

## **RULES GOVERNING THE TARIFF GLIDE PATH PURSUANT TO ARTICLE 7 OF THE RULES FOR SETTING THE ELECTRIC COOPERATIVES' WHEELING RATES (RSEC-WR)**

### **I. General Provisions**

#### 1.1 Background

The Energy Regulatory Commission promulgated the Rules for Setting the Electric Cooperatives Wheeling Rates (RSEC-WR) on September 23, 2009. The rules embody the new regulatory framework for the on-grid electric cooperatives. It is designed to achieve the following:

1. Develop a tariff setting methodology that would be more responsive to the needs of the Electric Cooperatives (ECs) given the objectives of the EPIRA;
2. Encourage reforms in the structure and operations of the ECs for greater efficiency and lower costs; and
3. Introduce incentives in the framework that will allow efficiency gains to be shared between the EC and the end-users.

Pursuant to Article 7 of the RSEC-WR, the ERC shall promulgate separate rules prior to the start of the regulatory period that will govern the movement of the initial tariffs to the tariff caps during the regulatory period. The tariff glide path will be defined by the following formula:

$$\text{Tariff} \times (1 + \text{Index "I"} - \text{Efficiency Factor "X"}) + \text{Performance Incentive "S"}$$

The Index, "I", shall be an escalation factor to be used in adjusting the rates to reflect current costs. There shall be an efficiency factor, "X", to provide for the sharing of the EC's efficiency with the member-consumers. There shall be a performance incentive, "S", which shall reward or punish the EC for above and below average performance, respectively.

#### 1.2 Purpose

These rules shall prescribe the methodology, the regulatory process and the timeline that the ERC may undertake in the full implementation of Article 7 of the RSEC-WR or the tariff glide path. These rules, as written, are not designed to assign the nominal values to I, X, and S.

##### 1.2.1 These rules set out:

- a) The economic and statistical parameters that ERC may consider in determining the indices, the efficiency factors and the rewards/penalties scheme that would define the adjustment of the initial tariff caps within the first regulatory period;

- b) The technical and performance standards that the ECs must comply with in consonance with the provisions of the Philippine Distribution Code;
- c) The statistical analysis that shall be undertaken by ERC in determining the variables affecting the tariff glide path;
- d) The consultative and collaborative process and the timelines to which both the electric cooperatives and the ERC must adhere to in order for these rules to be applied as intended;
- e) The rate verification process that the ERC may mandate with respect to the resulting tariff caps;
- f) The historical period that the ERC will use in ultimately determining the nominal values for the Index and the efficiency factors;
- g) The reportorial requirements that the electric cooperatives must comply with as part of the process of ultimately defining the values for the I, X and S and which the ERC must closely monitor in order to strike a balance that will be fair, just and equitable to the electric cooperatives and the customers; and
- h) The circumstances that would trigger a deviation from the provisions of these rules and the RSEC-WR.

### 1.3 Definition of Terms

**CPI** refers to the All Items Consumer Price Index published by the National Statistics Office of the Philippines. Consumer Price Index (CPI) is a measure of change in the average retail prices of goods and services commonly purchased by a particular group of people in a particular area.

**Corrected Ordinary Least Squares (COLS)** is a regression-based technique. Ordinary least squares (OLS) analysis is used to determine the parameters of a production or cost function. The regression line is thereafter shifted so that it intersects the most efficient firm and envelopes the rest of the firms. The efficiency of the rest of the firms is thus measured relative to the firm that set the frontier.

**Customer** shall refer to a person whose User System or Equipment is directly connected to the regulated distribution system and who purchases or receives, or who is seeking to

purchase or receive, regulated distribution services in respect of that regulated distribution system; or any other person who purchases or receives, or who is seeking to purchase or receive, regulated distribution services in respect of that regulated distribution system.

**Data Envelopment Analysis (DEA)** is a mathematical (linear programming) method that is traditionally used in benchmarking performance. It measures efficiency or productivity as the weighted value of outputs over the weighted value of inputs. The method calculates the weights to be assigned to outputs and inputs to optimize the efficiency of each utility, and then measures the efficiency of the other utilities relative to the subject utility using these weights. DEA calculates the efficiency of firms relative to the firm that sets the frontier.

**Distribution Management Committee (DMC)** refers to the Committee established by the Energy Regulatory Commission to perform the functions pursuant to Section 2.2.1 of the Philippine Distribution Code; formation of the DMC was subject to the Guidelines Governing the Formation of the Distribution Management Committee signed by the ERC on May 15, 2002.

**DSM** refers to the rates for the three functions of Distribution, Supply and Metering as established under the Rules for Setting the Electric Cooperatives' Wheeling Rates.

**Effectivity date** refers to the date on which these rules take effect.

**Electric Cooperative** refers to a Distribution Utility organized pursuant to Presidential Decree No. 269, as amended.

**EPIRA** refers to Republic Act No. 9136, otherwise known as the Electric Power Industry Reform Act of 2001.

**Energy Regulatory Commission** or **ERC** refers to the regulatory agency created under Section 38 of the Electric Power Industry Reform Act of 2001 (RA 9136).

**First regulatory period** refers to the period set out in Article 3.2 of these rules.

**Force Majeure Event** as used in these rules shall refer to a typhoon, storm, tropical depression, flood, drought, volcanic eruption, earthquake, tidal wave or landslide or an act of public enemy, war (declared or undeclared), riot, insurrection, revolution, sabotage, blockade or any violent and threatening actions that may result or likely lead to the increase in the costs of the electric cooperative.

**Historical Period** refers to a period as may be defined by the ERC in accordance with Article 2.2.6 of these rules.

**Initial Tariff Caps** , as used in these rules, refer to the maximum rates for Distribution, Supply and Metering as established pursuant to the Rules for Setting Electric Cooperatives' Wheeling Rates (RSEC-WR) promulgated by the Energy Regulatory Commission on September 23, 2009.

**National Statistics Office of the Philippines** or **NSO** is the major statistical agency responsible in collecting, compiling, classifying, producing, publishing, and disseminating general-purpose statistics as provided for in Commonwealth Act No. 591 and which shall be the official source of information on inflation indices to be used in the tariff glide path formula of the RSEC-WR.

**Non-power cost** refers to the costs incurred by the distribution utility in servicing its franchise area comprising of its distribution operation and maintenance expense, customer and information expense, and administrative and general expense.

**On-grid ECs**, for purposes of these rules, refer to the electric cooperatives connected to the main grids of the Philippine electric power system which are covered by the RSEC-WR.

**Philippine Distribution Code** refers to a compilation of rules and regulations governing electric utilities in the operation and maintenance of their Distribution Systems, which include, among others, the standards for service and performance and defines and establishes the relationship of Distribution Systems with facilities or installations of parties connected thereto.

**Regulatory Period** refers to the First Regulatory Period, the Second Regulatory Period or a Subsequent Regulatory Period (as the case may be).

**RSEC-WR** refers to the Rules for Setting the Electric Cooperatives' Wheeling Rates promulgated and adopted by the ERC on September 23, 2009 under Resolution No. 20 Series of 2009 that provided the legal framework governing the new regulatory regime of on-grid electric cooperatives.

**Stochastic Frontier Analysis (SFA)** uses regression (OLS or maximum likelihood estimation) to establish the parameters of the efficient production or cost function. SFA separates from its calculation of inefficiency the effects of random shocks normally termed as statistical noise that can affect output or cost. This method does not rely on a single firm to establish the frontier.

#### 1.4 Construction of Rules

These Rules shall be construed to promote the objective of securing a just, speedy and inexpensive disposition of the proceedings for setting the ECs' distribution wheeling rates.

### 1.5 Provision of Information

The results herein presented utilized information that was provided by the ECs. Additional information, calculations, and other data may be required by the ERC for purposes of these Rules.

## II. Determination of Components of the Tariff Glide Path

### 2.1 Objectives

The initial tariff caps for the Distribution, Supply and Metering (DSM) will be adjusted at an annual rate determined by a composite of factors that closely reflect the movements in the prices of inputs to production (“I”) and induce cost reductions through improved levels of efficiency (“X”). The methodology also includes a built-in incentive for good performance (“S”). The determination of these factors will be anchored on the following guiding principles:

- a) The target performance levels are realistic and attainable.
- b) The methodology is easy to implement and easily understood by both the consumers and the EC.
- c) The ERC will take into consideration the nature of the operations of the EC as well as the nature of their loads.
- d) The ERC shall hold paramount the interest of the consumers; as such, it shall ensure that cost reductions are not achieved by reducing the quality of service.
- e) The ERC shall also consider the impact of climatic and geographic conditions on the costs of the EC. The ERC, however, reserves the right to treat each case separately or on a case to case basis.

### 2.2 Determination of the Index, “I”

- 2.2.1 At the start of the first regulatory period and every year thereafter, the initial tariff caps for the DSM shall be adjusted by the Consumer Price Index (CPI), which shall be known as the “I” in these rules.
- 2.2.2 The CPI used shall be the data published by the National Statistics Office of the Philippines (NSO) and shall cover a period to be defined by the ERC;
- 2.2.3 Nothing in these rules shall preclude the ERC from using alternative price indices for the “I” in the future.
- 2.2.4 The ERC may also revise the historical period that will be used in calculating the indices.

### 2.3 Determination of the Efficiency Factor, “X”

- 2.3.1 At the start of the first regulatory period and every year thereafter, the initial tariff caps for the DSM shall also be adjusted by an efficiency factor, “X”, which represents efficiency gains arising from improved productivity levels. This is in conjunction with the adjustment prescribed under Article 2.2.1 herein;
- 2.3.2 The “X” shall have a value of zero (0) for the first two (2) years of the first regulatory period after which it shall have a nominal value to be determined by the ERC after an in-depth analysis and evaluation of selected efficiency indicators ;
- 2.3.3 The ERC shall prescribe the value of “X” from a set of variables representing inputs to production (e.g. labor and capital) and a utility’s set of outputs that can be easily measured or quantified and verified. The ERC shall select measures of efficiency that are within the control of the electric cooperative but which cannot be manipulated or influenced by it.
- 2.3.4 The ERC shall consider the following measurements of inputs and outputs tabulated below:

Measurement of Input	Measurement of Output
Labor (DSM costs, Number of employees, )	Number of Consumers or Connections
Capital (Investment Cost)	Peak mW
Circuit Kilometers	kWh sales
	Circuit kms. (line length)

- 2.3.5 The ERC shall evaluate, among others, the following productivity indicators that may be used as basis in determining the “X”:
- a) Connection per employee;
  - b) kWh sales per Circuit Kilometer;
  - c) Connection per Customer Account Pesos; and
  - d) Connection per Non-Power Costs Pesos.
- 2.3.6 In the evaluation of the different parameters serving as basis for the value of “X”, the ERC shall consider the impact of load and customer diversity in the cost structure of the EC.
- 2.3.7 The ERC shall assign the appropriate percentage weights for each input measurement or output measurement as it deemed applicable.

## 2.4 Determination of the Performance Incentive “S”

- 2.4.1 Within six (6) months from the effectivity of these rules, the ERC shall establish the performance standards and promulgate the corollary performance incentive scheme that would define the “S” component of the tariff glide path formula.
- 2.4.2 There would be three (3) major components of the Performance Incentive, “S” as follows:
  - a) Technical Reliability;
  - b) Customer Satisfaction; and
  - c) Regulatory Compliance.
- 2.4.3 The ERC shall also take into consideration the performance of EC servicing both main grids and areas classified under the Small Power Utilities Group or SPUG, and the EC capability to segregate statistics pertaining to its main grid and SPUG areas.
- 2.4.4 The ERC hereby mandates the Distribution Management Committee to collaborate closely with the ECs in the monitoring and collation of the following quality of service standards, pursuant to the provisions of the Philippine Distribution Code:
  - a) Sustained Average Interruption Duration Index (SAIDI) as defined in the Philippine Distribution Code; and
  - b) Sustained Average Interruption Frequency Index (SAIFI) as defined in the Philippine Distribution Code.
- 2.4.4.1 The Distribution Management Committee shall submit by the 31<sup>st</sup> of December 2010 and every year thereafter a summary of data described in Article 2.4.3, which covers the period beginning of 2008.
- 2.4.4.2 To preserve the integrity of the regulatory process as well as uphold the primary objectives of the new regulatory framework for the on-grid electric cooperatives, the ERC encourages the DMC to adopt measures that will validate the accuracy and reliability of the information submitted as part of the ECs’ compliance to these rules.
- 2.4.5 In determining the customer satisfaction component of the performance incentive, “S”, the ERC shall closely monitor the capability of the EC in responding to customer complaint.

2.4.5.1 In accordance with Section 3, Rule 34 of the Implementing Rules and Regulations of the EPIRA and enforced by ERC Resolution No. 23 Series of 2005, the ECs, through its Consumer Welfare Desks, shall maintain an orderly record that keeps track of the time it takes for it to respond to a complaint.

2.4.5.2 The EC is hereby mandated to submit a duly notarized quarterly summary of complaints received, the nature of the complaints, the time it took the EC to resolve the complaint and the rationale in cases where the length of time is longer than the prescribed standard to be established by the ERC.

2.4.6 The regulatory compliance component of the “S” shall be measured with respect to the timeliness of submission of the following reportorial requirements:

- a) MO1;
- b) MO2;
- c) Sample Electric Bills per Customer Class; and
- d) Such other reportorial requirements that the ERC may deem necessary, in consultation with the ECs.

2.4.7 The ERC shall assign the following weights for the different components making up the performance incentive, “S”:

<b>Performance Indicators</b>	<b>% Weight</b>
Technical Reliability	
SAIFI	25
SAIDI	25
System Loss	10
Customer Satisfaction	
Time to respond to a complaint	30
Regulatory Compliance	
Timeliness of submission	10
Total	100

2.4.7.1 The ERC, in consultation with the ECs and the consumers, may assign different weights as it deem appropriate in the future.

2.4.8 The ERC shall reward or penalize the EC based on a scheme that creates incentives for the EC to become more efficient. The associated penalty for undesirable and

poor performance should be significant enough in order to discourage mediocrity in the delivery of service to its customers.

An example of the reward and penalty scheme is presented below:

Performance Indicator	Less than the Standard		Standard	Greater than the Standard	
	Deviation from the Standard	% Impact on Rates	% Impact on Rates	Deviation from the Standard	% Impact on Rates
1. Technical Reliability					
a) SAIFI b) SAIDI	Up to 1%	(1.5)	0	Up to 1%	1.5
	>1% to 2%	(2.5)	0	>1% to 2%	2.5
	>2% to 4%	(3.5)	0	>2% to 4%	3.5
	>4%	(4.5)	0	>4%	4.5
c) System Loss	Up to 1%	1.5	0	No penalties for the first regulatory period	
	>1% to 2%	2.5	0		
	>2% to 4%	3.5	0		
	>4%	4.5	0		
2. Customer Satisfaction	Up to 1%	(1.5)	0	Up to 1%	1.5
	>1% to 2%	(2.5)	0	>1% to 2%	2.5
	>2% to 4%	(3.5)	0	>2% to 4%	3.5
	>4%	(4.5)	0	>4%	4.5
3. Regulatory Compliance	No penalties for the first regulatory period		0	Up to 1%	1.5
			0	>1% to 2%	2.5
			0	>2% to 4%	3.5
			0	>4%	4.5

2.4.9 For the first regulatory period, the system loss and the regulatory compliance components shall not carry a penalty.

2.4.10 The ERC shall continue to undertake a consultative process with the ECs in setting the standards for each of the component making up the performance incentive, "S".

### III. Adjustment of Initial Tariff Caps Within the Regulatory Period

3.1 Subject to Article 2 herein, the initial tariff caps shall be adjusted beginning the first regulatory period as indicated below:

$$\text{Year 1: } T_0 \times (1 + I_1 - X_1) + S_1 = T_1$$

$$\text{Year 2: } T_1 \times (1 + I_2 - X_2) + S_2 = T_2$$

$$\text{Year 3: } T_2 \times (1 + I_3 - X_3) + S_3 = T_3$$

$$\text{Year 4: } T_3 \times (1 + I_4 - X_4) + S_4 = T_4$$

Where:  $T_{0-i}$  refers to Tariff as defined by these rules

$I_{0-i}$  refers to the index "I"

$X_{0-i}$  refers to the efficiency factor, "X"

$S_{0-i}$  refers to the performance incentive, "S"

3.2 The first regulatory period under the RSEC-WR will cover the period from January 01, 2012 to December 31, 2015;

3.3 In accordance with Article 1.5 of the RSEC-WR, tariffs will be reset before the end of the first regulatory period. The reset process shall be governed by separate rules to be promulgated by the ERC prior to the commencement of the second regulatory period.

### IV. ERC Order on the "I", "X" and "S"

4.1 At least six (6) months before the end of the interim period, the ERC shall issue an Order containing the reference period that would be used as basis for each EC in determining the values for the "I", "X" and "S".

### V. Setting the Reference Performance

5.1 The ERC may use as reference previous studies in establishing the reference performance to which the actual performance of the ECs will be compared with. These will include studies that utilized the traditional and internationally accepted methodologies such as the Data Envelopment Analysis (DEA), statistical approaches as the Ordinary Least Square (OLS), Corrected Ordinary Least Squares (COLS), Stochastic Frontier Analysis (SFA) and other hybrid models used in other jurisdictions.

### VI. Rate Verification

6.1 ERC shall continue to monitor power bills for each customer class as part of its rate verification process.

6.2 ERC shall complete its verification process within ninety (90) days upon receipt of the power bills; otherwise, such rates are deemed verified and approved.

6.3 Any violation of the rate orders shall be subject to the existing rules and regulations being implemented by the ERC.

## **VII. Establishment and Development of Robust Database**

7.1 Pursuant to Article 9 of the RSEC-WR, the ECs shall maintain a robust database that would be credible, reliable and verifiable which would be used as inputs in future regulatory processes.

7.2 The ERC will collaborate closely with the DMC in consultation with the ECs for the development of future performance indicators as part of promoting efficient utility operations.

## **VIII. Re-opening and Adjustment Events**

8.1 An EC may file an application for a change or a suspension of these rules, in accordance with Section 4(e) of the IRR of the EPIRA, in case of the following:

- a) Force Majeure Event;
- b) Unusual Increase in the Consumer Price Index for two (2) consecutive quarters where the values used pursuant to 2.2.1 herein increased to twice the level applied in the tariff glide path formula; and
- c) Significant adverse impact on utility operations of any legislated undertaking, i.e. open access and retail competition.

## **IX. Final Provisions**

### **9.1 Exception From the Provisions of the Rules**

Where good cause appears, the ERC may allow an exception from any provision of these Rules if such exception is found to be in the public interest and is not contrary to any law, rules and regulations.

### **9.2 Costs of Suit**

All ECs shall bear the regulatory implementation costs or costs associated with the implementation of these Rules, including but not limited to, costs attendant to the public hearings in the ECs' localities.

### 9.3 Repealing and Separability Clause

If any provision or part of a provision of these Rules is declared invalid or unconstitutional by a court of competent jurisdiction, those provisions which are not affected thereby shall continue to be in full force and effect.

### 9.4 Effectivity

These Rules shall take effect fifteen (15) days following its complete publication in a newspaper of general circulation.

Pasig City, Philippines, \_\_\_\_\_.

**ZENAIDA G. CRUZ-DUCUT**  
Chairperson

**RAUF A. TAN**  
Commissioner

**ALEJANDRO Z. BARIN**  
Commissioner

**MARIA TERESA A.R. CASTAÑEDA**  
Commissioner

**JOSE C. REYES**  
Commissioner