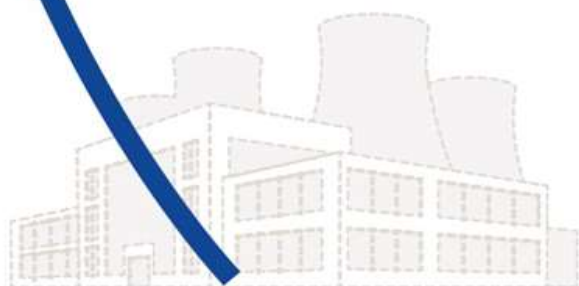
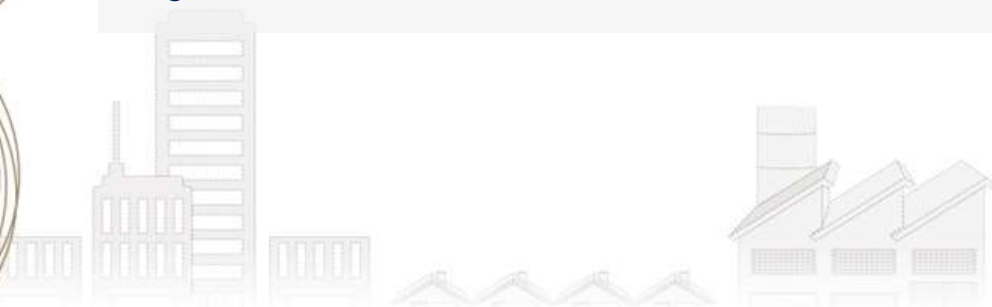


**Public Hearing: Consultation paper on
Methodology for Price Determination**

Eskom responses to Regulator Member Questions

Submission to NERSA

August 2022



Contents

Eskom's Responses to queries raised by Regulator Members	3
1 Deviations from legal requirements	3
2 Eskom prices still not cost reflective at revenue and tariff level	4
3 Licensee revenue determination ensures recovery of only efficient costs	5
4 Impact of sales volumes.....	5
5 Validity of continuing with present methodologies.....	6
6 Principles of this proposed methodology – not understood and risky for stakeholders ..	9
7 Proposed subsidies	10
8 Impact on residential customers	10
9 Impacts have not been determined – need to be undertaken	11
10 Benefit of Time-of- Use signals	11
11 Eskom Revenue application is not required in this methodology	11
12 Transitional arrangements need to be consulted on	11
13 Eskom Uganda concession	12

Eskom's Responses to Queries raised by Regulator Members

1 Deviations from legal requirements

NERSA acknowledges that changes in the regulatory approach can only occur within the legislative framework. However, this statement is contradicted in many instances. Key aspects are:

- Electricity Regulation Act (ERA)
 - NERSA must ensure that licensees recover efficient costs and a fair return seem not to be possible any longer in this proposal. The devastating impact of this oversight creates an untenable situation for licensees.
 - The focus on customers' affordability, competitiveness and profitability does not seem to uphold the spirit of the ERA – where a fair balance between customers, licensees, investors, etc is not evident.
 - Draft amendments to the ERA and EPP seem to have become a reality creating further confusion. Establishment of entities such as the central purchasing agency that should house the IPP Office (according to this proposal) amongst others is being consulted on by the DMRE.
- The National Energy Regulator Act (NERA) and Promotion of Access to Justice Act (PAJA)
 - This is extremely important to allow all stakeholders opportunities to engage on further developments of the as yet incomplete methodology as well related regulatory requirements.
- Appropriation Act
 - NERSA is proposing subsidies that are not included in the National Treasury appropriation act.
- Municipal Finance Management Act (MFMA)
 - To meet the S42 of the MFMA, Eskom is required to consult on a revenue application to SALGA and National Treasury. This proposed methodology does not require a revenue application. Thus, NERSA is not allowing this MFMA requirement to be met.
 - The MFMA does not allow for quarterly or monthly price adjustments
- The EPP requirements in many instances are not complied with. For example:
 - Recovery of efficient costs and fair return at licensee level (Eskom) **Policy position 1**
 - Use of replacement value for the determination of RAB Policy position 1
 - Wholesale and retail energy prices must reflect the TOU structure (Policy positions 12, 31, 32, 36, 58).

- The NERSA codes, licenses and methodologies are also not complied with, for example on the Tariff Code,
 - Distributors shall be required to submit any tariffs and tariff structural changes to NERSA
 - Energy charges to be reflected on a TOU basis
 - Tariffs to include differentiation to take into account time and /or seasonal variance.

NERSA will need to correct its methodology due to such possible violations of legislation and Government Policy and update its regulatory documents to ensure the methodology is aligned and implementable.

2 Eskom prices still not cost reflective at revenue and tariff level

It is acknowledged that substantial price increases have been experienced in the last few years and will continue to be required for a few more years. The reason for this is that for many years the price of electricity was kept artificially low. This is one of the key reasons for the mounting debt burden. Thus, the gap between the prudent and efficient cost of electricity and the present price still needs to be narrowed. In essence all Eskom customers have been subsidised. A Business Day article clarifying this situation has been included.

Using the NERSA FY 23 revenue determination as an example and assuming that all cost items and depreciation are adequately addressed. With regards to return on assets (ROA) the following was determined by NERSA

- ROA should equate to the weighted average cost of capital (WACC) of almost 10% p/a
- The ROA of almost R50bn at a rate of 1.08% was determined by NERSA on an incorrect low regulatory asset value (RAB).
- NERSA determines that if the ROA = WACC, then ROA would be almost R112bn
- NERSA illustrates a shortfall of R62bn – corresponds to a further 25% price increase
- This shortfall needs to be funded from somewhere – it is a combination of Government equity and Eskom debt
- Eskom cannot borrow money at a rate of 1.08%
- Thus, until Eskom's ROA equates the WACC, Eskom's prices will not be cost reflective, and all customers will continue to be subsidised.

Cost reflectivity at a tariff structural level is still being migrated towards. The RTP proposals are contributing towards making further progress to ensure that customers are informed in their tariff of the different services and that the correct economic signals are provided.

3 Licensee revenue determination ensures recovery of only efficient costs

The only way that it is possible for a regulator to know that their tariff determination adheres to the requirements of ERA s.15(1)(a) and (b), is to calculate the amount of the total prudent and efficient costs, for an assumed level of electricity sales and fair return. Therefore, will have to calculate the total required revenue for the licensed entity. Revenue requirement determination is essential for ensuring financial sustainability for the licensees. Revenue reflects the efficient and prudent costs related to both the fixed and variable costs. Thus, when any changes in volumes of electricity materialises, it is likely that the corresponding variable costs will also vary. This invariably happens. Thus, the utilities' revenue cannot be guaranteed. It is rather directly linked to the level of prudent and efficient costs.

4 Impact of sales volumes

It is important to understand that Eskom provides a forecast based mainly of information provided to us to customers, and that there is no direct consequence to a customer that does not meet its forecast.

It has been clarified by Eskom that a need exists for the determination of a revenue requirement. It has also been established that the sales forecast, as determined by NERSA, will also need to be considered. This is a common approach used by many regulators across the world. Without knowing the sales, and from this the expected revenue flows, makes it impossible to forecast financials and cash flows which are the cornerstone for engagements with key stakeholders including the management, the board, auditors, lenders, rating agencies, labour and government.

“NERSA concern on sales volume variance is misplaced” (Prof Eberhard – NERSA Consultation workshop, 18 October 2021). Eskom has demonstrated on many occasions that neither Eskom nor Municipalities have control over sales volumes, and both rely on customer information to develop such a forecast. Eskom undertakes a detailed process to determine the projected sales but relies in the majority on customers to provide this information.

Volumes have to be forecast and the actual results are an outcome of a myriad of economic factors such as GDP growth, investor confidence, commodity cycles, disinvestment, de-industrialization, etc. Hence any revenue determination methodology is in line with any globally accepted sound economic regulatory practice, is not silent on sales volumes but factors it into the revenue and tariff equation as an essentially uncontrollable (to the utility) variable. Tariff charges are also derived from the sales volumes, that is, allocated costs divided

by a volume (kWh, R/kVA etc.) to get to a charge. Without this forecast a charge cannot be calculated.

As sales volumes increase or decrease, there would be a concomitant increase or decrease in variable costs, but not necessarily fixed costs. The key variable costs for the electricity industry are related to primary energy costs.

NERSA has established that Eskom's fixed costs are at least 65%. Thus, whatever the sales volume, the fixed costs would need to be recovered. Thus, when sales are lower than NERSA originally determined, it is only the fixed costs that are recovered at an RCA stage. It is not additional revenue. Even in a market situation, or for IPP contracts, the fixed costs for generators will be recovered, whatever the volume of energy. Presently, the ROA for IPP contracts are envisaged to be much higher than the 1.08% determined by NERSA for Eskom assets.

In addressing the matter of 'electricity utility financial death spiral' it is shown that it does not apply – because the main prerequisites are absent. Eskom's current average sub-cost-reflective price is 138c/kWh (US\$ 8.3c/kWh) in FY 23. Eskom's cost-reflective price is around 165c/kWh (US\$ 9.9c/kWh). Even compared to the cost-reflective price, there are no cheaper unsubsidized international substitutes and alternatives. Furthermore, Eskom's cost-reflective average price is well below the full cost of equivalent (thus, including back-up and storage) South African substitutes and alternatives – which start at approximately 170c/kWh for grid-scale installations. Thus, although some price elasticity of electricity demand obviously exists, regarding demand from Eskom it is 'relatively inelastic' at below -0.3 on average. Whereas, it requires a price elasticity of demand of greater than -1.2 to trigger the onset of an electricity utility financial death spiral. A volume reduction of 23.3% would be required to neutralise the financial gain from an assumed 20% increase in the average price. This would be equivalent to about 45 TWh for the year. The average annual reduction in Eskom sales volume over the last decade has been about 2 TWh.

At a tariff level, Eskom's RTP proposal for a generation capacity charge and higher fixed network charges addresses paying for services when consumption is reduced due to own generation, but the grid is still needed..

5 Validity of continuing with present methodologies

- Replacement of several existing NERSA methodologies

This proposed methodology seeks to replace many NERSA methodologies. These include the multi-year price determination (MYPD) methodology, the cost to serve (CTS) framework,

Eskom Retail tariff and Structural adjustment (ERTSA) methodology and guidelines for Municipal Benchmarks.

- Existing NERSA methodologies can achieve key objectives

It has been demonstrated that key implementable objectives of this proposed methodology can easily be implemented by existing methodologies and processes. These include the multi-year price determination (MYPD) methodology, the cost to serve (CTS) framework and Eskom Retail tariff and Structural adjustment (ERTSA) methodology. In addition, the retail tariff plan (RTP) that Eskom had submitted to NERSA during August 2020 together with the proposed update (submitted to NERSA on 5 August 2022), provides specific provisions for further achievement of key implementable objectives. The enforcement by NERSA of the CTS to be used for tariff design for municipal licensees will significantly contribute to cost-reflective tariffs and meeting the implementable objectives. This allows for Municipalities to recover efficient and prudent costs and a fair return.

- NERSA continues to determine revenue and tariffs

- Revenue determination by MYPD. The determination of revenue empowers NERSA to only allow efficient and prudent costs. This will be dependent on the availability of Eskom and IPP generation plants. Customers wish NERSA to play a more meaningful role in this aspect. NERSA has a powerful role to play in ensuring in only efficient and prudent costs. The RCA process is an inherent part of the determination of the efficient and prudent costs.
- Apportionment of revenue among customers by CTS - Once the revenue is determined, the CTS will allocate in accordance with services to be provided to with distinctions made between customer-, demand- and energy-related costs classes. Guidance is provided to licensees, who submit to NERSA to approve
- Determination of tariffs and rates by ERTSA – The NERSA methodology guides Eskom to provide rates and tariffs for approval by NERSA.
- Municipal tariffs determination together with CTS studies - Allows Municipalities to recover their efficient and prudent costs and a fair return

- Eskom Retail Tariff Plan (RTP) allows timeous implementation of further objectives

The RTP is in compliance with policy, legislation and other NERSA regulatory frameworks. This plan is implementable without need for any further information, meters, billing systems revisions, etc. The impacts of implementation have been defined for all stakeholders to engage with. Specific models will be provided. The Eskom retail plan is a move in the right direction reflecting Eskom's unbundled costs, updating tariffs and tariff structures to be more cost-

reflective in structure and responding to changing energy environment. Implementation of these known processes allows for incremental migration towards a market.

- It is not only a matter of methodology but implementation of methodology

The existing methodologies are globally accepted. They do not expire. Similar methodologies are applied across the world. The challenge that South Africa has been facing is the implementation of these methodologies. This has been clarified in the several court outcomes. In addition, certain licensees have not been in a position to provide submissions including cost of supply studies. Enforcing such submissions will assist NERSA in better implementing its existing methodologies.

- Eskom has submitted improvement of MYPD methodology

Eskom has submitted proposals for improvement in the existing MYPD methodology in 2020. These proposals have not been considered by NERSA since then.

- Requirements for next few years

In accordance with legislative requirements, any revenue and price determination process takes a long time to prepare for, and implement. NERSA has started a consultation process for FY 24 and 25 revenue determination. It would mean all the existing methodologies will be applicable for these two financial years. These are the MYPD, CTS, ERTSA and Municipal guidelines. It is imperative for NERSA to encourage Municipalities to provide CTS studies. This will provide more meaningful input to municipal adjustments that are made. There is a pending court process on this matter.

It has been established that this proposed methodology will not be completed by September 2022. Thus, will not be applicable. Any revision of existing MYPD methodology will also need to be finalised by September 2022. This will not be possible. Thus, any methodology change will be applicable for much later.

Eskom has submitted a retail tariff plan. This needs to be consulted on and finalised for implementation by 1 April 2023. NERSA has already consulted on many aspects of the retail tariff plan. These changes can be accommodated for implementation in FY 2024.

The possible sequence is as follows:

- NERSA consults on retail tariff plan – September to October 2022
- NERSA makes MYPD 5 revenue decision – November 2022
- NERSA approves retail tariff plan – November – December 2022
- Municipalities aware of average price increase and restructured tariff – Dec 2022
- NERSA make ERTSA approval – Jan – Feb 2023
- Municipalities make price adjustment applications – March 2023

- Eskom implements – 1 April 2023
- NERSA approves Municipal price adjustments – May 2023
- Municipalities implement 1 July 2023

6 Principles of this proposed methodology – not understood and risky for stakeholders

The principles, as now included in a proposed methodology, as being proposed to be applied are not supported by Eskom. They are not in compliance with legislation and policy. To the extent understood, they result in significant risks to all stakeholders. The basic tenets of a regulatory methodologies that may overlap with this proposal can be considered.

The sequence of the process to determine the price adjustment is unclear. NERSA undertakes to source information from licensees and customers to determine detailed tariffs. The format of the manner in which this information is provided is unknown and yet to be communicated to licensees. Information will need to be provided once in five years, with quarterly or monthly updates for certain changes. The level of detail required for NERSA to determine prudent and efficient costs is scant. It is unclear how NERSA will undertake its prudency and efficiency assessments.

NERSA will utilise information that it will source from electricity customers to determine their usage patterns. NERSA will determine levels of affordability, profitability and competitiveness to determine the prices. The remainder will be subsidised by the fiscus.

Eskom, in accordance with NERSA's scheduling and dispatch rules, dispatch generators on a least marginal cost basis already. It is not clear why NERSA appears to assume otherwise. During marginal cost dispatch, the price for the energy is based on the highest dispatched marginal plant, not each generators' marginal cost. For the government IPPs the price paid is the PPA tariff.

The proposed NERSA approach of allocating the cheapest generation to baseload customers is giving preferential treatment to one customer category over the other, ignoring that at any point in time, it is the mix of generation that is used to supply all the load. The mechanics of doing this seems to be impossible in a retail pricing environment and contrary to reflecting system marginal cost-based approach.

The load type approach has been proposed and rejected in the US. The most important flaw is that, " baseload" customers do consume power during the peak period, the marginal costs are higher during those periods, and if there is a response by reducing demand, it lowers costs for the system. For further reading on the subject (referred to as a decomposition method)

refer to the following document “Electric Cost Allocation for a New Era: A Manual” (<https://www.raonline.org/wp-content/uploads/2020/01/rap-lazar-chernick-marcus-lebel-electric-cost-allocation-new-era-2020-january.pdf>) drafted for **The Regulatory Assistance Project (RAP) which is an independent, global NGO advancing policy innovation and thought leadership within the energy community**

Many customers including those with baseload generation, are considering wheeling energy or installing own generation, and therefore their load profiles will change. The proposed load types and WAT approaches will impact the viability of wheeling transactions and will greatly disincentive customers to do this as they will move to a more expensive WAT. Eskom believes that the current TOU charges and the proposed move to having a generation capacity charge in its Retail Tariff Plan will achieve the objective of sending the right time-based signals for the cost when electricity is used and provide for standby capacity being charged for when customers lean on the system.

Based on the information provided, NERSA wishes to add many tariffs to determine prices to particular customers. It is unclear how these groupings will be determined. Subsequent adjustments will occur with a price cap. No details are provided on this process.

7 Proposed subsidies

This consultation paper creates the impression that room for subsidies by the fiscus is available and a request can be made for such through the “Social Welfare Services” or the “relevant industrial policy Ministry”. This is contrary to already existing policy decisions referred to in the EPP. In addition to the policy decision with regards to the negotiated pricing agreements (NPAs), the DMRE has a framework for long-term and short-term NPAs that NERSA is implementing.

8 Impact on residential customers

Residential customers would fall into the more expensive NERSA proposed load types as they have the peakiest profile of all customers' categories. This would mean that their tariffs would have to increase. A better alternative would be for NERSA to approve the proposed residential TOU tariff Homeflex, and that over time this tariff is made mandatory for higher consumption residential customers (which is aligned to the EPP). This would ensure that the correct pricing signals are provided to peak usage but would not penalise these customers in all time by putting them into the most expensive load type categories.

9 Impacts have not been determined – need to be undertaken

One of the greatest concerns with the proposed methodology is there no analysis of the impacts on customers has been undertaken by NERSA, nor any tools provided where customers could determine impacts. It is impossible to work out what such impacts would be due to the many questions that remain unanswered.

Eskom's retail tariff plan, submitted for NERSA approval, has provided significant details on the impact on various customers. These impacts were considered when the proposals were being designed. It allowed for coherent decisions to be made to allow for a migratory path.

10 Benefit of Time-of- Use signals

About 80% of Eskom's current sales are on a TOU basis. More than half of that is to municipalities, who do not all offer TOU tariffs to their customers. A better approach would be for NERSA as to propose standard tariff structures including TOU to be migrated towards over time.

Moving away from the concept of time of use (TOU), which is in accordance with the EPP to an apparent "type of use" appears to be favouring one particular sector to the expense of others. Removing TOU signals in tariffs is not cost-reflective and would have a serious impact on managing the electricity system. The System Operator needs TOU tariffs in the absence of a market and the System Operator requirements have not been understood or considered in the "type of use" proposal. The TOU approach is an internationally recognised approach to optimally utilising limited resources. Customers, especially industrial customers have been responding to these signals and manage their productivity in accordance with the benefit of the economy and the system.

11 Eskom Revenue application is not required in this methodology

Eskom is only required to provide information once in five years to NERSA. No revenue application is required made. NERSA will consider the permissible revenue for each tariff category. The tariff categories are added together and then a total price is determined.

12 Transitional arrangements need to be consulted on

In the event that NERSA wishes to implement the proposed methodology transitionally, the details need to be clarified upfront. All stakeholders need to be aware of transitional requirements. These would need to be consulted on. It is still necessary to first have a complete methodology and related regulatory requirements. All stakeholders need to be

aware of the transitional arrangements. These cannot be subjectively applied. The entire spectrum of applicability needs to be known prior to implementation.

13 Eskom Uganda concession

It would not be correct to compare South Africa to Uganda. The Ugandan electricity industry structure is vastly different from South Africa. Uganda has a fully unbundled industry with majority private ownership of Generation and Distribution. This is supported by the legislative framework of the country. Interestingly, Uganda is one of the two countries in Africa (together with Seychelles) that has cost-reflective tariffs. The percentage of people with access to electricity in Uganda was determined to be 15% and that of South Africa was 89% in a World Bank report (2016). Uganda presently has an installed capacity of approximately 1 346 MW, the majority being hydro. The annual energy produced is approximately 4.7 TWh in 2021. It should be noted that the various entities also make revenue applications to the regulator.

Eskom's concession in Uganda cannot be compared to the South African regulatory framework. The Eskom concession in Uganda fits into a particular arrangement that is not comparable to the South African situation and South African law. However at the public hearing reference was made to how Uganda dispatches their generation and Eskom wishes to reiterate that, in accordance with NERSA's scheduling and dispatch rules, generators are dispatched on a least marginal cost basis already.