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ENERGY REGULATORY OFFICE
REGULATORNI URED ZA ENERGIJU

Review of Feed-in Tariff for small hydro-plants- Response to comments

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DISCLAIMER

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1 Introduction

Energy Regulatory Office (ERO) is in the process of reviewing the Feed-in tariff for small hydro-plants. In Sept. 15th, 2008, ERO has published a consultation paper on approach to the calculation of the tariff in question.

The shareholders are invited to present their written comments relative to ERO analyses, preliminary proposals and all other issues related to that. Comments have been received from:

- Energy Corporation of Kosova, KEK JSC
- Independent Trade and Transmission System Operator, KOSTT JSC.
- Albanian Association for Energy and Environmental Sustainable Development (SHSHEMZHQ)

Besides the received written comments ERO have had official meetings with the representatives of MEM, KEK and SHSHEMZHQ. In this consultation paper are taken into account the comments and suggestions that have ensued these discussions

ERO commends all the shareholders for the comments handed over to PTD.

The copies of their papers may be viewed in the ERO web-page (www.ero-ks.org).

This answering paper offers a summary of the comments received and ERO reply to them. It also explains other modifications made to ERO preliminary proposals. Furthermore this presents the ERO final draft proposals for feed-in tariffs of the renewable sources exclusively for small hydro-plants. ERO shall take final decision on approved tariffs upon further revision of these proposals by its Board. It is the intention of ERO to approve the Feed-in tariffs as soon as possible, in order to pave the way for private investors investing in Kosova, to fulfill the indicative targets and the energy requirements from RS.

2 A summary of amendments to ERO preliminary proposals.

Based on the received comments and further internal revision of the allowed revenues, ERO proposes to make these amendments into its preliminary proposals:

1. Numerical data on capital investments are accepted increased for the value 20-50%.
2. ERO proposes feed-in tariffs on generation costs for hydro-plants with installed capacity of up to 2MW to be 5% instead of 10%.
3. New tariffs after the changes are:

Installed capacity up to 2MW with a 6.7 cent€/kWh instead of 6.44

Installed capacity 2MW -5 MW with a 5.8 cent€/kWh instead of 5.02

Installed capacity 5MW -10 MW with a 5.5 cent€/kWh instead of 4.02

3 KEK JSC Comments

Following 2 meetings including the presentation of the feed-in tariff calculation model, KEK JSC has handed its 4-rth and final comments which mainly express KEK JSC's concern relative to:

- Surplus energy supply from SHP during April through June
- Adapting the costs from other places
- Averted costs
- Increase of construction prices
- The Pricing difference between the categories

3.1 Surplus energy supply from SHP in the month of April through June

KEK JSC considers that "the most important problem may be in the season when the KEK charge is over-fulfilled". They add further that "monthly energy demand decreases significantly in April, May and June, bearing towards the lower July season and then increases again towards peak months of December and January". Therefore KEK JSC argues that due to the hydrologic conditions of Kosova, biggest river flows come during the months of April –June, merely when KEK JSC and the region are in energy surplus.

ERO considers as reasonable the argument that the energy demand during these months is lower, and that when generation exceeds consumption, the public supplier should purchase energy from smaller HPs with a higher tariff compared to the surplus generation export price.

But in the other hand, during the other 9 months, in the peak time and lacking of sufficient national energy generation, the public supplier is supplied with electric energy from smaller HPs with a lower price compared to the import price (in 2007 showed a 67% increase).

The Hydrologic effect surely impacts the time of energy generation from hydro-plants, but the final effect depends on the percentage of the energy that is produced from small hydro-plants at the peak time when the electric energy is imported. Therefore, since the KEK JSC's comment is reasonable, the impossibility of quantitative evaluation of the relation between the timeline of river flow and timeline of peak demand make KEK JSC's argument disputable.

The fact that KEK supposes all hydro-plants shall be constructed in the simultaneously makes their argument even more disputable. Furthermore, the Long-term Balance of the Electric Energy in Kosova 2009-2018 foresees a 16% increase on the energy demand from 2009 through 2012, as indicated in the following table:

Projected consumption of Electric Energy (GWh)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Gross consumption	5283	5583	5930	6166	6402	6605	6699	6889	6949	7149
Domestic consumption	1988	2366	2725	2817	2841	2833	2830	2887	2867	2896
Services	706	781	898	1051	1219	1402	1514	1620	1733	1907
Industria	814	862	923	1006	1086	1162	1232	1281	1333	1386
KOSTT losses	239	185	238	217	227	232	236	242	244	251
KEK - Dist. losses	684	678	672	649	674	668	651	669	587	525
Commercial losses	852	710	473	426	355	308	237	189	185	185

Along this fact, the tariff methodology of the energy sector allows the public suppliers an additional 3% of incomes on top of the energy purchase costs for recovering the mistaken forecast of the demand.

3.2 Adapting the costs from other countries

Further in its comments KEK JSC offers other alternatives for feed-in tariff calculation supposing to take the investment costs of small hydro-plants on other countries (especially in Macedonia and Albania) as a ground base.

ERO has naturally taken into account the development of the small hydro-plants sector in the region and other countries, yet the method of adopting methodologies and costs of other countries is irrelevant in the case of hydro-plants since 70% of the hydro-plants costs and tariff varies in case by case bases.

3.3 Averted Costs

KEK also comments that tariff calculation should take into account the averted costs. Averted costs implies the concept "if we would not purchase energy from hydro-plant X, then what we would pay for the energy of same quality, same quantity in the same time from another source?". Therefore KEK supposes that the calculated tariff for SHPs in question should be the average of the import price for the last three years implicating that the import is the averted or avoided cost from construction of SHP-s.

This argument indulges several difficulties. One of them is that, the evaluation of the "averted costs" is a subjective matter and depends entirely on the concept used to evaluate which costs are "averted" from the construction of SHP-s. A possible solution is the import. Yet, stating that import is the averted cost implies that the energy offered from SHP-s is in disposal

simultaneously with the import. Since none of the 18 potential SHP-s is accumulative, the aforementioned implication is incorrect thus making the comment on tariff calculation on grounds of averted costs to be irrelevant. Furthermore, Sec. 46.2 of Law 2004/9 "On Energy Regulator" dictates that generation capacity tariffs should be evaluated on "reasonable, non-discriminatory grounds, based on objective criteria set in a transparent manner".

3.4 Increase of construction costs

On the other hand ERO agrees with KEK JSC's comments that construction costs are increased due to the increase of iron and oil prices. ERO in cooperation with the SHSHEMZHQ officials has performed the necessary adjustment so that investment costs are in harmony with the increase of the initial investment prices.

3.5 Pricing differences between categories

ERO considers as accurate the comment that pricing difference between categories should be lessened because it may serve as an incentive for construction of SHP-s where a bigger hydro-plant has been projected. ERO notices that the consultation paper has not been very concise in deliberating this matter. ERO adds further that the published tariffs are valid for the site capacity, not for construction capacity, and this should be clarified in the consultation paper.

4 KOSTT JSC Comments

KOSTT JSC has sent comments relative to the following matters:

- KOSTT estimates that this report does not provide sufficient elements to understand the reason of issuing this report by ERO since the presented document lacks legal grounds and accordingly it creates uncertainties and confusion.
- KOSTT JSC estimates that initial RAB should be equal to final RAB.
- KOSTT JSC comments that the personnel cost evaluation method is based on three points for all 18 SHP-s.

4.1 Legal Grounds

The attached letter to the consultation paper published by ERO contains the legal provisions in power in which ERO relied.

4.2 Pricing comparison

Count 2.2 of the consultation paper titled "Selection of the hydro-plants included in tariffs" among others states "Initially all those hydro-plants that generate energy with tariffs equal or below the import price accumulating a national generation of 291.67 GWh, have been considered reasonable".

The consultation paper further, in the following sentence among others state that " *since the required quantity of the energy generated from SHP-s in the Administrative Direction is only 145.03*

GWh for 2009, the energy generated in Kosova in the occasion of constructing all the small HPs, exceeds this indicative target. Therefore, the hydro-plants that are favorized in calculation of the electric energy tariff are those which fulfill the afore-mentioned indicative target by way of lowest tariff and highest feasibility”.

4.3 Regulated assets' base

Regulated Asset Base (RAB) represents the amount of invested capital by shareholders, in which it the allowed return and annual depreciation in determining the allowed annual incomes is accepted. This consists of three elements:

- Initial or elementary RAB.
- Additional capital investments in RAB.
- Depreciation of assets subtracted from RAB

Therefore ERO does not agree with KOSTT-JSC which considers that initial RAB should be equal to final RAB since initial RAB subtracts the calculated annual depreciation using the linear method and adding the capital investments passed during the year and extracting the final RAB.

4.4 Personnel Cost

In count 3.4.1.1 " the Personnel Cost", KOSTT comments that " this methodology of determining the staff costs as a value whose change is linear, may have served in value, yet as explained in the prices chart- count 4.2, three points of line in the following chart. Maybe it should be explained while evaluating these costs, the way that levels of proposed advanced tariffs have been acquired."

For clarification sake, the personnel costs displayed in Chart 1 and equation 8 displaying the line in pic.1 are only application of the linear line equation:

$$y_2 - y_1 = m(x_2 - x_1)$$

MEM study evaluates that personnel cost does not depend too much from the installed capacity and varies between €45,000 and €60,000. In this particular case, the smallest hydro-plant, the one in Bajaska with a capacity of 300kW, is assigned the personnel cost of 45,000€. The largest hydro-plant, the one in Decan, with a installed capacity of 8300kW is assigned with a maximal cost of 60,000€.By replacing these two points in the line equation, the following equation results:

$$y = \left(\frac{15}{8}\right)x + 44,437.5, \text{ where } y=\text{Personnel cost and } x=\text{Installed Capacity}$$

Or as displayed in the consultation paper:

$$KP = \left(\frac{15}{8}\right)KI + 44,438$$

Personnel cost for all hydro-plants with an installed capacity ranging 300kW and 8300kW has been found by replacing the variable X in the mentioned equation with the installed capacity of the respective hydro-plant.

5 SHSHEMZHQ Comments

ERO has received a letter from SHSHEMZHQ official Mr. Besim Islami stating that it should increase the capital investments and other costs and it recommends that tariff calculation should be done taking the import price as a reference.

In the letter is stated that:

- Numeric data and capital investments taken out of ERO from the SHSHEMZHQ study in 2006 should be accepted as increased for about 50% because the equipment prices in the international market are increased as well. Furthermore the prices of construction raw materials are increased for about 20%.
- 'Other allowed costs' should be accepted more than 10% because actually the interests for real estate in Kosova are high. The actual interest rates in Kosova are at least 12%.
- Feed-in tariffs should be higher for SHPs of higher costs and not the other way around.

5.1 Price increase of Capital investments

ERO accepts the comment from the author of pre-feasibility study on potentials of SHP-s in Kosova that, the prices of initial construction equipment in the international market are increased for 50% in average, while the construction raw material prices are increased for 20%.

5.2 Feed-in Tariff

The purpose of feed-in tariff is an encouragement for construction of high efficiency and lower tariff electric energy generation hydro-plants, not the other way around.

6 ERO Final draft proposal on SHP-s feed-in tariffs

Feed-in tariffs of SHP-s

Upon considering of all the received comments, the final draft tariffs for the SHP-s are as follows:

<i>Installed Capacity</i>	<i>Price</i> <i>(€cent/kWh)</i>
<i>Hydro-plants up to 2 MW</i>	6.7
<i>Hydro-plants from 2 MW to 5 MW</i>	5.9
<i>Hydro-plants from 5 MW to 10 MW</i>	5.6