

# ELECTRICITY REGULATORY ENTITY

## WHOLESALE PUBLIC SUPPLIER TARIFF CALCULATION METHODOLOGY”

### PART I

#### Authority

This wholesale public supplier tariff calculation methodology is developed according to the Law No.\_\_\_\_, dated \_\_\_\_\_ “On Power Sector, as amended.

#### Purpose

The purpose of this methodology is to set tariffs for regulated sales from wholesale public supplier to the retail public supplier, based on sound economic principles and providing the licensee the opportunity to earn its allowed profit margin.

#### Objective

The short-term objective of this tariff methodology is to provide a cost-based framework for calculating the wholesale price of electricity.

### 1. Terms used in the methodology

Standard terms used in all tariff methodologies are defined in the Power Sector Law, the Market Rules, the Metering Code, the Transmission Code, and other secondary legislation approved by the ERE. Terms used in this methodology have the following meanings.

- 1.1 **Average tariff for electricity sales to tariff customers** – average revenue per kWh from sales to tariff customers over a 12-month period, calculated as the total revenue from capacity-related charges, energy-related charges, and fixed monthly charges divided by the total kWh delivered to tariff customers.
- 1.2 **Base Year** - the first year of a regulatory period.
- 1.3 **Delivery capacity** – an estimate of the total customer load in MW that can be reliably supplied by the distribution system during the base year.

- 1.4 **Demand Forecast** – the ERE-approved forecast of demand for tariff customers.
- 1.5 **Dispatch/Purchase Priority** – the Wholesale Public Supplier’s priority to purchase energy is:
1. Must-run generation for system protection and reliability in accordance with the market rules and transmission grid code
  2. Energy from publicly-owned generation at ERE-approved tariffs
  3. Market-based power.
- 1.6 **Tariff Year** – the 12-month period in which the tariffs approved by ERE.
- 1.7 **Regulatory period** – a multi-year period when prices or revenues requirements are allowed to increase at specific rates. Normally the period is 3 years for the Wholesale Public Supplier.
- 1.8 **Regional Electricity Market** – a competitive electricity market operating in Albania, Austria, Bosnia-Herzegovina, Bulgaria, Croatia, FYR Macedonia, Greece, Hungary, Montenegro, Romania, Serbia, Slovenia, UNMIK, and Turkey, based on the legal framework of EU Directive 2003/54/EC.
- 1.9 **Test Year** – a 12-month period prior to a regulatory period that is used as the basis for developing the revenue requirements for the base year for the wholesale public supplier.

## 2. General regulations and basic principles

- 2.1 Non-compliance with any part of this Regulation may result in a rejection by the ERE of a tariff application by the wholesale public supplier.
- 2.2 This methodology is developed in conformity with Law on Power Sector and the Government-approved Albanian Market Model (“AMM”) as well as other legal acts which are in force in the Republic of Albania and other secondary legislation approved by the ERE.
- 2.3 The ERE will establish tariffs based on the principles that:
- Tariffs should provide proper price signals for the efficient use of energy
  - Expenses included in tariffs should be transparent to all stakeholders
  - The tariffs should allow the Wholesale Public Supplier a reasonable opportunity to earn the ERE-approved profit margin.

- Only prudently acquired services by the Wholesale Public Supplier licensee will be accepted into tariffs.
- Prices for electricity should remain relatively stable over time.

### **3. Regulatory Periods, Test Year and Base Year**

- 3.1 The ERE will decide on the appropriate regulatory periods for the Wholesale Public Supplier using the price cap tariff methodology. The periods of cap regulation must be consistent for the transmission and distribution.
- 3.2 the first regulatory period will be the tariff year of 2009. this period shall allow the WPS to develop its tariff application for the second regulatory period.
- 3.3 The ERE adopts template tables for tariff applications as Part II of this tariff methodology. The Wholesale Public Supplier shall use the template tables provided by ERE. The format of the tables can be modified as long as the information is organized in a similar manner and the breakdown of information in no less than that provided in the approved template tables. The tables will show test year results, adjustments made to test year and resulting base year including but not limited to company expenses, capital expenditures, and tariff asset base by regulated service.
- 3.4 The regulatory periods will be consistent for transmission network services and distribution network services. The revenue requirement for the Wholesale Public Supplier is a result of the forecasted cost of the other regulated sector and its own cost of operation.
- 3.5 For the initial regulatory periods,
  - (1) The retail tariff structure in the first regulatory period will remain the same as it exists as of January 1, 2009.
- 3.6 The test year for establishing base financial costs will be based on accounting information in accordance with the ERE-approved Uniform System of Accounts. The test year should be a representative 12-month historical period of company operating costs. The ERE has the right to perform, or contract to perform, a regulatory audit of the public supplier's test year accounting information during the tariff application proceedings.
- 3.7 The Wholesale Public Supplier may propose changes to the test year expense results for setting tariffs for base year of the next regulatory period. Any such changes must be both known (a specific item) and measurable (quantifiable).

Contingency funds to cover unexpected costs will not be approved by the ERE. The ERE will consider adjustments to test year results such as:

- 1) demand growth or decreases;
  - 2) inflation;
  - 3) contract price changes;
  - 4) cost of capital;
  - 5) efficiency factor especially relating to the target market price.
- 3.8 The energy company will provide justification for each forecasted adjustment to the test year results. The adjustments must be specified on the tables provided by the energy company in the tariff application and written testimony will be included in the tariff application providing evidence for the reason(s) for each adjustment and the amount for each adjustments.
- 3.9 The Wholesale Public Supplier will separately charge on the Retail Public Supplier invoice for capacity and energy purchases, and charges related to public service obligations.

#### **4. Forecasting of Energy and Capacity Sales to the RPS**

- 4.1 Retail Public Supplier has the responsibility to provide the OST the annual, weekly and day ahead schedules of its expected sales to tariff customers to enable OST to develop its own energy purchase schedules.
- 4.2 The approved annual load forecast between the WPS and the RPS will be the basis for forecasting revenue requirements for energy and capacity sales to the RPS.
- 4.3 The RPS will be subject to dynamic scheduling. The OST will charge for system balancing starting in the tariff year starting March 2010. The imbalance service will start as soon as the OST is capable of implementing the program to implement the service. Until that time, the cost of the imbalance will be borne by the generators. The cost of dynamic scheduling should be included in the cost of energy and capacity as long as the both the WPS and the RPS show proof to the ERE that they have exercised their best efforts to minimize dynamic scheduling payments.

#### **5. Revenue Requirements for Regulated Services**

- 5.1 The revenue requirements for the two component charges (energy and capacity purchases and public service obligations) are calculated in the following manner:
- 5.1.1 The revenue requirements for **energy services** include:

- a) **Power purchase costs for energy from publicly-owned generation** - The generator prices are approved each year by the ERE in accordance with the Tariff Methodologies for Publicly-Owned Generation.

The revenue requirements of the Wholesale Public Supplier will include publicly owned hydro production at the [4,200 GWh] annual net generation level.

- b) The public generation licensee will charge the Wholesale Public Supplier for each hydro and thermal generating economical unit as follows:

$GE_x$  - the price of the energy sold by a public-owned generator at the interconnection between the generator and the transmission company to the public supplier licensee at a tariff approved by the ERE. Any costs allocated to ancillary service provided by the generators should not be included in the calculation of revenue requirements for the generator energy price.

$GC_x$  - the price of the firm generating capacity sold by a public-owned generator at the interconnection between the generator and the transmission networks to the public supplier licensee at a tariff approved by the ERE. Any costs allocated to ancillary services (including reserve capacity) should not be included in the calculation of revenue requirements for the generator capacity price.

Only costs allocated to energy sales to the Wholesale Public Supplier are included in the development of the generation price for each publicly-owned generator. Some costs may be allocated to ancillary services (such as for reserves) if an economical unit signs an ancillary services agreement with the OST.

- c) **Costs of market-priced energy purchases** – prices for market based electric energy and capacity purchased from qualified suppliers, independent power producers and small power producers. The prices for imported energy and energy from independent producers must be based on the required procurement process and in no way should the final purchase prices exceed regional market prices. The ERE based on its consultant or its own staff evaluation, should determine the market value only in cases of dispute.

**Market-priced Generation Costs** = MBG = Import Costs + IPP Costs

Import Costs =  $IM_p * IM_e$

Where:

$IM_p$  = Forecasted average market price in the region

$IM_e$  = Forecasted imported energy for the period

IPP Costs =  $\sum IP_z * IE_z$

Where:

$IP_z$  = Negotiated price for power purchased from IPP “Z” by the Public Supplier

$IE_z$  = Estimated energy from IPP “Z” for the period

- d) The import of energy will require capacity reservation on international interconnection. Any justified expenses relating to securing such capacity reservation can be included in revenue requirements for the WPS.
- e) **Cost of tariff-based energy purchased from small power producers** - The prices for small power producers will be based upon ERE-approved tariffs.

$$\text{SPP Costs} = \sum SP_y * SE_y$$

Where:

$SP_p$  = ERE-approved price for purchases from SPP “Y” by the Public Supplier

$SE_y$  = Estimated energy from SPP “Y” for the period

- f) **Wholesale Public Supply Fee(S)** – This fee covers the cost of selecting the optimal mix of generation and imports, conducting tenders for market based (import, IPPs, etc) electricity, negotiating contracts with independent power producers, filing tariff applications, and fulfilling other supply-related responsibilities of the Wholesale Public Supplier. The fee will also include any net financing cost for the Wholesale Public Supplier.

**Previous period adjustment** – The Wholesale Public Supply tariff for energy will be adjusted at the end of the regulatory period, for the next period. Due to the high uncertainty of power costs, the energy tariffs for the next regulatory period will be adjusted upward or downward (including interest income/expense) based on the actual versus forecasted average power purchase cost per kWh times the actual energy purchased for delivery to tariff customers.

The interest expense of acquiring short-term capital to cover hydro production uncertainty (for example, a credit line) will be included in base year tariffs as an estimate and adjusted at the end of the regulatory period for the future period. The interest income/expense will be calculated based on the same interest rate as the ERE-approved WACC for the publicly owned generation licensee.

The following Annual Adjustment is for calculating the differences between forecasted and actual supply.

$$\begin{aligned} \text{Annual Adjustment} &= (E_{hydro}^{forecasted} \cdot Price_{hydro}^{forecasted} + E_{CM}^{forecasted} \cdot Price_{CM}^{forecasted}) \\ &- (E_{hydro}^{actual} \cdot Price_{hydro}^{actual} + E_{CM}^{actual} \cdot Price_{CM}^{actual}) \\ &- ((E_{hydro}^{actual} - E_{hydro}^{forecasted}) \cdot Price_{wighted\ average}^{actual} + (E_{CM}^{actual} - E_{CM}^{forecasted}) \cdot Price_{wighted\ average}^{actual}) \end{aligned}$$

$$Price_{wighted\ average}^{actual} = \frac{E_{hydro}^{actual} \cdot Price_{hydro}^{actual} + E_{CM}^{actual} \cdot Price_{CM}^{actual}}{E_{hydro}^{actual} + E_{CM}^{actual}}$$

Where:

$E_{hydro}^{forecasted}$  – Annual Electricity forecasted to be generated (MWh/year)

$E_{CM}^{forecasted}$  – Annual Electricity forecasted to be bought from competitive market (MWh/year)

$E_{hydro}^{actual}$  – Actual Annual Electricity generated (MWh/year)

$E_{CM}^{actual}$  – Actual Annual Electricity bought from competitive market (MWh/year)

$Price_{hydro}^{forecasted}$  – Forecasted Electricity Price from public hydro generation (ALL/MWh)

$Price_{CM}^{forecasted}$  – Annual Forecasted Electricity Price bought from competitive market (ALL/MWh)

$Price_{hydro}^{actual}$  – Actual Electricity Price from public hydro generation (ALL/MWh)

$Price_{CM}^{actual}$  – Actual Annual Electricity Price bought from competitive market (ALL/MWh)

$Price_{wighted\ average}^{actual}$  - Actual Annual Weighted Average Electricity Price (ALL/MWh)

In the regulatory period the annual adjustments are summed up for the whole regulatory period.

- 5.1.2 Public service obligations (PSOs) are defined as those obligations imposed on the public service licensee including reliability of supply, environmental protection and energy efficiency.

All costs associated with public service obligations in the electric power sector shall be fairly paid by each and every end-users receiving service from the transmission and distribution systems and recovered as part of the cost of service from all energy consumers based upon metered usage. The allocation of these costs and the process for handling the allocation,

recovery and payment of the costs shall be determined in proceedings before the ERE.

## **6. Tariff design for Energy and Capacity Sales to the RPS**

6.1 The energy price for sales to the RPS will be calculated as:

$$EP = [ \sum (GE_x * P_{GE_x}) + MBP + P_{SPP} + PA ] / FES$$

Where:

**EP** - energy tariff to be paid by the RPS to the WPS

**X** - a public-owned generator,

**GE<sub>x</sub>** - the forecasted energy to be produced by Generator X in the forecast period

**P<sub>GE<sub>x</sub></sub>** - Regulated Price paid for Generator X

**MBP** - Market-based purchases

**P<sub>SPP</sub>** – Electricity purchases by SPP at regulated prices

**PA** - the previous period adjustment

**FES** -the forecasted annual energy sales to tariff customers

6.2 The capacity price for sales to the RPS will be calculated as:

$$CP = \sum (GC_x * PC_x) + IIC + CS / (FPL * 12)$$

Where:

**CP** = the monthly capacity tariff to be paid by the RPS to the WPS

**X** = a public-owned generator,

**GC<sub>x</sub>** = the contracted capacity guaranteed by Generator X in the internal protocol/agreement with the Wholesale Public Supplier;

**PC<sub>x</sub>** - Regulated Capacity Price paid for Generator X

**IIC** = the cost of reserving international interconnection capacity for import energy

**CS** – the cost of purchasing capacity by SPP

**FPL** = the forecasted annual coincident peak load of tariff customers

6.3 Public Service Obligations, if any, will be passed to the RPS on a fixed LEKE/Month basis.

## **7. Tariff Design for the Supply of the Last Resort services**

7.1 The WPS has the responsibility to cover the Supplier of Last Resort (SOLR) service. The tariff methodology for this service will be developed as the rules for the SOLR are developed.

## **8. Transitional provisions**

- 8.1 Based on this methodology, the WPS shall submit to the ERE a request for the approval of new tariffs 6 months before they enter into effect. The WPS shall submit the tariff application in forms approved by the ERE with written justification for the revenue requirements level and for the tariff design.
- 8.2 The Wholesale Public Supply tariff year is March through February of the next year.
- 8.3 The tariffs for 2011 will be based on financial data in accordance with IFRS and National Accounting and Reporting Standards.

## **9. Deadlines**

- 9.1 The WPS by April 30 of each year shall submit to the ERE the previous year's annual reporting forms in accordance with the ERE-approved regulatory Uniform System of Accounts.

## **10. Final Provisions**

The Wholesale Public Supplier Tariff calculation methodology was approved by ERE's Board of Commissioners by Decision Nr. 78, dated on June 26, 2008.

Part two

Tariff Application Forms