

Energy Regulation Act, 2006

EPDM Rules

In exercise of the powers contained in section 35 of the Energy Regulation Act, 2006 (Act No. 4 of 2006), the National Energy Regulator of South Africa has made the Electricity Price Determination Methodology (EPDM) Rules set out in the Schedule hereto.

Schedule

CHAPTER ONE: TITLE AND INTERPRETATION

Title

1. These Rules shall be known as the Electricity Price Determination Methodology Rules, abbreviated as the EPDM Rules.

Definitions

2. Any word or expression to which a meaning has been attached in the Energy Regulation Act shall have that meaning, and –

Act	Means the Electricity Regulation Act 2006, (Act No. 4 of 2006), and including any amendments thereto, and includes any regulation or rule made or issued in terms thereof and includes the Codes made thereunder.
Activity	Means an activity inherent to or directly associated with the Import, Export, Generation, Transmission, Distribution and Trading of electricity, and includes any Service associated therewith.
Administration charge	Means the daily fixed charge payable per Point of Delivery/point of supply/service agreement to recover administration-related costs such as meter reading, billing and meter capital. It is based on the monthly utilised capacity or monthly maximum exported capacity per POD/point of supply/service agreement.
Affordability subsidy charge	Means the transparent charge indicating socio-economic subsidies related to the supply of electricity to residential Tariffs and is payable on Licensees related active energy sales to non-local authority Tariffs.
Ancillary Service charge	Means the charge that recovers the cost of providing ancillary services by the Independent System Operator
Availability charge	Means the charge associated with costs of keeping a generation plant, transmission and distribution facilities available, irrespective of whether the plant has produced a single megawatt or not or transmission and distribution have transmitted or distributed a single megawatt or not. In the case of generation plants, this charge does not apply to non-dispatchable or 'self-dispatching' plant.
Capacity Charge	Same as Availability Charge
Charge	Means any charges forming part of a Tariff not otherwise forming part of the Rates component of a tariff.
Code	Means the Distribution Code, the South African Grid Code, the Grid Connection Code for Renewable Power Plants or any other code made by the Regulator under the Act.
Consumer	Means a person supplied with a Service or Activity by a Licensee.
Consumer Demand Analysis	Means the role of electricity in the activities of a consumer and the load profile of consumers, as set out in more detail in Rule 9.

Consumer groups	Consumer groups will reflect clusters of consumers that share similar load profiles and therefore may be used as a proxy for consumers that do not have smart metering for the purposes of determining the cost-to-serve and subsequent Tariffs for the such consumer groups.
Consumption	Consumption is the total electricity consumed in a given period and generally expressed in MWh.
Demand	Means the rate at which electricity is consumed, generally in MWh, and informs the capacity required to meet demand at any point in time.
Distribution	Means the conveyance of electricity through a Distribution Power System, and includes the ownership and operation thereof and any Activity directly associated therewith.
Distribution connected	Means connected to the Distribution system.
Distribution losses charge	Means the production-based (energy) incentive to generators. The losses charge is based on the approved loss factors, the load factor, the amount of energy produced seasonally and TOU and the WEPS energy rate (excluding losses).
Distribution network capacity charge	(Previously known as the Distribution network access charge) Means the R/kVA or R/POD fixed network charge raised to recover Distribution network costs and depending on the Tariff is charged on the annual utilised capacity or maximum export capacity where maximum demand is measured or the NMD where maximum demand is not measured. The charge will also include costs associated with technical losses.
Distribution Power System	Means a power grid operating at or below 132kV.
Electricity Supply Industry	Means the Electricity value chain subject to the Act being the Import, Export, Generation, Transmission, Distribution and Trading of Electricity and all activities related thereto, from both a vertical as well as a horizontal perspective;
Electricity Supply Industry	Means the electricity value chain subject to the Act being the Import, Export, Generation, Transmission, Distribution and Trading of electricity and all activities related thereto, from both a vertical as well as a horizontal perspective;
EPDM Rules	Means these EPDM Rules and includes the Annexures.
Export	Means the export of electricity from the Republic of South Africa.
Generation	Means the generation of Electricity through any means and includes any service or activity associated therewith.
Import	Means the import of electricity into the Republic of South Africa.
Load (electrical circuit)	An electrical load is simply any component of a circuit that consumes power or energy and converts electrical energy into light, heat, or useful motion, which constitutes a load on the circuit.
Load (electricity system)	Means the demand expressed as the MW that a consumer brings to the electricity system as a result of the various loads consuming energy and needs to be

	balanced by the Independent System Operator at any point in time.
Load Type	Means load categorised as Load 1, Load 2, Load 3 and Load 4, for the purposes of this rule.
Licence	Means a Licence issued by the Energy Regulator under the Act.
Licensee	Means the holder of a Licence.
Merit Order Dispatch	Means a manner in which available sources of energy, especially electrical generation, are ranked based on ascending order of tariffs or prices. The purpose of merit order dispatch is to enable the lowest net cost electricity to be dispatched first.
Price	In terms of the Act, "price" means a charge for electricity but for the purposes of this document, "price" means the charge for electricity to a customer or consumer that can be one-part or multi-part, which is a culmination of summing of all relevant Tariffs of services consumed by a consumer or customer.
Price Stability	In terms of this document, price stability means prices that are based on predictable methodology that yield predictable prices in the long term that facilitate investments by both the electricity supply industry as well as electricity consumers. Price stability facilitates affordability of electricity and competitiveness of industries. Price stability does not mean a fixed, low price, but prices that are predictable and cost-reflective.
Qualifying Generators	Means generators that have a Tariff determined by the Energy Regulator that qualifies the Generator to submit binding offers of available capacity to the System Operator for dispatch of power when called upon to do so.
Rate	Means the total charge for electricity including capacity charge, energy charge and other charges forming part of a Tariff.
Regulator	Means the National Energy Regulator established by section 3 of the National Energy Regulator Act, 2004 (Act No. 40 of 2004).
Revenue Requirement	Means the revenue requirement resulting from the revenue requirement formula set out in rule 7.
Service	Means any service provided by a Licensee as part of an Activity.
Service and Pricing Model	Means the service and pricing model adopted and used by the Regulator for purposes of the Rule.
System Operator	Means a transmission or a distribution system operator.
Standard Set of Regulatory Accounts	Means a set of regulatory accounts specified by the Regulator to which Licensees must adhere to and which is used to functionalise the costs of such Licensee.
Tariff	Tariff means the sum of Rates, Charges, taxes and subsidies charged for any Activity that is the subject to Tariff Regulation under the EPDM Rules.
Tariff Application	An application for the setting, amendment or withdrawal of a Tariff.

Tariff Regulation	Means the economic regulation of any Activity performed by a Licensee through the setting of Tariffs, in accordance with the EPDM Rules
Tariff Setting Methodology	The methodology is the detailed set of steps and modelling required to apply the principles to actually set the Tariffs, including the types of data that will be analysed and the format that must be applied, benchmarks that must be used and indices that will be used.
Trading	Trading refers to the buying and selling of power between participants in the energy industry, and includes the buying and selling of financial instruments and derivatives.
Transmission	Means the conveyance of electricity through a Transmission Power System, and includes the ownership and operation thereof and any Activity directly associated therewith and excluding trading, and “transmit” and “transmitting” have corresponding meanings.
Transmission Power System	Means transmission infrastructure that operates above 132kV.
Unbundling	Depending on the context, refers to either physical or financial separation of regulatory activities or their associated costs.
Weighted Average Tariff	The Tariff that represents the proportion of power dispatched at the related Tariff that takes account of the relative amount of power supplied by each generator and for the purposes of these Rules.

Glossary

3. The following abbreviations and acronyms are used in the EPDM Rules:

AR	Allowable Revenue
β	Beta
DSLII	Distribution Supply Loss Index
dP	Debt Premium
E	Expenses
EPP	The South African Electricity Pricing Policy
GWh	Giga Watt hours
IPP	Independent Power Producer
IRP	Integrated Resource Plan
ITSMO	Independent Transmission System and Market Operator
JSE ALSI	Johannesburg Stock Exchange All Share Index
K_d	Cost of debt
K_e	Cost of equity
M&V	Measurement and Verification
MEAV	Modern Equivalent Asset Value
MRP	Market Risk Premium
MWh	Mega Watt hours
MYPD	Multi-Year Price Determination
NERA	National Energy Regulator Act, No. 40 of 2004
O&M	Operating and Maintenance
OCGT	Open Cycle Gas Turbine
PBR	Performance Based Regulation
PPA	Power Purchase Agreement

R_f	Risk free rate of interest
RAB	Regulatory Asset Base
RAV	Revaluation Asset Value
RCA	Regulatory Clearing Account
SSEG	Small Scale Embedded generators
TD	Tariff Design
TNC	Transmission and Network costs
TOC	Trended Original Cost
UCT	Unit Capability Factor
WACC	Weighted Average Cost of Capital
WEPS	Wholesale Electricity Pricing System

CHAPTER TWO: MANDATE FOR SETTING TARIFFS

Legislative mandate for determination of Tariffs

4. (1) The Regulator may, under section 14 of the Act, issue a Licence subject to conditions relating to the setting or approval of Tariffs, Rates and Charges.
- (2) In terms of section 15 of the Act, a Licence condition relating to the setting or approval of a Tariff, Rate or Charge -
- (a) must enable an efficient Licensee to recover the full cost of its Activities, including a reasonable margin or return;
 - (b) must provide for or prescribe incentives for continued improvement of the technical and economic efficiency with which Activities are to be provided by a Licensee;
 - (c) must give end users proper information regarding the costs that their Consumption imposes on a Licensee's business;
 - (d) must avoid undue discrimination between customer categories of a Licensee; and
 - (e) may permit the cross-subsidy of Tariffs to certain classes of a Licensee's customers.
- (3) The Regulator shall apply the EPDM Rules to determine the Tariffs charged by Licensees that are subject to Price Regulation, after due consideration of what in its opinion is in the best interest of the Electricity Industry, the overall South African economy and the public.
- (4) A Licensee holding a licence that is subject to the setting or approval of a Tariff may not charge a customer any Tariff other than that determined or approved by the Regulator from time to time as part of its licensing conditions.
- (5) A Tariff shall be valid for the period for which it is approved by the Regulator and may be amended or withdrawn –
- (a) upon application by the Licensee that is subject thereto; or
 - (b) unilaterally by the Regulator if there are objective grounds for such Tariff amendment or withdrawal: Provided that a Tariff shall not be amended or withdrawn without due consideration of any written presentations made by the Licensee concerned.

CHAPTER THREE: EPDM

Electricity Supply Industry Structure and EPDM Rules

5. (1) The Electricity Supply Industry value chain with respect to Imports, Exports, Generation, Transmission, Distribution and Trading for purposes of the EPDM Rules is broken down into its constituent Activities, both 'vertically' and 'horizontally'.

(2) Table 1 below sets out the extent to which vertical and horizontal activities are subject to Tariff Regulation:

Table 1: Horizontal and Vertical Activities

Vertical Activity	Tariff Regulation	Horizontal Activity or Service	Tariff Regulation
Imports	Yes , if part of activities of a Licensee subject to Tariff Regulation No, if a SAPP transaction	Trading platform/entity charges or fees, related	Yes
Exports	Yes, if part of activities of a licensee subject to tariff regulation No, if part of a SAPP transaction	Trading platform/entity charges or fees, related	Yes
Generation <ul style="list-style-type: none"> • Licensed Generation • Schedule II Registered Generation • Schedule II unlicensed/unregistered Generation 	Yes, including PPA charges, costs and Tariffs approved for term of PPA No No	Black start, Ancillary Services, related N/A N/A	Yes
Transmission <ul style="list-style-type: none"> • Transmission assets • System Operator • Access to and use of transmission assets 	Yes Yes Yes	Planning, operation and maintenance, related System operator related Access and use of system, related	Yes Yes Yes
Distribution <ul style="list-style-type: none"> • Distribution assets 	Yes	Planning, operation and maintenance, related	Yes

Vertical Activity	Tariff Regulation	Horizontal Activity or Service	Tariff Regulation
<ul style="list-style-type: none"> • Access to and use of distribution assets 	Yes	Access and use of system, related	Yes
Trading <ul style="list-style-type: none"> • Wholesale trading/Central Purchasing Agency • Retail Trading • Market operator 	Yes ,if it is part of the activities a Licensee subject to Tariff Regulation Yes, if it is part of the activities a Licensee subject to Tariff Regulation N/A unless operator trades	Metering, billing, related Metering, billing, related Market operator service fees and charges, trading platform fees and charges, related	Yes Yes Yes

(3) the Regulator may from time to time amend Table 1 set out in subsection (2) to reflect the market structure in effect at that point in time.

EPDM Objectives

6. (1) Breaking down the Activities set out in Table 1 allows the Regulator to determine the costs associated with an Activity and to translate that into the cost reflective Tariffs for such Activity in order to –

- (a) improve competition;
- (b) achieve cost efficiency; and
- (c) ensure that costs associated with Activities are prudent and efficient.

(2) Unbundling of the Electricity Supply Industry value chain into its component Activities assists the Regulator in identifying specific cost drivers and allows the Regulator to allocate costs based on the details of the Licensee’s equipment, operation, and product mix, as well as allowing the Regulator to allocate overhead and indirect costs to related Activities.

EPDM Principles

7. (1) Each Activity will have its own individual Tariff based on the, capacity charges, energy charges and Ancillary Service Charges acknowledged by the Regulator, related to that Activity.

(2) Transforming the level of permissible revenues into a Tariff structure involves a model that incorporates all of the elements that are considered desirable in a regulated pricing regime, and the Tariff structure contains the economic signals that are intended to encourage efficient levels of usage within the constraint represented by the opportunity for the projected Tariffs to collect the level of permissible revenues at the time.

(3) A fundamental EPDM principle is the efficient use of rated operating capacities in the determination of all Tariffs as opposed to the use of sales or revenues to calculate Tariffs.

EDM Tariff Setting Process

8.(1) The EPDM entails a five-step process in rate setting which are as follows:

- (a) Step 1: Determine the revenue requirement;
- (b) Step 2: Functionalise Costs;
- (c) Step 3: Classify Costs;
- (d) Step 4: Allocate Costs; and
- (e) Step 5: Establish Rates and Charges forming part of Tariffs.

(2) The five-step process is applied to all Activities performed by Licensees that are subject to Tariff Regulation.

Determining of Revenue Requirement

(3)(a) This step entails the determination of the revenue requirement of a Licensee.

(b) Licensees performing activities subject to tariff regulation have the opportunity to recover their costs related to such Activities and earn a reasonable return thereon.

(c) Determining the revenue requirement is not a guarantee of revenue and a Licensee remains exposed to normal business risks.

Functionalise Costs

(4) In this step the Activities performed by Licensees are broken down into the respective services.

Classify Costs

(5) In this step costs that are functionalised are classified into more specific categories.

Allocate Costs

(6)(a) In this step classified costs are allocated among customer groups.

(b) The general regulatory principle in allocating costs is that costs are allocated to the customer group that are responsible for such costs.

(c) In order to allocate costs effectively the Regulator needs to understand the demand profiles of different categories of consumers in order to understand how their consumption imposes cost on the system over time.

(d) The collection of Consumer data is a fundamental component of the equitable allocation of costs over time.

Establish Rates and Tariffs

(7)(a) In this step the allocated costs are divided by appropriate consumption measures and various rate structures are adopted for different Consumer classes in order to reflect the different demand profiles of different Consumer classes.

(b) One or more of the following rate structures may be approved by the Regulator for different Consumer classes:

- (i) One-Part Tariffs: A single variable charge based on Consumer consumption. The cost allocated to a certain Consumer group is divided by an aggregate consumption billing determinant to derive a price per unit that would recover the revenue requirement.
- (ii) Two-Part Tariffs: The combination of a fixed charge (R per month) with a variable charge (R per kWh). The fixed charge is intended to cover the Licensee's fixed costs and the volumetric charge is set to cover its variable costs.
- (iii) Three-Part Tariffs: The three parts include a fixed charge (R per month), a variable charge (R per kWh), and a demand charge (R per kW-month).
- (iv) Multiblock Tariffs: Rates are set differently among different blocks of consumption.
- (v) Incentive Rate Tariff Structures: These structures are used to incentivise policy goal.
- (vi) Entry-Exit Tariffs: These rates set an entry fee and an exit fee, in addition to usage charges.
- (vii) Interruptible Rates: For customers who do not require firm Service, a special lower rate can be offered in exchange for the ability of the Licensee to curtail or interrupt Service to those customers.
- (viii) Time-of-Use Rates: This rate structure incorporates the time dependence of consumption
- (ix) Seasonal Rates: Seasonal rates reflects the costs of the demand peaks of certain seasonal periods or months.

EPDM Revenue Requirement Methodology

9.(1) The Revenue Requirement methodology forms a key component of the EPDM Tariff setting methodology.

(2) The Revenue Requirement is defined by the following equation:

Revenue Requirement = Operating Expenses + (Rate Base x Rate of Return)
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(3) The Revenue Requirement does not guarantee cost recovery.

(4) An Activity's costs from the Regulator's perspective –

- (a) must be known and measurable;
- (b) must be prudent;
- (c) must be just and reasonable; and
- (d) in respect of capital investment, must be used and useful.

(5) Operating expenses under the Revenue Requirement equation are non-capitalised costs and includes –

- (a) maintenance;
- (b) administration;

- (c) depreciation;
- (d) taxes;
- (e) billing expenses; and
- (f) such other items as determined by the Regulator from time to time.

(6) The rate base in the equation set out in subrule (2) equals the capital stock less accumulated depreciation, plus working capital that is deemed used and usable in performing the Activity.

(7) Following the determination of operating expenses under subrule (4) and the rate base under subrule (5), the rate of return is determined, represented by the weighted average cost of debt and equity, with the weighted average cost of debt base on actual debt and estimated new debt, and cost of equity based on generally accepted practices applied by the Regulator from time to time.

Key elements of EPDM Revenue Requirement methodology

10. The key elements of the Revenue Requirement methodology are as follows:

Regulatory Asset Base

(1)(a) the Regulator allows an element within the Required Revenue that may be collected and the associated Tariffs, calculated by establishing the value of the assets used (the regulatory asset base or (RAB), and applying to this a rate of return (ROR), based on the weighted average cost of capital (WACC).

(b) RAB and ROR determination will be for each activity.

(c) Licensees whose costs are not primarily driven by the RAB will use margin to determine their profits.

(d) RAB must represent assets used and usable to provide regulated service for each activity.

(e) RAB will be used to determine return based on approved WACC and depreciation charges.

(f) Historical cost basis is a preferred approach for asset evaluation method when determining RAB.

(g) The RAB of activities may only include assets necessary for the provision of those activities.

(h) The RAB must consist of existing fixed assets in use, new investments, as well as making allowance for net working capital to allow the respective operations of licensees to meet their short-term obligations.

Weighted Average Cost of Capital

(2)(a) The Weighted Average Cost of Capital (WACC) is the weighted average of the expected cost of equity and cost of debt.

(b) WACC is used by the Regulator to determine the rate that will be multiplied with RAB to grant Licensees a reasonable return.

- (c) The following formula will be used to determine the pre-tax real WACC:

$$WACC = [Ke \times g] + \left\{ \frac{Ke}{1 - tc} \times (1 - g) \right\}$$

Where:

WACC = pre-tax, real cost of capital

g = gearing

Ke = post-tax cost of equity

tc = company tax rate

Expenses (operating and maintenance costs)

(3)(a) Allowable expenses relate to all expenses that are incurred in the production and supply of electricity.

(b) Licensees must split between operating and maintenance costs.

(c) Operating costs should include head office costs or shared costs.

(d) Support and share of corporate costs includes:

- (i) Finance;
- (ii) HR;
- (iii) Commercial;
- (iv) Security;
- (v) Research and Development;
- (vi) Sustainability;
- (vii) Strategic and consultancy costs;
- (viii) Stakeholder management;
- (ix) Board, CEO;
- (x) any other costs approved of by the Regulator.

(e) Operations, maintenance, and other site related costs includes:

- (i) Technology Services;
- (ii) Environmental Compliance;
- (iii) Insurance;
- (iv) Labour;
- (v) Contractors;
- (vi) Materials and supplies;
- (vi) any other related costs approved by the Regulator.

Primary energy costs

(4)(a) These costs recognise that the energy mix will vary between different technologies.

(b) The Licensee regulated will be required transparently report the cost variances with respect to primary energy.

(c) Primary energy costs includes:

- (i) Fuel usage (coal, oil, gas)
- (ii) Operational fuel,
- (iii) Fuel handling
- (iv) Water usage and treatment
- (v) any other related costs approved by the Regulator

Depreciation

(5)(a) Licensees will be allowed to include depreciation related costs.

(b) Annual depreciation will be calculated by deducting the Accumulated Depreciation of the previous year (year-1) from the Accumulated Depreciation the current year (year 0) using the following formula:

$$D = ACy_0 - ACy_{-1}$$

Where:

D = Depreciation and amortisation of replacement cost adjustment

ACy_0 = MEAV x (remaining economic life year 0/total economic life)

ACy_{-1} = MEAV x (remaining economic life year -1/total economic life)

(c) The economic life for the regulated assets shall be determined by the Licensees and approved by the Regulator.

Levies

(6)(a) The Government imposes certain taxes and levies that are payable by Licensees that generate electricity.

(b) The rate is determined by Government, are actual payments and will be treated as allowable costs.

(c) These costs are determined by the metered generated volumes.

[(d) Because municipal surcharges fit the definition of the government levies and taxes, these need to be excluded from the municipal Tariffs and expressly captured and reflected as pass-through costs.]

Profit considerations

(7)(a) For asset-based Activities Licensees will be allowed a profit/ ROA based on their RAB value.

(b) For activities that are not asset based a profit margin mechanism for Licensees will be approved by the Regulator.

Consumer Demand Analysis

11. (1) Consumer Demand Analysis enables the Regulator to anticipate the impact of electricity prices on consumers in terms of affordability, profitability and competitiveness.

(2) the Regulator will use Consumer Demand Analysis as part of Tariff setting.

(3) Consumer Demand Analysis for the purposes of the Rule is divided into two aspects, namely –

(a) the role of electricity in consumer activities; and

(b) consumer load profiles.

(4) the Regulator will require Licensees and may request consumers to keep records of and provide consumer data in order to assist with Consumer Demand Analysis, including but not limited to –

(a) Peak Load-on a Daily, Weekly and Monthly basis;

(b) Electricity Consumption – 24 hours, weekly and monthly at half- an-hour or one hourly intervals;

(c) Pricing - businesses: Prices being paid, competitive prices in other areas of operation – regional and international;

(d) Pricing – households: Alternative energy solutions such as Solar or LPGas;

(e) Sensitivity to power quality fluctuations: Less than an hour, more than an hour but less than four hours and subsequent impacts;

(f) Competitiveness and affordability data: Role of electricity in consumer activities:

(i) proportion of energy costs to overall business;

(ii) proportion of energy costs to overall household budget.

(g) such other data as the Regulator may from time to time determine.

(5) Data collected under subrule (4) will be collected in compliance with the Protection of Personal Information Act, 2013 and will only be used by the Regulator for the purpose of Customer Demand Analysis and Tariff setting in accordance with the Act and internal Regulator policy regarding confidential information.

(6) Consumer load analysis will be divided into Load 1, Load 2, Load 3 and Load 4, whereby –

(a) Load 1 relates to Consumption that is at a constant level at all times;

(b) Load 2 relates to Consumption that is at a semi-constant level;

(c) Load 3 relates to Consumption that is of short duration where consumption is inconsistent; and

(d) Load 4 relates to Consumption that is variable and unpredictable.

Merit order dispatch

12. (1) The determination of fair and transparent consumer pricing requires adherence to the Merit Order Dispatch of power.

(2) The following steps will be applicable in terms of dispatch by the Independent System Operator-

- (a) For any given step change in energy demanded by the various types of consumer loads set out in Rule (5), the power will be Merit Order Dispatched, meaning those generators with the lowest Tariffs from the setting of the unbundled and cost reflective supply industry Tariffs will be dispatched first.
- (b) The quantity of power dispatched to meet the various consumer loads on the system will be monitored and reported by the System Operator, capturing which generator supplied what amount of power and record the duration of supply.
- (c) Different Consumer loads that come onto the system and the associated cost of power dispatched to meet various loads will effect a corresponding change in the price of electricity for that type of load, and will inform the basis for setting consumer prices by the Regulator.
- (d) Prior to a fully functioning electricity market coming into effect and effectively used for consumer price discovery, Weighted Average Tariffs for each load based on the cost of the power dispatched by the Systems Operator will be used to determine customer prices.
- (e) Fundamental in the Merit Order Dispatch approach is that not only are the power plants dispatched on merit order, but only those plants that are dispatched will be included in the resultant consumer prices determination, and hence –
- (i) only generators with a Regulator determined Tariff will be dispatched;
 - (ii) electricity prices should reflect the true economic cost of Consumption;
 - (iii) consumers should only pay for the Activities they are getting a benefit from.

Consumer price build-up

13. (1) Consumer Tariffs are set using the following formula:

$$\begin{aligned}
& \textbf{Consumer Tariff} \\
& = \\
& \textbf{Appropriate WAT \{Load 1 WAT + Load 2 WAT + Load 3 WAT + Load 4 WAT\}} \\
& + \\
& \textbf{Transmission network Tariff + Ancillary services charges} \\
& + \\
& \textbf{System/Market Operations Tariff (Management fee)} \\
& + \\
& \textbf{Central Purchasing Agency (CPA) Tariff (Management fee)} \\
& + \\
& \textbf{Levies (including REIPPP levies)} \\
& + \\
& \textbf{Distribution component} \\
& + \\
& \textbf{Trading component} \\
& + \\
& \textbf{Municipal Surcharges} \\
& +/- \\
& \textbf{Subsidies}
\end{aligned}$$

Where:

WAT = Weighted Average Tariff – see 13(3) (c) for explanation

(2) The formula is applied as follows:

Load 1 WAT + Load 2 WAT + Load 3 WAT + Load 4 WAT

(3)(a) The Independent System Operator submits forecasted energy demand by 10:00 am every day for the following day, while all qualifying generators are expected to submit their planned plant output (committed availability) by 14:00 every day for the following day.

(b) The Independent System Operator will call up power plants in merit order to meet the different loads as they come onto the system and record which generators delivered power and how much over the 24-hour period.

(c) A weighted average Tariff (WAT) approach will be followed, for each load based on the power actually delivered and monitored by the Independent System Operator, as calculated below:

$$\textbf{Weighted Average Tariff Load 1 (WAT1)} = \frac{\sum_{i=0}^n T_i \times X_i}{\sum_{i=0}^n X_i}$$

where T_i = tariff of plant i that has been dispatched to meet load 1
and X_i = the power dispatched to meet load 1

(d) The formula is repeated for each load type, and becomes the Load Price that will be charged for each load within a consumer load profile.

(e) Each other activity Tariff associated with servicing each load type will be summed in proportion to the amounts consumed in each load type to reach the overall billing for any particular consumer.

(f) For consumers using smart meters, the amounts per load will be based on the actual amounts consumed in each load, whilst for those consumers who do not have smart meters, total Consumption will be proportioned out based on a generic Consumption pattern for a particular consumer group to which the consumer will be deemed to belong, based on the benchmarking of actual consumers.

(g) If a consumer shifts their load from a more expensive load period to a cheaper load period, then the prevailing WAT for that period will apply, and will serve as an incentive to consumers to use electricity optimally.

Transmission network Tariff + Ancillary services charges

(4) The transmission use of system charges will be based on the Revenue Requirement methodology.

System Operations Tariff (Management fee)

(5) The charges for this Activity will be based on the Revenue Requirement methodology.

All levies, including REIPPP levies

(6) The levy charged will be based as follows:

(a) Generators will only be compensated for the energy supplied if they are dispatched.

(b) Generators can only be dispatched if they have a Tariff set by the Regulator.

(c) Where take or pay PPAs that guarantee compensation exist that self-dispatch and sales are made to a Licensee, this will be managed through a levy that is paid for by all electricity users as determined by the Regulator.

Distribution component

(7) The distribution use of system changes will be based on the distribution network tariff and the revenue requirement methodology.

Retail trading component

(8) The charges for this Activity will be based on the Revenue Requirement methodology.

Municipal surcharges

(9) Municipal surcharges imposed in terms of the Constitution and the Municipal Fiscal Powers will be treated like taxes and as pass-through costs by the Regulator.

Subsidies

(10)(a) Any subsidy will be transparently added or subtracted.

(b) the Regulator will from time to time determine the allowability of subsidies and how it is calculated, including the circumstances under which cross-subsidies are allowed.

Energy charges and capacity charges

(11)(a) Energy charges and capacity charges will be reflected separately on customer bills.

(b) Fixed charges will be allocated based on the relative Consumption of each consumer of that load.

Price predictability

(12) Price predictability will be underpinned by quarterly price reviews based on the dispatched data provided by the Independent System Operator, using the information obtained in the preceding quarter.

CHAPTER FOUR: ELECTRICITY SUPPLY INDUSTRY DATA

Data collection

14.(1) Data collected for purposes of the Rules will be based on the Regulator's authority to collect data in terms of section 35(1)(b) of the Act.

(2) Financial and non-financial information required to be generated by Licensees or consumers will be in a format or by means of a data collection tool made available by the Regulator from time to time and the submission thereof may be made compulsory.

(3) Data required to be submitted by Licensees or consumers by the Regulator will be used in costs assessment and conversion of those costs to Tariffs in accordance with the Rules.

(4) The costs information submitted by Licensees may be converted into either single Tariff or multiple part Tariffs, depending on the nature of the Activities performed by a Licensee.

(5) As well as cost information, Licensees should submit business plans for the period of validity of the tariff which include a narrative explaining and justifying the expected costs including expected improvements in efficiency and performance, applying to both capital and operating expenditure.

CHAPTER FIVE: TARIFF APPLICATION PROCESS

Pre-application process

15.(1) A Licensee wishing to apply for the setting, amendment or withdrawal of a Tariff shall, prior to submitting a Tariff application –

(a) shall obtain any approvals or permissions required to be issued or given under any other law to enable the applicant to apply for a Tariff under the Act; and

(b) shall collect such information and compile such reports containing the data and in the format that the Regulator may specify, as may be applicable to the Activity or Services to which the application relates.

(2) A Licensee may discuss its proposed Tariff application and the contents thereof with the Regulator prior to formally submitting such application for consideration: Provided that the records of such discussions shall be reduced to writing and must be submitted with its application.

(3) A Licensee shall ensure that it submits its tariff application in time to allow for its Licence conditions, legislative requirements and timeframes to be met.

Tariff application

16.(1) A Tariff application shall –

- (a) be made on the form available from the Regulator for this purpose;
- (b) be made in the name and Licence number of the Licensee applying;
- (c) indicate the regulated Activity to which the application relates;
- (d) shall be accompanied by the approvals, permissions, information and reports obtained, collected and compiled by the applicant under section 15;
- (e) be accompanied by the prescribed application fee; and
- (f) contain such further particulars as the Regulator may require in general, or in the case of a particular Licensee or Activity.

(5) Nothing prevents an applicant from applying for more than one A performed under different Licences under a single combined Tariff application.

Tariff consideration and approval

17. (1) the Regulator shall evaluate the information received under section 16 and inform the applicant of any deficiencies to be rectified or additional information to be provided within the period determined by it.

(2) the Regulator shall upon receipt of the application and any additional information as may required under subsection (1), cause a notice to be published in the *Gazette* -

- (a) informing members of the public that the Tariff application may be inspected at the offices of the Regulator against payment of the prescribed fees;
- (c) informing members of the public of the time and place of any public hearings that the Regulator plan to hold in connection with the Tariff application; and
- (b) inviting any person who wishes to comment on or object to the application, to lodge such comments or objection with the Regulator within the period as set out in the notice.

(3) Objections shall be accompanied by the prescribed fees and must include at least the following information --

- (a) the name, nationality and identity or identity number of the person objecting, or, in the case of a body corporate, its registration number, as well as the postal and physical address of the person objecting; and
 - (d) substantiated reasons for the objection.
- (4) the Regulator must provide the applicant with a complete copy of any objections received within 7 days of such objection being lodged with the Regulator.
- (5) the Regulator must afford the applicant at least 30 days after provision of any objections to respond thereto to the Regulator in writing.
- (6) the Regulator must consider and decide on the Tariff application within 120 days following the receipt of any response from the applicant under subsection (5).
- (7) the Regulator is not obliged to approve a Tariff application or may approve an application with such changes as it may deem necessary.
- (8) A Tariff approval or amended Tariff approval shall be valid for the period determined by the Regulator: Provided that the Regulator may approve automatic monthly or quarterly increases to reflect increases that are not under a Licensee's control or influence.
- (9) the Regulator must keep written record of all its proceedings and shall, in the event that a Tariff application is not approved or amended, provide written reasons for its decision to the applicant within 60 days of such decision.

Licence Conditions

18.(1) A Tariff approved by the Regulator under section 17 shall supersede any previously approved Tariff, and any associated Licence condition in the Licence of a Licensee shall, notwithstanding the provisions of section 17 of the Act, automatically be deemed to be amended to reflect the Tariff and any conditions that it is subject to.

- (2) In approving a Tariff under section 17, the Regulator may if it deems it necessary for purposes of the Act and the Rules determine associated Licence conditions relating to -
- (a) the manner in which any charge, rate or Tariff is to be made known to customers;
 - (b) metering, billing and related issues;
 - (c) the duty to act without undue preference, the termination of electricity supply to customers under certain circumstances, the duty to recommence supply, and conditions related thereto;
 - (e) the compliance with guidelines to govern relations between a Licensee and its customers, including the use of standardised contracts and the key provisions or requirements of such contracts;
 - (f) the dealing with and the settlement of Tariff related disputes between Licensees and customers;
 - (g) the keeping of financial and other information of such Licensee, and the furnishing thereof to the Regulator at such intervals as may be specified; and

(h) the keeping of technical, supply and other data regarding the customers of such Licensee, and the furnishing thereof to the Regulator at such intervals as may be specified.

(3) the Regulator shall prior to the imposition of a Licence condition under subsection (2) follow the consultation procedure set out in section 17(2).

Objection to Tariff

19. Any person objecting to a Tariff approved under section 17, shall do so in terms of the provisions of the Promotion of Administrative Justice Act, 2000.

Non-compliance to Tariff setting procedure

20.(1) Any non-compliance with the application, consideration and award procedure set out in this Chapter may on application be considered for condonation.

(2) A request for condonation shall be made on the form available from the Regulator for this purpose and shall be accompanied by the prescribed application fee.

(3) the Regulator shall take the following factors into account in deciding whether or not to grant a request for condonation-

- (a) the extent or degree of deviation;
- (b) the explanation for the deviation;
- (c) the impact of the deviation on the achievement of the objectives of the EPDM Rules; and
- (d) the prejudice to be suffered by electricity industry stakeholders, members of the public and the economy in general if condonation is granted or not granted.

CHAPTER SIX: REGISTER OF APPROVED TARIFFS

Register of Tariffs

21. the Regulator must keep and maintain a Tariff register in electronic format and hard copy, in which must be recorded --

- (a) the name and address of every Licensee subject to Tariff regulation;
- (b) the approved Tariffs of such a Licensee, categorised by Activity.

Inspection of Register

22. Any person may, subject to compliance with the the Regulator electronic document access policy, access the electronic register of Tariffs, and may request certified hard copies or extracts of any entry in the Tariff register which must be provided on payment of the cost thereof to the Regulator.

Remedies

23. Section 10(3) of the National Energy Regulator Act, 2004 (Act No.40 of 2004), applies to every decision by the Regulator under these Rules, except where the Act determines otherwise or where the Regulator sits as a tribunal, in which case section 10(4) of that act applies.