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# **TARIFF METHODOLOGY**

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**Public Utilities Commission of Sri Lanka**

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# TARIFF METHODOLOGY

## 1 CHAPTER I: COMPONENTS OF THE TARIFF

This Tariff Methodology is approved by the Public Utilities Commission of Sri Lanka (Commission) in terms of Section 30 of the Sri Lanka Electricity Act, No. 20 of 2009.

In this methodology the components are grouped as follows:

- The Bulk Supply Tariffs, that include the component of the tariff relating to the use of the Transmission System and component of the tariff related to electricity generation, as specified in Chapter II.
- The Distribution Tariff, that includes the component of the tariff relating to the use of the licensee's Distribution System, as specified in Chapter III.
- The Retail Supply Tariff, that includes the component of the tariff relating to supply of electricity, as specified in Chapter III.

Transmission customers will only pay the bulk supply tariff, while other customers will pay a tariff comprising all four components.

## 2 CHAPTER II: TRANSMISSION AND GENERATION COSTS - BULK SUPPLY TARIFFS

### 2.1 RATIONALE

The Bulk Supply Tariffs shall be calculated by the Electricity Transmission & Bulk Supply Licensee (hereinafter the "Transmission Licensee"), performing the function of "Bulk Supply and Operations Business" as stated in the Section 3 of the relevant Licence, in accordance with the methodology stated in this Tariff Methodology.

The Transmission Licensee ("Bulk Supply and Operations Business") shall perform 3 different activities:

1. The "Bulk Supply and Operations Business" shall purchase electricity produced by the Generation Licensees performing its sub-function (i) *the single buyer of electricity generated by generation licensees* (hereinafter the "Single Buyer")
2. The "Bulk Supply and Operations Business" shall dispatch the available generation according to the operational criteria established by the Electricity Transmission & Bulk Supply Licence Condition 30, *Central Despatch and merit order*, performing its sub-function (iii) *of the system operator in respect of the Transmission System* (hereinafter the "System Operator").
3. The "Bulk Supply and Operations Business" shall supply customers in bulk through Power Sales Agreements as established in Condition 33 of the Electricity Transmission & Bulk Supply Licence, performing its sub-function (ii) *of the supplier of electricity in bulk to Distribution Licensees for re-sale and to Bulk Supply Customers* (hereinafter the "Bulk Supplier").

Thus, any and all the following terms: Single Buyer, System Operator and Bulk Supplier must be understood as the Transmission Licensee ("Bulk Supply and Operations Business") and these terms are used with the only purpose of identifying the different functions of the Bulk Supply and Operations Business, the Transmission Licensee has to perform, as established in this Tariff Methodology.

The Bulk Supplier, pursuant to Condition 32 (2) (e) (ii) (a), (b) and (c) of the Transmission License, shall determine the Bulk Supply Tariffs by computing the generation costs, the transmission costs and the supply costs according to the methodology herein established, and submit them to the Commission for approval.

### 2.2 GENERATION COSTS

#### 2.2.1 STRUCTURE

Electricity production is a responsibility of the Generation Licensees (hereinafter the "Generators"), licensed by the Commission. The energy and capacity produced by the Generators, shall be purchased by the Single Buyer.

Prices for Capacity and Energy sold by the Generators and purchased by the Single Buyer are defined in the Power Purchase Agreements (PPAs), establishing commercial conditions for such sales and purchases.

Based on the prices established in the PPAs and the quantities generated by each Generator arising from the economic dispatch performed by the System Operator, the Single Buyer shall determine the generation costs that shall be used to calculate the Bulk Supply Tariffs.

The economic dispatch performed by the System Operator shall be subject to the Merit Order Dispatch Methodology established by the Commission.

## **2.2.2 POWER PURCHASE AGREEMENTS (PPAs)**

There shall be four types of PPAs:

1. PPAs between Independent Power Producers (IPPs) (existing or to be commissioned in the future) and the Transmission Licensee
2. PPAs between thermal power plants belonging to Ceylon Electricity Board (CEB) Generation Licensee and the Transmission Licensee
3. PPAs between hydroelectric power plants belonging to CEB Generation Licensee and the Transmission Licensee
4. PPAs with Small Power Producers (SPP), also known as Small Power Purchase Agreements (SPPAs) (existing or to be commissioned in the future) and the Transmission Licensee

### **2.2.2.1 PPAs WITH IPPs AND SPPs**

The PPAs with IPPs and SPPs shall be the agreements signed between such IPPs or SPPs and the Transmission Licensee.

### **2.2.2.2 PPAs WITH CEB GENERATION LICENSEE**

Power Purchase Agreements (PPAs) shall be established between the CEB Generation Licensee and the Transmission Licensee (hereinafter "CEB Generation PPAs), on the following basis:

#### **2.2.2.2.1 CEB Thermal Generation**

For CEB Thermal Generation, the CEB Generation Licensee shall establish, for each generation unit in each Generation Plant included in the Generation License, a PPA with a minimum duration of five (5) years.

The price formula in such a PPA shall be a two-part tariff, comprising:

1. a capacity price, aimed at recovering fixed costs associated with each generating unit, namely:
  - a. debt service
  - b. efficient O&M fixed costs
  - c. costs of services provided by CEB Generation Headquarters
2. energy price, aimed at recovering:
  - a. fuel costs (including no load heat rate and incremental heat rate)
  - b. efficient variable O&M costs
  - c. start up costs
  - d. others as may deem needed

#### **2.2.2.2.2 CEB Hydroelectric Generation**

For CEB hydroelectric generation, the CEB Generation Licensee shall establish, for each Generation Plant included in the Generation License, a PPA with a minimum duration of five (5) years.

The price formula shall be a one part capacity price, comprising:

- a. debt service
- b. efficient fixed O&M costs including any resource costs
- c. costs of services provided by CEB Generation Headquarters

#### **2.2.2.2.3 PPAs with SPPs**

The PPAs with SPPs shall be the agreements signed between the SPPs and the Transmission Licensee, limited to the commitments of the Transmission Licensee to pay all or a portion of the tariffs payable on each SPPA.

#### **2.2.2.2.4 Filing and Approval of CEB Generation PPAs**

Capacity and energy prices for each CEB Generation PPA, shall be prepared by the CEB Generation Licensee, and submitted to the Commission by the Transmission Licensee for approval according to the filing procedure established by the Commission. The criteria to be used for preparing these prices, shall be based on the following principles:

1. Forecast debt service costs shall be consistent with the same concepts included in the audited accounts of the last financial year of the Generation Licensee. In cases where the costs are not divided between each Generating Unit, proportional allocation in relation to installed capacity shall be used.
2. Forecast efficient fixed O&M costs shall be consistent with the same concepts associated with the Generating Unit or Generating Plant (or allocated to each unit/plant) included in the audited accounts of the last financial year of the Generation Licensee. It shall be accompanied by a cost reduction plan aimed at achieving a reduction in fixed O&M costs over the period of the PPA. The Commission shall have the right of using independent expert opinion to approve or amend the proposed costs.
3. CEB Generation Headquarters costs. Fuel costs shall be determined based on:
  - a. Actual heat rate of each Generating Unit, determined through tests conducted by a certified technical auditor
  - b. Fuel prices as published by the Ceylon Petroleum Corporation, or other entity, with which the CEB Generation Licensee has entered into a Fuel Supply Agreement (FSA)
4. Forecast efficient variable O&M costs shall be consistent with the same concepts in the audited accounts of the last financial year of the Generation Licensee for each Generating Unit or Generating Plant (or allocated to each unit/plant). The Commission will have the right of using independent expert opinion to approve or amend the proposed costs.
5. Extraordinary maintenance costs not included in the fixed or variable O&M costs, have to be submitted to the Commission for approval in a special filing process, initiated by the Generation Licensee. In case the Commission approves the cost and the need for the investment, the Commission will recalculate the capacity price for the remaining duration of the corresponding CEB Generation PPA.
6. Re-powering or refurbishment costs of existing Generating Units or Generating Plants have to be submitted to the Commission for approval in a special filing process, initiated by the Generation Licensee. In case the Commission approves the cost and the appropriateness of the investment, the Commission will recalculate the capacity price for the remaining duration of the corresponding CEB Generation PPA.
7. Start up costs shall be in accordance with the PPA.

#### **2.2.2.2.5 Indexation**

Capacity prices stated in each CEB Generation PPA shall be indexed every six months, if relevant, considering a basket of indices affecting the debt portfolio associated with each Generation Unit (thermal) and Generation Plant (hydroelectric), and its operation and maintenance costs.

Fuel prices stated in each CEB Generation PPA shall be indexed to fuel prices based on the Fuel Supply Agreement.

### **2.2.3 CENTRAL DESPATCH**

The System Operator shall despatch the available generation following the conditions established in Condition 30 of the Transmission Licence.

The System Operator, following the Merit Order Despatch Methodology approved by the Commission, shall undertake operational planning and the real time operation, pursuing the optimization targets as established in the Transmission Licence. The System Operator shall produce the following operating plans:

- a. Annual Operating Plan (year ahead plan, revised once every six-months, by the beginning of January and beginning of July, respectively)
- b. Monthly Operating Plan (month ahead plan)

- c. Weekly Operating Plan (week ahead plan)
- d. Day-ahead Operating Plan

### **2.2.4 ACTUAL OPERATION**

The System Operator shall keep a record of the actual hourly capacity and energy delivered by each Generating Unit to the Transmission System as recorded by the metering system, and, shall also keep a record of the total aggregate capacity and energy delivered by all Generating Units to the Transmission System.

Similarly, the System Operator shall keep records of the actual hourly capacity and energy supplied to each Distribution Licensee and Bulk Supply Customers, and on aggregate, the total capacity and energy supplied from the Transmission System.

## **2.3 TRANSMISSION ALLOWED REVENUES**

This section of the Tariff Methodology deals only with the Transmission Business costs, revenues and tariffs. Bulk Supply and Operations Business costs, revenues and Tariffs are established in a subsequent section.

This section of the methodology defines:

1. type of Tariff Methodology for the Transmission Business
2. the methodology to determine the Transmission System Allowed Revenue
3. the allocation methodology, specifying how the Transmission System Allowed Revenue is charged to the users of the Transmission System (hereinafter "Transmission Users").

### **2.3.1 TYPE OF TARIFF METHODOLOGY**

The Transmission System Allowed Revenue is the revenue that the Transmission Licensee is allowed to collect from the Transmission Users for the use of the Transmission System, excluding connection charges<sup>1</sup>.

The Transmission System Allowed Revenue shall be the sum of two components:

- The Base Allowed Revenue and
- The Large Infrastructure Development (hereinafter "LID") allowances.

Transmission Base Allowed Revenue shall be calculated based on a Multi Year Tariff System with a limitation (a "revenue cap") imposed by the Commission on overall revenues (the Transmission System Allowed Revenues) during the Tariff Period regardless of the number of Transmission Users, energy transmitted, etc.

The Tariff Period shall be five (5) years.

Transmission System Allowed Revenue shall be annually adjusted considering the factors contained in the Revenue Control Formula.

The Transmission Licensee shall make a Tariff Filing to the Commission based on the Tariff Methodology established in this section.

1. The Tariff Filing shall be done before the commencement of the Tariff Period and it shall include the approved cost components and the Revenue Control Formula.
2. Once every year after the initial Tariff Filing, a simplified filing shall be done to demonstrate that the revenue control formulae are properly applied.

LID allowances shall be computed as defined in 2.3.3. Upon commissioning of each LID, the Transmission Licensee shall make a Tariff Filing to the Commission for the corresponding LID allowance, based on the methodology established in 2.3.3.

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<sup>1</sup> Connection costs will be directly negotiated between the Transmission Licensee (Transmission Business) and the Transmission Users on a case by case basis.

## **2.3.2 TRANSMISSION BASE ALLOWED REVENUE**

The base allowed revenue shall be determined for a Tariff Period.

The Transmission System Allowed Revenue shall be calculated based on a forecast cash flow for firm<sup>2</sup> discounted at the Allowed Rate of Return on Capital for the Tariff Period, considering:

- Initial Regulatory Asset Base (RAB) (the value of the assets belonging to the Licensee to provide the transmission service, excluding connection assets).
- Rolling forward of the initial RAB, considering minor Capital Expenditure (CAPEX) for the period
- Depreciation of existing non-depreciated assets
- Return on capital
- Efficient operational expenditure (OPEX)
- Taxes

### **2.3.2.1 INITIAL REGULATORY ASSET BASE**

To compute the assets and their valuation, the net book value of the non-current assets on the audited accounts of the Licensee for the last financial year shall be used. CAPEX that may have been incurred after closing the annual accounts shall not be considered until a new tariff is approved for the subsequent Tariff Period.

The allowed working capital for the Licensee to manage the Transmission Business (that will be part of the asset base) shall be an amount equal to 1/12 of Transmission Base Allowed Revenue of the previous year.

### **2.3.2.2 DEPRECIATION ALLOWANCE**

Depreciation shall be calculated on the straight line method and the depreciation rates shall be those that are currently used in the statutory accounts. Once an asset is fully depreciated, it shall be removed from the gross value of the assets.

### **2.3.2.3 RETURN ON ASSETS**

The calculation of the Transmission System Allowed Revenue shall include a return on invested capital. This return shall reflect the actual cost of debt of the Licensee and a positive return on equity based on the cost of the long-term debt of the Government of Sri Lanka. The rate of return on equity will be defined by the Commission for each Tariff Period.

The rate of return on assets shall be calculated considering a weighted average of the cost of debt and equity, employing the actual debt to asset ratio. The rate of return on assets shall be defined by the Commission for each Tariff Period.

### **2.3.2.4 CAPITAL EXPENDITURE (CAPEX) ALLOWANCE**

RAB shall be determined for every year of the Tariff Period. The closing value (value at the end of one year) of the RAB is set equal to the opening value of the RAB plus the CAPEX during the year, minus regulatory depreciation during the year.

The Forecast CAPEX program for the Transmission Licensee shall be the Long-term Transmission Development Plan (LTTDP) approved by Commission for the next 5 years. The CAPEX program shall include both load-related CAPEX and non load-related CAPEX. Investments stated in the LTTDP shall be separated into Minor CAPEX and Large CAPEX where,

- Minor CAPEX means all replacement, reinforcement and quality-driven investments approved by the Commission. The Transmission Licensee shall present its Minor CAPEX development plan and the criteria followed in establishing the Minor CAPEX development plan. Non-load related CAPEX shall be included in minor CAPEX.
- Large CAPEX, including all the investments related to the expansion of Transmission System.

Only Minor CAPEX shall be included in the rolling forward of the RAB according to the CAPEX program developed by Transmission Licensee and approved by the Commission.

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<sup>2</sup> The free cash flow each year under a cash flow for firm is calculated as EBITDA (earning before interest, taxes, depreciation and amortization) minus taxes and CAPEX.



### 2.3.2.5 TREATMENT OF DIFFERENCES BETWEEN FORECAST CAPEX AND ACTUAL CAPEX

Every year during the Tariff Period, the Commission will conduct an ex-post analysis, checking what minor CAPEX has actually been incurred.

- in case of underinvestment in relation to the forecast CAPEX included in the filing for the Transmission Allowed Revenue, the difference will be fully clawed-back including the time value of money, at a rate defined by the Commission, and transferred to customers through tariffs in the following year of the Tariff Period.
- in case the actual CAPEX is higher than the forecast, the Commission will request for all the relevant information to determine whether the additional investment has been prudent and efficient, and the difference will be allowed, including the time value of money at a rate defined by the Commission, and transferred to customers through tariffs in the following year of the Tariff Period.

### 2.3.2.6 OPERATING EXPENDITURE (OPEX)

The OPEX to be included in the calculation of the Transmission Base Allowed Revenue shall be the OPEX forecast for the tariff period by the Transmission Licensee. The Licensee shall justify the OPEX forecast based on the forecast demand increase and the actual OPEX of the audited accounts of the last financial year. This OPEX shall include the expenditure on License requirements (levies, insurance, etc) and the efficient cost of operating the Transmission System.

The OPEX component of the Transmission Base Allowed Revenue shall be adjusted at a rate defined by an Efficiency factor (OPEXX) per year during the Tariff Period. OPEXX (%) will be fixed by the Commission before the commencement of the Tariff Period.

For successive Tariff Periods, the Commission may revise the methodology for computing the efficient OPEX to be included in the Transmission Base Allowed Revenue.

### 2.3.2.7 TAXES

All taxes applicable to the Transmission Business and imposed by the relevant Tax Laws and Regulations shall be included in the tariff filing, together with the proposed adjustment mechanisms in case the tax scheme changes during the Tariff Period.

### 2.3.2.8 ADJUSTMENTS TO TRANSMISSION BASE ALLOWED REVENUES

The adjustment mechanisms are intended to adjust the Transmission Base Allowed Revenue within the Tariff Period, to account for inflation and exchange rate variations.

The adjustment shall be based on two indices: (i) Sri Lanka Consumer Price Index (SLCPI) and (ii) foreign exchange (LKR:USD) rate and foreign inflation. Weights to be used for each one of them shall be proposed by the Transmission Licensee for approval as a part of the tariff filing, considering the share of costs that are essentially local (and thus indexed to SLCPI) and the share of cost related to imported goods.

Adjustments shall be done on an annual basis. However, when unexpected significant events occur, requests for "extraordinary reviews" may be entertained by the Commission. The Transmission Licensee will be allowed to apply for an extraordinary review if the accumulated change in the indexation formula for any year in the Tariff Period exceeds 15% by 30<sup>th</sup> June of such year, and the adjustments to be effective as early as possible thereafter. Otherwise, if an extraordinary review is filed after 30<sup>th</sup> June, the adjustment shall be effective from the next year of the Tariff Period.

### 2.3.2.9 REVENUE CONTROL FORMULA

Based on the previous definitions, the following control formula will be applied to the transmission base allowed revenue:

$$AR_y = AR_{y-1} \times (1 - X) \times \left[ a \times (1 + SLCPI_{y-1}) + (1 - a) \times \left( \frac{FX_y}{FX_{y-1}} + PPIUS_{y-1} \right) \right]$$

where: $AR_y$	Allowed Base Revenue in year "y" (LKR)
$AR_{y-1}$	Allowed Base Revenue in year "y-1" (LKR)
$a$	Share of local costs in total costs of the Transmission Licensee to be approved by the Commission based on the filing by Transmission Licensee.
$SLCPI_{y-1}$	Accumulated change in Sri Lanka Consumer Price Index (%) during year "y-1"
$FX_y/FX_{y-1}$	Average change in the LKR:USD exchange rate during last quarter of year "y-1"
$PPIUS$	Accumulated change in the Producer Price Index of USA (%) during year "y-1"
$X$	OPEX Efficiency factor (%)

The Commission may adjust this formula in case a cap on total transmission losses is imposed as described in 2.3.4.

All aspects requiring detailed procedures for implementation of this formula with regard to availability and sources of indices shall be proposed by the Transmission Licensee along with the tariff filing, and would be subject to Commission approval.

### **2.3.3 LARGE INFRASTRUCTURE DEVELOPMENT (LID) ALLOWANCES**

Revenue with regard to CAPEX classified as LID in the LTTDP and approved by the Commission will be collected from Transmission System users by adding an allowance to the Transmission Base Allowed Revenue from time to time.

For each LID, upon submission of a communication to the Commission after commissioning of such assets, the Commission will compute an annual allowance to be collected from customers, considering the debt service profile, a return on equity and the depreciation over a reasonable useful life, based on an investment cost approved by the Commission. An LID allowance will be added to the Transmission Base Allowed Revenue in the year immediately after the new assets in a particular LID have been commissioned.

LID allowances will be indexed through an indexation formula defined by the Commission on a case-by-case basis.

### **2.3.4 TECHNICAL LOSSES**

Technical losses in the Transmission System will be allowed to be passed-through to Bulk Supply Tariffs. The forecast transmission losses shall be calculated by the System Operator as a part of the Annual Operating Plan, and the actual transmission losses shall be measured through the metering system. In case the metering system is not available, the Commission may allow the Transmission Licensee to use forecast transmission losses for determining the Bulk Supply Tariffs.

The Commission may establish a cap for the maximum losses in the Transmission System.

### **2.3.5 ALLOCATION METHODOLOGY**

Transmission System Allowed Revenue shall be collected in the form of a Transmission Tariff, only from Distribution Licensees and Transmission Customers.

The Transmission Tariff shall be determined using the Postage Stamp Methodology in which the Transmission System Allowed Revenue is allocated among Distribution Licensees and Transmission (Bulk Supply) Customers in proportion to their demand at the time of the System Monthly Peak Demand (Coincident Peak). This shall be a component of the Bulk Supply Tariff (Capacity).

Details for its calculation are included in the Bulk Supply Tariff Section.

### **2.3.6 REACTIVE POWER TARIFFS**

The Commission may establish a compensation mechanism for reactive power through a Reactive Power Tariff, if deemed necessary.

## **2.4 ALLOWED REVENUES FOR BULK SUPPLY AND OPERATIONS BUSINESS**

This section establishes the allowed revenues for the Transmission Licensee (Bulk Supply and Operations Business) required for performing the duties of the Single Buyer, the System Operator and the Bulk Supplier, as stipulated in the Transmission License.

The allowed revenue for the Bulk Supply and Operations Business shall include the following two main components:

- The allowed revenue required for operation of the Bulk Supply and Operations Business
- The working capital allowance for the Bulk Supply Transactions Account

### **2.4.1 ALLOWED REVENUE REQUIRED FOR OPERATION OF THE BULK SUPPLY AND OPERATIONS BUSINESS**

The allowed revenue required for operation of the Bulk Supply and Operations Business is the revenue that the Transmission Licensee is allowed to collect from the Transmission System users for carrying out the Bulk Supply and Operations Business.

Allowed revenue required for operation of the Bulk Supply and Operations Business shall be calculated based on a Multi Year Tariff System with a cap on overall revenues during the Tariff Period regardless of the number of transmission users, energy transmitted, etc.

The Tariff Period shall be five (5) years.

The Allowed Revenue required for operation of the Bulk Supply and Operations Business shall be adjusted annually considering the SLCPI.

The Transmission Licensee shall make a tariff filing to the Commission based on the methodology established in this section, before the beginning of the Tariff Period. Additionally, once a year after the initial filing, a simplified filing for adjusting the revenue based on SLCPI should also be developed.

The allowed revenue shall include a forecast of the efficient Operational expenditure required to perform the operation of the business. Existing assets and capital expenditure that may be needed shall be included in the Allowed Revenue for the Transmission Business and not in the Allowed Revenue for the Bulk Supply and Operations Business.

### **2.4.2 BULK SUPPLY TRANSACTIONS ACCOUNT**

The Bulk Supply Transactions Account will be used to settle transactions between the Transmission Licensee (Transmission) and the following parties.

- Transmission Licensee (Bulk Supply Operations Business)
- Generation Licensees
- Distribution Licensees
- any Transmission Customers.

In this account, the following transactions shall take place:

1. Payments made by Distribution Licensees and Transmission Customers for the purchase of Bulk Supply Electricity (including generation, transmission and bulk supply services), according to the relevant Power Sale Agreements (PSAs)
2. Payments to the Transmission Licensee (Transmission and Bulk Supply Operations Business)
3. Payments to Generation Licensees for selling of generation according to the PPAs and SPPAs.
4. Other transactions as directed by the Commission

### **2.4.3 WORKING CAPITAL ALLOWANCE FOR THE BULK SUPPLY TRANSACTIONS ACCOUNT**

The Bulk Supply Transactions Account requires working capital in form of contingent cash, as there is a high probability that the forecast Bulk Supply Tariff to be different from actual in Sri Lanka's hydrothermal power system. The allowed Bulk Supply Operations Business Working Capital shall be used as liquid capital to make effective the payments to the Creditors when needed.

The accumulated deviation at the end of each six month period shall be compensated as defined in 2.5.4, Nevertheless, the Single Buyer may require cash to fulfil its commitments during the six-month period. Hence, the Transmission Licensee in coordination with the Government of Sri Lanka (GOSL) should ensure that the working capital is adequate to meet such situations. The Single Buyer may file for additional financial costs not considered in this methodology if required to ensure the availability of this working capital.

The single buyer may file for additional financial cost if needed to ensure the liquidity in the Bulk Supply Transactions Account. Specifically, the Single Buyer has the right to file for the working capital required to cover the potential gap on the basis of forecast payment schedules.

#### **2.4.3.1 TRANSMISSION LICENSEE LIMITED LIABILITY**

The Transmission Licensee (Bulk Supply Operations Business) shall make payments from the funds available in the Bulk Supply Transactions Account. In situations of cash shortfalls, the Transmission

Licensee's (Bulk Supply Operations Business) liability shall be limited to the funds available in the Bulk Supply Transactions Account.

The management of this account will be established by the Commission through "Bulk Supply Transactions Account Management Guidelines".

## **2.5 DETERMINATION OF BULK SUPPLY TARIFF**

### **2.5.1 STRUCTURE**

Bulk Supply Tariffs shall be the sum of three components:

- a. Generation tariff
- b. Transmission tariff
- c. Bulk Supply and Operations Business tariff

Each component shall be determined following the rules established in this methodology for their determination.

Bulk Supply Tariffs shall be of two parts:

- a. capacity charge
- b. energy charge

The energy charge shall vary according to the time intervals as follows:

- a. Interval 1, from 5:30 AM to 6:30 PM
- b. Interval 2, from 6:30 PM to 10:30 PM
- c. Interval 3, from 10:30 PM to 5:30 AM

### **2.5.2 FORECAST BULK SUPPLY TARIFFS**

The Forecast Bulk Supply Tariffs will be used to determine the end use customer tariffs. The Forecast Bulk Supply Tariffs will be passed through to the end use customer tariffs according to the methodology defined in 3.2.2. The Forecast Bulk Supply Tariffs are calculated and filed once every six months by the Transmission Licensee, following the procedure defined in this methodology. The Forecast Bulk Supply Tariffs include the forecast for the corresponding six-month period and an adjustment factor to compensate the differences between the forecast and actual Bulk Supply Tariffs.

In the Forecast Bulk Supply Tariffs, the components shall be determined as defined in 2.5.2.1.

#### **2.5.2.1 FORECAST GENERATION COSTS**

Generation Costs, shall have two components:

- a. Capacity Costs
- b. Energy Costs

##### **2.5.2.1.1 Forecast Generation Capacity Cost**

The Forecast Generation Capacity Cost shall be determined once in every six-month period and shall be equal to the sum of the forecast capacity payments to Generators, based on a monthly simulation of capacity payments under each PPA.

The Forecast Generation Capacity Tariff for the period shall be equal to the Forecast Generation Capacity Cost divided by the Forecast System Coincident Peak Demand (MW) for the six-month period.

$$GC_{y,p}^F = \frac{\sum_n CP_{y;p;n}^F}{P_{y,p}^F} \left[ \frac{LKR}{MW} \right]$$

$GC_{y,p}^F$ : Forecast Generation Capacity Tariff

$CP_{y;p;n}^F$ : Forecast capacity payment for year "y", six month period "p" and generator "n"

$P_{y,p}^F$ : Forecast System Peak Demand for year "y", six month period "p" metered at each point of delivery to Distribution Licensees and Transmission Customers.

"F": Forecast

"N": All generators

### 2.5.2.1.2 Forecast Generation Energy Costs

The Bulk Supplier shall determine the forecast total costs, by adding the forecast energy payment to all Generation Licensees according to their forecast energy delivered in all hours and the energy prices stated in PPAs and the SPPAs. This forecast shall consider:

- The forecast fuel prices provided by Ceylon Petroleum Corporation or other suppliers and the Fuel Supply Agreements
- A generation dispatch schedule developed for the purpose of setting the Bulk Supply Tariff. This dispatch should be based on an Annual Operating Plan for a period of 12-months ahead, considering a probability of occurrence of 70%, and the best available information about the storage level of reservoirs and planned maintenance of Generating Plants.
- A monthly simulation of the energy-related payments under each PPA and SPPA.

This total Forecast Generation Energy Costs divided by the total forecast energy purchased by distribution licensees and transmission customers during the six month period, will provide the forecast average energy tariff.

$$GE_{y,p}^F = \frac{\sum_n \sum_{t=1}^6 EG_{y,p;n;t}^F \times EP_{y,p;n;t}^F}{\sum_n \sum_{t=1}^6 EG_{y,p;n;t}^F} \quad [LKR/MWh]$$

Where,

$GE_{y,p}^F$  : Forecast Generation Energy tariff for the six-month period "p"

$EG_{y,p;n;t}^F$  : Forecast Energy Generated for the six month period "p" by Generator "n" during month t

$EP_{y,p;n;t}^F$  : Forecast Energy tariff according to the PPA or SPPA for the Generator "n" in the month t of the six-month period "p".

"F": Forecast

"N": All Generators

"t": -Month

### 2.5.2.2 FORECAST TRANSMISSION TARIFF

The Forecast Transmission tariff shall have two components:

- Forecast Transmission Capacity Tariff
- Forecast Transmission Loss Factor

#### 2.5.2.2.1 Forecast Transmission Capacity Tariff

The Bulk Supplier shall determine the Forecast Transmission Capacity tariff per month for each year of the Tariff Period by dividing the Transmission System Allowed Revenues by the forecast System Peak Demand (MW) for the period according to the Annual Operating Plan, in accordance with the equation given below, assuming that the total transmission revenues are evenly recovered in each month.

$$TR_{y,p}^F = \frac{1}{12} \frac{TSAR_y}{P_{y,p}^F} \quad [LKR/MW]$$

Where,

$TR_{y,p}^F$  : Forecast Transmission Capacity tariff per month for year "y", six month period "p"

$TSAR_y$  : Transmission System Allowed Revenues year "y"

$P_{y,p}^F$  : Forecast System Peak Demand for year "y", six month period "p" metered at delivery points to Distribution Licensees and Transmission Customers.

### 2.5.2.2.2 Forecast Transmission Loss Factor

The Bulk Supplier shall determine the Forecast Transmission Loss Factor for each Time Interval according to the following methodology:

- a. Based on the dispatch simulation described in 2.5.2.1.2, the Bulk Supplier shall calculate the forecast total losses for each Time Interval, by subtracting from the total energy received by the Transmission System, the total energy supplied from the Transmission System to the Distribution Licensees and Bulk Supply Customers.
- b. The Forecast Transmission Loss Factor shall be determined for each Time Interval by dividing the Forecast Total Losses per Time Interval by the Forecast Energy Supplied per Time Interval

$$TLF_{y,p,h}^F = \frac{TL_{y,p,h}^F}{\sum_m^M ES_{y,p;m,h}^F}$$

Where

$TLF_{y,p,h}^F$  : Forecast Transmission Loss Factor, for year "y", six month period "p" and Time Interval "h"

$TL_{y,p,h}^F$  : Forecast Total Transmission Losses for Time Interval "h", for year "y", six month period "p"

$\sum_m^M ES_{y,p;m,h}^F$  : Total Forecast Energy Supplied in year "y", six month period "p" to Distribution Licensee or Bulk Supply Customer "m" in Time Interval "h"

"M": all Distribution Licensees and Bulk Supply Customers

"h": Time Intervals 1, 2 or 3

### 2.5.2.3 FORECAST BULK SUPPLY AND OPERATIONS BUSINESS TARIFF

The Bulk Supplier shall determine the Forecast Bulk Supply and Operations Business tariff for each month for the period, in accordance with the equation given below, by dividing the Transmission Licensee "Bulk Supply and Operations Business" Allowed Revenues by the forecast System Peak Demand (MW) according to the Annual Operating Plan, presuming that the total Bulk Supply and Operations Business revenues are evenly recovered in each month.

$$BSS_{y,p}^F = \frac{1}{12} \frac{BSOB_y}{P_{y,p}^F} \left[ \frac{LKR}{MW} \right]$$

Where,

$BSS_{y,p}^F$  : Forecast Bulk Supply and Operations Business tariff for six-month period "p" of year "y"

$BSOB_y$  : Transmission Licensee "Bulk Supply and Operations Business" Allowed Revenue for year "y"

$P_{y,p}^F$  : Forecast System Peak Demand for year "y", six month period "p" metered at delivery points to Distribution Licensees and Transmission Customers.

### 2.5.3 ACTUAL BULK SUPPLY TARIFFS

The Actual Bulk Supply Tariffs will not be passed through to the end-user tariffs each month. However it will be used to compensate at the end of each six-month period, for deviations between Forecast and Actual Bulk Supply Tariffs, according to the methodology defined in 2.5.4.

In the Actual Bulk Supply Tariffs, the components shall be determined as defined in 2.5.3.1.

### 2.5.3.1 ACTUAL GENERATION COSTS

Generation Costs, as defined in previous section, shall have two components:

- a. Capacity Costs
- b. Energy Costs

#### 2.5.3.1.1 Actual Generation Capacity Costs

The Actual Generation Capacity Cost shall be determined monthly and this shall be equal to the addition of the actual capacity payments to Generators based on the outcomes of the actual operation registered during the month by the System Operator. In cases when liquidated damages apply, this amount shall be discounted from the Actual Generation Capacity Costs.

The Actual Generation Capacity tariff for the period, shall be equal to the Actual Generation Capacity Cost divided by the Actual System Coincident Peak Demand (MW) for the month.

$$GC_t^A = \frac{\sum_{n=1}^N CP_{t,n}^A}{P_t^A} \quad [LKR/MW]$$

$GC_t^A$ : Actual Generation Capacity tariff for month "t"

$CP_{t,n}^A$ : Actual Capacity payment for Generator "n" in month "t"

$P_t^A$ : Actual System Monthly Peak Demand in month "t" metered at delivery points to Distribution Licensees and Transmission Customers.

"A": Actual

"N": All Generators

"t": Actual month

#### 2.5.3.1.2 Actual Generation Energy Costs

Based on the actual operation registered by the System Operator, the Bulk Supplier shall determine the actual total monthly energy costs for each Time Interval, by adding the actual energy payments to all IPPs, SPPs and Generating Units in this month, according to their actual energy delivered in each Time Interval and the energy prices stated in PPAs and SPPAs.

This total monthly actual Generation Energy Costs divided by the total actual energy delivered in each Time Interval during the month, will give the Actual Energy tariff for each Time Interval.

$$GE1_t^A = \frac{\sum_n \sum_{h=5:30}^{18:30} EG_{t;n,h}^A \times EP_{t;n}^A}{\sum_n \sum_{h=5:30}^{18:30} EG_{t;n,h}^A} \quad [LKR/MWh]$$

$$GE2_t^A = \frac{\sum_n \sum_{h=18:30}^{22:30} EG_{t;n,h}^A \times EP_{t;n}^A}{\sum_n \sum_{h=18:30}^{22:30} EG_{t;n,h}^A} \quad [LKR/MWh]$$

$$GE3_t^A = \frac{\sum_n \sum_{h=22:30}^{5:30} EG_{t;n,h}^A \times EP_{t;n}^A}{\sum_n \sum_{h=22:30}^{5:30} EG_{t;n,h}^A} \quad [LKR/MWh]$$

Where,

$GE1_t^A$ : Actual Generation Energy tariff for Time Interval 1

$GE2_t^A$  : Actual Generation Energy tariff for Time Interval 2

$GE3_t^A$  : Actual Generation Energy tariff for Time Interval 3

$EG_{t;n,h}^A$  : Actual Energy Generated by Generator "n" during hours "h" of month "t"

$EP_{t;n}^A$  : Actual Energy tariff according to the PPA, for Generator "n" of month "t"

"A": Actual

"N": All Generators

"h": Hours from – to

"t": Actual month

### 2.5.3.2 ACTUAL TRANSMISSION TARIFF

The Actual Transmission tariff shall have two components:

- a. Actual Transmission Capacity tariff
- b. Actual Transmission Losses Factor

#### 2.5.3.2.1 Actual Transmission Capacity Tariff

The Bulk Supplier shall determine the Actual Transmission tariff for the period by dividing the Transmission System Allowed Revenues by the Actual System Peak Demand (MW) registered by the System Operator for the month, and divided by twelve, assuming the total Transmission Capacity Costs are evenly recovered in each month.

$$TR_t^A = \frac{1}{12} \frac{TSAR_y}{P_t^A} \left[ \frac{LKR}{MW} \right]$$

Where,

$TR_t^A$  : Actual Transmission Capacity tariff for month "t"

$TSAR_y$  : Transmission System Allowed Revenues year "y"

$P_t^A$  : Actual System Coincident Peak Demand for month "t", metered at delivery points to Distribution Licensees and Transmission Customers.

#### 2.5.3.2.2 Actual Transmission Loss Factor

The Bulk Supplier shall determine the Actual Transmission Loss Factor for each one of the Time Intervals according the following methodology:

- a. Total transmission losses per Time Interval shall be calculated by subtracting the total energy delivered to the Distribution Licensees and Transmission Customers from the Actual Total Energy supplied to the Transmission System.
- b. The Actual Transmission Losses Factor shall be determined for each Time Interval by dividing the Actual Total losses per Time Interval by the Actual Energy Supplied per Time Interval

$$TLF_{t,h}^A = \frac{TL_{t,h}^A}{\sum_m ES_{t,m,h}^A}$$

where

$TLF_{t,h}^A$  : Actual Transmission Losses Factor, for month "t", Time Interval "h"

$TL_{t,h}^A$  : Actual Total Transmission Losses for month "t", Time Interval "h"



$\sum_m^M ES_{t;m,h}^A$  : Total Actual Energy Supplied to the Distribution Licensee or Transmission Customer "m" during month "t" and Time Interval "h"

"M": all Distribution Licensees or Transmission Customers

"h": Time Intervals 1, 2 or 3

"t": Actual month

### 2.5.3.3 ACTUAL BULK SUPPLY AND OPERATIONS BUSINESS TARIFF

The Bulk Supplier shall determine the Actual Bulk Supply and Operations Business Tariff for the period according to the following equation. by dividing the Transmission Licensee "Bulk Supply and Operations Business" Allowed Revenue by the Actual Coincident System Peak Demand (MW).

$$BSS_t^A = \frac{1}{12} \times \frac{BSOB_y}{P_t^A} \quad [LKR/MW]$$

Where,

$BSS_t^A$  : Actual Bulk Supply and operation business tariff for month "t"

$BSOB_y$  : Transmission Licensee "Bulk Supply and Operations Business" Allowed Revenue for year "y"

$P_t^A$  : Actual System Coincident Peak Demand for month "t", metered at delivery points to Distribution Licensees and Transmission Customers.

"t": Actual month

### 2.5.3.4 RESULTING ACTUAL BULK SUPPLY TARIFFS

The two-parts, three- interval Actual Bulk Supply Tariffs shall be:

$$BST_t^A(C) = GC_t^A + TR_t^A + BSS_t^A \quad [LKR/MW]$$

$$BST_t^A(E1) = (1 + TLF_{t,1}^A) \times GE1_t^A \quad [LKR/MWh]$$

$$BST_t^A(E2) = (1 + TLF_{t,2}^A) \times GE2_t^A \quad [LKR/MWh]$$

$$BST_t^A(E3) = (1 + TLF_{t,3}^A) \times GE3_t^A \quad [LKR/MWh]$$

Where,

$BST_t^A(C)$  : Actual Bulk Supply Tariff (Capacity) for month "t"

$BST_t^A(E1)$  : Actual Bulk Supply Tariff (Energy in Time Interval 1) for month "t"

$BST_t^A(E2)$  : Actual Bulk Supply Tariff (Energy in Time Interval 2) for month "t"

$BST_t^A(E3)$  : Actual Bulk Supply Tariff (Energy in Time Interval 3) for month "t"

$TLF_{t,h}^A$  ;  $TLF_{t,h}^A$  ;  $TLF_{t,h}^A$  : Transmission Loss Factor for Time Intervals 1, 2 and 3 for month "t"

"t": Actual month

## 2.5.4 RESULTING FORECAST BULK SUPPLY TARIFFS

The two-part, three-interval Forecast Bulk Supply Tariffs for any given six-month period "p" shall be:

$$BST_{y,p}^F(C) = GC_{y,p}^F + TR_{y,p}^F + BSS_{y,p}^F + ..$$

$$\left[ \left( \sum_{t=1}^6 P_{t,p-2}^A \times (BST_{y,p-2}^A(C) - BST_{y,p-2}^F(C)) \right) \times \frac{1}{P_{y,p}^F} \right] \times (1 + r_{p-1}) \quad [LKR/MWh]$$

$$BST_{y,p}^F(E1) = (1 + TLF_{y,p,1}^F) \times GE_{y,p}^F \times k1 + ..$$

$$\left[ \left( \sum_{t=1}^6 EG_{t,1,p-2}^A \times (BST_{y,p-2}^A(E1) - BST_{y,p-2}^F(E1)) \right) \times \frac{1}{EG_{y,1,p}^F} \right] \times (1 + r_{p-1}) \quad [LKR/MWh]$$

$$BST_{y,p}^F(E2) = (1 + TLF_{y,p,2}^F) \times GE_{y,p}^F \times k2 + ..$$

$$\left[ \left( \sum_{t=1}^6 EG_{t,2,p-2}^A \times (BST_{y,p-2}^A(E2) - BST_{y,p-2}^F(E2)) \right) \times \frac{1}{EG_{y,2,p}^F} \right] \times (1 + r_{p-1}) \quad [LKR/MWh]$$

$$BST_{y,p}^F(E3) = (1 + TLF_{y,p,3}^F) \times GE_{y,p}^F \times k3 + ..$$

$$\left[ \left( \sum_{t=1}^6 EG_{t,3,p-2}^A \times (BST_{y,p-2}^A(E3) - BST_{y,p-2}^F(E3)) \right) \times \frac{1}{EG_{y,3,p}^F} \right] \times (1 + r_{p-1}) \quad [LKR/MWh]$$

Where,

$BST_{y,p}^F(C)$ : Forecast Bulk Supply Tariff (Capacity)

$BST_{y,p}^F(E1)$ : Forecast Bulk Supply Tariff (energy time interval 1)

$BST_{y,p}^F(E2)$ : Forecast Bulk Supply Tariff (energy time interval 2)

$BST_{y,p}^F(E3)$ : Forecast Bulk Supply Tariff (energy time interval 3)

k1, k2, k3: Ratio of total energy purchased time intervals 1, 2, 3. These factors shall be filed by the Transmission licensee every six months under the guidelines approved by the Commission.

$r_{p-1}$  Average reference Interest rate of six month period "p-1" to be defined by the Commission

$EG_{y,1,p}^F$ ;  $EG_{y,2,p}^F$ ;  $EG_{y,3,p}^F$ : Forecast energy generated for year "y", six month period "p" in time interval 1, 2, 3.

All other parameters have been previously defined.

## 2.6 SETTLEMENT

### 2.6.1 TRANSACTIONS WITH GENERATION LICENSEES

Generation Licensees shall send monthly invoices to the Single Buyer, discriminating Capacity Costs and Energy Costs, according to the provisions of the PPAs and SPPAs. The invoices shall indicate energy delivered to the Transmission System by the generating unit, hourly discriminated and based on measurements obtained through the metering system approved in compliance with the metering code, number of start-ups, hours of no load cost, hours of incremented heat rate, etc., according to official records accepted by the System Operator.

On the payment due date, the Single Buyer shall proceed to make the payment out of the Bulk Supply Transactions Account according to the Bulk Supply Transactions Account Management Rules.

#### **2.6.1.1 TRANSACTIONS WITH DISTRIBUTION LICENSEES AND TRANSMISSION CUSTOMERS**

At the due date established in the Power Sale Agreements, the Bulk Supplier shall invoice the Distribution Licensees and Transmission Customers based on the physical information and the forecast Bulk Supply Tariffs for the corresponding month.

At the due date established in the Power Sale Agreements for payment, the Distribution Licensees and Transmission Customers shall deposit the due amounts in the Bulk Supply Transactions Account. Upon crediting of the funds in the account, the Bulk Supplier shall remit the corresponding receipt.

#### **2.6.1.2 TRANSACTIONS WITH THE TRANSMISSION LICENSEE**

On the specific date established by the Commission, the Transmission Licensee shall invoice the Single Buyer the due amount applicable for that month, consisting of one twelfth of the Transmission System Allowed Revenues for the year "y" (*TSAR<sub>y</sub>*).

On the due date established by the Commission, the Single Buyer shall pay the due amount to the Transmission Licensee out of the Bulk Supply Transactions Account. Upon receiving the payments, the Transmission Licensee shall remit the corresponding receipt.

#### **2.6.1.3 TRANSACTION WITH THE TRANSMISSION LICENSEE (BULK SUPPLY OPERATIONS BUSINESS)**

On the specific date approved by the Commission, the Transmission Licensee (Bulk Supply Operations Business) shall enter its invoice with the due amount applicable for that month, consisting of one twelfth of the Transmission Licensee "Bulk Supply and Operations Business" Allowed Cost into the Bulk Supply Transactions Account.

On a specific date approved by the Commission, the Single Buyer shall transfer out of the Bulk Supply Transactions Account the corresponding amount to the Bulk Supply Operations Business Internal Account. Upon receiving the payments, the Transmission Licensee (Bulk Supply Operations Business) shall remit the corresponding receipt.

### **3 CHAPTER III: DISTRIBUTION AND RETAIL TARIFFS**

The Electricity Distribution and Supply License defines two main businesses for the Distribution Licensee:

- Distribution Business
- Retail Supply

Distribution Tariff methodology is presented in 3.1. This section of the methodology defines:

- type of tariff methodology
- the methodology to determine the distribution Allowed Revenue
- the allocation methodology, that is how the distribution Allowed Revenue is charged to the distribution users.

Methodology to calculate the Retail Services Tariffs is presented in 3.2 and includes the methodology to estimate both the retail service tariffs and the bulk supply "pass-through" tariffs.

## **3.1 DISTRIBUTION ALLOWED REVENUES**

### **3.1.1 TYPE OF TARIFF METHODOLOGY**

The Distribution Allowed Revenue is the revenue that a Distribution and Supply Licensee is allowed to collect from the distribution users due to the use of the distribution system (wire business), excluding Allowed Charges (connection, reconnection, meter testing, etc) that are separately regulated.

Distribution Allowed Revenue shall be calculated based on a Multi Year Tariff System in which a cap on overall revenues shall be imposed during the tariff period. This cap will be adjusted for:

- Changes in the number of distribution users and energy distributed as prescribed by the Revenue Control Formula
- Changes in the indices contained in the Revenue Control Formula.

Each Distribution and Supply Licensee shall make a tariff filing to the Commission based on the methodology established in this section, in the following way:

- before the beginning of the Tariff Period, the filing shall be complete, including approval of cost components and Revenue Control Formulae.
- once a year after the initial filing, during the Tariff Period, a simplified filing with the purpose of demonstrating that the Revenue Control Formulae are properly applied.

### **3.1.2 DISTRIBUTION ALLOWED REVENUE**

For each Distribution and Supply Licensee, the Distribution Allowed Revenue shall be calculated based on a forecast cash flow for firm for the tariff period, considering:

- Initial Regulatory Asset Base (RAB) (the value of the assets belonging to the Licensee to provide the distribution service).
- Rolling forward of the initial regulatory asset base, considering the forecast CAPEX for the period
- Depreciation of existing non-depreciated assets
- Return on capital
- Efficient operational expenditure (OPEX)
- Taxes

Calculation of Allowed Revenues shall take into account the non-regulated revenues that may exist.

#### **3.1.2.1 INITIAL REGULATORY ASSET BASE**

To compute the assets and their valuation, the net book value of the non-current assets in the audited accounts of last financial year of the Licensee shall be used. Capital Expenditure (CAPEX) that may be incurred after closing the annual accounts and until the new tariff is approved will not be considered.

The asset base shall include the working capital required to run the business. Working capital needs shall be filed by the Licensees and approved by the Commission.

#### **3.1.2.2 DEPRECIATION ALLOWANCE**

The depreciation method to be used shall be the straight line method and the depreciation rates shall be those rates currently employed in the statutory accounts. Once an asset is fully depreciated, it should be removed from the gross value of the assets.

#### **3.1.2.3 RETURN ON ASSETS**

The calculation of the distribution Allowed Revenue shall include a return on invested capital. This return should include the actual cost of debt of the Licensee and a positive return on equity based on the cost of the long-term debt of the Government of Sri Lanka. The rate of return on equity will be defined for each tariff period by the Commission.

The rate of return on assets shall be calculated considering a weighed average of the cost of debt and equity employing the actual debt to asset ratio. The rate of return on assets will be defined by the Commission for each tariff period.

#### **3.1.2.4 CAPITAL EXPENDITURE (CAPEX) ALLOWANCE**

RAB is determined for every year of the tariff period. The closing value (value at the end of one year) of the RAB is set equal to the opening value (which is equal to the value at the end of the previous year) of the RAB plus capital expenditure (CAPEX) minus regulatory depreciation.

The forecast CAPEX program for the Distribution and Supply Licensee should be based on the load-related capital expenditure in the Medium-term Distribution Development Plan (MTDDP) approved by Commission as stated in the Planning Guidelines, and other capital investments not related to load, such as for refurbishments, information technology and vehicles, for the next 5 years.

### 3.1.2.5 TREATMENT OF DIFFERENCES BETWEEN FORECAST CAPEX AND ACTUAL CAPEX

Every year, the Commission will conduct an ex-post analysis, checking what CAPEX has been developed and commissioned.

- in case of underinvestment in relation to the forecast CAPEX included in the filing for the allowed revenue, the difference will be fully clawed-back including time value of money at a rate defined by the Commission and transferred to customers through tariffs in the following tariff period.
- in case the actual CAPEX is higher than the forecast, the Commission will ask for all relevant information to be able to judge if the additional investment has been prudent and efficient.

### 3.1.2.6 OPERATING EXPENDITURE (OPEX)

The OPEX to be included in the calculation of the distribution Allowed Revenue shall be the forecast OPEX for the tariff period by the Licensee. The Licensee should justify the forecast based on the forecast demand increase and the actual OPEX in the audited accounts of the last financial year.

The OPEX component of the base allowed revenue will be adjusted at a rate defined by an Efficiency Factor (OPEXX) per year during the following years until the end of the tariff period. OPEXX (%) will be fixed by the Commission before the start of the tariff period.

In successive Tariff Periods, the Commission may revise the methodology for computing the efficient OPEX to be included in the distribution Allowed Revenue.

### 3.1.2.7 TAXES

All taxes applicable to the distribution business and imposed by the Tax code should be included by the Distribution and Supply Licensee when filing the revenue requirement.

### 3.1.2.8 ADJUSTMENTS TO DISTRIBUTION ALLOWED REVENUES

The adjustment mechanisms are intended to adjust the Distribution Allowed Revenue within the Tariff Period for inflation and exchange rate variations.

The adjustment shall be based on two indices: (i) Sri Lanka Consumer Price Index (SLCPI) and (ii) foreign exchange (LKR:USD) rate and foreign inflation. Weights to be used for each one of them shall be proposed by the Distribution and Supply Licensees as part of the tariff filing process, considering the shares of costs that are essentially local and thus indexed to SLCPI, and the share of cost related to imported goods. Based on the filed shares by the different Distribution Licensees, the Commission will approve the share to be employed in the revenue control formula.

Adjustments will be done on an annual basis. It is foreseen the possibility of “extraordinary reviews” when unexpected significant events occur. The Distribution and Supply Licensee will be allowed to apply for an extraordinary review in case the accumulated change in the indexation formula during any year surpasses 15%. Such applications for an extraordinary review shall be made before 30<sup>th</sup> June each year, for immediate review and approval by the Commission. Any application for review after this date shall be considered for implementation on 1<sup>st</sup> of January in the succeeding year. Revenue Control Formula

Based on the previous definitions, the following control formula shall be applied to the Distribution Allowed Revenue:

$$AR_y = AR_{y-1} \times (1 - X) \times \left[ a \times (1 + SLCPI) + (1 - a) \times \left( \frac{FX_y}{FX_{y-1}} + PPIUS \right) \right] \dots$$

$$\times [b \times (1 + Dcust) + c \times (1 + DkWh) + d] - Diff_y$$

where:

$$Diff_y = [AREV_{y-2} \times (1 - (AL_{y-2} - ACL_{y-2})) - AR_{y-2}] \times (1 + r_{y-1})$$

$AR_y$  Allowed base revenue in year “y” (LKR)

$AR_{y-1}$  Allowed base revenue in year “y-1” (LKR)

$a$  share of local costs in total costs of TL to be approved by the Commission based on the filing by TL.

$SLCPI_{y-1}$  accumulated change in Sri Lanka Consumer Price Index (%) of year “y-1”

$FX_y/FX_{y-1}$  Average change in the LKR:USD exchange rate of year  $\delta_{y-1}$

$PPIUS$  Accumulated change in the Producer Price Index of USA (%) of year  $\delta_{y-1}$

$X$  Efficiency factor (%) is the translation of OPEXX in terms of total revenues

$Diff_y$	Interim adjustment factor to compensate differences between actual distribution revenues and allowed distribution revenues (LKR) of the year $\bar{\alpha}_y-2\bar{\alpha}$
$AREV_{y-2}$	Actual distribution revenue based on invoicing (LKR) of the year $\bar{\alpha}_y-2\bar{\alpha}$
$AR_{y-2}$	Allowed revenue (LKR) of the year $\bar{\alpha}_y-2\bar{\alpha}$
$r_{y-1}$	Average reference Interest rate of year $\bar{\alpha}_y-1\bar{\alpha}$ to be defined by the Commission
$b$	Allowed revenue coefficient to adjust for increases in the number of customers
$Dcust$	Percentage of customers in excess (negative if in deficit) of the level forecast at the time of setting tariff for the period
$c$	Allowed revenue coefficient for energy increase
$d$	$1-b-c$
$DkWh$	Percentage of energy distributed in excess (negative if in deficit) of the level forecast at the time of setting the tariff for the period
$AL_{y-2}$	Aggregated allowed level of energy losses for year “ $y-2$ ” (%)
$ACL_{y-2}$	Aggregated actual level of energy losses for year “ $y-2$ ” (%)

### **3.1.3 ALLOCATION CRITERIA FOR DISTRIBUTION REVENUES**

Regardless of a customer’s social or legal status and the purpose for which the electrical capacity and energy is used, the tariff structure shall reflect the costs that the user imposes on the Distribution System, according to his/her consumption characteristics and the voltage level at which the service is supplied.

Distribution revenue shall be allocated to each voltage level based on an estimation of the long run marginal cost at each voltage level. Overheads and other costs that cannot be directly allocated by voltage level, shall be allocated to each voltage level in proportion to the allocation of direct costs per voltage level.

At each voltage level, costs shall be allocated between customer categories based on the share of the peak demand of each customer category at that voltage level in the sum of peak demands across all categories at that voltage level.

Based on these criteria, allocated distribution revenue in each customer category shall be converted into a tariff by dividing by the non-coincident peak demand of the customer category. In case of one-part tariff, the distribution tariff shall be converted into an energy distribution tariff considering the annual load factor calculated on a representative average load profile of the customer category. In both cases, the calculation should ensure that the level of allowed losses and no more than it is considered when calculating the distribution tariff.

This methodology requires the Distribution and Supply Licensee to produce and make public proper representative load profiles for each customer group. Any Load Profile shall be derived from statistically representative samples, following guidelines issued by the Commission.

The Commission may establish a reactive power compensation scheme and a reactive power tariff, if deemed necessary.

### **3.1.4 TARIFF FILING**

After the first tariff filing, Distribution Tariffs for end-users for each subsequent year of the Tariff Period shall be filed once a year by each Distribution and Supply Licensee based on this procedure. The Commission may approve them if the calculation has properly followed the criteria stated above.

## **3.2 RETAIL SUPPLY TARIFF**

The Retail supply tariff includes:

- Retail Service Tariff
- Bulk Supply “Pass-through” Tariff

### **3.2.1 RETAIL SERVICE TARIFF**

Retail service tariff includes all the costs related to the commercial cycle (meter reading, invoicing and collection), routine meter testing cost and an allowance for bad debt if the Commission deems such allowance is appropriate.

The retail service tariff shall be calculated based on a Multi Year Tariff System in which a limitation (“a cap”) on average price shall be imposed during the Tariff Period.

The Tariff Period shall be five (5) years.

Yearly, the Allowed price cap shall be adjusted considering SLCPI.

Each Distribution and Supply Licensee shall make a tariff filing to the Commission based on the methodology established in this section before the beginning of the Tariff Period. Additionally, once a year after the initial filing, during the Tariff Period, each Distribution and Supply Licensee shall make a simplified filing for the purpose of adjusting the tariff based on the SLCPI.

The allowed tariff will include a forecast of the efficient operational expenditure required to perform the operations related to the commercial cycle and related costs. The Licensee should justify the forecast based on the forecast customer increase and the actual OPEX stated in audited accounts of the last financial year. Existing assets and capital expenditure that may be needed should be considered when calculating the allowed revenue for the distribution business. Distribution and Supply Licensees should adjust their accounts to properly unbundle the OPEX related to the retail service activity.

A Licensee may file for a bad debt allowance. A bad debt allowance filing should be developed discriminating the different types of customer. The Commission may define the total bad debt allowance considering the Licensee's customer portfolio and the potential efficiency gains in the collection activity.

The Commission may apply different retail service tariffs to end-users according to their size, location or type. However, in each year of the Tariff Period, the retail service tariff should be the one calculated by the following control formula:

$$RSPC_y = RSPC_{y-1} \times (1 + SLCPI) - DiffRS_y$$
$$DiffRS_y = [ARSPC_{y-2} - RSPC_{y-2}] \times (1 + r_{y-1})$$

where:

$RSPC_y$	Allowed retail service tariff in year "y" (LKR/customer)
$RSPC_{y-1}$	Allowed retail service tariff in year "y-1" (LKR/customer)
$SLCPI_y$	Accumulated change in Sri Lanka Consumer Price Index (%) for the year "y-1"
$r_{y-1}$	Average reference Interest rate of year "y-1" to be defined by the Commission
$ARSPC_{y-2}$	Actual Retail service tariff (LKR/customer) of the year "y-2".
$RSPC_{y-2}$	Allowed retail service tariff (LKR/customer) of the year "y-2"

Retail service tariffs for end-users shall be filed once a year by each Distribution and Supply Licensee based on this procedure. The Commission will automatically approve them if the calculation has properly followed the criteria.

### **3.2.2 BULK SUPPLY "PASS-THROUGH" TARIFF**

Retail supply customers shall pay the Bulk Supply "Pass-through" Tariffs, which are based on the Bulk Supply Tariffs defined in 2.5.4 and adapted in order to be applied to retail customers.

Bulk Supply "Pass-through" Tariffs shall consist of two parts:

- a. capacity charge
- b. energy charge. The energy part shall be divided into three Time Intervals as defined in 2.5.1.

Bulk Supply "Pass-through" Tariffs shall be differentiated by the voltage levels that the Commission defines, following the guidelines defined in 3.3.

For each voltage level, a Loss Factor shall be applied. This loss factor acts as a cap on the level of total losses that the Commission will allow the Distribution and Supply Licensee to be passed through to customers in each voltage level. The Loss Factor for each voltage level shall be filed by the Distribution and Supply Licensee at the beginning of the Tariff Period, for every year during the Tariff Period, when filing for the Distribution Allowed Revenue. The Licensee should provide evidence to the Commission that the proposed Loss Factor is based both on actual levels and the implementation of a prudent loss reduction program. The Commission may approve declining Loss Factors for every year during the Tariff Period.

The Bulk Supply "Pass-through" Tariffs that the Licensee is able to charge to retail customers is constrained by the following formula:

$$PTP_{p,i,v} = BST_p^F(E_i) \times (1 + AL_{p,v})$$

$$CP_{p,v} = BST_p^F(C) \times (1 + CAL_{p,v})$$

where:

$PTP_{p,i,v}$	Allowed energy Pass-through tariff (LKR/kWh) for a six-month period "p" in hourly interval "i" at voltage level "v".
$AL_{p,v}$	Allowed (energy) loss factor (%) at voltage level "v" for the six-month period "p"
$CP_{p,v}$	Allowed capacity Pass-through Tariff (LKR/kVA-month) for the six month period "p"
$CAL_{p,v}$	Allowed (capacity) loss factor (%) for six month period "p" for voltage level "v"

All the other parameters are defined in 2.5.2 and 2.5.3

### 3.2.2.1 CRITERIA FOR APPLYING BULK SUPPLY "PASS-THROUGH" TARIFF TO RETAIL CUSTOMERS

The Bulk Supply "Pass-through" Tariffs shall be applied to end-users as follows:

- Bulk Supply "Pass-through" Energy Tariffs (PTP) shall be directly applied in case of end-use customers billed on Time of Use (TOU) rates. In case end-use customers billed on non-TOU rates, the shares of consumption in each Interval based on a representative average load profile of the category shall be taken into account.
- Bulk Supply "Pass-through" Capacity Tariff (CP) for end-use customers on two-part tariffs shall be based on the coincident peak of the end-use customer in relation to the system peak. In case of customers on one-part tariffs, the Bulk Supply "pass-through" Capacity Tariff (CP) shall be based on the coincident peak of the end-use customer in relation to the system peak and converted into an energy tariff considering the annual load factor calculated on a representative average load profile of the category of such end-use customers.

The load profiles mentioned above shall be the same as those employed in 3.1.3.

Bulk Supply "Pass-through" Tariffs for end-users shall be filed once every six months by the Distribution and Supply Licensee based on this procedure and the approved forecast Bulk Supply Tariffs. The Commission will automatically approve them if the calculation has properly followed the criteria.

## 3.3 CRITERIA FOR DEFINING THE TARIFF STRUCTURE

The customer categories shall be distinguished by the voltage levels defined by the Commission.

Tariffs for each customer category shall be split into (i) approved Bulk Supply "Pass-through" tariff, comprising Generation, and Transmission and Bulk Supply Operation Business Tariff (ii) approved distribution tariff, (iii) approved retail service tariff, and (iv) any approved special levies. The Commission may request the Licensees to separately identify these components in customer bills. Upon such request, any explicit subsidies that are applied to Distribution and Retail Tariffs, or passed through the Single Buyer, shall be identified in the tariff structure and in customer bills.

Where technically and economically feasible, the structure of end-use customer tariffs shall be in two-parts, with capacity and energy charges.

TOU tariffs shall be applied to end-use customers connected to medium voltage and low voltage in case of 3-phase supply. TOU tariffs shall be applied to customers connected to low voltage in case of 1-phase supply where it is technically and economically efficient to install TOU meters. In case where TOU rates are optional, Customers have the right to receive the service at TOU rates if such a customer pays for the new meter, either up-front or through rental fees.

All the tariffs and charges shall be set in Sri Lanka currency.

Six months before the Distribution and Supply Licensees are required to file for a new Distribution Allowed Revenue, the Commission will publish the detailed criteria for the definition of the tariff schedule to be applied in the next Tariff Period, including the definition of customer categories, structure of charges for each category, penetration of TOU rates, etc.



## 4 CHAPTER IV: TRANSITIONAL PROVISIONS

The Commission may, from time to time, introduce special transition provisions aimed at ensuring that the new Tariff Setting Methodology complies with the implementation policy guidelines by GOSL in terms of managing the initial revenue shortfall of the electricity industry and adopting a systematic procedure for the removal of the existing subsidies.

The Commission will issue an Implementation Decision with the detailed criteria for the tariff structure definition mentioned in 3.3 and including all the transition provisions to this methodology that may be needed during the first Tariff Period.

## 5 ADDENDUM TO TARIFF METHODOLOGY: TRANSITION PROVISIONS FOR IMPLEMENTATION IN THE FIRST TARIFF PERIOD

### 5.1 IMPLEMENTATION OF GOSL POLICY FOR THE FIRST TARIFF PERIOD

For the first Implementation Period, the Single Buyer shall invoice the Distribution and Supply Licensees and Transmission Customers, on the basis of adjusted Bulk Supply Tariffs. Similarly, the Commission will employ them for calculating the tariff schedule for end-use customers.

This adjusted Bulk Supply Tariffs will be calculated by the Commission every six months based on the filing of the Single Buyer and the guidelines defined by GOSL in terms of gradual implementation of cost-reflective tariffs. The Commission will adjust proportionally the tariffs  $BST_{y;p}^F(Ei)$ . The tariff  $BST_{y;p}^F(C)$  will not be modified.

The Commission will publish the adjusted Bulk Supply Tariffs together with the tariff schedule for end-use customers.

### 5.2 UNIFORM NATIONAL TARIFF AND COMPENSATION

For the entire first Tariff Period of implementation of this Tariff Methodology, a Uniform National Tariff (UNT) will be implemented. The UNT will be calculated and updated by the Commission based on the approved revenue requirements filed by the Licensees and the formulae for adjustments defined in this methodology. As a consequence, during this first Implementation Period, the Distribution and Supply Licensees may not file for the Bulk Supply "Pass-through" Rate, the Retail Service Rate and the Distribution Rate as required by this Tariff Methodology. Such Licensees should only file for their Revenue Requirements.

The difference between the Approved Revenues for each the Distribution and Supply Licensee and the revenues generated by the application of the UNT will be compensated with the goal of ensuring that the Allowed Revenue will be collected by each Distribution and Supply Licensee. The compensation amount will be calculated ex-ante and ex-post, for each six-month period, as follows:

#### 5.2.1 EX-ANTE ADJUSTMENT OF FORECAST BST

For each six-month period "p", the forecast adjusted energy bulk supply tariff for each time interval "i" and for each Distribution and Supply Licensee "z" will be calculated. Initially, the forecast average Adjusted BST (ABST) will be calculated, and then it will be converted to (i) the forecast average ABST for each Distribution and Supply Licensee, and (ii) the forecast ABST each time interval "i" for each Distribution and Supply Licensee.

##### 5.2.1.1 FORECAST AVERAGE BST BASED ON COST OF SUPPLY

Weighted average forecast BST for sales by the Transmission and Bulk Supply Licensee to all Distribution Licensees in a six-month period p is given as follows. This calculation uses the allowed revenues of the Transmission and Bulk Supply Licensee for the six-month period "p".

$$BST_p^F = \frac{\sum_{i=1,3} BST_p^F(E_i) \times EB_{p,i}^F}{\sum_{i=1,3} EB_{p,i}^F}$$

where,

$BST_p^F$  : Weighted average forecast BST for energy sales by the Transmission and Bulk Supply Licensee to all Distribution and Supply Licensees in period "p".

$BST_p^F(E_i)$  : Calculated BST for energy sales by the Transmission and Bulk Supply Licensee to all Distribution and Supply Licensees in period  $p$  for time interval  $i$ . This has been previously calculated, in accordance with the procedure in 2.5.4.

$EB_{p,i}^F$  : Forecast energy sales by the Transmission and Bulk Supply Licensee to all Distribution and Supply Licensees in period "p" for time interval "i", on the basis of allowed losses.

### 5.2.1.2 FORECAST ADJUSTED AVERAGE BST BASED ON FORECAST SALES REVENUE

The forecast adjusted average BST for each Distribution and Supply Licensee "z" for the six-month period "p" is given as follows. This calculation is based on the forecast sales revenue to be collected by each Distribution Licensee by the application of UNT, and the allowed distribution and retail services revenues.

$$ABST_{p,z}^F(E) = \left[ FTR_{p,z} - \frac{AR_{p,z}}{2} - \frac{FRRS_{p,z}}{2} - FCP_{p,z} \right] \times \frac{1}{EB_{p,z}^F}$$

where:

$ABST_p^F(E)$  : Forecast average adjusted BST for energy for distribution and supply licensee "z" in period "p".

$FTR_{p,z}$  : Forecast total revenue to be collected owing to the application of the UNT in period "p" for Distribution and Supply Licensee "z". This calculation will use the approved sales forecast for each customer category and approved end-use tariff.

$AR_{p,z}$  : Allowed annual distribution revenue for Distribution and Supply Licensee "z" corresponding to the year of period "p".

$FRRS_{p,z}$  : Allowed annual retail service revenue to be collected Distribution and Supply Licensee "z" in period "p" on the basis of the forecast number of customers.

$FCP_{p,z}$  : Forecast capacity payment of Distribution and Supply Licensee "z" in period "p" to the Single Buyer, on the basis of forecast capacity purchases from the Single Buyer and the approved Capacity Charge.

$EB_{p,z}^F$  : Forecast energy sales by the Transmission and Bulk Supply Licensee to Distribution and Supply Licensee "z" in period "p", on the basis of allowed losses.

### 5.2.1.3 SCALING TO ADJUST BST IN EACH TOU INTERVAL

The ratio between the adjusted average BST for each Distribution and Supply Licensee, and the average BST for energy sales by the Transmission and Bulk Supply Licensee, will be used to scale the adjusted BST to each Distribution and Supply Licensee for each interval "i".

Scaling factor to be applied to each interval BST for licensee "z" =  $\frac{ABST_{p,z}^F}{BST_p^F}$

The adjusted BST for each distribution and supply licensee for each interval "i" is calculated as:

$$ABST_{p,z}^F(E_i) = \frac{ABST_{p,z}^F}{BST_p^F} \times BST_{p,z,i}^F = \frac{ABST_{p,z}^F}{\sum_{i=1,3} BST_p^F(E_i) \times EB_{p,i}^F} \times \sum_{i=1,3} EB_{p,i}^F \times BST_{p,z,i}^F$$

Since  $\sum_{i=1,3} EB_{p,z,i}^F = EB_{p,z}^F$  and considering the equation in 5.2.1.1,

$$ABST_{p,z}^F(E_i) = \left[ FTR_{p,z} - \frac{AR_{p,z}}{2} - \frac{FRRS_{p,z}}{2} - FCP_{p,z} \right] \times \frac{BST_{p,z,i}^F}{\sum_{i=1,3} BST_p^F(E_i) \times EB_{p,i}^F}$$

$ABST_{p,z}^F(E_i)$  is the forecast adjusted BST for the supply of energy by the Transmission and Bulk Supply Licensee to each Distribution and Supply Licensee "z", for the period "p" in the time interval "i".

All others parameter have been previously defined in this methodology.

$ABST_{p,z}^F(E_i)$  shall be estimated and communicated by the Commission to the Single Buyer and the Distribution and Supply Licensees at the beginning of each six-month period "p".

## 5.2.2 Ex-POST CALCULATION OF COMPENSATION

The ex-post compensation to each Distribution and Supply Licensee will be calculated on the following basis. All the quantities, whether actual or forecast, are for the period p-2.

### Commitments

- Amount payable to Single Buyer on account of energy purchases at the rate of allowed losses
- Amount actually paid to Single Buyer on account of capacity

### Entitlements:

- Allowed revenue for Distribution Business
- Allowed Retail Services Revenue adjusted to the actual average number of customers served.

### Income

Actual total revenue collected by the application of UNT

In the first Tariff Period covered in these transition provisions, the ex-post Compensation will be calculated on the basis of the principle that each Distribution and Supply Licensee shall be responsible to ensure that losses allowed by the Commission are adhered to, and that Compensation would be awarded for other changes in the sales, which are not directly under the control of the Licensee.

Accordingly, the compensation shall be,

$$C_{p,z} = \left[ \sum_{i=1}^3 ABST_{p-2,z}^F(E_i) \times EB_{p-2,z,i}^A \times \frac{1 - ACL_{p-2,z}}{1 - AL_{p-2,z}} \right] + [ACP_{p-2,z}] + \left[ \frac{AR_{p-2,z}}{2} + \frac{FRRS_{p-2,z}}{2} \times \frac{CUST_{p-2}^A}{CUST_{p-2}^F} \right] - ATR_{p-2,z}$$

where,

$C_{p,z}$  : The compensation to be paid to Distribution and Supply Licensee in period "p" on account of UNT application in period "p-2".

$ABST_{p-2,z}^F(E_i)$  : Forecast adjusted energy bulk supply tariff for each time interval "i" for Distribution and Supply Licensee "z" in period "p-2".

$EB_{p-2,z,i}^A$  : Actual energy supplied by the Single Buyer to the Distribution and Supply Licensee "z" in each time interval "i" in period "p-2".

$ACL_{p-2,z}$ : Actual level of losses in period "p-2" of Distribution and Supply Licensee "z" calculated by considering total actual losses in relation to energy injected to the distribution grid.

$ACP_{p-2,z}$ : Actual capacity payment of Distribution and Supply Licensee "z" in period "p-2" to the Single Buyer

$FRRS_{p-2,z}$ : Retail service revenue allowed for the year of period "p-2" for Distribution and Supply Licensee "z".

$CUST_{p-2,z}^F$ : Forecast average number of customers of Distribution and Supply Licensee "z" in period p-2

$CUST_{p-2,z}^A$ : Actual average number of customers of Distribution and Supply Licensee "z" in period "p-2".

$ATR_{p-2,z}$ : Actual invoiced revenue earned owing to the application of the UNT in period "p" for Distribution and Supply Licensee "z".

All other parameters have been previously defined in this methodology

$C_{p,z}$  shall be estimated and communicated by the Commission to the Single Buyer at the beginning of each six-month period. The compensation amount shall be credited/debited to each Distribution and Supply Licensee in the next invoicing immediately after the Commission approval.

### **5.2.3 REVISION TO FORECAST BST ON ACCOUNT OF COMPENSATION FOR UNT**

Residual imbalances in the compensation mechanism shall be considered in forecasting the BST for the period "p", and the formulae in section 2.5.4 will be accordingly modified.

$\sum_{z=1}^M C_{p,z}$ : Residual imbalance of compensation awarded to "M" Distribution and Supply Licensees in period "p".

### **5.2.4 SUSPENSION OF INCENTIVES/DISINCENTIVES IN REVENUE CONTROL FORMULAE**

During the first Tariff Period where these transitional provisions are implemented along with the compensation paid for changes in allowed revenues owing to the application of UNT, the additional incentive/disincentive for lower/higher losses than the allowed losses included in the revenue control formulae for Distribution and Supply Licensees shall be suspended.

Accordingly, the component Diff in distribution revenue control formula in 3.1.2.9 is set at zero for the entire first Tariff Period of implementation of this Tariff Methodology. Similarly, the component Diff in the retail service formula in 3.2.1 is also set at zero.

## **5.3 TARIFF SCHEDULE FOR THE FIRST TARIFF PERIOD**

During the first tariff implementation period, the Commission will define the tariff schedule for final end-use customers based on the guidelines provided by GOSL.

The Commission will determine which customer categories would be charged under one-part or two-part tariffs, and flat tariffs or TOU tariffs every year.

## 5.4 EXTRAORDINARY FILING PROCESS FOR RE-SETTING TARIFFS 2012-2015

The Commission may request the Transmission and Distribution Licensees for an extraordinary tariff filing no later than 31st August 2011 with the objective of adjusting the revenues for the remaining years of the first Tariff Period.

## 5.5 MAIN DEFINITIONS FOR THE FIRST TARIFF PERIOD

For the first year of the Tariff Period of implementation of this Tariff Methodology, the X-factor component (X) of the formulae defined in sections 2.3.2.9 and 3.1.2.9 of the methodology is set at zero (0). The Commission will define the X-factor for the remaining years of the first tariff Implementation Period by June 2011. Not later than December 2012, the Commission will issue a methodology for setting the X-factor for the second Implementation Period.

The parameters "b" and "c" of the formula defined in section 3.1.2.9 are set at 40% for the first Implementation Period of this methodology. The Commission may change these parameters for the second Implementation Period.

For the first Implementation Period, the parameter "a" of the formula defined in 2.3.2.9 of this methodology is set at 50%. Similarly, the parameter "a" of the formula defined in 3.1.2.9 of this methodology is set at 60%. The Commission will issue a methodology for setting the parameter "a", both for the Transmission and Distribution activity no later than December 2013 for the licensees to file for these parameters during the filing process.

For the first implementation period, in the estimation of the parameters SLCPI, FX and PPIUS, the subscript "y-1" should be read as end-June(y-2) to end-June(y-1)

The parameter "r" of this methodology employed in sections 3.1.2.9 and 3.2.1 is the 1-year Sri Lanka Inter Bank Offer Rate (SLIBOR) published by the Central Bank of Sri Lanka. Similarly, the parameter "r" of this methodology employed in section 2.5.4 is the 6-month SLIBOR published by the Central Bank of Sri Lanka.

Extraordinarily, the Commission will accept non-audited accounts as the basis for the first filing process of the Transmission and Distribution Licensees. Before the extraordinary filing process scheduled for August 2011, the Transmission and Distribution Licensees shall present to the Commission the audited accounts of 2009 and 2010 as stated in the condition 8 of the Licenses. Additionally, the Transmission and Distribution Licensees shall present to the Commission no later than March 2011, the investment program for 2012-2016 discriminating the different types of investment required and providing proper justification for them, along with the updated Long-term Transmission Development Plan and the Medium-term Distribution Development Plans, respectively.

For the first year of the first implementation period, the parameter "k1" is set at 1, the parameter "k2" is set at 1.3 and the parameter "k3" will be calculated by the Single Buyer and presented to the Commission while filing for the Bulk Supply Tariff following the principle of revenue neutrality. Under this principle, the parameter "k3" shall be calculated in a way that the following condition is satisfied:

$$GE_{y;p}^F * EG_{y;p}^F = \sum_{i=1}^3 (EG_{y;i,p}^F \times GE_{y;p}^F \times k_i)$$

where  $EG_{y;i,p}^F$  is the energy forecast for six-month period "p" for time interval "i". All the other parameters have been previously defined in this methodology.

The Commission may define the parameters "k1" and "k2" whenever the Commission considers they should be adjusted. If no such notification is given by the Commission, the values defined for the first year shall be also applied to the remaining years of the first tariff Implementation Period.

For the first Implementation Period, the allowed Rate of Return on Assets to apply, both to Transmission and Distribution Licensees, is set at the minimum level compatible with the financing of the investment

program foreseen for the period 2011 to 2015, given that return on equity is set at 0. As a consequence, the return on asset is set 2% in real terms after tax for the first Implementation Period of the Tariff Methodology.

No later than 31st July 2010, the Transmission Licensee shall present to the Commission, the pricing agreements with the CEB Generation Licensee. These pricing agreements shall be employed for the Bulk Supply Tariff filing by the Single Buyer.

## **5.6 RATES FOR POWER TRANSFER SERVICES FOR LECO**

The Single Buyer shall invoice LECO every month for the rates due to any the Distribution License for the transfer of Power LECO over such Licensees' distribution networks. The Single Buyer shall credit these amounts in the monthly invoices to the corresponding Licensees.

The power transfer rates to be applied to LECO shall be calculated by the Commission and published along with the Tariff Schedule for end-use customers. When calculating the power transfer rates, the Commission would consider the average distribution cost down to the voltage level at which LECO is connected, and the allowed losses up to such voltage level.

## **5.7 BOUNDARY METERING**

No later than December 2010, the Single Buyer shall place in operation a commercial metering system that allows the proper and transparent settlement of transactions between the Single Buyer and all other Licenses.

Energy exchanges among Distribution Licenses excluding LECO, and their compensation will not be regulated. Distribution Licenses are free to agree on protocols for the compensation mechanism. These exchanges and compensations will not be included when calculating the compensation defined in 4.1 of this Tariff Methodology.