Submission to NERSA

Eskom's fourth Multi-Year Price Determination (MYPD4) application for the years 2019/20, 2020/21 and 2021/22

29 November 2018

1. Introduction

This submission is made to the National Energy Regulator of South Africa ("**NERSA**") in response to its invitation for public comment on Eskom's fourth Multi-Year Price Determination application for the years 2019/20, 2020/21 and 2021/22 ("**MYPD4**")

NERSA's invitation requests that separate comments be submitted for each of the MYPD4 and the third Multi-Year Price Determination Regulatory Clearing Account (RCA) Year 5 (2017/18) applications ("**MYPD3 Year 5 RCA**"). The comments in this submission relate to the MYPD4 application, but the financial implications of the MYPD3 Year 5 RCA application are included in order to show the potential aggregate cost to consumers of all current tariff applications and already existing approvals, as set out in paragraph 2 below.

A separate submission in relation to the MYPD3 RCA has not been prepared.

2. Financial implications for consumers of the Eskom applications

The aggregate increased amount payable by consumers is set out in the table immediately below, on the assumption that both the MYPD4 and MYPD3 Year 5 RCA applications are approved as requested (with 25% of the latter being recouped annually, from 2020/21 onwards). In order to complete the picture, the table also includes the already approved RCA application in relation to MYPD3 for Year 2 (2014/15), Year 3 (2015/16) and Year 4 (2016/17) ("**MYPD3 Years 2,3 and 4 RCA**").

	2019/20	**2020/21**	**2021/22**
MYPD4 application	R219bn	R252bn	R291bn
MYPD3 Year 5 RCA application	---	R5.41bn	R5.41bn
MYPD3 Years 2,3 and 4 RCA as approved	R8.173bn	R8.173bn	R8.173bn
Total Revenue	R227.17bn	R265.58bn	R304.58bn
Percentage increase over preceding year	19.56%	16.91%	14.68%

On the assumption that the tariff and RCA applications are approved as requested, this table shows that Eskom's total revenue in 2021/22 will amount to R304.58bn, up from R190bn in 2018/19. This represents an aggregate increase of no less than 60% over a three-year period and an average annual increase of 17%. Eskom's MYPD4 application mentions an annual increase of 15%, but that does not include any RCA reimbursements, which the consumer nevertheless has to pay in addition to any tariff increase.

3. Eskom's analysis of the economic impact of increased tariffs

In its tariff application, Eskom's analysis of the effects of a tariff increase of 19% on the economy as a whole is the following:

- GDP is forecast to expand at an average rate of 2.0% y/y, which is 0.3 percentage points lower than the 2.3% y/y growth forecast in the baseline scenario (which assumes a 8% tariff increase); and
- total employment is expected to grow at an average rate of 0.9% y/y under a 19% tariff increase, compared to 1.2% y/y in the baseline scenario.

This analysis shows that high tariff increases have a negative impact on growth and employment, which would, in any event, have been a logical assumption.

The GDP assumptions in the economic report on which Eskom bases its comments[1] are 2.0% (2018), 2.2% (2019) and 3.0% (2020-30). However, the National Treasury's latest economic growth forecast is 0.7% for 2018, 1.7% for 2019 and 2.1% for 2020[2]. Eskom's GDP growth assumptions are therefore substantially higher than current forecasts. The report used by Eskom is dated 6 June 2017 and almost 18 months later, can now be considered to be out of date. South Africa is clearly in a worse economic situation than assumed in Eskom's analysis. If one nevertheless assumes that Eskom's study is correct in identifying that high tariff increases lead to lower growth and job creation, then those consequences will equally apply in a lower growth scenario. One hardly needs to be an economist to come to that conclusion.

In its application, Eskom even takes the view that it would be preferable for NERSA to grant Eskom the requested increase in tariffs to reduce the risk of a further sovereign downgrade being triggered by a much lower-than-required tariff, which would, according to Eskom, force Government to borrow more to plug the gap, at higher interest rates. NERSA and consumers are therefore being told that they risk further sovereign credit downgrades if Eskom doesn't get the tariff increases it has applied for. Quite apart from the causality in Eskom's argument being debatable, this kind of argument places NERSA in a situation where it is expected to second guess the effect of its tariff decision on South Africa's sovereign credit ratings. This places improper pressure on NERSA and is not appropriate in a tariff application.

Whilst Eskom's further argument that subsidised or artificially low electricity tariffs may lead to distortions in the economy is not discounted, we have a situation in South Africa where electricity demand has been stagnant for a decade, but where the cost of electricity is continuously increasing by leaps and bounds. This is in itself a highly abnormal situation which Eskom seems to be unable to recognise as such. No attention is paid in the economic report to potential distortions which such a continuing situation would cause to the economy.

4. Major reasons for the tariff increases

The major reasons why the requested increases in tariffs are so substantial, are:

- the ever-increasing cost of debt service (comprising interest payments and debt repayments);
- the increasing cost of primary energy; and
- electricity demand which has been stagnant for 10 years.

5. The cost of Eskom's debt service

The methodology applied in tariff applications does not include debt service as an item to be included in the calculations. Instead, the non-cashflow concepts of a return on assets and depreciation are used, and Eskom effectively applies these concepts to make provision for its debt service in the tariff formula.

[1] *The macroeconomic impacts of alternative scenarios to meet Eskom's five-year revenue requirement*, report prepared by Deloitte for Eskom Holdings SOC Ltd, 6 June 2017, p. 33.
[2] Medium Term Budget Policy Statement, 24 October 2018. The IMF forecast of October 2018 is 0.8% and 1.4% for 2018 and 2019, respectively. The Bureau of Economic Research at the University of Stellenbosch expects real GDP growth at 0.6% in 2018 and 1.5% in 2019.

However, Eskom 's position is that "revenue related collectively to depreciation and return on assets must match the debt service commitments entailing the debt repayments and interest payments". Requiring non-cashflow items (in this case a return on assets and depreciation) to match cashflow items (capital repayments and interest payments) makes no sense, but this is the way Eskom treats its debt service costs in the calculations. In the current application[3], it is shown that debt service in the first two years of the three-year period is approximately R50bn higher than the theoretical return on assets and depreciation. Eskom's position is that it has decided to forgo this R50bn, "in the interest of the potential impact on consumers".

The increasing cost of debt service is the result of debt-financing the massive capital expenditure programme which Eskom has undertaken, mainly centred on the new coal-fired power stations at Medupi and Kusile. Eskom itself decided to manage the implementation of these projects, which have been plagued by huge cost overruns and serious delays.

On the occasion of the sod-turning ceremony at the Medupi site in 2007, Eskom announced an estimated construction cost of R80bn, with a completion date of 2015[4]. A more recent cost to completion estimate is R145bn[5], with a completion date of 2020/21[6]. The other major project of Kusile was expected to cost R118.5bn to complete[7], but this has now increased to R161.4bn[8].

These cost overruns of more than R100bn have a direct impact on the size of Eskom's debt and its debt service requirements. The point that must be made in this context is that Eskom is effectively attempting to recoup the increased funding requirements (arising through cost overruns and delays) through increased consumer tariffs. Whether these increased capital costs are reasonable or not, does not seem to be addressed anywhere and the question arises as to whether NERSA has ever been provided with evidence that these increased costs were reasonable. Why should consumers be expected to pay whatever the final number may be? Why is Government, as Eskom's 100% shareholder, not attempting to alleviate this burden on consumers and indirectly on the economy?

Eskom's 2017/18 annual report reflects debt service of R44.5bn[9] and its forecast for 2018/19 amounts to R68bn[10] - this compares to the current tariff application's debt service forecasts of R73bn, R95bn and R95.5bn for 2019/20, 2020/21 and 2021/22 respectively. To put these debt service numbers into some kind of perspective: they represent 33% of the total revenue which Eskom has applied for over these three years.

As far as its debt service is concerned, Eskom's annual report for 2017/18 puts it as follows:

> "The debt repayment profile, based on existing debt only, is relatively pressured over both the short and long term, with interest payments of approximately R215 billion and debt repayments of R228 billion over the next five years, and maturities currently extending to 2043."

This forecast amounts to an average annual debt service of R89bn up to and including 2022/23.

[3] Eskom Holdings MTYPD4 Revenue Application FY2019/20 – 2021/22, Table 2 on p. 12.
[4] Medupi Sod Turning Press Release by Eskom, 14 August 2007
[5] 2017 Annual Report, p. 55.
[6] 2018 Annual Report, p. 90
[7] 2014 Annual Report, p. 120.
[8] 2017 Annual Report, p. 56.
[9] 2017/18 Annual Financial Statements, p. 5.
[10] Eskom Integrated Report 2018, p. 65.

The 2017/18 Annual Financial Statements[11] also admitted that

> "… while Eskom generates adequate cash to meet its operational requirements, it has to borrow to service debt and for investment activities."

Applying normal financial prudency standards, the immediate conclusion is that a company whose debt service equates to a third of its revenue and which has to keep on borrowing to service that debt, is in serious financial difficulties.

Eskom's debt situation becomes even more critical after the MYPD4 period: its forecasts for debt service in the year 2023/24 amount to R141.5bn, which is R46bn more than the debt service for 2021/22 (the last year of the MYPD4 period)[12].

6. Primary Energy Costs

The increase in Primary Energy Costs (excluding IPPs and international purchases) is 54% from the 2018/19 NERSA decision to the first year of the MYPD4 application (and by 25% over Eskom's application for the 2018/19 year). The increase is mainly related to coal usage, with a variety of individual issues behind this increase, including the increase in the volume of coal purchased through short/medium term contracts.

In addition, Eskom's previous practice of engaging in "cost plus" contracts has been discontinued to a large extent (these long-term contracts applied to coal mines close to power stations which are dedicated to supplying coal to Eskom power stations, often with conveyor-belts). Eskom did not want to spend the capital needed to extend the life of these mines and this has given rise to increased short-term contracts, where the costs are much more unpredictable and where logistical issues create other problems (such as trucking by road). This problem is acknowledged in Eskom's 2018 Annual Report.[13] Whilst "cost plus" contracts may seem expensive from an up-front capital expenditure perspective on day one, short-term contracts can be vastly more expensive over the longer term.

The increased costs which result from this short-sighted policy, are now being placed on the shoulders of the consumer. It is submitted that NERSA should investigate the financial effects of Eskom's policy not to conclude "cost plus" contracts, but instead to replace them with short term coal purchase agreements.

7. The size of Eskom's workforce

In its analysis of its staffing levels, Eskom's 2018 Annual Report states that "we may be up to one-third overstaffed".[14] The number of employees is 48 628[15]. The tariff application states that the number of employees is assumed to decrease over the application period and that "this will

[11] 2017/18 Annual Financial Statements, p. 5.
[12] Eskom MYPD4 Application, p. 12.
[13] 2018 Annual Report, p. 100.
[14] 2018 Annual Report, p. 111.
[15] Ibid., p. 109.

occur through planned attrition or alternates that support savings initiatives and efficiencies". However, no details are provided in the application as to the expected rate of decrease.

The tariff application also confirms that Eskom employees are to benefit for the 2019/20 and 2020/21 years with an above inflation annual wage increase of 7%. (Note: annual CPI inflation in October 2018 was 5.1%[16]).

Eskom's request is therefore in effect that consumers are to fund wage increases at 1.9% above the current inflation rate for a workforce that is one-third overstaffed.

8. Stagnant demand

In respect of electricity demand, it should be noted that it has been stagnant over the past 10 years, as a result of lower economic growth and consumer reaction to constantly rising electricity prices. Eskom's current tariff application assumes sales in 2021/22 at 218 292GWh, which is 2.7% higher than the 2017/18 level. However, the signs are that demand is actually decreasing at the moment: Eskom's presentation of 28 November 2018 on its 2018 interim financial results, states that there has been a decline of 0.8% in year-to-date sales volumes.

9. Eskom has a business model that is no longer appropriate

It is disappointing to see that the tariff application shows no signs of Eskom realising that drastic action is needed to address its basic problems: it is unable to contain its costs in the face of continuous stagnant demand, which shows no real signs of changing. A commercial enterprise that functions in this manner would have had to apply for business rescue long ago, unless its consumers are prepared to pay whatever it takes to keep it afloat. An effective monopoly on a basic essential service to the country allows Eskom to exploit its position in this regard.

In its 2018 Annual Report, Eskom announced that it would undertake a strategy review, expected to be complete by September 2018. The most recent reference by Eskom to such a strategy review is contained in its presentation on its 2018 interim financial results of 28 November 2018. In that presentation, it mentions that Phase I of the strategic review is currently being discussed with the shareholder ministry, but no further details are provided. Given the circumstances in which Eskom finds itself, one would also have expected some reference to Eskom's medium to longer term strategy in a three-year tariff application, but the document is silent on this aspect. The three-year tariff application reads as if it's business as usual.

The simple truth is that Eskom's business model is no longer fit-for-purpose and there is no indication as to what it is doing about it.

10. Government now accepts that renewable energy is cheaper than the alternatives

The Department of Energy published a draft Integrated Resource Plan (IRP) for comment on 27 August 2018. This document represents Government's long-term electricity infrastructure development plan. The draft IRP states that the Independent Power Producer programme

[16] Stats SA press release of 21 November 2018

("**IPP**" - the Government approved renewable energy programme), together with Eskom's own capacity increase, ending with the completion of the Kusile coal-fired power plant in 2022, will provide more than sufficient capacity to cover projected demand up to 2025. It also finds that the scenario which does not place any limits on the building of renewable energy sources, provides the least-cost option by 2030 (and beyond that, to 2050). The IRP's recommended plan provides for wind and solar power to make up 21% of total installed capacity by 2030.

Thankfully, this draft IRP does not suffer from the obvious manipulation which allowed the previous draft IRP of November 2016 to include a nuclear option. Pending finalisation of the new draft IRP, Eskom cannot now avoid having to work out how it can integrate this cheaper electricity into its network. Eskom has complained on a regular basis of the IPP costs it has to cover, but it should be noted that that relates to the initial renewable programme, which was much more expensive than what is now available.

In the public discussion about the problems of increasing reliance on renewable energy, much has been said about the potentially negative impact on grid stability, especially by proponents of nuclear energy. This concerns the question of whether a system which relies on renewable power has an ability similar to that of a conventional system, to withstand sudden major failures to avoid a total system breakdown. One would assume that the countries which do use renewable energy to a large degree, are able to deal with this issue. It is interesting to note the major users of variable renewables (ie. solar and wind), are: Denmark (55%), Uruguay (30%), Germany (27%), Ireland (26%), Portugal (24%) and Spain (22%).[17] In contrast, purchases from the IPPs by Eskom in 2017/18, constituted only 4% of the total available electricity for distribution[18].

11. NERSA's wider responsibility

It will be noted that we have not even addressed the well-publicised instances of corrupt behaviour at Eskom or the reasons for the continued danger of load shedding. These relate to board/management oversight or operational issues which Eskom should be able to deal with internally within its existing structures and procedures.

However, the issues of stagnant demand, very high debt service costs and a changed energy environment, require a major strategic review which would need to consider realistic demand forecasts, Eskom's financial position and its future generating and distribution policy.

In this wider context, NERSA has a definite role to play. The legislation which sets out NERSA's mandate provides that in addition to regulating prices and tariffs:

- it must issue rules designed to implement the national government's electricity policy framework, the integrated resource plan[19] and the Act[20];

[17] Tobias Bischof-Niemz and Terence Craemer, *South Africa's Energy Transition, A Roadmap to a Decarbonised, Low-cost and Job-rich Future*, Routledge 2018, p. 26. For more background on grid stability, see p. 104 *et seq*. of this publication.
[18] Eskom Integrated Report 2018, p. 141.
[19] Defined in the Electricity Regulation Act, no. 4 of 2006, as "a resource plan established by the national sphere of government to give effect to national policy" - which will obviously have to be revised following adoption of a new IRP, following publication of a draft IRP, as mentioned in this submission.
[20] Section 4(a)(iv) of the Electricity Regulation Act, no. 4 of 2006.

- it may perform any other act incidental to its functions[21]; and
- it must act in the public interest and every decision must be in the public interest.[22]

It is clear that NERSA's role goes well beyond that of the limited field of administrative or technical issues and it is submitted that NERSA should not only draw important strategic issues to the attention of Eskom but should also emphasise the importance of urgent attention being paid to them. If fundamental issues are not addressed adequately, NERSA will continue to receive tariff applications which are based on assumptions and business models which are not appropriate for the country's requirements.

12. Conclusion

Given Eskom's current predicament, it is not clear how it can expect NERSA to give proper consideration to a three-year tariff application without details of at least a medium-term strategy. It is submitted that NERSA should request Eskom to carry out a strategic review of its current business model and to present it to NERSA.

It is further submitted that NERSA should, in keeping with its recent decisions on Eskom's tariff applications, weigh the inevitable effects of high tariff increases on a struggling economy.

Specific issues which appear highly problematic in Eskom's tariff increase application include the following:

- demand has remained stagnant over the past decade (and has actually decreased during the year to September 2018), whereas costs keep on increasing at a rate above inflation;
- there does not seem to be a realisation that Eskom's business model is out-of-date and as a result, it is submitted that NERSA requests details of Eskom's medium-term strategy before considering this application;
- the financial effects of cost-overruns and delays in Eskom's capital programme and the damage done to Eskom's financial situation by its conscious decision not to continue with "cost plus" contracts, need to be considered from the perspective of whether it can be justified for the consumer to pay for them, or whether the Government (as 100% shareholder) should contribute; and
- above inflation wage increases for a workforce that is one-third overstaffed;

It is surely time for Government, as the 100% shareholder, to realise that Eskom's financial situation is so serious that it cannot be dealt with by tariff increases alone (especially not by a struggling economy). A recapitalisation of Eskom appears to be unavoidable and Government cannot expect NERSA to shield it from its responsibility to ensure that Eskom is appropriately managed and adequately funded.

In one way or another, this message needs to be conveyed to Government.

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[21] Section 4(b)(iii) of the Electricity Regulation Act, no. 4 of 2006.
[22] Sections 9(f) and 10(1)(b) of the National Energy Regulator Act, no. 40 of 2004.