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**TARIFF APPLICATION
YEAR 2012**

Part IV – Distribution Use of System Tariff Application

12 January 2012

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I. Introduction

A. Overview

This Application is respectfully submitted to the Energy Regulatory Office (ERO) of Kosovo for the approval of the proposed regulated tariffs for distribution system operations, which are licensed by the ERO to KEK.

B. Energy Balance

In order to calculate the total costs of distribution, the Energy Balance must provide the starting point. The energy balance prescribes the amount of energy, measured in kWh (or MWh) that is expected to flow into and out of the distribution network. Table 1 provides a summary of the final energy balance agreed to by Ministry of Economic Development, ERO, KOSTT, and KEK.

Table 1- 2012 Energy Balance Summary

Line No.	Input/Output Description	Amount GWH
1	Kovovo A Net Generation (net of all Aux Power)	1,475.3
2	Kovovo B Net Generation (net of all Aux Power)	3,392.5
3	Ujmani generation	82.0
4	Imports	820.8
5	Total Into Transmission System (1 + 2 +3 + a4)	5,770.6
6	Transmission Sales	744.6
7	KEK Use	20.4
8	Mines	111.0
9	Exports	169.8
10	Transmission Losses	128.2
11	Surplus	13.3
12	Total out of Transmission (6 + 7 + 8 + 9 + 10 + 11)	1,187.3
13	Net into Distribution System (5 - 12)	4,583.3
14	Distribution Connected Generation	51.5
15	Energy Delivered to North Kosovo by KOSTT	203.7
16	Distribution Technical Losses	796.9
17	Distribution Commercial Losses	723.2
18	Net for Sales at Distribution Level (13 + 14 - 15 - 16 - 17)	2,911.0
19	Distribution Level Sales	
20	35 kV	40.1
21	10 kV	205.0
22	0.4 kV	2,665.8
23	Total (20 + 21 + 22)	2,910.9

C. Definitions

Unless otherwise noted, the definition of terms in this document are the same as those in the energy laws of Kosovo and those contained in the Pricing Rules adopted by the Energy Regulatory Office

II. Pricing Rules and Tariff Methodology

This section describes how this Tariff Application is in compliance with the Pricing Rules and the proposed Tariff Methodology submitted by KEK for approval by the ERO.

A. Pricing Rule

In November 2011, the ERO adopted the “Rule Distribution System Operator Pricing (DSO Pricing Rule)”. This Rule supersedes the previous “Rule on Principles of Calculation of Tariffs in the Electricity Sector (Pricing Rule)” and “Tariff Methodology for the Electricity Sector” that was adopted by the ERO on 15 December 2005.

B. Tariff Methodology

The methodology for determining the Distribution Use of System (DUOS) tariffs follows the tariff methodology proposed by KEK and is consistent with the ERO’s DSO Pricing Rule. The initial Maximum Allowed Revenues (MAR) for the first Regulatory Period are calculated in accordance with the DSO Pricing Rule. Each year throughout the Regulatory Period the MAR and resulting tariffs will be determined according to the DSO tariff methodology. As stated in Schedule 10 of the DSO Pricing Rule, the first regulatory period will only cover one year (01 April 2012 through 31 March 2013), therefore, the multi-year provisions of the Rule need not be addressed in this tariff application.

III. Maximum Allowed Revenues

A. Total MAR

According to the DSO Pricing Rule, the Maximum Allowed Revenues (MAR) are developed at the beginning of the regulatory period using the following formula:

$$MAR_t = OPMC_t + DEPC_t + RTNC_t + LSSC_t + LICC_t + KREV_t$$

Where

MAR_t is Maximum Allowed Revenues in Relevant Year t

$OPMC_t$ is allowed operating and maintenance costs in Relevant Year t

$DEPC_t$ is allowed depreciation in Relevant Year t

$RTNC_t$ is allowed return on capital in Relevant Year t

$LSSC_t$ is allowed cost of losses in Relevant Year t

$LICC_t$ is the Licence Fee in Relevant Year t

$KREV_t$ is the revenue correction factor in Relevant Year t

The proposed 2012 MAR for the Distribution System Operator is detailed in Table 2.

Table 2- Proposed 2012 Maximum Allowed Revenues for the DSO

Distribution System Operator Tariff Development

Euros in thousands except per unit values
All Costs Based on Year 2012

Cost Component

Operating and Maintenance Expenses

Network O&M		14,640	
Allocation of Headquarters Costs		1,820	
TOTAL O&M COSTS		16,460	=OPMC

Regulatory Asset Base for Depreciation Purposes:

Cost at 01 Jan 2012	160,800
2012 additions	16,003
Cost at 31 Dec 2012	176,803

Depreciation for the Year 2012 **5,627 =DEPC**

Asset Life in years as of 2012	30
Accum. Depreciation at 01Jan12	70,113
Depreciation for the Year 2012	5,627
Accum. Depreciation at 31Dec12	75,740

Grants:

Grants at 01 Jan 2012	28,326
Grant Amortization 2012	977
Grants at 31 Dec 2012	27,349

RABf for Return Calculation:

Beginning of Year	62,361
End of Year	73,714
Average for 2012	68,038

Weighted Average Cost of Capital for Network 14.40%

Return for 2012 **9,797 =RTNC**

Cost of Losses

Technical Loss per Energy Balance (MWH)	796,940	
Commercial Loss per Energy Balance	723,249	
Total Distribution System Losses (MWH)	1,520,189	
Cost of Losses (Wholesale Energy €/MWH)	38.65	
		58,755 = LSSC

DSO License Fee

0 = LICC

Other Items:

Adjustment for underspending on 2011 CAPEX	(363)
Third Party Revenue Credit	(2,800)
Total Other Costs	(3,163)

Total Cost for DSO **87,476 =MAR**

The values for the various components of the MAR formula in Schedule 1 of the DSO Pricing Rule were determined as follows:

a) Operating and Maintenance Costs (OMPC)

The O&M costs for Network in 2012 (€14.6 million) are those contained in the KEK budget for 2012. This is lower than the €16.7 million approved by ERO in the 2011 tariff review, due primarily to the more aggressive cost control of materials and services costs being undertaken by KEK.

The allocation of Headquarters costs to network (€1.8 million) is slightly more than the amount ERO approved in 2011. The allocation method (headcount) is the same as in previous tariff reviews

b) Allowed Depreciation (DEPC)

The new pricing rules have redefined the Regulatory Asset Base and included the pre 2006 assets in the RAB. Part I of the KEK Tariff Application provided a documentation of the RAB as of 31 December 2011. Using that as the starting point, the 2012 capital additions of €16.0 million were added and the depreciation for 2012 was based on the average fixed asset balance and the 30 year life of network assets to produce a value of €5.6 million for 2012 depreciation.

c) Allowed Return on Capital (RTNC)

The year- end 2011 RAB information and WACC information in Part I of the tariff application provide the starting point for the RAB and return calculations for 2012. Table 2 utilizes that information and incorporates the expected 2012 activity (CAPEX, depreciation, and grant amortization) to arrive at an average RAB of €68.04 million for the calculation of return.

The Weighted Average Cost of Capital (WACC) is computed in accordance with Schedule 3 of the DSO Pricing Rule as follows:

$$WACC = (1 - g) * (rE) / (1 - t) + g * (rD)$$

Where

WACC is the Weighted Average Cost of Capital

g gearing (debt: debt + equity ratio)

rE real cost of equity (expressed as a %)

rD real cost debt (expressed as a %)

t Kosovo corporate income tax rate

As documented in Part I of KEK's 2012 Tariff Application, Baseline Information on RAB and WACC, the values of the component variables for Network are as follows:

- g = gearing (debt: debt + equity) = 0.00
- rE = real cost of equity (expressed as a %) = 13.00%
- rD = real cost debt (expressed as a %) – Not Applicable
- t = Kosovo corporate income tax rate = 10%

The resulting WACC for Network is, therefore, 14.4%

The WACC of 14.4% when applied to the average RAB of €68.04 million produces a return of €9.8 million.

d) Cost of Distribution Network Losses (LSSC)

The losses in distribution as documented in the Final 2012 Energy Balance are:

Technical Losses	796,940 MWH
Commercial Losses	723,249 MWH

As discussed with the Ministry of Economic Development and ERO, the Commercial Losses included in the 2012 Energy Balance are 15.6% of input to the distribution system. KEK agreed that the sum of the energy delivered to North Kosovo by KOSTT and the Commercial Losses can be no more than 20% in 2012. Since the energy delivered to the north is 4.4% of input to distribution, the maximum commercial loss can only be 15.6%. The report "Independent Review of KEK Distribution Losses for 2010" documented that the commercial losses in 2010 were 20% of input to distribution. KEK has a target of reducing commercial losses by two percentage points each year. This would result in the 2012 commercial loss target being 16%, fairly close to the 15.6% included in the energy balance.

Applying the Wholesale Price of Energy (€38.65 / MWH) as documented in Part III of KEK's Tariff Application, Wholesale Electricity Price for 2012, results in a cost of losses of €58.8 million.

e) Other Items to include in MAR

The MAR for 2012 should include two additional components. Since KEK did not spend the total amount of CAPEX allowed in tariffs for 2011, an adjustment needs to be made in 2012 to reflect the depreciation and return on the unspent amount.

Additionally, the MAR must be adjusted by the revenues expected from third parties for use of KEK's network facilities (€2.8 million)

KEK recommends that ERO review and approve the proposed 2012 MAR for the Distribution System Operator of €87,476,000.

IV. Allocation of MAR and Determination of DUOS Tariffs

The Distribution System Operator recovers its MAR through the Distribution Use of System (DUOS) tariffs. This is accomplished by allocating each element of the MAR to the voltage levels as described in detail in Appendix A.

In accordance with Chapter IV, Distribution Use of System Charges, of the DSO Pricing Rule:

The DSO shall set DUOS Charges from time to time such that:

- The DSO recovers its allowed revenues that are not recovered from other charges or from Excluded Services; and
- DUOS Charges are in accordance with a methodology developed by the DSO and approved by the Regulator. The methodology shall be in accordance with the Statement of Distribution Charging Principles issued by the Regulator.

The DSO shall submit to the Regulator its methodology for DUOS Charges and any subsequent amendments to this methodology at least 30 Business Days prior to its proposed date of effectiveness.

No methodology or amendments to a methodology shall be effective until approved by the Regulator.

The DSO shall have the right to determine the DUOS Charges subject to the requirements above.

KEK hereby submits its Methodology for DUOS Charges in Appendix A and requests ERO to review and approve it.

Appendix A also provides ERO with the proposed DUOS tariffs that result from applying the DUOS Methodology to the 2012 requested MAR.

V. Proposed Tariffs

The proposed tariffs for Distribution Use of Service are shown in Table 3.

Table 3 - Proposed Distribution Use of System (DUOS) Tariffs for 2012

Voltage Level	€ cents/kWh
35 kV	1.01
10 kV	1.65
0.4 kV	3.14

KEK respectfully requests ERO to approve the DUOS tariffs shown in Table 3.

METHODOLOGY FOR DISTRIBUTION USE OF SYSTEM TARIFFS AND COMPUTATION OF PROPOSED 2012 DUOS PRICES

This document presents the methodology for the determination of Distribution Use of System (DUOS) tariffs and applies it to 2012 costs

Summary of the Methodology:

1. The starting point is the annual Energy Balance and the Maximum Allowed Revenues for the DSO
2. The MAR for the DSO is allocated to voltage levels based on energy and demand
3. Technical Losses are analyzed and allocated to voltage levels
4. Commercial Losses are analyzed and allocated to voltage levels
5. DUOS Tariffs by voltage level are the combination of items 2, 3, and 4 above

Worksheet:

Contents

Summary Calculations	Summary of the cost elements to be recovered in the DUOS Tariff by voltage
Allowed Revenues - Network	Allowed Revenues for Network in 2012 based on requested Allowed Revenues
Technical Losses by Voltage	Distribution Technical Loss allocation by voltage based on 2011 actual results and Network Division analysis
Commercial Loss Allocation	2012 commercial losses from Energy Balance allocated to voltage levels
Energy and Demand Allocation	Allocation of 2012 customer sales to voltage level and analysis of contribution to distribution peak by voltage level

SUMMARY OF RESULTS:		
Distribution Use of System cost for customers connected at:		
35 KV	1.01	Euro cents per kWh Billed
10 KV	1.65	Euro cents per kWh Billed
0.4 KV	3.14	Euro cents per kWh Billed

Cost Elements to be recovered via the Distribution Use of System Tariff

Based on requested Allowed Revenues for the Year 2012

	Total (€000)	Allocation to Voltage level (€000)		
		35KV	10KV	0.4KV
a) Allowed Revenues for Network				
Capital Related Costs (Depreciation and Return)	15,424	112	815	14,498
<i>Allocation based on Demand</i>		0.72%	5.28%	93.99%
Operating Costs	13,297	183	936	12,178
<i>Allocation based on energy</i>		1.38%	7.04%	91.58%
TOTAL ALLOWED REVENUES	28,721	295	1,751	26,675
b) Technical Losses:				
Energy Delivered to Distribution System (MWH)	4,634,851			
% Energy lost in Distribution System	17.2%	0.10%	2.72%	97.18%
Technical Losses in MWH	796,940	833	21,652	774,456
Energy Price used for Losses (€ per MWH)	<u>38.65</u>			
Cost of Technical Losses	30,802	32	837	29,933
c) Non-Technical (Commercial) Losses:				
Energy Delivered to Distribution System (MWH)	4,634,851			
% Energy lost in Distribution System	15.60%			
Losses in MWH	723,249	2,005	20,500	700,744
Energy Price used for Losses (€ per MWH)	<u>38.65</u>			
Cost of Non-Technical Losses	27,954	77	792	27,084
TOTAL COSTS TO BE RECOVERED IN DUOS TARIFF	87,477	404	3,380	83,692
SALES (MWH)	2,910,941	40,100	205,000	2,665,841
TARIFF (Euro cents per kwh)	3.01	1.01	1.65	3.14

Allowed Revenue for Network Licensee

Source: KEK Tariff Application for 2012
(Excluding Cost of Losses)

Allowed Revenue Items	2012 Requested
<u>Operating Expenses</u>	
Fuel	60.0
Electricity	
Maintenance	4,915.0
Other	805.0
Materials and Services	840.0
Personnel	7,465.3
Security	360.0
Other Overheads	194.5
Total Annual OPEX	14,640
<u>Annual Depreciation</u>	5,626.7
<u>Taxes</u>	0.0
TOTAL ANNUAL EXPENSES	20,266.5
<u>Allowed Return</u>	9,797.4
<u>Allocated HQ Costs</u>	1,820.6
<u>Adjustment for 2011 Underspent CapEx</u>	(363.1)
<u>Third Party Revenue Credit</u>	(2,800.0)
Total Allowed Revenues	28,721.3

TECHNICAL LOSSES IN THE DISTRIBUTION SYSTEM

Source: Network Division 2011 Loss Analysis

Based on 12 month ended November 2011 data

All Energy Flows in MWH

	110/35/10KV Transformer	35 KV Lines	35/10 KV Transformer	10 KV Lines	10/0.4 KV Transformer	0.4 KV System	TOTAL	Energy		Billed Energy			
								Flow Thru Distrib.	Tech Loss %	35KV	10 KV	0.4 KV	Total
Jan-11	2,269	6,413	2,035	34,860	6,651	52,727	104,955	574,759	18.3%	3,931	17,418	254,179	275,528
Feb-11	1,769	4,995	1,689	26,047	5,794	45,614	85,908	491,785	17.5%	3,489	16,783	237,844	258,116
Mar-11	1,754	4,199	1,636	25,479	5,918	44,495	83,481	486,079	17.2%	3,328	18,645	245,949	267,923
Apr-11	1,281	2,890	1,278	15,582	4,892	33,203	59,126	368,481	16.0%	2,654	16,374	210,653	229,680
May-11	1,072	2,449	1,256	13,859	4,711	31,782	55,129	352,054	15.7%	3,546	15,662	191,862	211,071
Jun-11	1,151	1,996	1,125	10,691	4,240	26,679	45,881	305,073	15.0%	3,210	15,266	194,720	213,196
Jul-11	1,226	2,166	1,112	11,905	4,522	29,007	49,937	331,147	15.1%	3,701	16,033	199,253	218,987
Aug-11	1,073	2,169	1,093	12,498	4,572	29,782	51,186	333,886	15.3%	3,594	16,403	209,004	229,000
Sep-11	994	2,663	1,182	10,954	4,439	26,670	46,903	305,627	15.3%	3,248	15,688	198,212	217,148
Oct-11	1,297	2,981	1,347	19,727	5,093	35,746	66,191	399,006	16.6%	3,634	17,211	211,545	232,390
Nov-11	1,646	3,366	1,503	25,962	5,694	41,298	79,468	465,643	17.1%	3,317	16,914	213,509	233,740
Dec-10	1,918	6,105	1,921	30,252	7,432	45,895	93,523	533,013	17.5%	3,321	17,692	247,366	268,379
Total	17,451	42,392	17,177	237,815	63,957	442,896	821,689	4,946,553	16.6%	40,973	200,090	2,614,096	2,855,159
								821,689		1.44%	7.01%	91.56%	100.00%
								796,940					
								3,327,924			200,090	2,614,096	2,814,186
											7.11%	92.89%	100.00%

Voltage Class	Allocation of 2011 Losses							
35 KV	250	608	0				859	0.10%
10 KV	1,223	2,971	1,221	16,909			22,324	2.72%
0.4 KV	15,978	38,813	15,956	220,907	63,957	442,896	798,507	97.18%
	17,451	42,392	17,177	237,815	63,957	442,896	821,689	100.00%

Year 2012 Distribution Commercial Loss Allocation

(Energy in MWH)

Total Commercial Losses	723,249	per 2012 Energy Balance
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Losses Allocated to 35 KV Customers:

Sales to 35 KV Customers per Energy Balance	40,100	
Assumed Commercial Loss as a % of Sales	5%	
Allocated Commercial Losses (MWH)		2,005

Losses Allocated to 10 KV Customers:

Sales to 10 KV Customers per Energy Balance	205,000	
Assumed Commercial Loss as a % of Sales	10%	
Allocated Commercial Losses (MWH)		20,500

Losses Allocated to 0.4 KV Customers:

Equals total commercial losses		
less allocations to 35 and 10 KV		700,744
Sales to 0.4 KV Customers per Energy Balance	2,665,841	
Resulting Commercial Loss as a % of Sales	26%	

NOTE: The assumed commercial loss percentages for 35 and 10 KV customers are based on judgement

Sales and Demand Allocations

Tariff Group	Sales (MWH)	Energy Allocation	Demand Allocation
	(a)	(b)	(c)
35kv	40,100	1.38%	0.72%
10kv	205,000	7.04%	5.28%
0.4kv	2,665,841	91.58%	93.99%
	2,910,941	100.0%	100.0%

Source: (a) Sales by voltage level based on Final 2012 Energy Balance
 (b) Energy Allocation percentage based on sales in prior column
 (c) Demand Allocation from analysis below - Contribution to five monthly peaks of Distribution System

Analysis of Demand

Analysis Period: 12 Months ended November 2011
 Demand values in MW

Five Maximum Peak Months:	JAN '11	FEB '11	MAR '11	NOV '11	DEC '10
Distribution Maximum Demand	972	953	901	928	948
less: 35kV billing demand	7	7	7	6	7
less: 10kV billing demand	46	50	53	48	51
= 0.4kV estimated Demand	919	896	841	874	890

Contribution to Peak

	JAN '11	FEB '11	MAR '11	NOV '11	DEC '10	Five Month Average
35kV	0.72%	0.73%	0.78%	0.65%	0.74%	0.72%
10kV	4.73%	5.25%	5.88%	5.17%	5.38%	5.28%
0.4kV	94.55%	94.02%	93.34%	94.18%	93.88%	93.99%
TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%