



*KORPORATA ENERGETIKE E KOSOVËS Sh.a.  
KOSOVO ENERGY CORPORATION J.S.C.  
ENERGETSKA KORPORACIJA KOSOVA D.D.*

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

**TARIFF APPLICATION  
YEAR 2012**

**Part III – Wholesale Electricity Price  
For the Year 2012**

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## **I. Introduction**

The Kosovo Energy legislation was revised in December 2010 and called for ERO to amend its secondary legislation to conform to the new laws. In November 2011, ERO issued its new Pricing Rules for each licensed activity as follows:

- Rule on Regulated Generator Pricing
- Rule on Rule on Transmission System Operator and Market Operator Pricing
- Rule on Distribution System Operator Pricing
- Rule on Public Electricity Supplier Pricing

The new Pricing Rules result in a significant change in the manner in which tariffs are initially developed and subsequently modified in future years. KEK has spent significant time studying and commenting on the various consultation materials leading up to the issuance of the final pricing rules in November 2011. In addition, KEK has extensively studied the final rules in order to prepare this tariff application and the supporting documentation to comply with the new rules.

As explained in Part I of this tariff application, In order to comply with the new unbundled pricing mechanisms being implemented by ERO, the 2012 KEK Tariff Application will consist of five (5) parts as follows:

### **Part I Baseline Information for all Licensees**

### **Part II Regulated Generator Tariff Application**

### **Part III Wholesale Electricity Price for 2012**

### **Part IV Distribution Use of System Tariff Application**

### **Part V Public Electricity Supplier Tariff Application**

This Part III of the application will utilize the information from the 2012 Energy Balance and the Generation Tariff to determine the 2012 Wholesale Energy price, along with information concerning the estimated cost of imports, purchases from other domestic generators, and exports.

KEK respectfully requests that the ERO review this part of the KEK tariff application as soon as possible in order that the 2012 tariff process can move along in time to implement a retail adjustment on 01 April 2012. The process is already behind the time schedule outlined in the pricing rules. KEK is also submitting its tariff application for the Public Generator (Part II of the application) along with this document. Approval of the generation tariff (Part II of the tariff application) and subsequently the wholesale electricity price in this document are critical. The wholesale electricity price is a critical input to the Distribution Use of System Tariffs, The Transmission System Operator Tariff, and Public Supplier Tariff applications.

## II. Assumptions Made to Develop the Wholesale Electricity Price

Article 13 of the Rule on Public Electricity Supplier Pricing at Article 13 specifies how the Wholesale Power Costs are to be determined as follows:

### ***Allowed Wholesale Power Costs***

1. *Allowed wholesale power costs shall comprise:*
  - 1.1. *Allowed wholesale capacity costs;*
  - 1.2. *Allowed wholesale energy costs; and*
  - 1.3. *A Retail Margin on allowed wholesale capacity costs and wholesale energy costs.*
2. *Maximum Allowed Revenues shall be adjusted for changes in allowed wholesale power costs at each Annual Update, as per the formulae given in Schedule 1*
3. *Allowed wholesale capacity costs are those costs associated with the payment of capacity charges for domestic generating capacity which is contracted for the purposes of ensuring security of supply and relates to supply Regulated Customers.*
4. *Allowed wholesale energy costs shall comprise the following allowed costs as they relate to supplying Regulated Customers:*
  - 4.1 *Costs of purchases from domestic generation;*
  - 4.2 *Energy import costs;*
  - 4.3 *Energy export revenues (as a negative cost), subject to the Export Sharing Factor;*
  - 4.4 *Net imbalance costs, subject to the Imbalance Sharing Factor.*
5. *Revenues relating to the sale to the TSO and DSO of energy to cover transmission and distribution losses shall be deducted from allowed wholesale energy costs, to avoid recovering the cost of energy losses twice.*
6. *Allowed costs of purchases from domestic energy generation shall comprise the actual costs incurred by the PES in purchasing energy from generators in Kosovo (whether regulated or unregulated) for supplying to Regulated Customers, as determined in power purchase agreements or otherwise, less any allowed wholesale capacity costs.*
7. *Allowed costs of purchases from domestic energy generation shall exclude any additional costs of generation that are recovered under separate mechanisms, such as the difference between feed-in-tariffs and average wholesale power costs for purchases from renewable generation.*
8. *Allowed energy import costs shall be the actual costs incurred by the PES in purchasing imported energy, as determined in import contracts, less any import subsidies provided by the Government of Kosovo.*
9. *Allowed energy export revenues shall be the actual revenues earned by the PES in selling exported energy.*
10. *The Export Sharing Factor shall be a fixed percentage that is applied to export revenues to determine the sharing of these revenues between the PES and Regulated Customers. The Export Sharing Factor shall be sufficient to encourage the PES to maximise export revenues, but not result in excessive returns for the PES.*
11. *Allowed net imbalance costs shall comprise the actual costs incurred less the actual revenues earned (as determined in accordance with the Market Rules) that result from imbalances between actual demand from Regulated Customers and the contracted supply of energy.*
12. *The Imbalance Sharing Factor shall be a fixed percentage that is applied to net imbalance costs to determine the sharing of these costs between the PES and Regulated Customers, where a value of 0% means that all net imbalance costs are allocated to the PES and a value of 100% means that all net imbalance costs are allocated to Regulated Customers. In setting the Imbalance Sharing Factor,*

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*the Regulator shall consider the extent to which the PES is able to manage imbalances and, in particular, the balance between supplies from domestic generation and firm imports and the demand served by the PES. The Regulator shall set the Imbalance Sharing Factor at 100% until such time as it considers that supply is generally adequate to meet demand.*

13. *Allowed revenues relating to transmission and distribution losses shall comprise the actual amount invoiced by the PES to the DSO and TSO (as determined in accordance with the Market Rules) to compensate for the difference between metered energy sent out by generators or imported and energy delivered to eligible and non-eligible customers.*
14. *Forecasts of allowed wholesale energy costs at Annual Updates shall have regard to:*
  - 14.1. *Recent and historic changes in import prices, export prices, the cost of domestic generation, and revenues relating to transmission and distribution losses;*
  - 14.2. *The seasonality of import and export prices;*
  - 14.3. *Relevant contract prices on power exchanges; and*
  - 14.4. *Other factors that provide a reasonably reliable means for forecasting wholesale energy costs.*
15. *The Regulator may, at its discretion, introduce an export penalty that is deducted from Maximum Allowed Revenues. The penalty would apply if the PES sells energy exports when there is unserved domestic demand for energy due to inadequate generation or imports, as evident in the settlements data produced by the TSO. The penalty per unit would be sufficient to ensure that the PES has a strong incentive to serve domestic demand before exporting, but should not threaten the financial position of the PES. Any such penalty shall only be introduced if and when the Regulator considers that there is evidence of significant volumes of exports by the PES taking place at times of domestic load shedding.*
16. *The Retail Margin shall be a fixed percentage that is applied to allowed wholesale energy costs and allowed wholesale capacity costs. It shall be set at such a level such that it:*
  - 16.1. *Provides the PES with a reasonable return that compensates it for the risks it assumes in providing Standard Service to Regulated Customers. This shall be calculated with reference to the margins earned by similar utilities in countries elsewhere in Europe, taking account of the similarities between the electricity industry in those countries and that of Kosovo; and*
  - 16.2. *Provides the PES with a reasonable return on its net fixed assets used in providing Standard Service to Regulated Customers. This shall be calculated with reference to the cost of capital of other licensees in Kosovo.*

To comply with the wholesale power cost provisions of the PES Pricing Rule, KEK has utilized data, estimates, and assumptions as follows:

- a. The final 2012 Energy Balance that KEK sent to KOSTT on 27 December 2011 was used to determine energy flows. See Table 1 for a summary of the 2012 Energy Balance.
- b. The capacity and energy charges from the Public Generator, as included in the application submitted to ERO on 05 January 2012 were used.
- c. Energy purchased from Ujmani HPP is priced at the current contract price of €27.5 per MWH. Although Iber Lepenc has requested an increase in that price, they have not yet documented and justified a new price, which must ultimately be approved by ERO. For that reason, the price is assumed to remain at €27.5 per MWH.
- d. Energy purchased from other domestic sources is priced at current contract prices.

- e. Imported energy is priced at €70 per MWH, based on the actual cost of imports in 2011. This price is therefore quite conservative given the recent rise in regional energy prices caused by a variety of factors including draught conditions in the region and the announced closing of Germany's nuclear units due to the Fukushima incident in Japan.
- f. Subsidies from the Government of Kosovo are NOT considered in the determination of Wholesale Power Costs, which corresponds to the regulatory treatment in the past. Including the Government subsidy distorts the actual cost of power and since the actual subsidy is likely to differ from the budgeted amount, it is best to be kept as a separate line item for the Public Supplier. In its 2011 tariff application, KEK submitted cost reflective tariffs and in that context recommended that the subsidy be allocated entirely to households to reduce the amount of Allowed Revenues allocated to them. KEK recommends a similar treatment this year.
- g. Energy Exports are priced at €30 per MWH, approximately the cost of KEK generation.
- h. As KEK has communicated with ERO during the development of the Pricing Rules, energy exports in Kosovo are not made for the purpose of earning profits. They are currently made primarily as a balancing mechanism and to effectively utilize temporary surpluses. In the new environment, exports will primarily be made in the event a day-ahead nomination turns out to be overstated, the primary driver of which is often weather. Exports are not made to take advantage of exporting low cost Kosovo generation to other countries to make money. KEK would expect to pass along export revenues to customers in full and, therefore, the Export Sharing Factor is zero.
- i. Likewise, the export penalty disregards the real time nature of balancing supply and demand. Given the small amount of export being currently experienced and anticipated in the Energy Balance (less than 3% of available energy), it's apparent that the supplier is not trying to reap profits on exports. Energy prices are extremely time dependent within a day and prudently negotiated export arrangements may not be flexible hour to hour. In any given 24 hour period it is rational to shed load at peak hours so as not to incur high cost emergency purchases while exporting at night. Even within a specific hour, KEK may have negotiated an export or exchange arrangement in advance that must be honored and if either supply is lower (due to the unexpected loss of a generating unit) or customer demand is higher (likely due to weather) load shedding may be required to keep the system in balance. A similar situation occurs in the case of compensation, which must be delivered or taken at a specific hour. For the above reasons, the Export Penalty is zero.
- j. Since the Market Rules are still in the development stage, imbalance costs are not relevant at this time and have not been included in the wholesale power cost.
- k. The Retail Margin is intended to compensate the Public Supplier for the risks it assumes in providing Standard Service to Regulated Customers and to provide a return on investment to the PES. A review of data available from OFGEM indicates a wide variation in the retail margins actually earned by gas and electricity suppliers. The Kosovo Public Supplier incurs far more risks than utilities in highly developed countries; therefore, KEK is proposing that the Retail Margin be set at 5%.

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- l.** As agreed with Ministry of Economic Development, until such time as KEK Distribution has full access to the North Kosovo distribution network facilities and Supply operation, the cost of energy delivered by KOSTT to North Kosovo will be recovered as part of the wholesale cost of energy. This is a more transparent and logical manner to handle this difficult political issue. The amount of energy is metered and quantified in the KEK energy accounting reports on a monthly basis. The prior practice of adding that energy (which is accounted for) to distribution commercial losses (which by definition is “unaccounted for” energy) is simply no longer viable. That energy is not delivered to a facility that KEK Distribution has control of and a potential KEDS investor should not be expected to pay for any energy delivered to an area that they have no access to.
- m.** Kosovo A and Kosovo B require Auxiliary Power in order to operate. Approximately 75% of that power is provided by the plant itself while the remainder is provided from the distribution network at 35 KV and 10 KV. Given the separation of Network and Supply from KEK, that energy must be paid for at retail tariffs, similar to the energy utilized by the mines. The net output of Kosovo A and B has been adjusted in the determination of wholesale power costs to reflect this.

Based on the estimates and assumptions discussed above, KEK developed the recommended 2012 wholesale power cost shown in section III.

**Table 1 – Energy Balance for the Year 2012**

<b>Line No.</b>	<b>Input/Output Description</b>	<b>Amount GWh</b>
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	<b>Total Into Transmission System (1 + 2 + 3 + 4)</b>	<b>5,770.6</b>
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	<b>Total out of Transmission (6 + 7 + 8 + 9 + 10 + 11)</b>	<b>1,187.3</b>
13	<b>Net into Distribution System (5 - 12)</b>	<b>4,583.3</b>
14	Distribution Generation	51.5
15	Energy Delivered to North Kosovo by KOSTT	203.7
16	Distribution Technical and Commercial Losses	1,543.3
17	<b>Net for Sales at Distribution Level (13 + 14 - 15 - 16)</b>	<b>2,887.8</b>
	<b>Distribution Level Sales</b>	
18	35 kV	40.0
19	10 kV	200.0
20	0.4 kV	2,647.8



### III. Determination of the Wholesale Electricity Price for 2012

Table 2 presents KEK's recommendation to ERO for the Wholesale Electricity Price.

**Table 2 Wholesale Electricity Price for 2012**

#### **WHOLESALE ENERGY COST FOR THE YEAR 2012**

(Energy in MWH and Monetary values in thousands of Euros, except per unit values)

	<b><u>Energy MWH</u></b>	<b><u>Cost (€000)</u></b>	<b><u>Cost per MWH</u></b>
Kosovo A			
Net output per Energy Bal	1,475,300		
Off Site Aux Power	77,000		
Input to the System	1,552,300		
Kosovo B			
Net output per Energy Bal	3,392,500		
Off Site Aux Power	77,700		
Input to the System	3,470,200		
KEK Generation input to System	5,022,500	149,407	29.75
Ujmani	82,000	2,255	27.50
Imports	820,800	57,456	70.00
Export	(169,800)	(5,094)	30.00
Energy to North	(203,700)		
<b>Wholesale Energy Cost (Transmission)</b>	<b>5,551,800</b>	<b>204,024</b>	<b>36.75</b>
Distribution Connected Generation	51,522	2,246	43.60
<b>Wholesale Energy Cost (Distribution)</b>	<b>5,603,322</b>	<b>206,270</b>	<b>36.81</b>

The above prices do not include the Retail Margin of 5%

<b>Final Wholesale Energy Costs including the Retail Margin of 5%:</b>	
<b>Wholesale Energy Cost (Transmission)</b>	<b>38.59</b>
<b>Wholesale Energy Cost (Distribution)</b>	<b>38.65</b>