

NATIONAL ENERGY REGULATOR OF SOUTH AFRICA

Decision and Reasons for Decision (RfD)

ELECTRICITY PRICE DETERMINATION RULES

NATIONAL ENERGY REGULATOR OF SOUTH AFRICA

In the matter regarding

ELECTRICITY PRICE DETERMINATION RULES ('THE ELECTRICITY PRICING RULES')

DECISION

Based on the available information and the analysis performed, the Energy Regulator (ER) at its meeting of 14 December 2023 decided to:

1. **approve** the Electricity Pricing Rules developed under section 35 of the Electricity Regulation Act, 2006 (Act No. 4 of 2006), attached hereto as **Annexure A**;
2. **note** the preparation for the Electricity Pricing Rules that involves:
 - a. an Electricity Regulation (ELR) capacity assessment in FY 2023/24, and
 - b. stakeholder readiness planning in FY 2023/24 and FY 2024/25; and
3. **note** that the Electricity Pricing Rules will be implemented from FY 2025/26.

TABLE OF CONTENTS

1. INTRODUCTION	9
2. BACKGROUND	11
3. THE DECISION-MAKING PROCESS	14
4. THE ANALYSIS	14
5. LEGISLATIVE MANDATE FOR DETERMINATION OF TARIFFS	28
6. THE ELECTRICITY PRICING RULES.....	29
7. MOTIVATION	31
8. RISKS ASSOCIATED WITH THE ELECTRICITY PRICING RULES.....	33
9. TIMELINES TO IMPLEMENT THE ELECTRICITY PRICING RULES	34
10. CONFIDENTIALITY	36
11. CONCLUSION AND RECOMMENDATION.....	36
12. ANNEXURES	36

Abbreviations and Acronyms

β	Beta
DSL	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
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, 2004 (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 interest rate
RAB	Regulatory Asset Base
RAV	Revaluation Asset Value
RCA	Regulatory Clearing Account
RR	Revenue Requirement
TSO	Transmission system operator
SSEG	Small-Scale Embedded generators
TD	Tariff Design
TNC	Transmission and Network Costs
TO	Transmission Operator
TOU	Time-of-Use (Tariff or Price)
UCT	Unit Capability Factor
WAC	Weighted Average Cost of Capital
C	
WAC	Weighted Average Cost to Serve
S	

Definitions

Term	Meaning
The Act	The Electricity Regulation Act, 2006 (Act No. 4 of 2006) (the “ERA”).
Activity	An activity inherent to or directly associated with the import, export, generation, transmission, distribution and trading of electricity, and includes any service associated therewith.
Ancillary Service	The services defined in the South African Grid Code, and specifically defined in the System Operation Code, section 4, including, but not limited to: <ul style="list-style-type: none"> • reserves as defined in section 4.1 of the Transmission Code; • black start and unit islanding; • constrained generation; • reactive power supply and voltage control from units; and • regulation and load following.
Ancillary Service Charge	The charge that recovers the cost of providing ancillary services by the transmission system operator, and the plural shall have the same meaning.
Availability Charge	The charge associated with the costs of keeping a generation plant, as well as transmission and distribution facilities available, provided that the facilities are available to provide energy or reserves at any time during the year, whenever the services may be needed for any reason. In the case of generation plants, this charge does not apply to non-dispatchable or ‘self-dispatching’ plants.
Capacity	A commitment to be available to provide energy services or reserves at any time during the year, whenever the service may be needed, for any reason.
Capacity Charge	Same as Availability Charge.
Code	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.
Consumption	The total electricity consumed in a given period and is generally expressed in MWh.
Customer	A person who purchases electricity or a service relating to the supply of electricity.

Term	Meaning
Distribution	The conveyance of electricity through a Distribution Power System, excluding trading.
Distribution Power System	A power system operating at or below 132kV
Electricity Supply Industry	The Import, Export, Generation, Transmission, Distribution and Trading of electricity and all activities related thereto. For the purposes of the Electricity Pricing Rules, this includes Consumers.
Electricity Pricing Rules	These Electricity Price Determination Rules, including the annexures.
Energy Charge	The charge for the total electricity delivered, as recorded by the transmission or a distribution system operator, in a given period. It is generally expressed in MWh.
Export	The physical or virtual sale of electricity from the Republic of South Africa to another country, including any activity associated therewith.
Generation	The generation of electricity through any means and includes any service or activity associated therewith.
Import	The physical or virtual buying of electricity into the Republic of South Africa from another country, including any activity associated therewith.
Load	The demand for electricity, generally expressed in MW, that a consumer places on the electricity system as a result of the various consumer loads consuming electricity.
Licence	A licence issued by the Regulator under the Act.
Licensee	The holder of a licence.
Merit Order Dispatch	The dispatching of the lowest net cost electricity first.
Price	The charge for electricity and for the purposes of the Electricity Pricing Rules, it means a charge to a consumer as envisaged under section 15(1)(c) of the ERA.
Regulator	The National Energy Regulator of South Africa established by section 3 of the National Energy Regulator Act, 2004 (Act No. 40 of 2004).

Term	Meaning
Residual Load	All load remaining in a transmission or distribution company's area or service territory after all other sources serving the load in such area or territory have been excluded.
Retail trading	Selling electricity at retail prices that comprise the final prices to customers.
Revenue Requirement	The revenue requirement resulting from the revenue requirement formula.
Rules	The Electricity Pricing Rules made by the Regulator in terms of section 35 of the Act.
Service	Any service provided by a Licensee as part of an activity, and recognised and allowed by the Regulator as such.
System Operator	The licensee responsible for providing the service to operate the national transmission or distribution network, and includes any activity associated therewith.
Tariff	A charge for electricity and for the purposes of the Electricity Pricing Rules, it means a charge to recover the full and efficient cost of providing a service in terms of a licensed activity, including a reasonable margin or return, as envisaged under section 15(1)(a) of the Act.
Tariff Application	An application for the setting, amendment or withdrawal of a tariff.
Tariff Regulation	The economic regulation of any activity performed by a licensee through the setting of unbundled and cost-reflective tariffs, in accordance with the Electricity Pricing Rules.
Tariff Setting Methodology	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, as well as the benchmarks that must be used and the indices that will be used.
Time-of-Use Tariff or Price	The time-based billing structure under which the rate charged for each unit of electricity consumed may vary, depending on the time of the day.
Trading	The buying and selling of electricity as a commercial activity.
Transmission	The conveyance of electricity through a Transmission Power System excluding trading.

Term	Meaning
Transmission Power System	The transmission infrastructure that operates above 132kV.
Unbundling	Either the physical or accounting separation of activities and directly associated services into separate components, depending on the context.
Weighted Average Generation Tariff	The Tariff that takes account of the relative amount of power supplied by each generator at any particular time. For the purposes of these rules, it is the suggested proxy for a marginal price in the absence of a functioning competitive market.

1. INTRODUCTION

- 1.1. In the exercise of the powers contained in section 35(1) of the Electricity Regulation Act, 2006 (Act No. 4 of 2006), to make rules, and read with the power to regulate tariffs and prices as set out in section 4(a)(ii) and 4(a)(iv) of the ERA, the National Energy Regulator of South Africa (NERSA) has made the Electricity Pricing Rules (herein after 'the Rules'), attached hereto as **Annexure A**.
- 1.2. The introduction of an industry-wide electricity-pricing rule, as a departure from licensee-specific tariff conditions, supports the 2008 Electricity Pricing Policy (EPP)¹ (attached as **Annexure E**) objective of a sustainable electricity industry that is 'economically viable, stable and fundable in the short, medium and long term'.
- 1.3. The proposed Electricity Industry pricing approach is based on the globally accepted 5-Step Rate Setting Process. Its major departure from existing Eskom Multi-Year Price Determination – Cost of Supply – Eskom's Retail Tariff and Structural Adjustment (MYPD–COS–ERTSA) process is that it determines electricity industry tariffs and prices rather than determining one company's revenue.
- 1.4. The first three steps of the Electricity Pricing Rules are informed by the ERA and supported by the EPP, with the objective of establishing a link between the tariffs a user pays and the cost of delivering a service. Steps 1 to 3 are essentially about the derivation of unbundled cost-reflective tariffs for each regulated activity across the electricity value chain (vertical unbundling). In the parts of the value chain where more than one activity takes place, as in the case of generation and distribution, a further unbundling of the activity is undertaken, resulting in sub-activity specific tariffs.
- 1.5. Conventional rate setting begins with the use of regulatory accounts as an instrument to standardise the collection of historical cost data as the initial step to determining the revenue requirement (RR). The historical costs as well as utilised or available capacity are used as a base for the determination of base-year tariffs. To ensure price stability, utilised or available capacities are used as rate determinants.

¹ Department of Minerals and Energy (19 December 2008), Electricity Pricing Policy (EPP) Of The South African Electricity Supply Industry (Notice 1398), *Government Gazette*, 31741 p3

- 1.6. Projected cost and available capacity data will be collected annually to allow for the determination and the review of multi-year tariffs. For the purposes of promoting efficiency, multi-year tariffs could be determined based on the incentive framework best suited for each part of the electricity value chain.
- 1.7. In recognition of possible industry-wide or systemic risks and incidences, interim tariff 're-openers' will be allowed, to ensure the stability of the industry.
- 1.8. The fourth step of the Electricity Pricing Rules considers consumer demand data in two distinct forms.
 - 1.8.1 The first form, referred to as step 4A, seeks to understand individual and overall and unconstrained customer demand profiles as a baseline for determining appropriate pricing signals. It is known that the cost of generating power is driven by, among other factors, the generation plants that are deployed to meet the residual load. It is imperative that individual and overall consumer residual time-based demand data is collected. Guided by clause 8.4 of the EPP and to comply with the dictates of section 15(1)(a) of the ERA, it is critical that tariffs must be based on actual generation costs rather than an arbitrary multiplier for time of use.
 - 1.8.2 The second form, referred to as step 4B, relates to the data required for the evaluation of the impact of the electricity price on consumers. The data relates to electricity price affordability by different residential customer groups and the role of electricity in the competitiveness of each industrial and commercial customer group. The data will be used for the determination of subsidy frameworks as envisaged in section 15(1)(e) of the ERA, as well as clauses 2.4 and 6.3 of the EPP and EPP Policy Position (PP) 18.
- 1.9 The final step, step 5 of the Electricity Pricing Rules, is also split into two separate processes.
 - 1.9.1 Step 5A is about the determination of cost-reflective consumer prices that comply with the prescripts of section 15(1)(c) of the ERA. Individual consumer prices will be determined by summing the tariffs of only the services consumed by a consumer group.
 - 1.9.2 Step 5B is about the determination of final consumer prices that reflect subsidies that may have been defined by a subsidy framework that would have been agreed on with the stakeholders and the policy makers, as informed by section 15(1)(e) the ERA, as well as the EPP.

2. BACKGROUND

- 2.1 There are essentially two broad approaches available to the Regulator to set or approve prices and tariffs, namely:
- i) setting a tariff methodology as a condition of licence for each licensee; or
 - ii) setting a tariff methodology as a rule that will be applicable to all licensees.
- 2.2 Both approaches have advantages and disadvantages, but the second option allows for standardisation of the price setting mechanism among all industry participants and allows for the regulation of the industry rather than regulating individual players.
- 2.3 When the South African electricity supply industry primarily consisted of a vertically integrated utility, namely Eskom, determining tariffs for the utility was an appropriate approach. However, the unbundling of the utility and the emergence of new industry players, from generation through trading, has necessitated a shift from regulating a company to regulating an industry. This is an important step towards levelling the playing field for all electricity industry players, with price as the arbiter.
- 2.4 The two approaches, methodology or rule, can be summarised and compared as follows. Firstly, both are ERA and EPP compliant, apart from the need to obtain policy approval to develop a mechanism to allow tariffs setting applications from unlicensed activities – i.e. registrants and embedded generators, etc. Secondly, both adopt a form of a 5-step tariff/pricing setting process. The key difference in the approaches is the order of the steps, namely:
- i) the determination of efficient costs that are used to determine the required revenue [EPP 2.2/PP1 and ERA section 15(1)(a)];
 - ii) the functionalisation of costs into different activities (EPP 2.4);
 - iii) the classification of costs into fixed, variable and customer specific costs supported by numerous clauses of the EPP, but especially 2.3; 2.4; 5.2; 6.2; 8.5);
 - iv) the allocation of functionalised and classified costs into customer categories [EPP 8.4 and ERA 15(1)(c)]; and
 - v) determination of tariffs and prices using appropriate rate determinants (EPP 8.9 and PP30).

- 2.5 Efficient economic regulation is underpinned by detailed cost and financial data and, more especially, for tariff setting purposes. Although the regulatory accounting data that is required for tariff making purposes is presented differently from financial reports, it is essentially based on the same operating, maintenance and capital data collected by companies on a daily basis. Licensees will have to reorganise the same 'raw' financial data they use for tax or financial reporting, but into standardised Regulatory Accounts, to enable appropriate functionalisation, classification and allocation of costs – a crucial and unavoidable mechanism to derive cost-reflective tariffs. This step is underpinned by section 2.4 of the EPP, which states that 'Accounting Ring-Fencing of key electricity functions ... is the first step towards achieving accurate, transparent, and unbundled accounts'.
- 2.6 The fundamental concern in both approaches is the need to determine the 'efficiency and prudence' of the costs used in the tariff setting. The testing of the efficiency of an individual company, without appropriate benchmarks and deep industry knowledge, is extremely difficult. Overcoming this information asymmetry remains a challenge for regulators worldwide.
- 2.7 The easier and more prudent route is defining an approach that will allow the Regulator to come up with an efficient generation facility operator; an efficient transmission facility operator; an efficient distribution facility operator; and an efficient trader, and, where possible, benchmarking players against each other. While this approach may be possible for most parts of the value chain that have multiple players, it is not possible for parts of the value chain that only has one market participant.
- 2.8 The approach above will allow for the determination of cost-reflective tariffs that comply with the prescripts of section 15(1)(a) of the ERA.
- 2.9 Once cost-reflective tariffs for each activity have been determined, consumer prices that reflect the overall system demand profile, as demanded by section 15(1)(c), can be designed. The rider to this is that an allowance is made for individual customers or categories of customers, who, upon application and provision of evidence, will be charged prices that best represent the costs that their own unique consumption imposes on the licensees' businesses, as outlined in clause 8.4 of the EPP.
- 2.10 The above approach is aligned with the three principles, which are also contained in the EPP, and were approved by NERSA on 6 December 2021,

as follows:

- 2.10.1 **Principle 1:** the electricity industry value chain is disaggregated into its discreet activities to enable unbundled and cost-reflective tariffs, founded on the principles of the 'ABC approach' (EPP 2.4).
- 2.10.2 **Principle 2:** Recognition of the fact that the costs to serve are driven by load profiles and that price signals should reflect that (EPP 8.4).
- 2.10.3 **Principle 3:** Consumer prices should be underpinned by marginal costs once the generation sector has been liberalised. However, before a market is introduced, a cost-reflective proxy would be used (EPP 8.8, 8.9, 8.10 & 8.11 and the corresponding PPs 29, 30, 31 & 32).
- 2.11 A key challenge however is that true cost-reflective prices may not necessarily be affordable to each customer group, necessitating the tempering of cost-reflective prices through a subsidy framework – i.e. through cross-subsidies or direct state support programmes. Although cross-subsidies are envisaged under section 15(1)(e) of the ERA, the definition of subsidies is a policy prerogative, hence the importance of considering paragraphs 6.3 and 9 of the EPP and any other published Government policy.
- 2.12 The envisaged cost-reflective pricing system may not be fully aligned to the existing EPP in certain aspects, which means that some EPP policy positions may need to be accordingly reviewed, to enable the development of fully unbundled and cost-reflective tariffs and prices.
- 2.13 Although the thrust of the proposed tariffing and pricing framework is moving from regulating individual licensees to regulating the electricity industry – which is emphasised throughout the EPP – it is possible to expand the existing Eskom pricing framework (with some appropriate changes) to include all other market participants. This would involve:
- i) adapting the Eskom MYPD methodology to allow for the determination of allowable revenue (with or without the RCA framework) to all licensees;
 - ii) allowing and approving each licensee's tariff plans using the approved Cost of Supply Studies framework; and
 - iii) subsequently approving each licensee's final tariffs, from which end-user prices could be drawn – noting the EPP sought to rationalise and reduce the number of tariffs and end-user prices as outlined in EPP section 8.15 and PP 37.

3. THE DECISION-MAKING PROCESS

- 3.1 On 14 September 2023, NERSA published the Electricity Pricing Rules (attached as **Annexure A**) to give stakeholders the opportunity to provide both written and oral representation. This was to ensure that the process of developing the Electricity Pricing Rules was compliant with section 10 of the National Energy Regulator Act, 2004 (Act No. 40 of 2004).
- 3.2 The Regulator conducted a public hearing on 21 September 2023 and received nine written comments from stakeholders.
- 3.3 The Regulator made a decision on 14 December 2023.

4. THE ANALYSIS

4.1 Stakeholder engagement

- 4.1.1. On 14 September 2023, the Regulator published the Electricity Pricing Rules for stakeholder comments.
- 4.1.2. The Regulator received nine stakeholder comments (in written and in presentation format) from affected persons. The comments are categorised as set out in Figure 1 below.

Figure 1: Analysis of stakeholder comments

EPDM Rule Component \ Stakeholder	Regulator empowered to set tariffs/prices	EPDM Rule is ERA (Act No 4 of 2006) compliant	Use of capacity as tariff determinant	Unbundled tariffs essential for cost reflectivity	Allowed Requirement is not a guarantee of revenue	ABC (F + C + A) necessary for cost reflective tariffs	Tariff by load i.e. type of use	Marginal Pricing Principle via Weighted Average tariff	Smart meters essential for collecting consumer data	Merit order dispatch to instil efficiencies	Energy & capacity charges to reward availability	Cost reflective price signal – eg Cost reflective TOU	Price cost build-up with transparent imposts	NERSA capacity to collect, analyse and report on data	Overall Stakeholder response to EPDM Rule
MCSA	Supported	Conditional Support	Supported	Supported	Supported	Supported	Not supported	Supported	Conditional Support	Supported	Supported	Supported	Supported	Conditional Support	Supported
Sasol	Supported	Supported	Supported	Supported	Supported	Supported	Conditional Support	Unclear	Supported	Conditional Support	Unclear	Supported	Conditional Support	Unclear	Supported
Centlec	Supported	Supported	Supported	Supported	Unclear	Supported	Unclear	Supported	Supported	Supported	Unclear	Supported	Supported	Conditional Support	Supported
PFL	Unclear	Unclear	Conditional Support	Supported	Supported	Supported	Unclear	Conditional Support	Conditional Support	Supported	Unclear	Supported	Conditional Support	Conditional Support	Conditional Support
City Power	Supported	Supported	Unclear	Unclear	Supported	Unclear	Not supported	Unclear	Conditional Support	Unclear	Unclear	Unclear	Unclear	Unclear	Conditional Support
ECBC	Unclear	Unclear	Conditional Support	Unclear	Supported	Conditional Support	Not supported	Conditional Support	Supported	Supported	Conditional Support	Conditional Support	Conditional Support	Not supported	Conditional Support
Eskom	Conditional Support	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	Not supported	Unclear	Supported	Supported	Not supported	Not supported	Not supported	Not supported
Elexpert	Unclear	Unclear	Not supported	Conditional Support	Not supported	Unclear	Not supported	Not supported	Unclear	Supported	Unclear	Unclear	Unclear	Not supported	Not supported
EIUG	Supported	Supported	Conditional Support	Conditional Support	Supported	Conditional Support	Not supported	Not supported	Not supported	Supported	Unclear	Unclear	Not supported	Not supported	Not supported

4.1.3. The figure provides some useful insights and conclusions, as addressed in the Regulator's responses in the annexures, and set out briefly below.

4.1.4. There is general agreement among stakeholders that:

- 4.1.4.1. the revenue requirement approach is not a guarantee of revenue; and,
- 4.1.4.2. unbundled tariffs are essential for cost reflectivity (EPP 2.4), and,
- 4.1.4.3. merit order dispatch is supported as a key efficiency driver (EPP 4.2² and PP9).

4.1.5. Main areas of concern identified by stakeholders include the following:

- 4.1.5.1. the Regulator's capacity to implement the Electricity Pricing Rules and the need for a capacity assessment. A detailed capacity and training needs assessment has since been initiated by NERSA and should be completed by the end of the financial year.
- 4.1.5.2. The controversial 'type of use' tariffs approach also received a negative response. In this regard, a compromise was considered, as set out in paragraph 2.9 above, which essentially establishes a time-of-use tariff but which enables customers, or categories of customers, to apply for a fully cost-reflective consumer price – and elucidated further in 4.5.8 below.

4.1.6. Issues raised by stakeholders and the Regulator responses, and Regulator Members' questions at the public hearing are detailed in **Annexure B** and **Annexure C**. The stakeholder comments are categorised into facts and evidence, separated from sentiments and opinions. In terms of section 10 of the National Energy Regulator Act, stakeholder views, supported by relevant facts and evidence, are summarised and presented.

4.2 Underlying Regulatory Principles

4.2.1 The following are central not only to the proposed pricing framework, but to any regulated pricing framework, and feature prominently throughout the

² Tariff structures should not impede on the least cost dispatch of the different generating sets and supply options.

EPP:

- 4.2.1.1 Standardised regulatory accounts are required in the proper exercise of economic regulation.
- 4.2.1.2 Demand profiles drive the deployment of generators from the cheapest to the most expensive and as the EPP 4.2 states; the tariff structure should not impede this outcome.
- 4.2.1.3 Consumer affordability data and analysis should inform a well-structured subsidy framework.

4.3 Underlying pricing principles

4.3.1 *Principle 1:* Activity Based Costing (ABC) principles allow for functionalisation, classification and allocation of costs to different activities, noting the following:

- 4.3.1.1 ABC is no more data-intensive than the current methodologies employed in South Africa. In their day-to-day operations, licensees collect costing and financial data, which they use to generate tax and financial reports.
- 4.3.1.2 ABC simply requires the licensees to package (or as the EPP in clause 2.4 states 'Accounting ring-fencing') the same data with a standardised set of regulatory accounts, before the allowable revenue calculations are undertaken.

4.3.2 *Principle 2:* The original principle that '*different loads have different cost to serve*', while technically sound, and supported in the EPP clause 8.4, has caused much controversy, and has therefore been reviewed to accommodate stakeholder concerns. The generally accepted principle of load profile generation costs to serve all consumers connected to the system has been adopted as a compromise, provided that, on application and presentation of evidence, customers may be allowed to contract directly, based on their specific demand profiles – as envisaged in EPP clause 5.4 and PP 14.

4.3.3 *Principle 3:* The application of the marginal cost principle can only be applied to the generation sector once the generation sector has been liberalised, as candidly pointed out in EPP 8.8 and PP 29. Ahead of the introduction of the market, it is proposed that the applicable generation tariff used to determine consumer prices, at any point in time, be calculated based on a weighted average of all generator tariffs that are dispatched at those specific times, based on a merit order basis.

4.4 Regularisation of Data matters

4.4.1 Data intensity of the Electricity Pricing Rules has largely been exaggerated or misrepresented, primarily because the cost data that underpin the pricing methodology is the same data used for other accounts, only aggregated and presented differently. The role of data and its collection are alluded to in the EPP, paragraphs 10.3 and 10.4.

4.4.1.1 On the supply side, the Regulator will need disaggregated information in the format of a Regulator -approved and -standardised set of regulatory accounts or 'accounting ring-fencing' as detailed in paragraph 2.4 of the EPP. This information should already be available in the accounting systems of the licensees.

4.4.1.2 On the demand side, pricing requires properly aggregated data that shows the demand profiles to ensure consumers pay for the services they actually consume, noting this may initially be more data intensive than for the supply side. Further demand information will enable the Regulator to understand the impact of the cost-reflective prices on individual consumer or consumer groups. Data will be collected in terms of the Protection of Personal Information Act, 2013 (Act No. 4 of 2013) ('POPIA') and consumer identifiable data will be protected – see EPP 10.4.

4.5 The Electricity Pricing Rules' 5-step process

4.5.1 In regulating the tariffs in the South African electricity sector, the focus has been on setting or approving each licensee's tariffs through conditions set for each licensee. The alternative approach is to consider a generally applicable rule, as per section 35(1) of the ERA.

4.5.2 The approach that is proposed with the Electricity Pricing Rules is to shift from regulating individual licensee's tariffs to regulating the industry, as emphasised throughout the EPP and as per the Rules. The focus of the RfD is the economic regulatory construct of the Electricity Pricing Rules, rather than the detail of the Rules, which are attached as **Annexure A**.

4.5.3 The Electricity Pricing Rules follow the following basic construct, as

supported by the EPP:

- 4.5.3.1 A shift from regulating individual licensee tariffs to regulating the electricity industry where pricing for an industry is emphasised throughout the EPP
 - 4.5.3.2 The establishment standardised regulatory accounts – EPP 2.4
 - 4.5.3.3 Application of the ABC principles to licenced activities – EPP 2.4
 - 4.5.3.4 Application of the principle of an opportunity to earn allowed Revenue Requirement rather than a guarantee thereof to ensure efficiency – ERA section 15(1)(a)
 - 4.5.3.5 Design and implementation of unbundled cost-reflective tariffs as a key tenet of the EPP with six sections and policy positions dedicated to the concept
 - 4.5.3.6 The need for understanding of the impact of the overall consumer demand profile on the cost of supplying electricity (EPP 4.2; 8.4; 10.4)
 - 4.5.3.7 The need for a clear understanding of the affordability of cost-reflective prices by each consumer group, as outlined in EPP section 9.
- 4.5.4 **Step 1:** The proposed price setting approach follows ‘accounting ring-fencing’ of the main licensed activities of the value chain.
- 4.5.4.1 This step is essentially about disaggregation of the electricity industry value chain.
 - 4.5.4.2 The activities under the ABC methodology as per the dictates of the ERA are as follows: a) generation, b) transmission and associated services, c) distribution, and d) trading. The primary separation of the activities is the foundation of the Electricity Pricing Rules, derived from the basic unbundling of the value chain – see EPP 2.4.
 - 4.5.4.3 Central to the proposed pricing framework are the following key regulatory issues – efficiency and compliance with the EPP and section 15(1) of ERA. It must, however, be recognised that the pricing framework may, in some cases, be in conflict with some of the EPP policy positions, which will then require that those policy positions be revised in consultation with the policy line department.

- 4.5.4.4 Different parts of the value chain lend themselves in different ways to the determination of an 'efficient licensed activity'. For the parts of the value chain that have more than one player, efficiency testing may be achieved in a way that is distinctly different than for parts of the value chain that are a natural monopoly, such as transmission.
- 4.5.5 **Step 2:** This step of the Electricity Pricing Rules is about supply side data collection, which will be used in the tariff determination exercises. With the activities demarcated, the Regulator will need disaggregated data by activity in the format of the standardised regulatory accounts. This ensures that there is standardised treatment of the cost data by the licensees and in its collection by the Regulator. The correctly formatted data, consistent for each activity, is a critical enabler for Step 3 and is endorsed by the EPP 2.4.
- 4.5.6 **Step 3:** The functionalisation, clarification and allocation of costs underpins the determination of tariffs that are compliant with section 15(1)(a) of the ERA. Steps 1 and 2 provide the building blocks for unbundling tariffs and ensuring they are cost-reflective – or as the EPP puts it 'the first step towards achieving accurate transparent and unbundled accounts'.
- 4.5.6.1 For the setting of tariffs, a critical departure from the past is the use of capacity as a rate determinant to drive efficiency rather than the use of sales. This shift will eliminate the need for the widely contested RCA and the price instability that characterised the Eskom MYPD methodology.
- 4.5.6.2 As indicated, activities in different parts of the value chain are subject to tariff setting – see ERA section 7(1), and as outlined in the following sections.
- 4.5.6.3 *Generation*
- 4.5.6.3.1 The recent global best practice is exposing this part of the value chain to competition rather than to regulation to drive efficiencies. Efficient generators are determined through marginal pricing. However, South Africa, although having started deregulating the embedded generation market, is yet to join the league of nations that have established a generation

- market.
- 4.5.6.3.2 The fact that South Africa is yet to move towards the market approach does not mean that market principles cannot be introduced, with the aim to drive efficiencies in the generation sector.
- 4.5.6.3.3 South Africa can still impose the need for merit order of dispatch of generators based on the individual tariffs, as captured in section 4.2 of the EPP, meaning that each Eskom generator must have an individual tariff, reflective of their individual costs – as is the case for all Independent Power Producers (IPPs).
- 4.5.6.3.4 As an interim measure, prior to the introduction of the market, time-of-use (ToU) prices based on the weighted average of generation tariffs dispatched on a merit order basis will be used to determine cost-reflective prices for each hour of the day. This weighted average generation tariff is considered a suitable proxy for the long run marginal cost pricing alluded to in EPP 8.8, as will be case with a fully functioning market.
- 4.5.6.3.5 Globally, the markets are essentially ‘energy only’ markets and the provision of ‘capacity’“capacity” has generally been inadequately funded in the generation sector. Essentially, ‘capacity’ must be priced differently than energy. Energy-only markets compensate for active power supplied, whilst capacity markets compensate the passive power, reserve power, and availability to produce power if needed.
- 4.5.6.3.6 Adequate capacity is required to secure a sufficient supply of stable energy on a power grid. It is essentially an insurance against power fluctuations or outages, eloquently stated by the IEA³, and such capacity is made available by generators.

³ The International Energy Agency stated in its Power Systems in Transition Report “It would be very hard to imagine our modern societies without a secure supply of electricity. While it only accounts for a fifth of primary energy use today, it is indispensable for the 24/7 and increasingly digital economy. Recent difficulties caused by the Covid-19 pandemic remind us of the critical importance of electricity in all aspects of our lives, such as keeping medical equipment working in hospitals and IT systems available for teleworking and video conferencing. The impacts of an

Capacity, or availability, needs to be paid for and needs to be priced differently from energy.

- 4.5.6.3.7 Secured capacity may or may not be utilised, but is made available as a backup that can be relied on for grid stability. Only qualifying generators⁴ can be compensated for this service, – i.e. to be available (on standby) to deliver capacity on demand.
- 4.5.6.3.8 Any generator, however, that is paid for this service but is proven to have failed, at any time, to deliver the service when called upon to do so, will be penalised. The transmission system operator will accordingly monitor and record capacity secured, paid for and utilised, as well as generators who failed to deliver..
- 4.5.6.3.9 Capacity (or availability) charges will be used to compensate qualifying generators as appropriate. EPP section 5.6 explicitly states that such charges must be cost-reflective and appropriately socialised.
- 4.5.6.3.10 Renewable power generation capacity is measured as the maximum net generating capacity of power plants. However, it is not all renewable energy types that are dispatchable and hence only dispatchable renewable energy sources that would qualify for a capacity charge.
- 4.5.6.3.11 Fundamental to the merit order of dispatch of generators is the need to determine individual generator tariffs. The Regulator would then publish a schedule of Eskom’s individual generator tariffs. This approach to individual generator tariffs is no different to the manner currently applied to IPPs.
- 4.5.6.3.12 To deal with historical and legacy IPP tariffs, a ‘legacy levy’ will be determined and the dispatch of these IPPs will not be based on merit order. Their contracted tariffs will be paid from funds

extended outage go far beyond the power system or the value of the lost energy purchase itself.” (<https://www.iea.org/reports/power-systems-in-transition/electricity-security-matters-more-than-ever>)

⁴ Generators that have a tariff for their service set or approved by the Regulator.

emanating from the 'legacy levy'. Future Government-led IPP programmes will also be honoured through this levy, which will be payable through electricity sold in the Republic of South Africa.

4.5.6.4 *Transmission*

4.5.6.4.1 The transmission part of the value chain is a natural monopoly and therefore falls squarely in the realm of Regulator's efficiency and prudence determination methodology.

4.5.6.4.2 The determination of efficiency in this part of the value chain cannot be accomplished in any way other than through detailed analysis and tariff setting, for each of the services provided by the transmission system operator.

4.5.6.4.3 The other important issue in respect of transmission, is the departure from the original distance-based transmission tariffing approach to a postage stamp⁵ approach, considering that generation is now dispersed across the country, as opposed to adhering to the country's historical generation patterns. Paragraph 6.5 of the EPP addresses this and leaves it in the hands of the Regulator to investigate the different options and decide on the most appropriate method.

4.5.6.4.4 The differences in pricing of transmission will therefore only be informed by differences in load factors and connecting voltage levels so as to align with section 15(1)(c) of the ERA and EPP paragraph 6.5.

4.5.6.4.5 Transmission wheeling charges will be based on the unbundled tariffs applicable to transmission, as envisaged in EPP 6.2.

4.5.6.5 *Distribution*

4.5.6.5.1 Efficiency considerations for this part of the value chain presents challenges because of the diversity associated with

⁵ Postage stamp pricing means charging the same delivered price for all destinations irrespective of buyer's location – not currently catered for in the EPP.

the sector in terms of, inter alia, population density, building types, and geographic and income differences.

- 4.5.6.5.2 Distribution tariffs are comprehensively dealt with in section 8 of the EPP, which, inter alia, is centred on a number of core tariff determinants, namely cost reflectivity, tariff rationalisation and simplification, socioeconomic considerations, customer categorisation, time-of-use tariffs and the different distributors environments.
- 4.5.6.5.3 More specifically, the different determinants do not mean that distributors cannot be grouped together into logical categories for the purposes of determining efficient distributors and is aligned with EPP 8.15 and PP 37. Categorisation will be transparent and evidence based.
- 4.5.6.5.4 For each category of distributors, there are two possible approaches to the determination of an 'efficient distributor', namely:
- i) 'beating' an average approach; or
 - ii) determination of a benchmark distributor.
- 4.5.6.5.5 Appropriate benchmarks are generally difficult to determine due to the diversity of the efficiency drivers, and also presents challenges in terms of compliance with section 15(1)(a) of the ERA. The alternative was, therefore, considered.
- 4.5.6.5.6 The intended approach is that distribution tariffs will be finalised based on the determination of 'efficient' average tariffs for each category of distributors, taking into account voltage and load factor differences, as will be the case for the Transmission part of the value chain.
- 4.5.6.5.7 Distribution wheeling charges will be based on the tariffs applicable to each distribution category.
- 4.5.6.6 *Trading*
- 4.5.6.6.1 The trading part of the electricity value chain presents unique challenges, different to both transmission and distribution. The

ERA⁶ essentially defines both transmission and distribution as the 'wires only' business, excluding the buying and selling of electricity for commercial purposes.

- 4.5.6.6.2 In the past, a distributor was *de facto* considered as holding a 'trading' licence and distributors' tariffs incorporated both 'wire' and 'retail trading' costs. In essence, for every distribution area, there was effectively one 'retail' trader, supported by a number of resellers, who were essentially 'retail trading' in the name of the licence of the distributor. However, the situation is changing rapidly.
- 4.5.6.6.3 Independent traders are rapidly emerging as an increasingly important interface with consumers. As the role of traders evolves and diversifies, trading may end up being the main interface with the consumers of electricity and traded prices may become more important than the tariffs derived in the other parts of the value chain.
- 4.5.6.6.4 The key challenge is the absence of policy on traders that would guide the Regulator in defining their areas of operation or even limiting the number of traders existing in a distribution area. Essentially, the EPP only really addresses reseller pricing and the non-discriminatory access to the wholesale prices by qualifying licenced traders.
- 4.5.6.6.5 The further complication with traders is that trading is not limited to the distribution part of the value chain, as generators, transmitters or even independents and consumers can apply to be traders.
- 4.5.6.6.6 Fundamental though for tariff setting, as would have been seen in the other energy sectors, the determination of traders' tariffs – especially section 15(1)(a)-compliant tariffs – is extremely difficult, largely because trading is not an asset-based activity.

⁶ "Distribution" means the conveyance of electricity through a distribution power system excluding trading, and "transmission" means the conveyance of electricity through a transmission power system excluding trading.

- 4.5.6.6.7 The key questions are, therefore:
- i) how to determine the 'profit' component of a section 15(1)(a)-compliant tariff; and
 - ii) if there is effective competition in this part of the electricity value chain, is there a need for a Regulator-determined trading tariff?
- 4.5.6.6.8 Apart from the non-discriminatory access to wholesale prices and infrastructure, the EPP is quiet on this licenced activity and this part of the licensing value chain will require more focus than in the past – noting that the EPP PP22 does empower the Regulator to publish guidelines in this regard.
- 4.5.6.6.9 In the absence of effective competition, a national trading tariff or 'margin', which can drive efficiency and be section 15(1)(a) compliant, is possible. The tariff that can be determined in a manner so that the 'profit' component of the regulatory costs can be determined, will be derived by consideration of appropriately benchmarked earnings before interest, taxes, depreciation and amortisation.

4.5.7 Step 4: Inclusion of consumer data analysis in tariff determination

- 4.5.7.1 Historically, consumer price determination essentially focused on the supply side and overlooked consumer demand data. It is not surprising that it was the most contentious part of the SA electricity pricing review. EPP 8.4 recognises that '... tariffs need to be differentiated by the type of usage profile and by type of customer'.
- 4.5.7.2 EPP 5.2 addresses that the cost of electricity generation is largely influenced by the electricity generation technology that is deployed to meet the consumer demand. Put differently, the cost of electricity is driven by the resources deployed to meet the consumer demand profile.
- 4.5.7.3 In the previous response to the demand profile cost impacts, arbitrary 'time-of-use' tariff structures were utilised. However, the approach was neither EPP 5.2 and 10.4, nor ERA section 15(1)(a)-compliant and the Electricity Pricing Rules involve time-

of-use tariffs that are cost reflective.

- 4.5.7.4 The ideal approach would have been to conduct load-flow studies for each consumer group to determine the load profiles to be used in pricing. Unfortunately, i) load-flow studies are time consuming to conduct and ii) they tend to be reflective of current ‘time-of-use’ pricing approaches. Consumers who are currently on ‘time-of-use’ tariffs will most likely display demand profiles that reflect the current pricing approach rather than their actual demand profile.
- 4.5.7.5 For what is now referred to as Step 4A data, it is still recommended, in line with EPP PP58, that smart meters be deployed. Where smart meters are not available, general profiles can be utilised in the determination of the ‘cost to serve’ costs and the subsequent determination of cost-reflective customer prices.
- 4.5.7.6 Step 4A is aimed at understanding the load profile of a consumer, or category of consumers. For most users, smart meters are the most appropriate way of identifying load profiles. Load profiles are an important element of understanding costs to serve a customer group, which is borne out by the EPP 8.4: “Each different type of customer has a different load profile and thus load factor and consequently the energy and network costs differ.”
- 4.5.7.7 Step 4B addresses the need for a subsidy framework – EPP 6.3:
- 4.5.7.7.1 The need for a clearly defined subsidy framework is clear. The determination of an appropriate subsidy framework requires consumer income and expenditure data. Although the Regulator does not have not an explicit subsidy mandate, according to section 15(1)(e) of the ERA, tariffs and prices may ‘permit the cross-subsidy of tariffs to certain classes of customers’.
- 4.5.7.7.2 Consumer surveys are at the heart of this sub-step and help to elucidate what different consumer groups can afford to spend on electricity relative to their income or cost structure.

- 4.5.7.7.3 This sub-step will be important to gaining an understanding of the affordability of consumers groups with the aim to inform a subsidy framework. Understanding affordability and the development of a cross-subsidy framework is extensively covered by section 9 of the EPP.
- 4.5.8 **Step 5:** Translation of cost-reflective tariffs and incorporation of subsidies into consumer or end-user prices. As in the case of the previous step, this step is split into two distinct parts, namely i) determination of cost-reflective prices, and ii) determination of a subsidy framework.
- 4.5.8.1 This step is where the cost reflectivity, enabled by Steps 1 to 3 and informed by the insights from Step 4, translate to section 15(1)(c) compliant consumer prices. The consumer price signal will reflect the cost to serve, as well as the affordability as required by ERA section 15(1)(c) – a fundamental expectation of the EPP objectives as a ‘link between the price a user must pay to the cost of serving that user’, and emphasised in EPP 8.9 and PP30.
- 4.5.8.2 It is, however, important that a customer, or class of customers, that requires prices that best respond to the dictates of section 15(1)(c) of ERA (supported by EPP 5.4 and 8.4), is allowed to apply for a price that is based on their unique demand profile and the specific ‘costs that their consumption imposes’ on the system. EPP 8.9 and policy position 30 expressly support this approach and goes further to make it the Regulator’s responsibility to approve any ‘additional price signals’. This premise is cognisant of ERA section 21(2), and its rationale is expanded on in 0 below.
- 4.5.8.3 The importance of Step 5 of price determination is that any imposts, including surcharges, levies and subsidies, are only implemented after the cost-reflective tariffs have been determined, i.e. prices are transparent and void of opaque subsidies – again captured precisely in EPP 9.2 and PP45. Step 5 is divided into two components.
- 4.5.8.4 Step 5A: this sub-step gives effect to setting the baseline price that reflects the actual cost to serve across the system, but achieves the same outcome, as follows:

- 4.5.8.4.1 Effective time-of-use tariffs for all consumers that reflect the overall system cost to serve at different times – see EPP 10.4.
- 4.5.8.4.2 A provision allows consumers to apply for a power price that reflects the actual costs they impose on the system. Such consumers must submit an application accordingly and produce facts and evidence, such as the demand profile – from step 4(a) – that justifies a price that reflects only the services actually consumed – also fundamentally underpinned by EPP sections 5.4, 8.4 and 8.9.
- 4.5.8.5 Step 5B is about the determination of the consumer’s affordability, as per step 4B, and the final consumer prices being reflective of the subsidy framework.
- 4.5.8.5.1 Some consumers can afford to pay more for electricity, while others can only afford to pay less than the fully cost-reflective price. This provides for opportunities for internal cross-subsidies, as defined in section 9 of the EPP.
- 4.5.8.5.2 Where internal subsidies are not adequate, ‘external’ subsidies may be considered. In such cases, the Regulator can use the analysis to advise a sector ministry as to the need for, and level of, a subsidy.

5 LEGISLATIVE MANDATE FOR DETERMINATION OF TARIFFS

- 5.1 The development of the methodology is a process aimed at achieving fair evaluation, an efficient and effective administrative process, and rationality from a marsh of information. The general nature of the powers mandated to NERSA by section 4 of the Electricity Regulation Act, 2006 (Act No. 4 of 2006) shall, without related regulatory instruments, result in abstract and arbitrary conclusions. A more detailed explanation of the mandate can be found in **Annexure D**.
- 5.2 Notwithstanding the above mandate, the Regulator is also empowered, in terms of section 35(3)(k), to ‘make rules for the proper implementation of this Act’ insofar as it relates to administrative matters. It is with this in mind that the Regulator decided to implement its mandate to set tariffs and prices in

the form of a set of rules, collectively referred to as the Electricity Pricing Rules. This has been done after consultation with various stakeholders, as prescribed by section 35(1) of the Act.

- 5.3 This is a significant step, as it removes any notion that the Regulator seeks to implement an approach to setting tariffs and prices that is unlawful, unreasonable or irrational. It is upon these procedural grounds that the Regulator has faced numerous challenges to its application of a methodology and subsequent decisions. The development of the Electricity Pricing Rules seeks to address the courts' findings and avoid such shortcomings in future.
- 5.4 The development of the Electricity Pricing Rules serves to generate rationality, reasonableness and lawfulness in the exercise of powers by the Regulator. The Rules bring with it some important outcomes, namely:
- 5.4.1 Enforcement, as the Electricity Pricing Rules will be subordinate legislation to implement tariff setting with the least administrative burden
 - 5.4.2 Transparency, as the Rules will be applicable to all licensees and licence conditions, in respect of tariffs across the electricity industry
 - 5.4.3 Fairness, as the same rules will be applied fairly and all licensees of the same class will be treated equally.
- 5.5 By developing a rule, or set of rules, the Regulator seeks to ensure that the approach to tariff and price setting is generally applicable to the electricity industry and in so doing, non-discriminatory of any licensee, or class of licensees.
- 5.6 The Rules will ascend the passage of being a delegated law and has an immediate binding effect on approval. There is an important distinction between a methodology, as had previously been used and a rule. A rule, as advocated in the current regulatory instrument, will be legal and binding on all licensees in the Electricity Industry.

6 THE ELECTRICITY PRICING RULES

- 6.1 Chapters 1 and 2 of the Rules deal with its interpretation, title and definitions; and legislative mandate for the determination of tariffs in terms of section 14 and 15 of the ERA, respectively.

- 6.2 A key consideration was that in the past, the MYPD was a methodology without legal status, beyond the precedent set by its usage. The Electricity Price Determination Rule will be set via the Electricity Pricing Rules (i.e. the Electricity Pricing Rules incorporate a series of rules that will be applied), noting the following considerations in this change:
- 6.2.1 Section 35(3)(k) mandates the rules made by the Regulator as may be necessary for the proper administration of the Act, i.e. there seems to be a possibility that rules can expand on the key principles in respect of tariffs, as long as it remains within the ambit of the Act.
- 6.2.2 As rules are subordinate legislation, the Regulator cannot, for example, include unlicensed activities in Electricity Pricing Rules, when the Act does not empower the Regulator to set tariffs of unlicensed activities in the first place.
- 6.2.3 The Electricity Pricing Rules are hence issued under section 35 as a series of rules that will apply to all licenced activities.
- 6.3 Issuing a tariff methodology by means of a rule may have certain advantages:
- 6.3.1 The rule has the status of legislation
- 6.3.2 Uniform application for all similar licensees and all similar activities – i.e. moving from regulating one company (Eskom) to regulating the Electricity Industry
- 6.3.3 Non-discriminatory i.e. applies to all licensees equally
- 6.3.4 The rule sets out the principles that are then applied in the tariff application.
- 6.4 Licensing forms the cornerstone or foundation of price regulation under the ERA. Currently, there are licences for the *activities* of Generation, Transmission, Distribution, Trading, Import and Export. These *activities* are licensed under section 7:
- 6.4.1 the *operation* of generation, transmission and distribution *facilities*;
- 6.4.2 import or export; and
- 6.4.3 *involvement* in trading.
- 6.5 Each licence constitutes licensed activities, and the Electricity Pricing Rules

identify which of these activities should be price regulated. The Regulator has a choice to price regulate (or not), depending on the licence conditions.

- 6.6 The Electricity Supply Industry value chain with respect to import, export, generation, transmission, distribution and trading⁷ for the purposes of the Electricity Pricing Rules is broken down into its constituent activities.
- 6.7 The Electricity Pricing Rules then break down these activities (aligned to the market structure) in order to promote competition, achieve cost efficiency and ensure that the costs associated with each such activity are prudent and efficient.
- 6.8 Chapter 3 of the Rules addresses the Electricity Supply Industry Structure and Electricity Pricing Rules. The objectives of the Rules are improving competition; achieving cost efficiency; and ensuring that costs associated with activities are prudent and efficient.
- 6.9 Chapters 4, 5 and 6 address the issues of data collection, the tariff application process and the register of tariffs respectively and can be found in the relevant section of the Electricity Pricing Rules. The Electricity Pricing Rules' 5-step process forms the backbone of the Rules – as expounded in section 4.5.
- 6.10 In regulating tariffs in South African electricity sector, the focus has been on regulating each licensee's tariffs through conditions set for each licensee. The alternative approach is considering a generally applicable rule as per section 35(1) of ERA. The proposed approach is shifting from regulating individual licensee's tariffs to regulating the industry, as per the Electricity Pricing Rules attached as **Annexure A**.

7 MOTIVATION

- 7.1 The previous sections have sought to frame the Electricity Pricing Rules and the underlying 5-step methodology and clarify some misunderstandings, elucidate nuances in the elements of the approach, and provide the legal underpinning of the approach.

⁷ The licensing categories provided for in the ERA

7.2 Considering the analysis in section 4 and the legal mandate in section 5, both within the broader context of the changes in the South African electricity industry, there is a need for an industry-wide methodology, binding on all industry players, as proposed by the Electricity Pricing Rules, noting the following:

7.2.1 Any pricing approach must be compliant with section 15 of the ERA, where the approach must provide the mechanism for extracting efficiencies in a manner that addresses the information asymmetry that often exists between the regulator and the regulated – the Electricity Pricing Rules are fully ERA section 15-compliant.

7.2.2

7.2.3 The Electricity Pricing Rules are also well aligned with the prescripts of the EPP. All of the underlying principles have been identified in earlier parts of this RfD and where applicable, EPP compliance has been outlined with reference to the relevant sections and/or policy positions. The key attributes of the alignment are as follows:

7.2.3.1 Move to regulating an industry and not individual licensees – empathised throughout the EPP as a policy to ensure a stable and sustainable electricity industry.

7.2.3.2 The need for a set of standardised regulatory accounts as emphasised in EPP 2.4. The current NERSA Regulatory Reporting Manuals, and associated Cost Allocation Manuals, are a good start to develop such regulatory accounts that are enforceable and applicable to all players in the Electricity Industry, as well as the emphasis on the merit order dispatch with refinements, as captured in the grid code.

7.2.3.3 Merit order dispatch outlined in EPP 4.2 – stating that tariff structures should not impede the practice of the merit order of dispatch.

7.2.3.4 In addition, the Electricity Pricing Rules seek to reduce the number of tariffs being used in the electricity industry, as outlined in the EPP Policy Position 37: *NERSA shall rationalise existing electricity distribution tariffs into a set of electricity tariff structures for the EDI. The number of these sets will be governed by*

rationalising the number of distribution licensees through the restructuring process.

7.2.4 Advice received has indicated that although the current Eskom regulatory approaches can be extended to the rest of the electricity supply industry, the attempt will result in significant administrative burden. A more efficient approach would better at an industry level – see sections 6.2 and 6.3 for further discussion in this regard.

8 RISKS ASSOCIATED WITH THE ELECTRICITY PRICING RULES

8.1 Most of the risks below are important in terms of building the risk mitigation strategies into the preparation and implementation of the Electricity Pricing Rules over the next two years to risk-proof the Rules during implementation. The following table addresses the major risks identified.

Table 1: Electricity Pricing Rules Risk Matrix

Risk	Mitigating action
Data intensity of the Electricity Pricing Rules	There should be no increase in data intensity as the data required should be in the accounting systems of the licensees. Licensees' available data can be used while licensees prepare themselves and reorganise their accounting systems for the regulatory accounts.
The Electricity Pricing Rules are also demand data intensive and due to POPIA, this data may not be readily available	The section on demand load profiling can be deferred to a later stage in the project until the required data has been collected or made available. The use of surveys and proxies can be considered in the interim.
Implementability of merit order of dispatch rule when generation capacity is low	The Rules allow the cheapest available power to be dispatched first and this will drive efficiency and stable prices. It is acknowledged that under severe supply constraints, all power is dispatched, however in reverse order, more expensive power can be curtailed first when excess power is entering the grid. The Electricity Pricing Rules are not designed for the short term, but for the long term when supply constraints may or may not be prevalent. It must also be noted that all generation plants will only earn revenue when they are dispatched and therefore consumers will not pay for broken and inoperable plants.
NERSA's capacity to implement the Electricity Pricing Rules	Once approval has been granted, resources can be made available with the help of NERSA's Human Resource Department. External resources will also be utilised. Without the approval of the Electricity Pricing Rules, it is difficult to motivate for the necessary departments

Risk	Mitigating action
	to begin recruiting, however NERSA and some donor organisations are collaborating on a capacity and training needs assessment, which will also address the capacity required to prepare and implement the Electricity Pricing Rules.

9 TIMELINES TO IMPLEMENT THE ELECTRICITY PRICING RULES

9.1 Plan A – the Electricity Pricing Rules for the Electricity Industry

9.1.1 The Regulator is faced with a transition period to enable the setting of tariffs in the short term (2023/24 and 2024/25) using the MYPD5 years 2 and 3 revenues in the interim. The application of the revised pricing approach in the medium to long term – from 2025/26 onwards – will utilise the interim period to enable stakeholders (licensees and consumers) to ready themselves for the Electricity Pricing after 2024/25. The remaining two years of the MYPD5 have provided an opportunity, as follows:

9.1.1.1 National Transmission Com[any South Africa (NTCSA): The funding of the NTCSA will be ‘transferred’ from the Eskom MYPD5 revenues for the FY2023/24 and FY2024/25 using an internal revenue transfer mechanism, however this is only a transitional arrangement for the duration of the MYPD5. In the subsequent years, from 2025 onwards, the NTCSA will apply for their own tariff, making use of the Electricity Pricing Rules.

9.1.1.2 Pre-implementation readiness preparation for the implementation of the Electricity Pricing Rules will include, inter alia, the following:

9.1.1.2.1 the use of consultants to assist with the acquisition and analysis of supply and demand data.

9.1.1.2.2 the development and testing of models to process and analyse the data – including an impact assessment.

9.1.1.2.3 Extensive consultation with stakeholders supported by a stakeholder engagement and advocacy programme that started in November 2023 with the Electricity Price Determination Rules Webinar and continues until after the final approval of the tariffs and prices from the implementation of the EPDR.

9.2 Plan B – MYPD Methodology for every licensee

9.2.1 As with any plan, while all faith is in the Electricity Pricing Rules being approved and being rolled out according to plan, the team has considered a Plan B, as suggested by Members during various meetings. The Plan B provides Members with an alternative to the Electricity Pricing Rules, namely the use of the MYPD Methodology, but with the following provisos:

9.2.1.1 Important changes must be effected to address the price distortions currently related to, inter alia, Eskom's bundled average tariffs and misuse of the RCA risk mechanism

9.2.1.2 It must be applied to the entire electricity industry in acknowledgment of the increased penetration of IPPs.

9.2.2 While the IPPs from the various bids windows are catered for, as their PPAs are with Eskom and are a pass-through cost in the application of the MYPD Methodology, all other licensees will need an approved tariff to export power to the grid.

9.2.3 Although the thrust of the proposed tariffing and pricing framework is moving from regulating individual licensees to regulating the electricity industry, it is possible to expand the existing Eskom pricing framework (with some appropriate changes as alluded to in 9.2.1) to include other licensees on a licensee-by-licensee basis, as articulated by Eskom and other licensees at the public hearing. This would involve:

9.2.3.1 applying the MYPDM to all players requiring a tariff, including Eskom Generation, NTCSA and Eskom Distribution and all other licensees, such as municipalities and co-generation (cogen) plants exporting to the grid;

9.2.3.2 adapting the Eskom MYPD Methodology to allow for the determination of allowable revenue (with or without the RCA framework);

9.2.3.3 allowing and approving each licensee's tariff plans using the approved Cost of Supply Study framework; and

9.2.3.4 subsequently approving each licensee's final tariffs, from which

end-user prices could be drawn.

10 CONFIDENTIALITY

10.1 No text or section of the RfD has been identified as confidential.

11 CONCLUSION AND RECOMMENDATION

11.1 From a conspectus of the facts and evidence presented to the Energy Regulator, it is appropriate to consider and approved the Electricity Pricing Rules.

End.

12 ANNEXURES

Annexure A: Electricity Pricing Rules

Annexure B: Written stakeholder comments

Annexure C: Oral stakeholder comments - public hearing, 21 September 2023

Annexure D: Legislative Framework

Annexure E: The Electricity Pricing Policy (2008)