

**Final Draft**

**KOSOVO ENERGY CORPORATION J. S. C.**

**TARIFF APPLICATION**

**Submitted to the  
Kosovo Energy Regulatory Office**

February 14, 2008

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## 1. Introduction

This is an Application to the Energy Regulatory Office (ERO) for the approval of the proposed retail tariffs for the Public Supplier and the Distribution Network of Kosovo Energy Corporation (KEK). This submission complies with the ERO's Tariff Application Guidelines adopted by the ERO on April 27, 2006. The proposed tariffs were developed in accordance with the ERO Tariff Methodology, as revised on January 16, 2007

KEK submits this Application for the year 2008 and proposes that these tariffs are approved by the ERO and become effective 1 April 2008. This Application is for:

- The charges for usage of the distribution network (DUOS charge), and
- The Supply charges (retail tariffs) for the final non-eligible customers connected to different voltage levels.

The proposed tariffs are designed to recover the "Allowed Revenues" determined in accordance with the ERO Tariff Model templates using a test year of 2008. The Tariff Model not only calculates the Allowed Revenues, but then allocates the costs to each of the tariff categories and finally calculates the prices for each tariff category. In this Application, KEK uses the prices produced from the Tariff Model as a guideline but is proposing some tariff structure changes and different prices for each tariff category.

The results produced by the Tariff Model for 2008 show that the Allowed Revenues for retail customers in Kosovo amounts to 153,741,000 Euros (€).

According to the ERO Tariff Application Guidelines, this Application consists of five sections and two reporting tables:

### Sections

1. Tariff Strategy
2. Allowed Revenues
3. Existing Tariff Updates
4. Proposed Amendments
5. Consultation

### Reporting Tables

1. Reporting Table 1: Existing Tariff
2. Reporting Table 2: Amended Tariff

KEK also submits the allowed revenue calculations as prescribed in the ERO Tariff Review Spreadsheet model, including:

1. Energy Balance
2. Purchase Power Costs
3. Mining Costs
4. Generation Costs
5. Distribution Costs
6. Supply Costs
7. Headquarters Costs

The ERO Tariff Review Spreadsheet contains two additional worksheets for the calculation of Allowed Revenues. The data for these worksheets are the responsibility of KOSTT and include:

1. KOSTT
2. TUOS/SO/MO Charges

## 2. Tariff Strategy

This section presents the evaluation of the proposed tariffs in terms of conformity with the Law on the Energy Regulator and the Tariff Methodology, in particular the requirements on cost-reflectiveness and non-discrimination as required in that methodology. The Methodology also requires an analyses of the existing charges particularly the relationship between the relative charges of the different customer categories and the cost of providing electricity to these customers.

KEK's goal is to provide Kosovo retail customers with all of their electricity requirements and at fully cost-based tariffs. Therefore, the strategy for this 2008 Tariff Filing is to provide the resources necessary to move towards this goal.

KEK recognizes that, in the near-term, there are technical capacity constraints of the transmission system and parts of the distribution networks. These constraints will prevent KEK from providing electricity during all hours of the year; however, KEK will endeavor to operate its system to minimize the amount of load shedding for its retail customers.

The Allowed Revenues for the existing regulated retail tariffs of KEK received final approval by the ERO on May 31, 2007 and became effective on May 1, 2007. The tariffs proposed herein are primarily based around voltage and tariff categories. Based on the cost analyses, the proposed tariff elements are separated into a standing (customer) charge, a standing (demand) charge (€/kW), an active energy charge (€/kWh), and a reactive energy charge (€/kVARhr). The tariffs are also based on the difference in the costs of providing service for each season (summer and winter) and, for other than residential customers the time of day (see section 4 of this application).

### Retail Supply Tariffs

KEK supports the notion that the tariffs for each customer category should reflect the cost with providing the service; that none of the customers should pay more for their electricity than the costs incurred by KEK for the electricity service. KEK also adheres to the notion that the tariffs be non-discriminatory.

The tariffs, as recognized by the ERO in the previous tariff filing are not fully cost-reflective but are in compliance with the requirements of non-discrimination. KEK agrees with these principles and proposes to move towards more cost-reflective tariffs, recognizing that an

immediate change to these tariffs would result in severe increases to some customer categories.

The overall tariff structures proposed are more transparent in terms of allocation of costs (Allowed Revenues) to certain customer groups. The proposed tariffs for each customer group are structured to comply with costs associated with each and include:

- Standing (customer) charge
- Demand charge (where applicable)
- Energy charge
- Reactive power charge (where applicable)

KEK understands the importance in Kosovo of the need to protect the most vulnerable customers and will continue to strive towards this, while also recognizing that it should not be the role of the electricity supplier to be the provider of social benefits for those customers. The Government of Kosovo has again appropriately decided to provide a subsidy from the Central Budget for those customers, recognizing that this is a government responsibility, not a task for a commercially oriented utility.

The Tariff Model of the Energy Regulatory Office has determined that the overall "Allowed Revenues" for KEK for the year 2008 is 153,741,000 Euros, the amount required to recover costs of electricity sales in accordance with the approved tariff methodology.

Since the Government expects KEK to improve and operate as a viable commercial entity, KEK will continue to minimize losses and discontinue serving non-paying customers. As a result, effective in 2008, if the Government fails to specifically transfer, in a timely manner, the amounts due to KEK under the Social Welfare Scheme, KEK reserves the right to treat all customers equally, pursuant to the Rule on General Conditions of Energy Supply and the Rule on Disconnection and Reconnection of customers.

### **Distribution Network Tariffs (DUOS)**

In calculating its tariffs, KEK follows the rules of the Tariff Methodology and the Law on the Energy Regulator. The calculated tariffs are cost-reflective and non-discriminatory as required in the methodology. These principles are expressed in the different tariffs for the different distribution voltage level. The allowed revenues are allocated to each tariff group using appropriate allocation factors (coefficients) for the energy, demand and customer costs. Additionally, the tariffs used the estimated long-run marginal costs (LRMC) of the

different voltage levels to account for the future investment needs and the demand increase of the voltage level in question.

The DUOS tariffs consist of an energy tariff and demand tariff. Currently, there are no eligible customers where this tariff would be applicable. The energy tariff component reflects the cost of losses while the capacity component recovers the adjusted LRMC. For customers without load metering the demand charge is transformed in an energy charge.

### **Cost Classification**

In designing electricity tariffs, the cost of providing the service provides the basis; each customer group should pay its share of the overall costs of providing the electricity service. The costs are separated into three distinct classifications: demand, energy and customer costs.

The demand costs are those costs that are incurred to meet the maximum demands (kW) of customers at each of the functional levels: generation, transmission, distribution. That is: the infrastructure to meet customer loads are designed and constructed to meet the maximum loads of customers at each voltage level

Energy costs are those costs incurred to provide the energy requirements (kWh) of the customers, usually the primary costs being those of fuel and purchased power.

Customer costs are those costs incurred to meet the specific customer service needs: metering, meter reading, billing, customer accounting and customer service.

### **Retail Tariffs**

The retail tariffs for final customers are a combination of the supply tariffs and the DUOS tariffs. Each of the retail tariffs are composed of elements that reflect the costs and which can be measured, or which contain one or more of the classifications of the costs.

The demand tariff is calculated for each category as follows:

$$\text{Demand Charge (€/kW)} = \frac{\text{Demand-dependent costs allocated to customer group } i}{\text{Total "chargeable demand" for group } i}$$

The chargeable demand is be set equal to the peak load of the voltage level. Because of the higher cost to meter and bill demand, only those larger customers have demand-recording meters. For customer groups without demand metering, the demand costs are included in the energy charge (i.e. kWh is the chargeable measure).

The energy tariff is calculated for each category as follows:

$$\text{Energy Charge (€/kWh)} = \frac{\text{Energy dependent cost allocated to customer group } i}{\text{kWh consumed by customer group } i}$$

The customer costs are included in the standing (customer) charge and are calculated using the results of the cost allocation as follows for each tariff group:

$$\text{Standing (Customer) Charge (€/customer)} = \frac{\text{Customer costs allocated to customer group}}{\text{Number of annual customer bills for group}}$$

For larger customers with appropriate metering, reactive energy tariffs are also applicable and are billed as:

$$\text{Reactive Energy (€/kVarhr)} = \frac{\text{Reactive Energy costs allocated to customer group}}{\text{kVarhr consumer by customer group}}$$

### 3. Allowed Revenues

This section provides the results of the calculations of the maximum allowed revenues that are recovered by KEK Supply and Network Divisions with allowed charges. The Tariff Model has calculated an Allowed Revenue from retail customers to be 153,741,000 €.

The total allowed revenues of KEK Supply and Network Divisions is calculated according to the ERO Tariff Methodology and the Tariff Model template (final model February 12, 2008). Using the inputs from KEK, the model calculates the amount of revenues that the public supplier (KEK Supply) and network (KEK Network Division) should recover from retail tariffs charged to non-eligible customers, for the supply of electricity. It is set equal to the sum of:

- Allowed public supplier revenue, including purchased electricity from the KEK generation and from imported electricity.
- TUOS charges (KOSTT tariff) for the provision of transmission services to non-eligible customers.
- Total allowed revenue that the KEK Distribution Network Division can recover. (DUOS charges for the provision of distribution services to non-eligible customers)

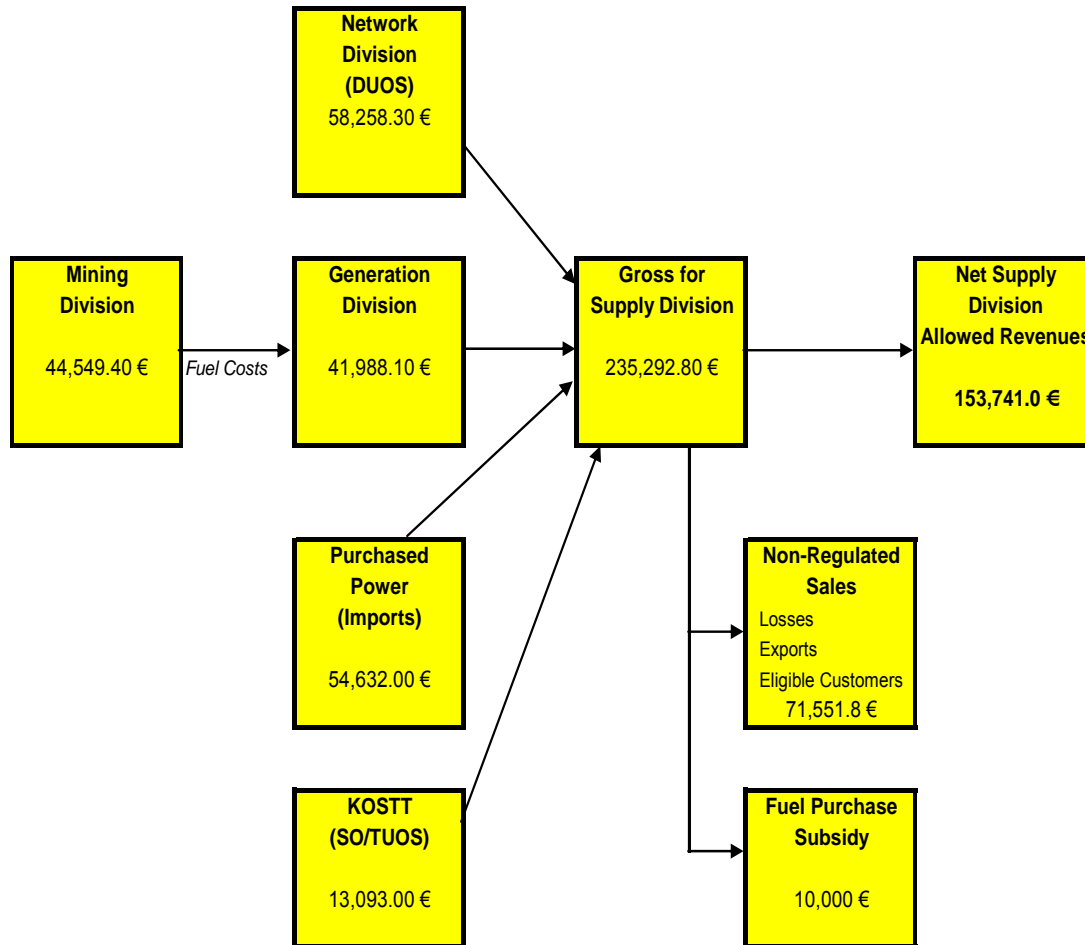
The Allowed Revenues are based on a test year of 2008. The test year of 2008 is used since the final tariffs approved by the ERO in this application will be in effect beginning April 1, 2008. All of the Tariff Model inputs (Energy Balance, Costs, Etc.) are based on calendar year 2008.

#### **Retail Supply Allowed Revenues**

The following table shows the total retail tariff revenues that are proposed to be collected with the proposed tariffs. This table is a summary of the calculations contained in the Tariff Model.

<u>Cost Descriptions</u>	<b>Mining</b>	<b>Generation</b>	<b>Network</b>	<b>Supply</b>
<b>OPEX</b>	38,434.2	74,664.9	20,197.2	146,080.4
Mining/Mining+Generation		44,549.4	0.0	0.0
Other Generation				0.0
Net OPEX	38,434.2	30,115.5	20,197.2	146,080.4
Portion of Headquarters OPEX	3,478.4	1,576.1	1,660.2	529.8
<b>Total OPEX</b>	41,912.6	31,691.6	21,857.4	146,610.2
Depreciation	1,738.7	3,221.8	1,837.0	376.7
Return	5,598.4	1,695.4	2,199.9	180.9
Purchase of Losses	0.0	0.0	44,669.0	0.0
Adjustment (8.2%)	0.0	0.0	0.0	0.0
SO/MO/TUOS	0.0	4,109.1	0.0	13,093.0
SO/MO/DUOS	0.0	0.0	0.0	58,258.3
Smoothing Adjustment	0.0	1,430.5	713.9	0.0
Compensation Adjustment	-4,503.3	-160.3	-2,428.2	-480.4
Loss Compensating Adjustment			-590.7	
Supply Margin (3%)	0.0	0.0	0.0	1,819.2
Adjustment for unpaid subsidies				15,434.9
<b>Gross Allowed Revenues</b>				<b>235,292.8</b>
Non-regulated sales				
Eligible Customers				-19,807.1
Exports				-1,461.9
Sale of Losses				-50,282.8
Coal	-197.0			
Total Non-regulated Sales	-197.0	0.0	0.0	-71,551.8
Fuel Purchase Subsidy	0.0	0.0	-10,000.0	-10,000.0
<b>Total Net Allowed Revenues</b>	<b>44,549.4</b>	<b>41,988.1</b>	<b>58,258.3</b>	<b>153,741.0</b>

The following diagram represents how the costs from each of the functional areas are summed into the total Allowed Revenue amount.



There remain two issues from the previous tariff filing that KEK would like the ERO to consider: collections and bad debt.

KEK is continuing to strive to improve collections in a variety of ways, including being more aggressive in disconnecting customers for non-payment, addressing the politically sensitive issues of the enclaves, collecting old debts, etc. Once KEK improves its collection rate to a reasonable level, it would like to be treated in a more commercially oriented manner and reduce the burden on the KCB by having a “Bad Debt expense included in allowed revenues, as is the practice for commercial utilities around the world. Every commercial company that grants credit to customers experiences some bad debt expense, even efficiently run companies.

The other revenue requirement issue, which was raised by KEK in the previous tariff filing is the determination of “Supply Costs”. The tariff methodology specifies that a “Supply Margin” based on a percentage of electricity purchase cost (Wholesale Power Cost) be used to

determine the supply cost. The previous percentage used by ERO in calculating allowed revenues was 3%. KEK will review its costs as the Public Supplier and submit its recommendation during the next tariff application.

The KEK supply calculates its allowed revenues according to the Tariff Methodology. It is the maximum amount that the public supplier is allowed to recover from non-eligible customers. It consists of

- Allowed cost of power purchases, both KEK generation and imported power costs
- A margin set equal to a specified percentage (3%) of the allowed cost of power purchase; as prescribed by the Tariff Methodology and
- The allowed retail cost of supplying non-eligible customers (set equal to the allowed retail cost per customer multiplied by the number of non-eligible customers).

#### 4. Existing Tariff Updates

The existing and proposed tariffs for each tariff group are provided in Reporting Table 1. and Reporting Table 2.

In order to develop the price levels and tariff designs for the proposed tariffs, KEK modified the ERO Tariff model and performed a Cost of Service Study to classify and allocate the Allowed Revenues to each of the customer groups. The costs are classified as fixed costs, variable costs and customer costs. The Allowed Revenues are then allocated to each customer group to determine its share of the overall amount.

##### Cost (of Service) Allocation Study

The cost of service study uses different allocation factors to allocate each of the cost elements to the customer tariff groups. The principle of cost causation<sup>1</sup> is the typical approach used to select the proper allocator for each of the cost elements.

Allocation Factor	Name	Description	Data Requirements	Costs Allocated
1	Coincident Peak (CP)	The ratio, in percent, of the demand of each tariff group at the time of the system peak to the maximum system peak demand.	1. System peak demand 2. Coincident demand of each tariff group at the time of the system peak demand.	Fixed costs included in generation of electricity.
2	Energy (kWh)	The ratio, in percent, of the total annual energy sales for each tariff group to the total annual energy sales for the system.	1. Energy sales for each customer group. 2. Loss factors for each voltage level	Variable costs of generation and other variable supply costs.
3	Non-coincident Peak (NCP)	The ratio, in percent, of the maximum demand of each tariff group to the sum of all tariff group maximum demands.	1. Non-coincident peak demand of each tariff group. 2. Sum of non-coincident demands for all tariff groups.	Fixed costs included in the networks.
4	Customers	The ratio, in percent, of the average total number of customers for each tariff group to the sum of the average number of customers for all customer tariff groups.	Average annual number of customers for each tariff group.	Part of the customer-related cost.
5	Weighted Customers	The ration, in percent, of the weighted total	Cost of metering for all customer tariff groups to	Part of the customer-related cost, such as

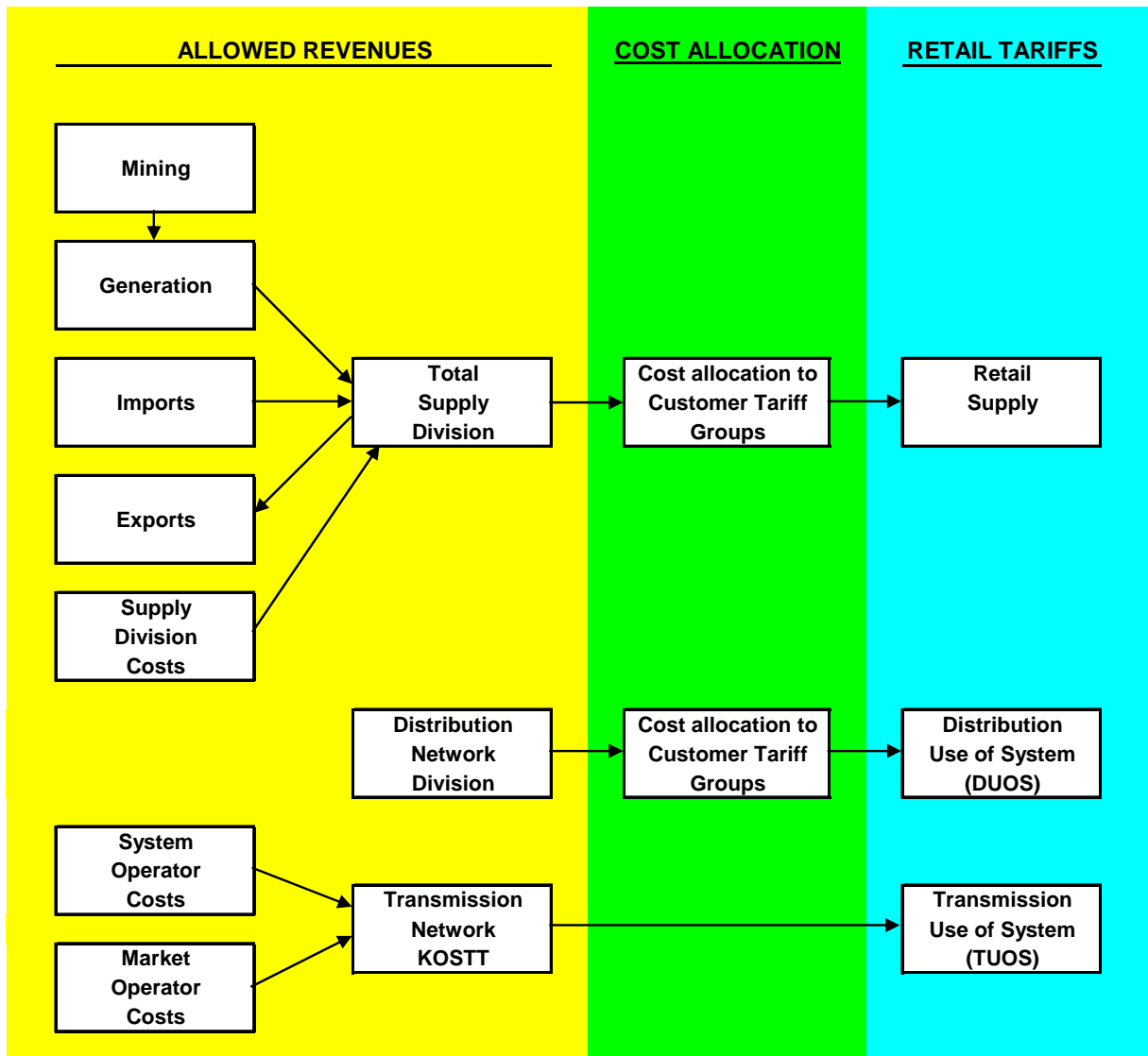
<sup>1</sup> Cost causation is usually the central principle for all cost allocation. This principle means that a cost is allocated on the basis of the factors that cause the cost to be incurred. For example, For example, a distribution company has to invest in building distribution capacity to meet customer peak demand. The investments in capacity correspond to the peak demand and, therefore causes the investment expenditures to be incurred. It follows that the investment expenditures would be allocated on the basis of some measure of peak responsibility of different customer groups or service categories. (National Regulatory Research Institute)

		number of customers for each tariff group to the sum of the weighted number of customers for all customer tariff groups. This provides the relative cost between tariff groups for some of the customer-related costs.	provide a proxy of the weighted customers. 1. 110 kV 2. 35 kV 3. 10 kV 4. 0.4 kV large 5. 0.4 kV TOD 6. 0.4 kV small (domestic)	metering and billing.
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**Tariff Process**

In developing the proposed tariffs, this diagram shows the process that KEK recommends to be followed in the future. The process is in conformance with the Laws and the ERO Tariff Methodology and Guidelines.

The results from this process would be to separate (unbundled) the tariffs to reflect the supply costs and the network (transmission and distribution) costs. When these tariffs are developed the customer bills can then show the amounts that are billed for each of the functional groups. Currently, the TUOS tariff is built into the KEK tariff and does not appear as a separate charge in the customers' bills.

**KEK TARIFF DESIGN PROCESS****Billing Determinants**

Billing determinants are the tariff elements that are measured and which the prices are applied to calculate customer bills. The billing determinants include: customer standing charge, demand standing charges (kW), energy (kWh) and, where applicable, reactive energy (kVarhr).

The Tariff Model estimates the billing determinants for each of the customer classes based on historic billing data. The historic data is used to calculate the percentage of energy billed in each block and then applying these percentages to the total billed energy for each customer classes in 2008.

KEK has collected the actual billing determinants for 2007 for each customer group and has used these to estimate the billing determinants for 2008. .

Summary of KEK billing determinants for 2007

Tariff Group	Billing Determinant	Total
0 (110 kV)	Customer Bills	
	KW	
	Summer kWh	
	Peak	
	Off-Peak	
	Winter kWh	
	Peak	
	Off-Peak	
1 (35 kV)	Customer Bills	
	KW	
	Summer kWh	
	Peak	
	Off-Peak	
	Winter kWh	
	Peak	
	Off-Peak	
2 (10 kV)	Customer Bills	
	KW	
	Summer kWh	
	Peak	
	Off-Peak	
	Winter kWh	
	Peak	
	Off-Peak	
3 Category I (0.4 kV)	Customer Bills	
	KW	
	Summer kWh	
	Peak	
	Off-Peak	
	Winter kWh	
	Peak	
	Off-Peak	
4 Category II (0.4 kV)	Customer Bills	
	KW	
	Summer kWh	
	Peak	
	Off-Peak	
	Winter kWh	
	Peak	
	Off-Peak	

Tariff Group	Billing Determinant	Total
5 Domestic 2-rate mtr.	Customer Bills	
	< 200 kWh	
	Summer kWh	
	Peak	
	Off-Peak	
	Winter kWh	
	Peak	
	Off-Peak	
	200-600 kWh	
	Summer kWh	
	Peak	
	Off-Peak	
	Winter kWh	
	Peak	
	Off-Peak	
	> 600 kWh	
	Summer kWh	
	Peak	
Off-Peak		
Winter kWh		
Peak		
Off-Peak		
6 Domestic 1 rate mtr.	Customer Bills	
	< 200 kWh	
	Summer kWh	
	Winter kWh	
	200-600 kWh	
	Summer kWh	
	Winter kWh	
> 600 kWh		
Summer kWh		
Winter kWh		
7 Domestic Un-metered	< 400 kWh	
	Customer Bills	
	Summer kWh	
	Winter kWh	
	400-800 kWh	
	Customer Bills	
	Summer kWh	
	Winter kWh	
	> 800 kWh	
	Customer Bills	
Summer kWh		
Winter kWh		
8 Public Ltg	Customer Bills	
	All kWh	

## Proposed Tariffs

The new tariffs can be determined in several different ways. The Tariff Model calculates the tariffs based on its allocation of costs, some of which uses marginal cost, and many other assumptions.

Traditionally, the overall increase in tariffs are determined by first determining the increase in overall revenue requirements. The following table provides this information. The revenues in the table were calculated from the billing determinants contained in the Tariff Model; the Allowed Revenues were calculated in the Tariff Model.

### Calculation of Required Revenue Increases

<u>No.</u>	<u>Tariff Category</u> <u>Description</u>	<u>Current</u> <u>Tariff Rev's</u> <u>000 €</u>
0	110 kV	4,086.5
1	35 kV	1,495.6
2	10 kV	8,125.1
3	0.4 kV Category I	8,766.0
4	0.4 kV Category II	24,227.8
5	Domestic 2 mtr	61,485.2
6	Domestic 1 mtr	9,660.1
7	Un-metered	3,992.3
8	Public Lighting	672.3
		=====
	Total Revenues	<b>122,510.9</b>
<b>Total Allowed Revenues (000 €s)</b>		<b>153,741.0</b>
	<b><u>Required Increase</u></b>	
	Euros (000 €'s)	<b>31,230.1</b>
	Percentage	<b>25.49%</b>

The Tariff Model tariffs for 2008 as shown Reporting Table 2a. The table also shows the % increase that would result for each of the blocks within each tariff category.<sup>1</sup> Table 2b shows the KEK recommended tariffs for each tariff category. KEK makes these proposals, which differ from the model results, because of the following:

1. KEK believes that none of the tariffs within each of the tariff categories should be decreased as the model results show. (see #3 for justification for this statement)
2. KEK proposes that the tariffs for domestic customers not be increased to the cost of service levels at once because such a move would cause rate shock for those customers.
3. The data inputs for the model contain many assumptions that need to be examined by the ERO and KEK prior to the next tariff filing. KEK believes that the current

model contains many erroneous assumptions that are no longer valid; these assumptions produce results which are incorrect. For example, the model produces prices for Category 0 customers during the summer low period that are lower than the cost that KEK can produce electricity.

**Miscellaneous**

On February 23, 2007, the ERO issued its “ERO Briefing Note” of the KEK Tariff filing. The ERO recognized that the tariffs were not fully cost-based but also recognized that to reach that level the impact on individual customers would be great. The paper stated that the “Board of the ERO has accepted the recommendation that the new cost-reflective tariffs should be phased in over time<sup>2</sup>”. The KEK filing here moves towards more cost-reflective tariffs.

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<sup>2</sup> See Section 5.1 of ERO Briefing Notes, issued February 23, 2007

## 5. Proposed Amendments

Kosovo Electricity Company (KEK) proposes several for changes to electricity tariff structures. It is anticipated that the proposed tariff structures, together with up-dated pricing, will become effective on April 1, 2008.

Although all tariff structures were analyzed by KEK, the two tariff structures addressed here are the two-rate (Time-of-Day) tariff and the Two-Band (Increasing Block) tariff. The seasonal tariffs are not addressed here as KEK believes that the cost differences between the summer period and winter period are such that the retail tariffs are appropriately different for each season.

### Time-of-Day (TOD) Tariff

#### *Purposes:*

Time-of-Day tariff structures are commonly used throughout the world. Traditionally, TOD tariffs are designed and implemented for two primary purposes, both of which are linked together.

1. In most cases, the cost of the electricity supplier of providing electricity is higher during the system peaking periods than the off-peak periods. TOD tariffs provides the appropriate pricing signal to customers that using electricity during the peak periods cost more than during the off-peak periods.
2. The TOD tariff is also used as a demand-side management measure and uses the pricing of electricity to induce customers to shift usage from peak periods to off-peak periods. By doing so, both the company and customer benefit. Shifting load from the peak periods to the off-peak periods improves the system's daily load factor, thus allowing baseload generating units to operate more efficiently. It also reduces the needs for purchasing high-cost generation from other utilities. There are also benefits to the distribution systems when daily load shapes do not contain high peaks. Customers can benefit by reducing their monthly bills by taking advantage of lower prices during the off-peak periods.

In most cases, the TOD tariffs approved by regulators are developed after a process whereby careful analyzes are completed. These analyzes usually include a review of system and customer loads and load shapes. Hourly costs for system operations are then

used to provide correct cost information for the tariff design. Customer data and input is also used to estimate the possible customer acceptance and changes in load shape (hence, lower costs). Implementation costs, such as new metering, billing modifications and customer education are also important inputs to a TOD program prior to its implementation. Following the implementation of a TOD tariff, it is important to monitor and evaluate the success of the tariff structure.

*Current Situation:*

In Kosovo, six of the nine tariff groups have TOD tariff structures. Customers benefit from lower electricity bills when they shift loads to off-peak periods. However, it is not clear that the TOD tariff is actually beneficial for KEK.

The measurement of on-peak and off-peak energy use does not appear to be accurate and there are two reasons.

First, with the daily load shedding, under the ABC program, the customer billing meters are without energy during one or more hours each day. Without sufficient battery back-up during those periods, the time clock in the meter is stopped when the power is off. When the power is restored the time clock begins where it left off. Therefore, after a few days, the time clock is not at in sync with the actual time. This results in the energy usage being registered at times differently than the actual times (i.e. usage during the middle of the day could be shown on the meter as being used during the middle of the night). Obviously, this results in meter readings that do not accurately reflect the time periods when energy is being consumed, and thus the billings for the on-peak and off-peak periods are not correct. Customers on this tariff may enjoy a lower bill without shifting any of their energy use to off-peak periods.

Secondly, the billing meters, and/or time clocks, are being manipulated by customers. This is evidenced by the number of meter and time clock seals that are broken, or missing, as noted by the KEK meter readers. The domestic customers are the primary offenders.

**Block Tariff (Band Tariff)**

*Purposes:*

Inverted block tariffs (ERO has called them “band tariffs”) are used throughout the world for a variety of reasons. In some cases, it is claimed that they provide a better economic price

signal to customers on the marginal costs of electricity and provide a pricing inducement to use electricity more efficiently. In other cases, inverted block tariffs are implemented to provide lower-cost electricity to customers that use a low amount of electricity, the presumption is that lower income (vulnerable) customers use lower amounts of electricity and that the lower price in the first block provides a minimal amount of electricity that is affordable. Usually, in this case, the tariff has only two blocks and is sometimes called a “lifeline” tariff. The first block (lower price) is designed to provide the amount of electricity that is required by a typical household to meet its minimum needs (i.e. lighting, cooking, etc.). In most cases, customers who are billed on lifeline tariffs must apply to the utility and submit documentation that shows that they meet the vulnerable customer requirements.

The Energy Law and Law on the Energy Regulatory provides for possible tariffs to provide assistance to vulnerable customers. The laws clearly state that the revenues for this come from cross-subsidies provided by other domestic customers, not commercial or industrial customers.

*Current Situation:*

In Kosovo, Tariff Group Nos. 5 and 6 have inverted tariff structures. Group 5 is further differentiated into TOD and seasonal prices and Group 6 prices are differentiated only by season (summer and winter). Since the meters can not measure the amounts of electricity consumed for each of the blocks, the bills are calculated by taking the overall ratio of on-peak to off-peak energy use and applying the ratio to each block.

**Tariff Group Modification Descriptions**

Tariff Group 0 (110 kV)

No changes to tariff structure is proposed. New electronic control (initial check) meters are in the process of being procured by KEK; the billing meters are the property of KOSTT.

Tariff Group 1 (35 kV)

No changes to tariff structure is proposed. New electronic billing meters are in the process of being procured by KEK.

Tariff Group 2 (10 kV)

No changes to tariff structure is proposed. New electronic billing meters are in the process of being procured by KEK.

Tariff Group 3 (Category I – 0.4 kV)

No changes to tariff structure is proposed. New electronic billing meters are in the process of being procured by KEK.

Tariff Group 4 (Category II – 0.4 kV)

The TOD tariff is discontinued; however the seasonal tariff structures is maintained. These are small commercial customers (shops, restaurants, etc.) that have little opportunity to shift load to off-peak periods. The current metering does not correctly record the energy use during the pricing periods due to the lack of battery back-up for the time clocks.

Tariff Group 5 (Domestic Standard)

The TOD tariff is discontinued; however the seasonal tariff structures is maintained. It is not clear that any load shifting has occurred as a result of the TOD tariff. The current metering does not correctly record the energy use during the pricing periods due to the lack of battery back-up for the time clocks.

The block tariff structure is changed from a three-block tariff to a single block and maintain the customer charge.

Tariff Group 6 (Domestic Optional)

The block tariff structure is changed from a three-block tariff to a two-block tariff. The new block should reflect an appropriate level of energy use required for survival by vulnerable customers and should be affordable. This is an optional tariff group. In order to qualify for this tariff, the customer must apply to KEK and demonstrate that they meet vulnerable

customer category. This approach is in line with national legislation and ERO guidelines for providing support to vulnerable customers. The revenue shortfall in the first block should come from other residential customers; the law prohibits cross-subsidization between customer classes but allows for it within a tariff class.

KEK proposes to modify the tariff structures for the tariff groups 5 and 6 as follows:

Tariff Group No.	Tariff element	Season	Monthly Billing Units
5	Standing (customer) charge	All months	€/customer
	Energy (kWh) charge	Summer	€/kWh
	Energy (kWh) charge	Winter	€/kWh
6	Standing (customer) charge	All months	€/customer
	< tbd kWh	Summer	€/kWh
	> tbd kWh	Summer	€/kWh
	< tbd kWh	Winter	€/kWh
	> tbd kWh	Winter	€/kWh

Tariff Group 7 (Un-metered)

No changes to tariff structure.

Tariff Group 8 (Public Lighting)

No changes to tariff structure.

## 6. Consultation

The preparation of this Tariff Application were accomplished following a deep analysis of the cost structure, energy balance requirements, assets and tariff structures. Please see the table here which summarizes these activities.

Date(s)	Activity Description
3 October 2007	ERO and KEK met to discuss the Tariff Model used in the previous filing
5 October 2007	ERO and KEK met to discuss the Tariff filing and the schedule
10 October 2007	ERO sent notification to KEK of Tariff Filing, the Principles and Timetable
19 October 2007	ERO and KEK met to discuss the tariff filing and schedule
19 October 2007	ERO Provided its Tariff Model to KEK
23 October 2007	In a letter to the ERO, KEK provided information concerning the reorganization of the Regulatory Affairs Department, the new budgeting process, the development of the load and energy forecasts, tariff design issues, and requested modifications to the ERO on the tariff filing schedule
1 November 2007	ERO responded to KEK's 18 October 2007 letter and revised its filing timetable
21 November 2007	ERO and KEK met to discuss the status of the tariff filing and schedule
30 November 2007	ERO provided its 2 <sup>nd</sup> revised Tariff Model to KEK
7 December 2007	KEK and ERO staff member met to discuss the Energy Balance and the need for a Chart of Accounts
10 December 2007	KEK provided to the ERO it's draft Energy Balance for 2008, which had not yet been approved by the KEK Board of Directors.
11 December 2007	ERO and KEK met to discuss the tariff model and its modifications
12 December 2007	KEK requested information and clarification of numerous items contained in the ERO Tariff Model
13 December 2007	ERO sent responses to KEK's request of 11 December 2007
19 December 2007?	KEK provided draft data and information to ERO for input into the Tariff Model
19 December 2007	ERO provided its 3 <sup>rd</sup> revised Tariff Model to KEK
20 December 2007	ERO requested additional information from KEK on the data provided for the Tariff Model
January 2008	KEK provided its draft responses to the KEK questions of 20 December 2007.
7 January 2008	ERO provided its 4 <sup>th</sup> revised Tariff Model to KEK
23 January 2008	ERO and KEK met to discuss the additional questions of the ERO on the data from KEK inputted into the Tariff Model. Additional information was requested from the ERO
28 January 2008	KEK provided to the ERO its final Energy Balance for 2007 and its revised written responses to the ERO's questions of 20 December 2007.
29 January 2008	KEK provided written responses to the issues raised during the 23 January 2008 meeting of KEK and the ERO (the issues were described in the ERO's minutes of the meeting)
5 February 2008	KEK submitted additional questions to the ERO advisor concerning portions of the Tariff Model
8 February 2008	KEK met with the ERO to discuss the status of the tariff filing and the final Tariff Application document. ERO requested additional detailed information concerning the CAPEX and import costs.
12 February 2008	KEK met with the ERO to discuss some details of costs included in the Tariff Model. The ERO requested additional information from KEK.
13 February 2008	ERO's advisor provided KEK with the latest version of the Tariff Model, which included all of the input modifications that were discussed and agreed upon during the meetings and correspondence between KEK and the ERO.
15 February 2008	KEK submitted to the ERO its final Tariff Application

## Reporting Table 1: Existing Tariff

## KEK 2007 Tariffs

Tariff Group	Supply Category	Tariff Element	Billing Unit	Time-of-Day	Season	
					Winter	Summer
0	110 kV	Standing (customer) Charge	€/Year		34.00	
		Standing (demand) Charge	€/kW		519.00	
		Active Energy	€/kWh	Hi	6.03	1.78
		Reactive Energy	€/kVarh	Low	2.50	1.47
1	35 kV	Standing (customer) Charge	€/Year		30.00	
		Standing (demand) Charge	€/kW		540.00	
		Active Energy	€/kWh	Hi	6.30	2.73
		Reactive Energy	€/kVarh	Low	3.33	2.47
2	10 kV	Standing (customer) Charge	€/Year		34.00	
		Standing (demand) Charge	€/kW		466.00	
		Active Energy	€/kWh	Hi	7.07	3.15
		Reactive Energy	€/kVarh	Low	3.81	2.87
3	0.4 kV Category I	Standing (customer) Charge	€/Year		29.00	
		Standing (demand) Charge	€/kW		270.00	
		Active Energy	€/kWh	Hi	7.85	4.36
		Reactive Energy	€/kVarh	Low	4.95	4.11
4	0.4 kV Category II	Standing (customer) Charge	€/Year		34.00	
		Single Tariff	€/kW		9.68	6.26
		Active Energy (TOD)	€/kWh	Hi	11.64	7.63
			€/kWh	Low	5.82	3.81
5	0.4 kV Domestic 2-rate meter	Standing (customer) Charge	€/Year		24.00	
		< 200 kWh (1 <sup>st</sup> Block)	€/kWh	Hi	4.42	3.17
			€/kWh	Low	2.21	1.58
		200-600 kWh (2 <sup>nd</sup> Block)	€/kWh	Hi	5.97	4.28
			€/kWh	Low	2.99	2.14
		> 600 kWh (3 <sup>rd</sup> Block)	€/kWh	Hi	8.67	6.21
6	0.4 kV Domestic 1-rate meter	Standing (customer) Charge	€/Year		24.00	
		< 200 kWh (1 <sup>st</sup> Block)	€/kWh		3.94	2.82
		200-600 kWh (2 <sup>nd</sup> Block)	€/kWh		5.32	3.81
		200-600 kWh (2 <sup>nd</sup> Block)	€/kWh		7.72	5.53
7	0.4 kV Domestic Unmetered	< 400 kWh/month	€/Month		20.00	
		400-800 kWh/month	€/Month		36.00	
		> 800 kWh/month	€/Month		61.00	
8	Public Lighting	Standing (customer) Charge	€/Year		34.00	
		Active Energy	€/kWh		7.82	7.82

## Reporting Table 2: Proposed Tariff

his is separately provided in electronic form as a MX Excel spreadsheet.

## 2a. Tariff produced by the Tariff Model (February 12, 2008 version)

Tariff Group	Voltage level of supply	Tariff elements	Unit	2008	
				High season	Low season
				1 Oct - 31 Mar	1 Apr - 30 Sept
0	110kV	Standing (customer) charge	€/customer/year	2671	
		Standing (demand) charge	€/kW	335	335
		Active energy (P), of which:	€/kWh	4	1.22
			€/kWh	1.69	1.02
	Reactive energy (Q)	€/kVArh	0	0	
1	35kV	Standing (customer) charge	€/customer/year	352	
		Standing (demand) charge	€/kW	388	388
		Active energy (P), of which:	€/kWh	5.31	2.69
			€/kWh	3.14	2.51
	Reactive energy (Q)	€/kVArh	0.1	0.1	
2	10kV	Standing (customer) charge	€/customer/year	148	
		Standing (demand) charge	€/kW	288	288
		Active energy (P), of which:	€/kWh	5.36	2.77
			€/kWh	3.21	2.58
	Reactive energy (Q)	€/kVArh	0.53	0.53	
3	0.4kV Category I (large reactive power consumers)	Standing (customer) charge	€/customer/year	81	
		Standing (demand) charge	€/kW	0	0
		Active energy (P), of which:	€/kWh	7.35	4.19
			€/kWh	4.73	3.96
	Reactive energy (Q)	€/kVArh	13.89	13.89	
4	0.4kV Category II	Standing (customer) charge	€/customer/year	76	
		Standing (demand) charge	€/kW	0	0
		Active energy (P)	€/kWh	6.26	4.02
		Active energy (P), of which:	€/kWh	6.38	4.02
€/kWh	6.38		4.02		
5	0.4kV (domestic 2-rate meter) (c)	Standing (customer) charge	€/customer/year	65	
		<200kWh/month (First Block) of which:	€/kWh	6.18	4.5
			€/kWh	6.18	4.5
		200-600 kWh/month (Second Block) of which:	€/kWh	6.18	4.5
			€/kWh	6.18	4.5
		>600 kWh/month (Third Block) of which: (d)	€/kWh	6.18	4.5
€/kWh	6.18	4.5			
6	0.4kV (domestic, 1-rate meter) (c)	Standing (customer) charge	€/customer/year	55	
		<200kWh/month (First Block) of which:	€/kWh	6.18	4.5
			€/kWh	6.18	4.5
		>600 kWh/month (Third Block) of which: (d)	€/kWh	6.18	4.5
7	0.4kV (domestic unmetered)	Estimated consumption <400kWh/month	€/customer/month	26	
		Estimated consumption 400-800kWh/month	€/customer/month	48	
		Estimated consumption >800kWh/month	€/customer/month	116	
8	Public lighting	Standing (customer) charge	€/customer/year	55	
		€/kW	Single tariff	5.43	5.43

## 7b. Tariffs Proposed by KEK

Tariff Group	Supply Voltage Level	Tariff Element	Billing Unit	Season			
				Winter		Summer	
				Peak	Off-peak	Peak	Off-peak
0	110 kV	Customer Charge	€/Month	222.58			
		Demand Charge	€/kW	520.00			
		Active energy Charge	€/kWh	6.70	3.00	2.00	1.75
		Reactive energy charge	€/kVarh				
1	35 kV	Customer Charge	€/Month	29.33			
		Demand Charge	€/kW	540.00			
		Active energy Charge	€/kWh	6.40	3.35	2.80	2.51
		Reactive energy charge	€/kVarh				
2	10 kV	Customer Charge	€/Month	12.33			
		Demand Charge	€/kW	466.00			
		Active energy Charge	€/kWh	7.90	4.00	3.25	2.95
		Reactive energy charge	€/kVarh	53.00		0.53	
3	0.4 kV Category I	Customer Charge	€/Month	6.75			
		Demand Charge	€/kW	3.00			
		Active energy Charge	€/kWh	8.00	5.10	4.50	4.20
		Reactive energy charge	€/kVarh	1.55		1.55	
4	0.4 kV Category II	Customer Charge	€/Month	6.33			
		Demand Charge	€/kW	0.00		0.00	
		Active energy Charge	€/kWh	11.70	6.00	7.90	4.00
5	0.4 kV Domenestic 2-rate meter	Customer Charge	€/Month	5.41			
		< 200 kWh	€/kWh	5.60	5.60	4.10	4.10
		200-600 kWh	€/kWh	5.60	5.60	4.10	4.10
		> 600 kWh	€/kWh	5.60	5.60	4.10	4.10
6	0.4 kV Domenestic 1-rate meter	Customer Charge	€/Month	4.58			
		< 200 kWh	€/kWh	5.60		4.10	
		200-600 kWh	€/kWh	5.60		4.10	
		> 600 kWh	€/kWh	5.60		4.10	
7	0.4 kV Domenestic Unmetered	< 400 kWh/Month	€/Month	26.00			
		400-800 kWh/Month	€/Month	48.00			
		> 800 kWh/Month	€/Month	116.00			
8	Public Lighting	Customer Charge	€/Month	4.58			
		> 600 kWh/month	€/kWh	5.43		5.43	