/calculate the cost of debt and the cost of equity for the district heating enterprises in Kosovo in order to come to a pre-tax WACC.

Cost of Debt

For this district heating season and the following ones, ERO decides to have a D/V ratio in the value of 60/100 (60% debt and 40% equity). This 60% ratio should be used in the estimations/calculations of commercial pre-tax WACC for district heating season 2019 – 2020 and the following seasons if no significant changes are noticed.

Currently, DH Termokos has a loan from KfW with the interest rate of 8.79% for investment in cogeneration project. In this regard, it should be noted that most of the investments in the cogeneration project have been donations (from the German Government, the European Commission and local and central institutions); while the amount of € 5,000,000 is a loan from KfW with an annual interest rate of 8.97% and a repayment period of 11 years. Consequently, the cost of debt will reflect the current credit and is fixed at **8.79%.**

Therefore, the cost of debt is:

**kd = 8.79%**

Cost of Equity

The cost of equity is expressed by the following formula:

**ke = rf +** **βe \*(rm - rf)**

where:

**(rm - rf) = ERP** - Equity Risk Premium

Risk-Free Rate - **rf** currently based on local and international financial trends of Government bonds (T-bills) is estimated in the range of 1.1 to 3.0%. The lower limit represents the level of interest rates on Kosovo's long-term treasury bills while the upper limit represents the 10-year average of interest rates on Hungarian treasury bills - representing the most risky long-term debt issuer traded among the regional comparators. Based on this, ERO fixes the **Risk-Free Rate** at **2.3%.**

Recent decisions by regulatory authorities estimate the equity risk premium in the range of 3.5 to 5%. Because DH Termokos is a public enterprise it is considered that the equity risk is minimal and consequently it is assumed that the value of **ERP is equal to 4.5%.**

The average asset Beta for electricity grids in the EU and integrated enterprises is 0.42 compared to 0.54 - 0.63 for enterprises that have only generation and supply in the EU and USA. Because Kosovo's district heating industry is small, it seems reasonable to assume that the demand growth - which is the main driver of revenue growth - will be more unpredictable than GDP growth - which is the main factor for the growth of the commodity and stock market - than in large and developed countries. Adding a single large consumer to district heating means increasing the demand for district heating compared to the previous demand, while the impact on GDP may be much smaller. In order to take into account the more unpredictable nature of the revenues of district heating companies compared to GDP growth, we estimate that the cost of equity is higher than the average set by EU regulators, and we consider that “βe” is reasonable for district heating companies in Kosovo to be **βe = 1.**

The post-tax cost of equity is as follows:

**Ke post tax = 2.3% + (1 \* 4.5%) = 6.80%**

The pre-tax cost of equity is found by multiplying the higher result of the post-tax cost of equity by tax wedge as follows:

**‘Tax wedge' = 1/(1-t)**

where:

**t** Tax rate on corporate profit

Profit tax in Kosovo is 10% and the tax wedge is:

**1/(1-0.10) = 1.11**

Pre-tax cost of equity is:

**ke pre-tax = 6.80% \* 1.11 = 7.55%**

As a consequence of the above calculations, it is calculated the pre-tax WACC – rounded to two decimals – as below:

**WACCpre-tax = [8.79% \* 0.6] + [7.55% \* 0.4] = 8.30%**

Calculation of Allowed Return on RABf for DH Termokos

Based on the calculated WACCpre-tax of 8.30% as mentioned in 3.4.1, we are now able to calculate the Allowed Return or Allowed Profit for DH TERMOKOS, according to the formula below:

RET = RoR x RABf

Therefore, the Allowed Return on RABf is equal to 10,791,349€ \* 8:30% = 895,274€.

### Table 5: Allowed Return (Allowed Profit) on RABf for the heating season 2020/2021

|  |  |  |
| --- | --- | --- |
| **Allowed Return on RABf** | | **Allowed by ERO [€]** |
| **for DH TERMOKOS** | |
| **RABf** | **Regulatory Self-financed Asset Base** | **10,791,349** |
| **RoR** | **Rate of Return at WACC level** | **8:30%** |
|  | **Allowed Return on RABf** | **895.274** |

## 

## Determination of Network Losses Cost

The allowed cost of network losses is used to cover the enterprise costs caused due to the loss of thermal energy during transmission and distribution. In accordance with Article 1 of Thermal Energy Pricing Rule, this cost is calculated as the quotient of the amount of network losses and generation of thermal energy that enters the network (share of overall network losses), multiplied by total variable cost of generation.

From what was said above, ERO has carried out the Thermal Energy Balance for DH Termokos for heating season 2020/2021, through which it determined the amount of network losses of **27,624 MWh**, being the amount of transmission network losses TPP Kosova B - DH Termokos (5,353MWh) and the amount of distribution network losses (22,271 MWh). Expressed in percentage, the total share of network losses is 10.30% - the share of transmission network losses 2.0% and share of distribution network losses 8.30%. Also, from the Thermal Energy Balance is derived the amount of net production (generation) and net purchases of thermal energy – in a total amount of 268,328 MWh.

Based on the above-mentioned amounts and variable operational cost (€ 2,599,468), the **cost of losses** in the amount of **€** **267,614** is calculated.

## Adjustment

Adjustment is used to correct eventual changes between the planning for the tariff review for the period (season) ‘n-1’ and realizations that have actually occurred during that period (season) and those changes are included (corrected) in the next review.

Specifically, adjustment includes the difference between the planning and the actual realization of these components: i) Revenues (regulated and unregulated); Operational Costs; Annual Depreciation; and Return on RABf.

The total value of the adjustment for the previous season 2019/20 is calculated: **-311,418 €.** Therefore, the total value of adjustment of -311,418 € is deducted from the value of Allowed Revenues for the season 2020/2021.

## ****Calculation of Maximum Allowed Revenues - Summary****

Total Allowed Revenues are calculated according to the following formula:

**MAR = OC + DEP + RTN + LOS +/- ADJ**

First of all, it should be noted, the Operational Costs deducted for the allowed cost of losses (so-called net operational costs in the amount of **€ 4,398,902**) are taken in the calculation of the Maximum Allowed Revenues.

Consequently, the value of MAR is equal to **€ 6,960,802** as presented in details in TABLE 6.

### Table 6: Allowed Revenues for DH Termokos of the heating season 2020/202 1

|  |  |  |
| --- | --- | --- |
| **Allowed Revenues** | | **Allowed by ERO**  **[€]** |
| **DH TERMOKOS for the season 2020/2021** | |
| **OC** | **Allowed Operational Costs** | **4,398,902** |
| **DEP** | **Annual Depreciation** | **1,710,430** |
| **RTN** | **Allowed Return on RABf** | **895.274** |
| **LOS** | **Allowed Cost of Loses** | **267.614** |
| **ADJ** | **Adjustment - the difference between permissions and realizations** | **-311 , 418** |
| **MAR** | **Maximum Allowed Revenues** | **6,960,802** |
|

In order to comply with the tariff structure which estimates the division in thermal capacity component (fixed component) and thermal energy amount component (variable component), the split of MAR is made according to the share: fixed part 15% and variable part 85%. Consequently, split of MAR in fixed part and variable part for heating season 2020/2021 is as follows:

**Fixed part of Maximum Allowed Revenues (MARF) € 1,044,120**; and

**Variable part of Allowed Revenue (MARv) € 5,916,682.**

# Thermal Energy Balance

The thermal energy balance is a very important component in the tariff review because projections for the production/purchase of thermal energy, losses in the network and finally the supply of customers are determined. For this reason, projections in the Balance Sheet have an impact on planning of the respective costs, and consequently on determination of the Allowed Revenues and tariffs.

Components of the Thermal Energy Balance for DH Termokos for the season 2020/2021 are summarized in the following tabular and graphical forms.

### Table 7: Summary of Thermal Energy Balance

|  |  |  |  |
| --- | --- | --- | --- |
| **Thermal Energy Balance - DH Termokos - season 2020/2021** | | **Proposed by DH Termokos** | **Allowed by ERO** |
| Gross Production of Thermal Energy | MWh | 6.820 | 6, 820 |
| Gross Purchases of Thermal Energy (Network Access. Trans.) | MWh | 267.648 | 267.648 |
| Net Purchases of Ther. Energy (Exit from the Network. Trans.) | MWh | 262.295 | 262.295 |
| Quantitative losses in the Transmission Network | MWh | 5.353 | 5.353 |
| Percentage losses in the Transmission Network | % | 2:00% | 2:00% |
| Gross Production + Gross Purchases of Thermal Energy | MWh | 274.468 | 274.468 |
| Quantitative losses in the Network Trans. + Self-consumption | MWh | 6.140 | 6.140 |
| Net Production + Net Purchases of Ther. En. (Network Access. Share.) | MWh | 268.328 | 268.328 |
| Quantitative losses in the Distribution Network | MWh | 22.271 | 22.271 |
| Percentage losses in the Distribution Network | % | 8:30% | 8:30% |
| **Supply / Consumption of Thermal Energy** | **MWh** | **246.056** | **246.056** |