

**DENTONS**

# REPORT

in respect of the investigation into the status of the business and challenges experienced by Eskom,  
instituted by the board of Eskom Holdings (SOC) Ltd in terms of a resolution passed on 11 March  
2015

**2 July 2015**

**(reflecting the state of the investigation as at 18 June 2015)**

**CONFIDENTIAL**

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# INTRODUCTION

## 1 Background

- 1.1 This document constitutes the report ("Report") of Dentons South Africa in respect of the investigation ("Investigation") commissioned by Eskom Holdings SOC Limited ("Eskom") pursuant to a request for proposals ("RFP") issued on 8 April 2015 under number CORP3254R, in terms of a resolution adopted by the board ("Board") of directors of Eskom on 11 March 2015.
- 1.2 The Investigation commenced on 20 April 2015. A draft report was required to have been provided on 20 July 2015, with the final report to follow on 31 July 2015. Progress reports have been provided to Eskom at approximately two-weekly intervals in the form of activity reports and presentations.
- 1.3 On 11 June 2015, we were requested to prepare a detailed presentation to the Board, in addition to a draft report dealing with the state of the Investigation to date. We understand that this was due to the need to meet the deadlines for various other commitments that had been made by the Board in respect of the time frames of the Investigation. A detailed presentation to the Board was delivered on 25-26 June 2015, which was followed by our draft preliminary report. For these purposes, investigatory activities ceased shortly after 11 June 2015 and resources were redirected from the normal course of the Investigation to the development of preliminary findings, preparation of the above mentioned presentation, and preparation of a draft preliminary report.
- 1.4 Subsequent to our presentation to the Board, we were advised that (i) the Board was satisfied with the Investigation and the degree of detail covered in a very short period of time, (ii) the Investigation had provided the Board with the information it needed to take decisions as to how best to manage the affairs of Eskom, and (iii) no further investigatory activities were required.
- 1.5 A draft preliminary report was submitted to the Board on 3 July 2015. This was followed by an executive summary on 6 July 2015. A presentation was made to the Minister of Public Enterprises on 9 July 2015. We were then requested to prepare this Report as our last submission.
- 1.6 This Report represents a snapshot of the Investigation at the midpoint of the investigation period (about 18 June 2015) and is provided to Eskom on the specific request of Eskom. The findings, views, conclusions and recommendations set out in this Report are accordingly (i) subject to verification and testing, (ii) provided to Eskom as a record of the Investigation as at the midpoint of the investigation period, and (iii) do not constitute definitive findings, views, conclusions and recommendations.

## 2 Form of Contract

- 2.1 The form of contract between Dentons South Africa and Eskom relating to the Investigation is the Professional Services Contract ("PSC") forming part of the New Engineering Contract 3 ("NEC") suite of contracts, which is published by Thomas Telford Publishing on behalf of the Institution of Civil Engineers, United Kingdom.

- 2.2 As indicated by its name, the NEC suite of contracts is designed for engineering and construction projects. It was a condition of the RFP that bidders contract on the basis of the NEC suite.
- 2.3 NEC provides for various contract options. In the present case, the PSC was subject to option G, which is a task order based option. In effect, Dentons South Africa was only required to perform work in respect of the Investigation in accordance with task orders issued by Eskom.
- 2.4 In the circumstances, a letter of acceptance ("Letter of Acceptance") was executed by both parties on 17 April 2014. The PSC was executed by Dentons on 7 May 2015, and thereafter by Eskom on or about 25 May 2015.
- 2.5 A task order ("Task Order 1") was issued by Eskom to Dentons South Africa on 29 May 2015. A version countersigned by Dentons South Africa was provided to Eskom on 1 June 2015. It is important to note that Task Order 1 repeated the scope of work specified in the TOR and did not in any manner limit this scope of work or provide any degree of specificity in relation to the scope of work.

### **3 The Investigation**

- 3.1 The RFP describes the Investigation as a "Forensic Fact Finding Enquiry ... into the status of the business and challenges experienced by Eskom". The RFP states further that on completion of the Investigation, the Board of Eskom is to be provided "with an independent view of reasons for the following:
  - 3.1.1 The poor performance of Eskom's generation plant
  - 3.1.2 Delays in bringing the new generation plant on-stream
  - 3.1.3 High costs of primary energy
  - 3.1.4 Eskom's financial challenges
  - 3.1.5 Integrity of the procurement processes and compliance with legislation as well as Eskom's procurement policies
  - 3.1.6 Contract management, in particular cost escalations, frequent modifications, penalty costs and Eskom's capacity to manage contracts in general. *[sic]*
  - 3.1.7 Security failures and accountability at Eskom as a Key National Point *[sic]*."
- 3.2 In addition to the RFP, we were provided (after execution of a confidentiality agreement) with certain terms of reference ("TOR"). A copy of the TOR is attached as Schedule 1.
- 3.3 The description of the Investigation in paragraph 3.1 is repeated in the TOR.
- 3.4 The TOR provides further that:

"The Board seeks to obtain an independent and unfettered view regarding the credibility and the correctness of information that Eskom's Executive Management ("EXCO") provides in their reports relating to:

- The poor performance of generation plant
- Delays in bringing the new generation plant on-stream
- High costs of primary energy
- Eskom's financial challenges
- Integrity of the procurement processes and compliance with legislation as well as Eskom's procurement policies
- Contract management, in particular cost escalations, frequent modifications, penalty costs and Eskom's capacity to manage contracts in general.

The Board has indicated that it is important for the information to be tested by an independent party without EXCO's involvement ("particularly those members of EXCO, whose areas would be directly impacted by the enquiry") so as to lend credence to the reports that the independent party would produce."

- 3.5 The items set out in paragraphs 3.1.1 to 3.1.7 are elaborated in greater detail in the TOR and also in Task Order 1. See in this regard paragraph 4 of the TOR (attached to this Report as Schedule 1), and paragraph 2 of Task Order 1 (attached to this Report as Schedule 2).
- 3.6 Similarly, the matters dealt with in paragraph 3.4 are also traversed in paragraph 2 of Task Order 1.
- 3.7 We note that the scope of work set out in the TOR and Task Order 1 is extremely broad. We were assured in the course of the pre-contract negotiations that the actual investigative work required would be as set out in the task orders to be issued post contract. Nonetheless, after our appointment it was apparent that the Investigation would be required to cover the entire scope of work, which was definitively conveyed to us when Task Order 1 was subsequently issued.

#### **4 Purpose of the Investigation**

- 4.1 The institution of the Investigation took place shortly after the highly publicised suspension of four of Eskom's executives ("Suspended Executives").
- 4.2 The TOR refers to the above mentioned suspensions only obliquely, stating in respect of the Investigation "that it is important for the information to be tested by an independent party without EXCO's involvement ("particularly those members of EXCO, whose areas would be directly impacted by the enquiry" *[sic]*) so as to lend credence to the reports that the independent party would produce".
- 4.3 The written material setting out the scope of the Investigation never contemplated the Investigation as being one that was directed specifically at the conduct of the Suspended Executives.
- 4.4 The timing of the Investigation led to speculation in certain circles that it was the conduct of the Suspended Executives that was being investigated.
- 4.5 In our meetings with the Board and Audit & Risk Committee ("ARC") of the Board, it was confirmed that the Investigation was not directed at the Suspended Executives and that the

Board was dealing with the Suspended Executives in accordance with a separate methodology.

4.6 The TOR and Task Order 1 state expressly that the purpose of the Investigation was to obtain an independent view on the credibility and correctness of the reports of Eskom's executive committee ("EXCO") to the Board. This was further qualified with reference to the matters set out in the scope of work sections of the TOR and Task Order 1.

4.7 The minutes of the meeting of the Board on 31 March 2015 authorising the Investigation records as follows:

"The Terms of Reference were based on the audit. ... Members were generally comfortable with the Terms of Reference in that they adequately addressed all the issues the Board wanted to be dealt with."

4.8 The purpose of the Investigation is accordingly to develop information that would serve to determine the credibility of EXCO's reporting to the Board with reference to the matters specified in paragraph 4 of the TOR and paragraph 2 of Task Order 1.

4.9 The TOR do not require investigation of misconduct of any specific individuals. Accordingly, no recommendations are made in respect of action to be taken to deal with misconduct by any specific individuals.

## **5 Methodology**

5.1 Task Order 1 prescribes the methodology to be applied by the Investigation in the following terms:

"Eskom's Terms of Reference prescribed the following methodology for the Enquiry:

3.1 conducting interviews with employees and any other party/ies or person/s who may have information regarding the Enquiry; and

3.2 obtaining and analysing, inter alia, minutes, letters, written reports, e-mails, and also determine the bona fides of the allegations and questions and evidence raised by employees or any other persons interviewed in accordance with the above.

Shortly following commencement of the Enquiry, the Dentons team will engage with the Audit and Risk Committee ("ARC") to discuss the details of the Scope of Work and methodology and to discuss the logistical arrangements for collection of data, review of documents, points of interface with Eskom, engagement with Eskom staff, reporting, etc. Dentons will thereafter prepare a preliminary list of documents and other data/information as well as a list of meetings/interviews that that are required for the Enquiry. It is expected that the data required will comprise, inter alia, minutes of Board and EXCO meetings including supporting information, reports, letters, emails. Interviews will be conducted with Eskom staff and, where deemed necessary for the purposes of the Enquiry, non-Eskom staff.

The investigation will be conducted in two phases:

### **Phase 1: Review of available information**

In this phase, the Dentons team will conduct reviews of the available documentary information and interviews to obtain an understanding of the information that has been provided to the Board on the key issues identified under the Scope of Work. This phase will entail review of a large volume of information, a key intent would be to distil and extract from these documents those aspects that are most pertinent to addressing the Scope of Work and will be used for the more detailed assessment to be conducted in Phase 2.

### **Phase 2: Detailed Assessment**

In this phase, the Dentons team will conduct assessment of the credibility and completeness of the information that has been provided to the Board on the key issues identified under the Scope of Work. This may require review of additional information such as more detailed reports as well as further interviews to fully address the issues identified under the Scope of Work.

The review of available information and the detailed assessment will be at a level which can be reasonably expected to be conducted within the time frame of Task Order 1. Although, specialist studies will not be conducted under Task Order 1, the verification of certain matters may require additional studies of a specialist nature that may fall outside the methodology set out in Eskom's Terms of Reference. Any such studies will be discussed and agreed between Eskom and Dentons as part of new task orders."

- 5.2 In effect, the methodology of the Investigation was limited to (i) interviewing employees of Eskom and also other persons, and (ii) review of documents.
- 5.3 The prescribed methodology excluded specialist and technical investigations and certain types of investigations that would ordinarily be included in the scope of forensics work.
- 5.4 The limitations of the above mentioned methodology was recognised by the Board, and this led ultimately to an extension of the methodology to include site inspections. This extension was authorised by way of a resolution of the Board adopted at the time of our presentation to the Board on 27 May 2015. Any additional investigations would require authorisation by way of a new task order.

## **6 Team Structure**

- 6.1 It is clear from the scope of work set out in paragraph 2 of Task Order 1 that the investigative team would be required to include specialists in engineering and finance. More specifically, paragraphs 2.1 to 2.3 involve a strong engineering component, whilst paragraph 2.4 is financial and accounting in nature.
- 6.2 The investigative team accordingly comprised of specialist engineering, finance and legal sub teams, co-chaired by the managing director of Dentons South Africa, Noor Kapdi, and Adv Dumisa Ntsebeza SC.
- 6.3 The investigative team was further divided into a core team, three primary working teams, and four further sub teams.
- 6.4 The three primary working teams were allocated the following tasks:
  - 6.4.1 engineering team – investigation of the matters set out in paragraphs 2.1, 2.2 and 2.3 of Task Order 1;

- 6.4.2 finance team – investigation of the matters set out in paragraph 2.4 of Task Order 1;
- 6.4.3 legal team – investigation of the matters set out in paragraphs 2.5 to 2.7 of Task Order 1.
- 6.5 In addition, the following four sub teams were appointed:
  - 6.5.1 coal team – investigation of coal supply and related contracts;
  - 6.5.2 diesel team – investigation of diesel supply contracts;
  - 6.5.3 business intelligence – gathering of business intelligence; and
  - 6.5.4 document review team – review of (i) selected reports received by EXCO from the various Eskom divisions and business units, (ii) selected reports made by EXCO to the Board, and (iii) minutes of EXCO and Board meetings.

## **7 Period of the Investigation**

- 7.1 The RFP provides that the Investigation is required to be concluded in a period of three months commencing no later than two days “after the signing of these terms of reference”. The Letter of Acceptance was signed by both parties on 17 April 2015.
- 7.2 As indicated above the form of contract used by Eskom for the appointment of Dentons South Africa to conduct the Investigation is task order based. Work is required to be performed only in terms of a task order. Nonetheless, the Investigation formally commenced on 20 April 2015.
- 7.3 At the meeting of the Board on 31 March 2015, it was noted that the period of the Investigation could take up to 12 months.
- 7.4 The contractual three-month period for the Investigation was possible only (i) on the assumption of full cooperation by Eskom for the purposes of the Investigation, and (ii) on the basis of the specified purpose and prescribed methodology of the Investigation (see in this regard paragraphs 4 and 5).
- 7.5 In the circumstances, we were requested to prepare this Report reflecting the state of the Investigation as at the mid point of the investigation period on the basis that the Investigation had at that stage revealed sufficient information for the purposes of the Board.

## **8 Conduct of the Investigation**

- 8.1 Eskom specifically requested that work on the Investigation commence on 20 April 2015 and that work proceed thereafter without delay.
- 8.2 The Investigation accordingly commenced formally on 20 April 2015 with a meeting between the Dentons core teams (being engineering, finance and legal) and ARC at Eskom’s premises in Megawatt Park, Johannesburg. Certain preliminary steps were undertaken both on, and in the days before, 20 April 2015 to assemble the various teams and to develop a definitive understanding of the TOR.
- 8.3 Further meetings with ARC were held in Cape Town on 21 April 2015 (to discuss the scope of work in greater detail) and on 22 April 2015 (to discuss points of clarification in respect of the scope of work in the TOR).

- 8.4 An informal introductory meeting with the Board took place in Cape Town on 22 April 2015.
- 8.5 The above mentioned meetings were followed by initial scoping interviews on 24 April 2015 for the purposes of scoping the Eskom environment and understanding its divisional structure and reporting lines. These interviews were with key Eskom personnel from the following organisational areas:
- 8.5.1 Group Capital Division;
  - 8.5.2 Primary Energy Division;
  - 8.5.3 Human Resources;
  - 8.5.4 Treasury;
  - 8.5.5 Information Technology; and
  - 8.5.6 Procurement.
- 8.6 An initial document request was made on 22 April 2015. This was followed by several other document requests as the Investigation progressed.
- 8.7 Interviews have been conducted with persons regarded by the investigative team as being sources of information relevant to the Investigation.

## **9 Limitations**

- 9.1 Access to Documents
- 9.1.1 Certain documents were available only at Eskom's premises. For a period of several weeks, these documents were available only until 17h00 during business days.
  - 9.1.2 Arrangements were put in place some weeks later to grant the document review team better access to these documents.
- 9.2 Access to Emails
- 9.2.1 Although the prescribed methodology requires review of emails, we were not provided with access to any emails.
  - 9.2.2 The prescribed internal form for access to emails is titled "Eskom Forensic & Anti-Corruption Information Management (Employee E-Mail Records) Request". A duly completed and signed copy of this form in respect of specified data subjects was delivered by hand to Eskom on 28 May 2015. A copy is attached as Schedule 4.
- 9.3 Interviews with Suspended Employees
- 9.3.1 Interviews were requested with certain employees who were under suspension.
  - 9.3.2 We were advised that these interviews could not be arranged due to the suspension of the employees in question. We were required to make direct contact with these employees for these purposes.

- 9.4 Interviews with Senior Management and Employees who have left the employ of Eskom
- 9.4.1 Interviews were conducted with several members of Eskom's senior management, including certain members of the EXCO and the Board. We had planned to interview all persons who had been members of EXCO or the Board over the last two years, but were unable to do so in the limited time leading up to the presentation of this Report.
- 9.4.2 Furthermore, we identified certain ex-employees as potentially being in possession of information relevant to the Investigation.
- 9.4.3 These ex-employees advised us that they had entered into confidentiality agreements with Eskom and would only discuss the affairs of Eskom with us if Eskom were to provide written consent to them doing so. We directed correspondence to Eskom on 23 June 2015 requesting that Eskom provide such written consent.
- 9.5 Conflict of Interests
- 9.5.1 Dentons South Africa represents Areva in respect of review and related appeal proceedings currently pending before the courts, in connection with the Koeberg steam generator upgrade.
- 9.5.2 We were accordingly precluded from investigating matters related to the above.
- 9.6 Methodology Limitations
- 9.6.1 The prescribed methodology for Task Order 1 limits the information sources for the Investigation to review of documents and interviews.
- 9.6.2 This limited the methods available to us to obtain, test and verify information.
- 10 Reporting**
- 10.1 The following reports have previously been provided to Eskom:
- 10.1.1 activity report delivered on 8 May 2015;
- 10.1.2 activity report delivered on 27 May 2015; and
- 10.1.3 activity report delivered on 8 June 2015.
- 10.2 In addition three presentations have been made, as follows:
- 10.2.1 presentation to ARC on 14 May 2015;
- 10.2.2 presentation to the Board on 27 May 2015; and
- 10.2.3 presentation to the Board on 25-26 June 2015.
- 10.3 In view of the Board's request for a detailed presentation on 25 June 2015 followed by a preliminary report and then this Report, no activity reports were prepared for the period subsequent to 8 June 2015.

## **11 Structure of this Report**

- 11.1 This Report comprises of seven chapters, dealing with the items contained in the scope of work set out in paragraph 2 of Task Order 1.
- 11.2 Additional material is provided in the schedules.
- 11.3 The assumptions and qualifications on which this Report is based are set out in Schedule 4.
- 11.4 A glossary is provided in Schedule 5.

## EXECUTIVE SUMMARY

An executive summary is provided as a separate document.

# CHAPTER 1: POOR PERFORMANCE OF THE GENERATION PLANT

## 1 Background

- 1.1 This Chapter deals with item 2.1 of the Scope of Work set out in Task Order 1.
- 1.2 Item 2.1 of Task Order 1 relates to the poor performance of Eskom's generation plant. Under this heading the following specific items are provided for:
- 1.2.1 "2.1.1 the state of the generation plant and the manner in which the fleet has been managed with reference to and in relation to best practice;
- 1.2.2 2.1.2 whether the underlying causes for the state of the fleet are known (in particular, the increase in the Unplanned Capability Loss Factor ("UCLF") and the actions taken by Eskom in response;
- 1.2.3 2.1.3 the application and impact of the strategies, tactics and plans to address the decline in the capacity of the fleet to ensure the security of supply over past twelve months;
- 1.2.4 2.1.4 the underlying reasons for load shedding by Eskom over the past two years;
- 1.2.5 2.1.5 the maintenance philosophy and regime implemented by Eskom over the past six months in its attempts to achieve the required UCLF;
- 1.2.6 2.1.6 whether the most recent reports on the state of the generation fleet have been prepared on a consistent basis with other reports in the last six months, and that the reports were credible in terms of validity, accuracy, completeness and timeliness of information;
- 1.2.7 2.1.7 the pricing of maintenance contracts commissioned by Eskom and the monitoring of performance of these contracts by Eskom."
- 1.3 In view of the limited timeframes in which this Report was required to be prepared, the contents of this Chapter require further corroboration and verification.

## 2 Brief historical overview

- 2.1 Eskom is South Africa's major electricity supplier and is wholly owned by the South African government. Eskom generates about 95% of electricity used in South Africa and about 40% of electricity consumed on the African continent. Eskom transmits and distributes electricity to its industrial, mining, commercial, agricultural and residential customers. Eskom also supplies electricity to municipalities who in turn distribute the electricity to end-users within their designated areas.
- 2.2 Eskom owns and operates 27 power stations in South Africa with a total nominal capacity of approximately 41 995 MW. Eskom's generating capacity comprises around 35 726 MW from coal-fired power stations, 1 860 MW from nuclear power, 2 409 MW from gas-fired power stations fuelled by diesel, 2 000 MW from hydro and pumped storage stations as well as 3 MW from a wind farm at Klipheuwel. Eskom's generation fleet is currently divided into 5 operational units, viz. Coal 1, Coal 2, Coal 3, Nuclear and Peaking each comprising the following power stations:

- (a) Coal 1: Kendal, Kusile, Majuba, Matimba and Medupi power stations;

- (b) Coal 2: Comprises Duvha, Kriel, Lethabo, Matla and Tutuka power stations;
  - (c) Coal 3: Arnot, Camden, Grootvlei, Hendrina and Komati power stations;
  - (d) Nuclear: Koeberg power station;and
  - (e) Peaking: Ankerlig, Gourikwa, Drakensberg, Palmiet, Van Der Kloof, Gariiep, Port Rex and Acacia power stations.
- 2.3 Eskom purchases electricity from IPPs as well as from electricity generating facilities beyond the country's borders. The company also maintains more than 360 000 km of power lines and substations with a cumulative capacity of over 230 000 MVA.
- 2.4 In 2013/14 Eskom sold 217 903 GWh of electricity to approximately 800 municipalities, 3 000 industrial customers, 1 000 mining customers, 50 000 commercial customers, 84 000 agricultural customers and more than 5.1 million residential customers (Integrated Report 2013/14).
- 2.5 Eskom has embarked on a capital expansion programme and is currently constructing new power stations and major power lines to meet South Africa's growing energy demand.

### **3 State of the generation plant**

- 3.1 In understanding the state of the generation plant, it is necessary to review the information that has been provided in the various Board and EXCO's submissions. The following documents were reviewed to determine the state of Eskom's generation fleet viz.:
- 3.1.1 "Generation Maintenance Philosophy and Winter Maintenance Schedule" presentation to EXCO, 20 May 2015;
  - 3.1.2 "Generation Plant Status Update", presentation made to EXCO by Generation GE, 27 January 2015;
  - 3.1.3 "Eskom - A Strategic Overview", PowerPoint presentation to Eskom Board, 31 March 2015, M. Rossouw;
  - 3.1.4 "Generation Sustainability Strategy – History, Current Practices and Way Ahead", presentation to EXCO, 29 August 2014, M Rossouw;
  - 3.1.5 "Generation UCLF Deep Dive", presentation made to EXCO Indaba, March 2014; and
  - 3.1.6 "Sustaining the Integrity of the Generation Asset Base", presentation to Board Indaba, 30 October 2013.
- 3.2 These documents have also been supplemented with information gathered during interviews with Eskom executives. The available documentation reported the following, inter alia, with regard to the state of Eskom's generation fleet viz.:
- 3.2.1 The generation assets are aged;
  - 3.2.2 The generation assets are being run exceptionally hard;
  - 3.2.3 The generation assets are under-maintained; and

3.2.4 There is under-investment in the generation fleet.

3.3 An analysis of each of the above factors is covered in the paragraphs below.

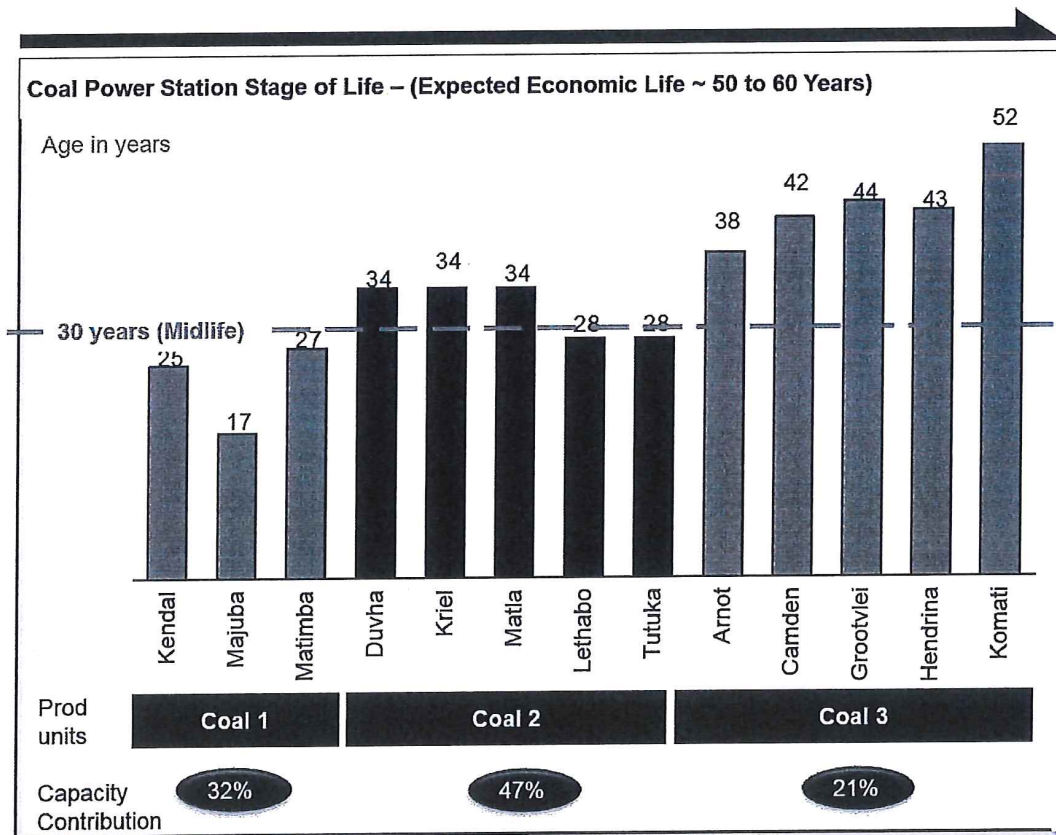
3.4 Fleet age

3.4.1 The Generation Sustainability Strategy document from August 2014 cited the following information with respect to the age of Eskom's generation assets viz.:

- (a) 60% of Eskom's power stations are older than the mid-life of 30 years (Figure 1);
- (b) 70% (9 out of 13) of Eskom power stations have exceeded their boiler design life (Figure 2); and
- (c) 60% (8 out of 13) of Eskom's power stations have exceeded their turbine design life (Figure 3).

3.4.2 The Board submission in 2015 also indicated that 80% of the coal fleet capacity is in urgent need of major equipment restoration and replacement in order to achieve a technical life of 60 years.

Figure 1: Eskom Coal Fleet Age<sup>1</sup>



1 – Interviews with Eskom Specialists, Medupi URS, Eskom Document GGP 1282 REV.2  
 SOURCE: GPSS, Team analysis

Figure 2: Eskom Fleet Boiler Life

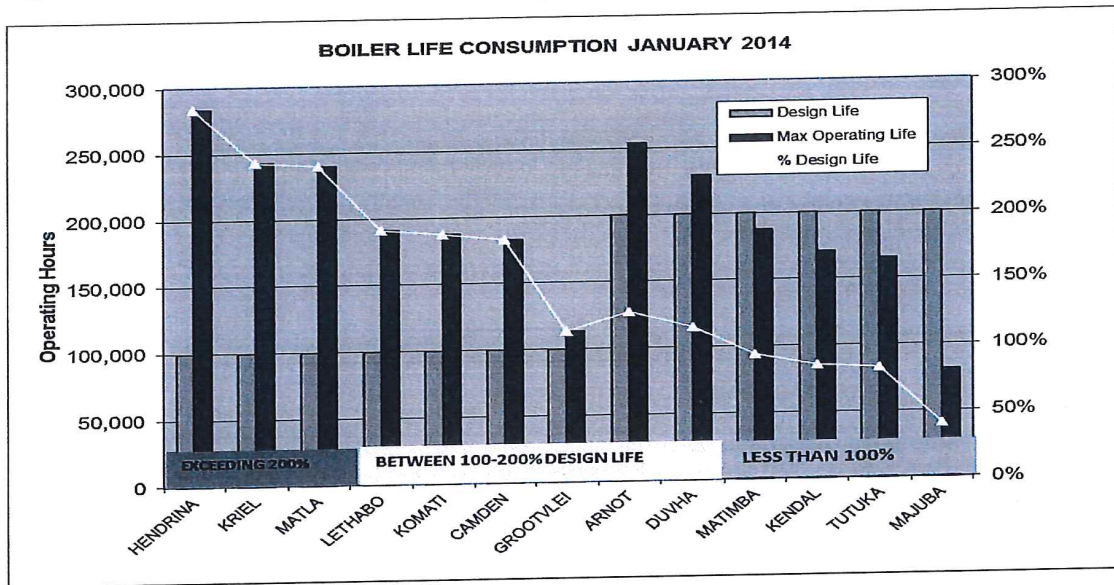
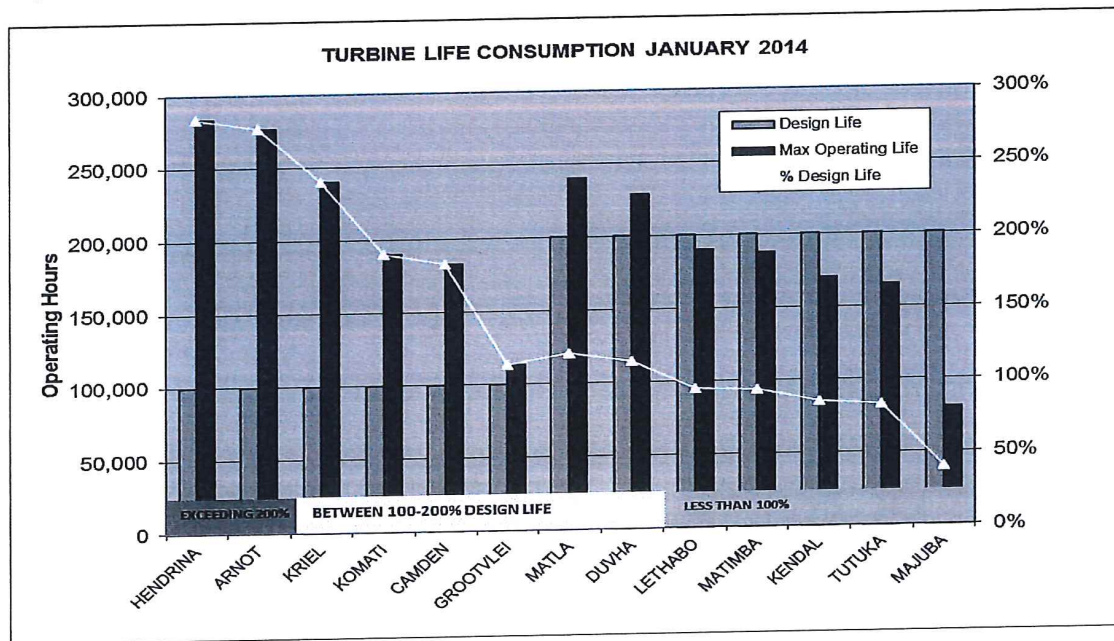


Figure 3: Eskom Fleet Turbine Life



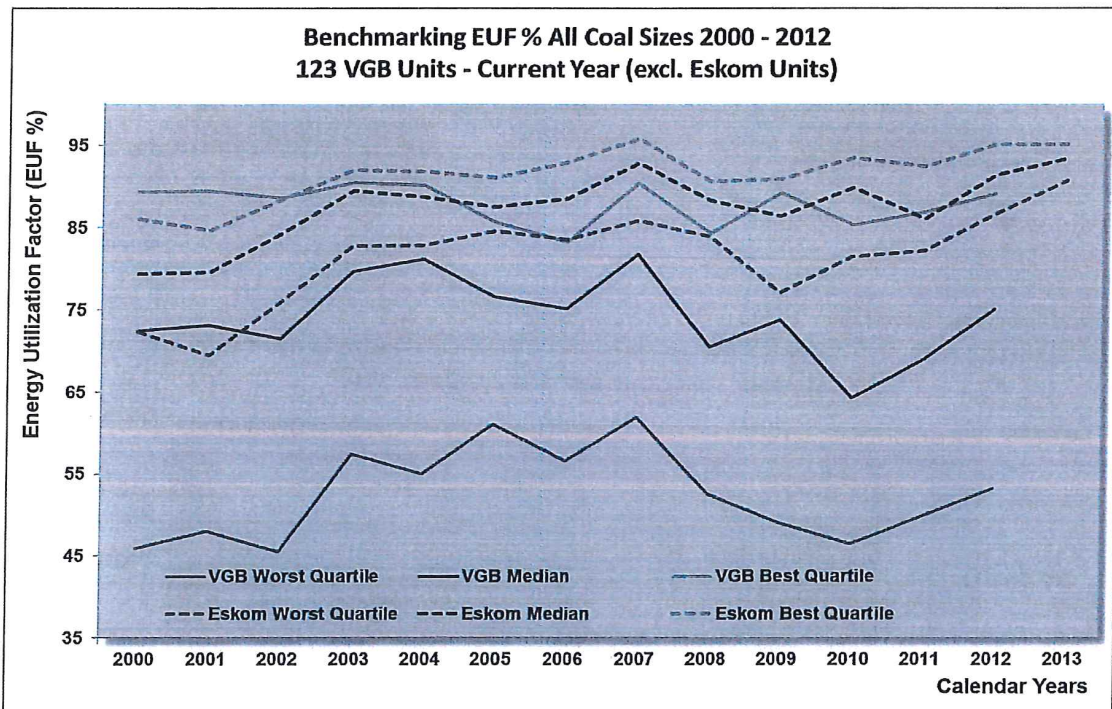
3.4.3 The age distribution of Eskom's coal fleet is not dissimilar to that of international utilities as 70% of generation plant in Europe has been in operation for more than 30 years. The average age of the coal fleet in the USA is greater than 40 years with a significant proportion of the total generation capacity in the USA being in excess of 50 years old. ("Outage Movement – Independent Assessment by VGB PowerTech - Summary Report" Dr F Bauer, Dr H Urban & A Boser, 12 July 2012). Thus, the age of Eskom's coal fleet does not on its own explain the state of the fleet and the challenges faced by Eskom to attain acceptable levels of plant performance.

3.5 Plant capacity factors

3.5.1 The Generation Sustainability Strategy document from August 2014 cited information indicating that Eskom's generation plant is being operated exceptionally hard when benchmarked against international utilities. This is shown graphically in Figure 4 below.

3.5.2 The above mentioned document also indicates that the increase in the frequency of Emergency Level 1 (EL1) incidents has resulted in units being operated with boiler tube leaks and chemistry excursions in an attempt to ensure that the demand/supply balance is achieved and load shedding is minimised.

Figure 4: Eskom Generation Plant Utilisation/Load Factors



3.5.3 Prior to 1997, Eskom plant operated at relatively low energy utilisation factors (EUF). However, from the onset of Eskom's 90:7:3 operational strategy in the mid-90s, the Eskom plant operated at higher EUFs. After 2012, the plant operated at very high EUFs with the median being in excess of 90%.

3.6 Plant maintenance

3.6.1 The Generation Sustainability Strategy document cited information indicating that Eskom has reduced planned maintenance (reflected in the Planned Capability Loss Factor (PCLF)) in order to maintain "Keeping the Lights On (KLO)" strategy. It should be noted that the historical 90:7:3 strategy applied by Eskom should also be factored in the assessment of the fleet performance as international practice typically targets values in the order of 85:10:5.

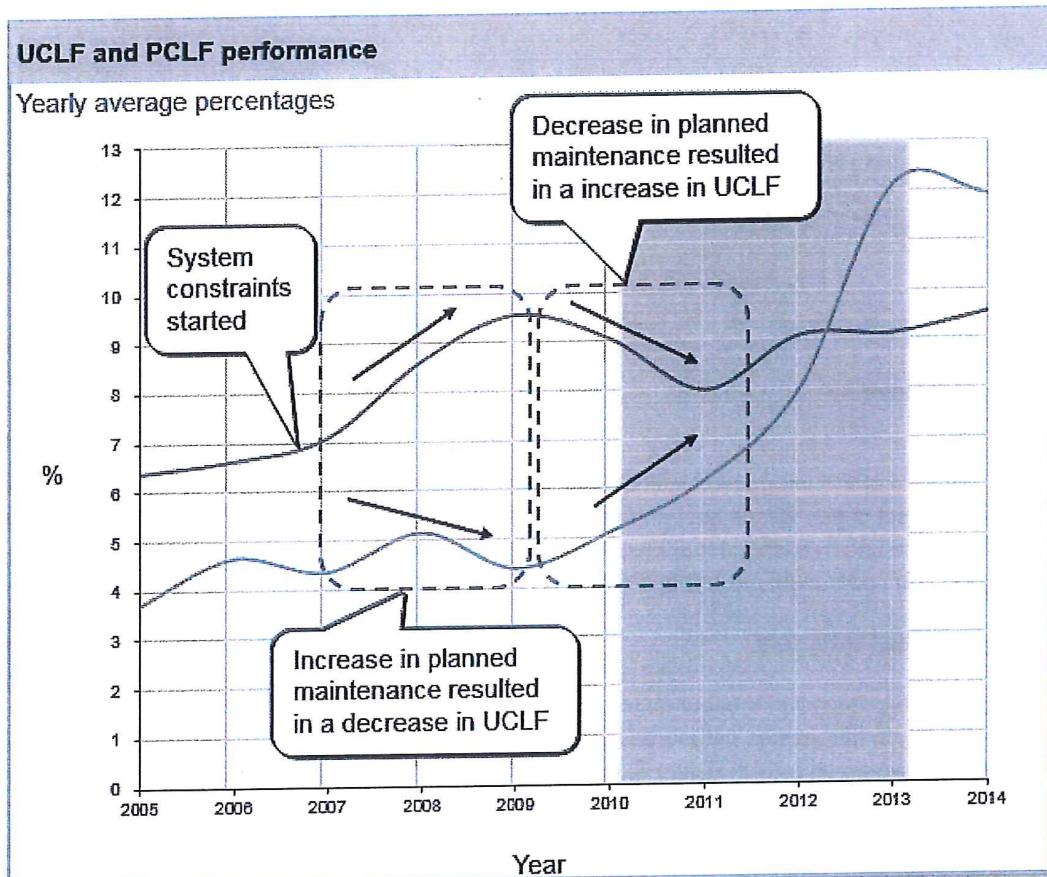
3.6.2 The historically low PCLF coupled with the KLO strategy and factors such as coal quality and high utilisation factors have led to a sharp increase in Unplanned Capability Loss Factor (UCLF) from 2009. This is shown graphically in Figure 5 below. The reduction of proactive maintenance due to the deferral of outages has led to more corrective maintenance being

required. This has led to a situation where a substantial outage backlog (44% average across the fleet) has been accumulated.

3.6.3 The available documentation also states that online maintenance has been compromised and this has been attributed to the increased frequency of EL1 notifications.

3.6.4 The lack of maintenance is a significant contributory factor to the current poor plant performance.

Figure 5: UCLF & PCLF Performance 2005 – 2014



SOURCE: Team analysis , GPSS

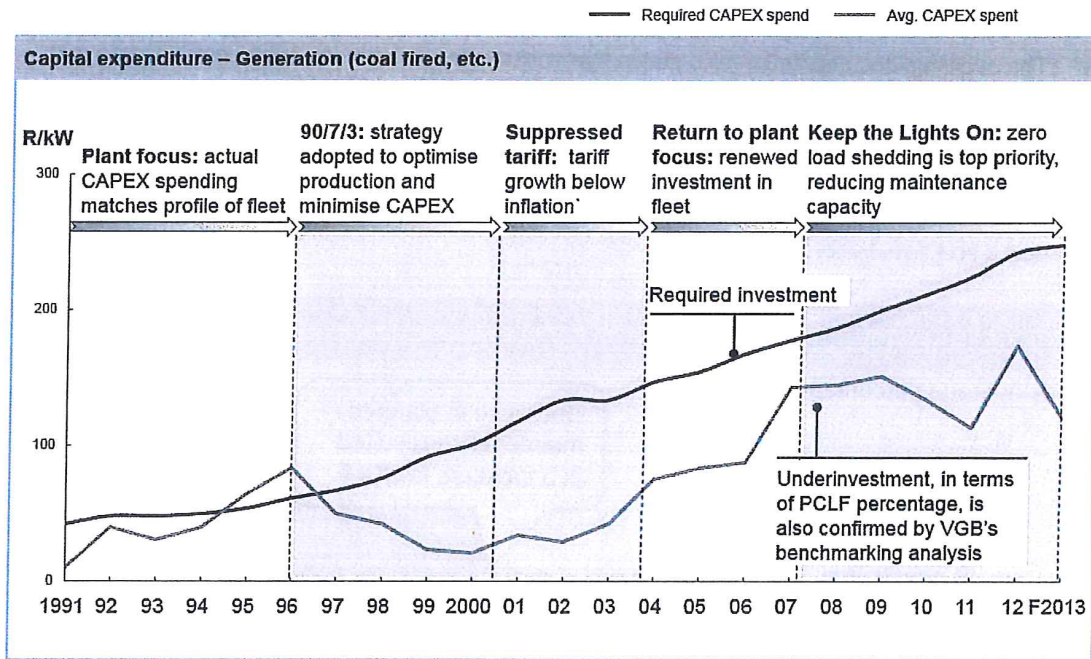
3.7 Plant under-investment

3.7.1 The Generation Sustainability Strategy document indicates that the Eskom generation fleet has experienced 15 years of under-investment in capital expenditure (capex) which is largely the result of cost cutting due to financial and capacity constraints.

3.7.2 These past decisions de-prioritised (in respect of both time and capital) allowances for maintenance.

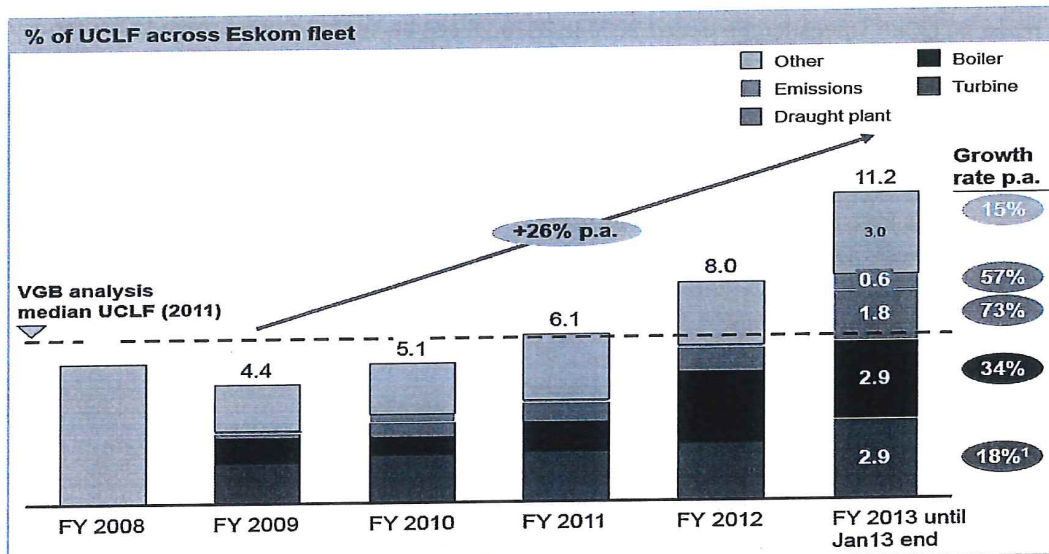
3.7.3 The VGB PowerTech analysis regarding the Eskom capex investment in relation to the required investment as per international best practice is shown graphically in Figure 6 below.

Figure 6: Eskom Capex Analysis 1991 – 2013



Source: Eskom Asset Management; VGB

- 3.7.4 The analysis of this information indicates that there was significant under-investment in refurbishment capex versus best practice for an extended period of time (from the mid 1990's). The under-investment at plant mid-life age is also critical and significantly contributes to the current poor plant performance.
- 3.8 Impact of the four factors
- 3.8.1 The combined impact of the four factors covered in paragraphs 3.4 to 3.7 has contributed significantly to the marked deterioration in the UCLF of the fleet from the years 2009 to 2013. This is shown graphically in Figure 7, which indicates an increasing trend in UCLF from 2009 to 2013.
- 3.8.2 Figure 8 shows the UCLF percentages and corresponding EAF percentages for the period 2010 to 2014. As planned maintenance has remained fairly constant, the increase in UCLF has had a significant impact on the EAF.



ly driven by Duvha 4  
 E: GPSS (Event Data); VGB benchmarking; PSM interviews  
 Figure 7: UCLF Percentages - Eskom Fleet 2009 – 2013

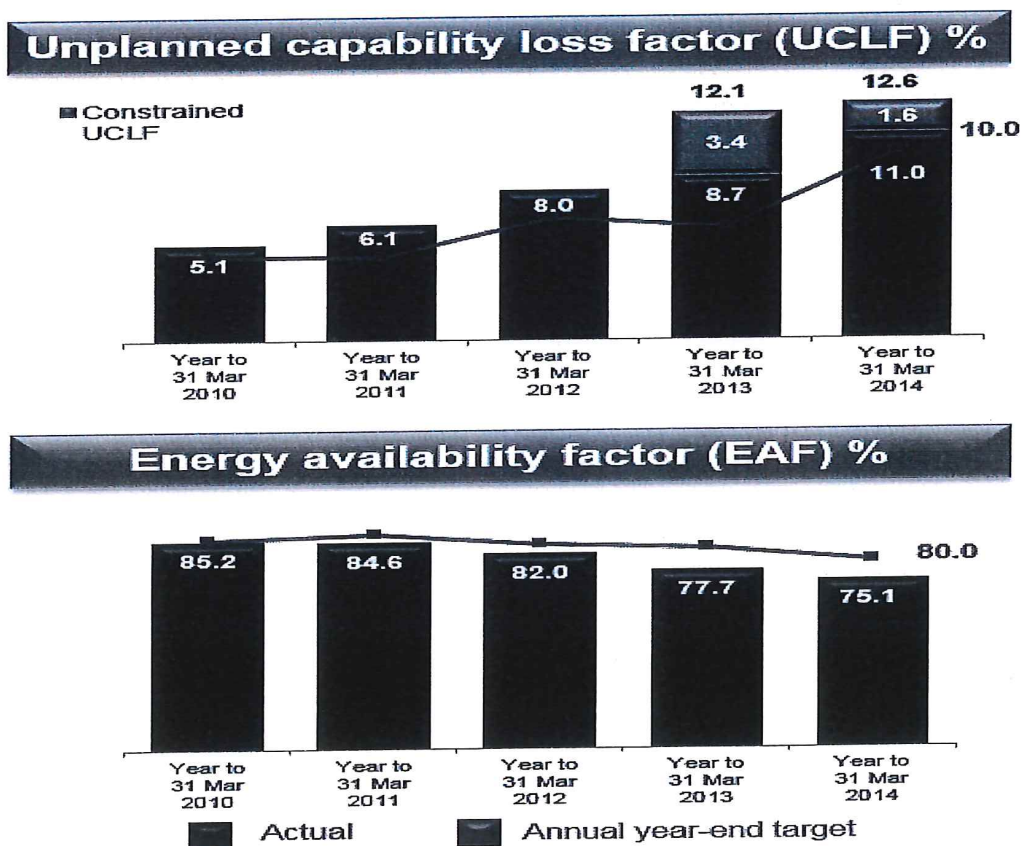
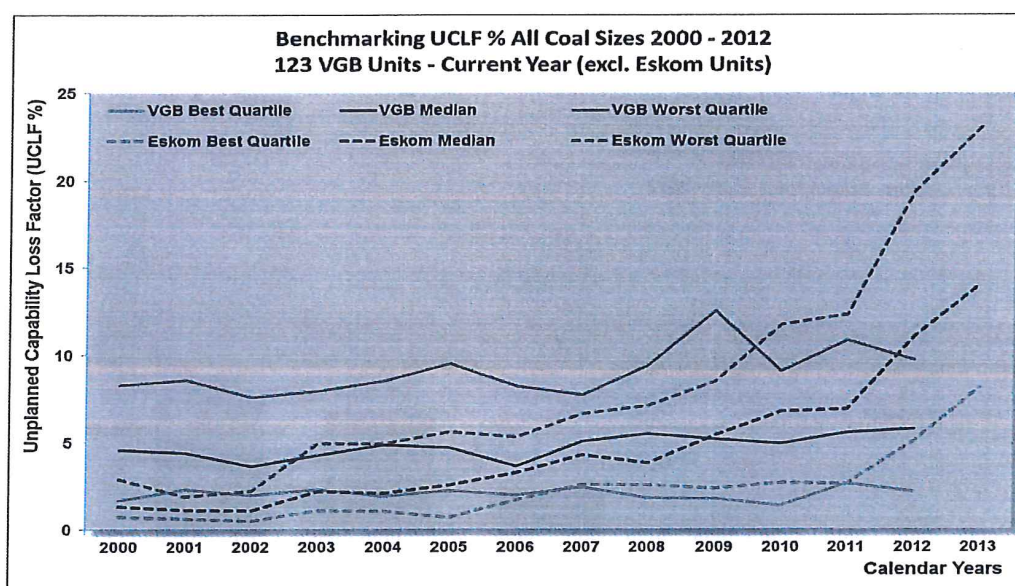


Figure 8: Eskom Plant UCLF & EAF - 2010-2014

- 3.8.3 Figure 9 below sets out a comparison between the Eskom UCLF figures and international recorded UCLF figures for the period 2000 to 2013. It can be seen that the Eskom UCLF for all quartiles shows a generally increasing trend from 2005. However, from 2011 onwards the Eskom UCLF increased sharply with the worst quartile UCLF exceeding 20% and the median exceeding 11% from 2012 onwards. The international UCLF median remained below 5% over the period 2000-2013, despite the plant ages being similar to those of the Eskom coal fleet.
- 3.8.4 The analysis indicates that the Eskom plant performance (as indicated by the recorded UCLF), has deteriorated materially since 2005 and there has been a rapid deterioration since 2011.

Figure 9: UCLF Benchmarking



#### 4 Underlying causes of the state of the generation fleet

- 4.1 The poor performance of Eskom's coal generation fleet from 2009 until the present is evident in the increase in UCLF and the corresponding decrease in EAF figures. Eskom has investigated these issues and several reports and presentations have been made at the EXCO and Board levels in respect of these issues.
- 4.2 In these reports and presentations to EXCO and the Board, the underlying causes of the increase in the UCLF figures have been attributed primarily to the following factors viz.:
- 4.2.1 increase in plant age;
  - 4.2.2 higher plant EAF figures (plant being run harder);
  - 4.2.3 plant deterioration due to maintenance being deferred; and
  - 4.2.4 planning and execution of the outage programme.
- 4.3 Eskom's aged assets

4.3.1 The ageing coal generation fleet has resulted in the following impacts:

- (a) increase in unplanned failures;
- (b) increase in mechanical failures;
- (c) increased duration of outages (due to increased scope of work during the outages) increases pressure on the rest of the grid to maintain security of supply;
- (d) increased costs due to increased scope of outage work; and
- (e) specialist engineering being required to complete the required scope of work during outages.

4.3.2 As indicated in paragraph 3.4.3 and paragraph 3.8, the age of the Eskom fleet is not dissimilar to that of utilities in Europe and the USA, but the performance of the Eskom fleet has been poor compared to these utilities. While the age of the Eskom coal fleet is expected to contribute to the deterioration of plant performance, it cannot be said to be the major factor for poor plant performance. Instead, the manner in which the plant has been operated, maintained and refurbished has played a great role in the current poor plant performance.

4.4 Higher plant utilisation

4.4.1 Eskom's plant has been operated harder than other international benchmark utilities (see Figure 4) mainly due operational strategies implemented by Eskom to cut costs (e.g. the 90:70:3 strategy and two-shifting operations for some plants) and to reduce the amount of load shedding.

4.4.2 The frequency of Emergency Level 1 (EL1) incidents has increased sharply with UCLF performance deterioration. This is related to the short term decisions being made (e.g. KLO strategy) to ensure that demand is met.

4.5 Maintenance deferral

4.5.1 With the onset of low reserve margins and system constraints in 2007, the reduced level of planned maintenance resulted in an increase in UCLF. Eskom further reduced PCLF in order to 'keep the lights on'. These and other factors (coal quality, high utilisation/load factors) resulted in a sharp increase in UCLF. Over the MYPD2 period the UCLF doubled while PCLF was reduced. The reduction in proactive maintenance due to outage deferral and rollover has led to Eskom having to implement higher levels of corrective maintenance.

4.5.2 The deterioration of the coal fleet (as evident in the high UCLF figures in Figure 9) can largely be attributed to the lack of maintenance, the deferral of maintenance outages and the quality of the maintenance being performed. This has been further exacerbated by the deferral of philosophy based outages and a decrease in on-line maintenance.

4.5.3 The following information regarding the maintenance and outage regime has been documented in the information submitted to the Board in 2014 viz.:

- (a) 44% of philosophy based outages across the fleet were deferred to March 2014;
- (b) 40 out of 90 outages are overdue (based on the philosophy maintenance requirements) resulting in a backlog of 39%;

- (c) It will take a period of 3-6 years to clear the current backlog of outages, provided that the philosophy based maintenance requirements are adhered to;
- (d) Deferral of maintenance outages compounds the negative impact on performance as more failures occur due to the deferral of the outages, resulting in greater levels of corrective maintenance being required with increased cost and longer periods required for such maintenance;
- (e) Coal 3 plants (Arnot, Camden, Grootvlei, Hendrina, Komati) have the highest backlog of outages primarily due to Coal 1 and 2 stations being given priority for maintenance; and
- (f) Online maintenance was also compromised largely due to EL1 notifications.

#### 4.6 Outage planning and execution

4.6.1 Achieving effective maintenance outage execution remains a very significant challenge for Eskom. In the FY 2015, only three out of seven maintenance outages were executed on time – this translates to only 43% of maintenance outages returning on time.

4.6.2 Eskom has identified the following primary reasons for maintenance outages not returning on time, viz.

- (a) lack of experienced skills and resources;
- (b) insufficient pre-project planning;
- (c) insufficient scope management;
- (d) sub-optimal spares management; and
- (e) productivity management.

4.6.3 The above issues have also resulted in additional costs for maintenance due to the following factors:

- (a) overtime – doing work after evening peak;
- (b) standing time – outage postponement;
- (c) emergency orders – for unplanned plant failures;
- (d) high tolerance for defects – defects arising on the plant are tolerated for longer periods to ensure that plant is available in the week;
- (e) weekend maintenance – overtime rates; and
- (f) high incidence of wet coal during the rainy season – additional oil burner costs.

4.6.4 Outage planning, scoping and execution are further hampered by the structure of the operating groups within Eskom. Prior to the re-organisation of Eskom (2011 - 2012), the Outage Management and Generation Engineering divisions were housed within the Generation group. The business operating model implemented since 2011 created many interfaces within Eskom on the group level for outage planning execution and management.

For the execution of a successful unit outage, alignment is required between the various Technology and Commercial divisions (Outage Management, Engineering and Procurement) and the end-customer at the specific power plants within the Generation Group. There are strong indications that this structure is not effective as the plant owner, who is accountable for the performance of the power plant, does not have total ownership in relation to the overall outage process. Interviews with Eskom Generation Group executives indicate that the management of outage process requires a complex delegation of authority which hampers the outage planning and execution. It is important to note that the significant increase in the UCLF figures coincides with the change in the Eskom business model (specifically in relation to the outage management process) during the 2011-2012 period. This correlation strongly suggests that the restructuring that was implemented by Eskom during the 2011/2012 period may have had a significant negative impact on the effective management of maintenance outages resulting in the recent sharp increase in the UCLF.

#### 4.7 Historical impacts of plant operation

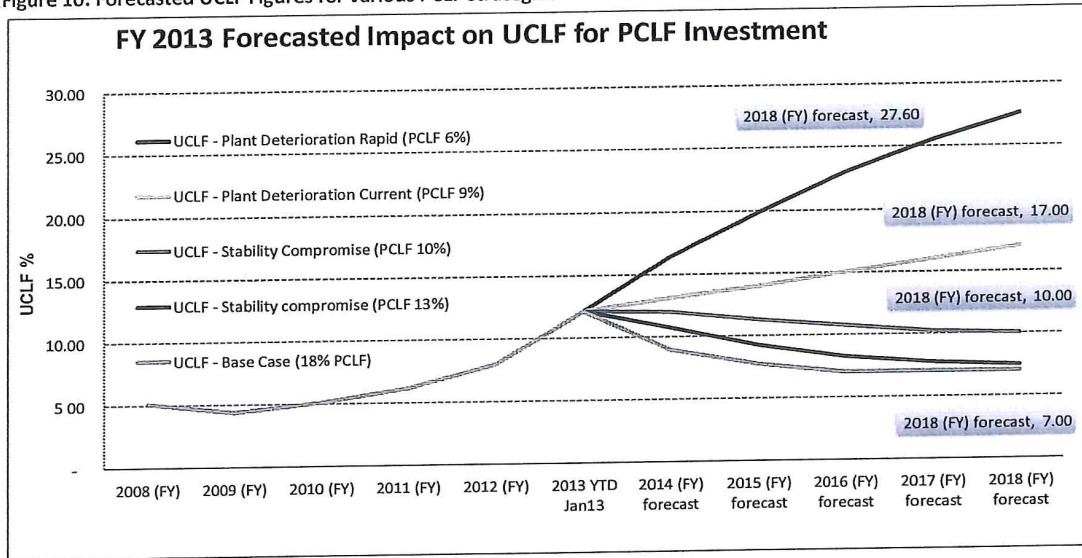
- 4.7.1 To uphold the KLO strategy, short term decisions were made by Eskom that negatively impacted on the long-term sustainability of the generation plant. Historically, this would include the impacts of maximising plant availability during the critical period in 2010 prior to and including the FIFA 2010 World Cup. The knock-on effects of deferring maintenance may not be immediately materialised and often manifest themselves later in the generation planning/production cycle. As an example, the available documentation indicates that in January 2013, five previous maintenance outages were not executed as scheduled as sufficient generation capacity was not available on the grid. The lack of generation reserves has also resulted in units operating outside limits of good practice. As an example, in June 2014, 46 out of 79 coal units were operating outside of good practice.
- 4.7.2 In order to address the surplus capacity issues in the late 1980s to early 1990s, certain Eskom plants were operated in a two-shifting mode. These included the Majuba and Tutuka stations, which were designed to operate as base load stations and not as two-shifting stations. During maintenance outages of these plants, excessive deterioration and additional defects are being identified beyond what would be expected for plants at their current ages. It now appears that the thermal stresses experienced during the two-shifting operation (implemented by Eskom more than 25-30 years ago) may have led to accelerated deterioration of these plants, which is manifesting itself in these plants today.

### 5 Strategies, tactics and plans to address fleet performance decline

- 5.1 Eskom has initiated various plans to address the deterioration in fleet performance. The following strategies have been put in place to address the fleet performance issues.
- 5.2 Eskom Emergency Recovery Team
- 5.2.1 The EXCO Emergency Recovery team was formed in 2013 in order to develop a recovery plan for achieving a sustainable generation business. The recovery plan focussed on the following six streams in order to achieve their objectives:
- (a) Communication and stakeholder engagement;
  - (b) Sustainable generation practices (fixing plant, building processes and developing skills in generation; building outage execution capability; and resource mobilisation);
  - (c) KLO levers;

- (d) System Operating Regime and Response;
  - (e) Medium Term Outlook; and
  - (f) Funding Requirements.
- 5.2.2 The recovery team has made positive progress in terms of attempting to balance the maintenance scheduling versus the system demand issues.
- 5.3 Technical Governance Committee Oversight
- 5.3.1 The Technical Governance Committee was formed to ensure that generation outage plans are incorporated and balanced with regard to the system demand and generation outlook. The oversight from this committee ensures that outages are firstly approved from a technical basis to ensure plant health is prioritised.
- 5.3.2 The technical oversight has been successful in prioritising philosophy based outages to ensure that the future plant health is maintained.
- 5.4 Eskom 80:10:10 Plan (Generation Sustainability Strategy)
- 5.4.1 The Generation Sustainability Strategy was developed in 2013 to operate and maintain the generation fleet with the aim of achieving sustainability of the generation business through the execution of the Generation 80:10:10 strategy.
- 5.4.2 The focus was to stabilise the fleet performance with regard to EAF, UCLF and PCLF figures over 18 months and to achieve a sustainable business over 72 months. The strategy looked at people, plant, processes and systems in order to address the fleet performance.
- 5.5 Impacts of the strategies to improve fleet performance
- 5.5.1 In 2013, Eskom conducted an analysis to forecast the future UCLF figures based on the implementation of various planned maintenance strategies. The results of the analysis are shown in Figure 10.

Figure 10: Forecasted UCLF Figures for various PCLF strategies

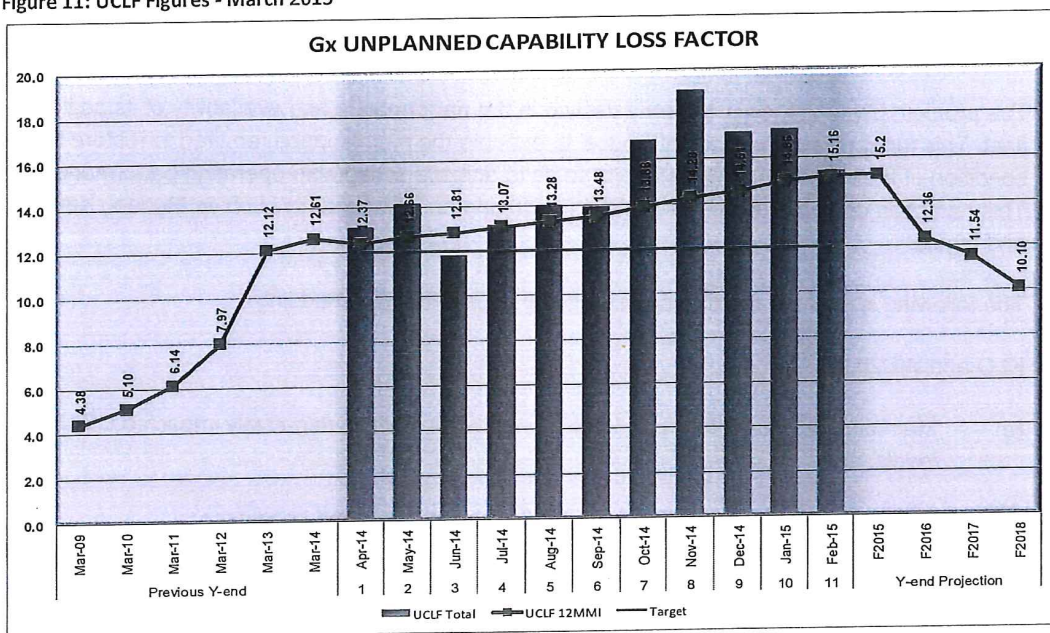


5.5.2 The above forecast indicates that if the maintenance levels based on PCLF of 6% was followed, this would result in a sharp increase in the UCLF with UCLF levels exceeding 15% in 2014 and 20% in 2015.

5.5.3 Eskom made a decision to implement the 80:10:10 maintenance strategy in 2014 and to prioritise philosophy based maintenance. This decision aligns with the stability compromise approach with a PCLF level of 10%.

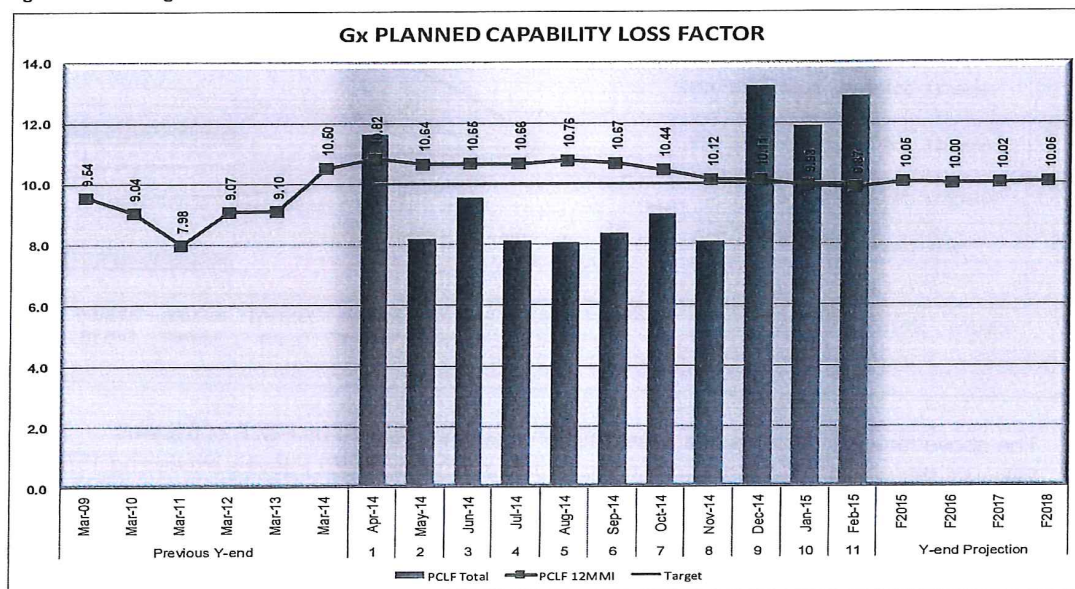
5.5.4 The current UCLF performance of the fleet is shown in Figure 11. It can be seen that the adoption of a 10% planned maintenance strategy and a focus on philosophy based maintenance strategy had a positive impact on the UCLF rates. The sharp increase appears to have been subsided, but the UCLF levels are still above the 10% target.

Figure 11: UCLF Figures - March 2015



5.5.5 Figure 12 below presents the actual PCLF levels for the Eskom fleet up to March 2015. The results indicate that Eskom did not achieve the target PCLF of 10% during certain periods of the 2014 financial year. This may be due to system capacity constraints which do not allow the “space” for the planned maintenance works.

Figure 12: PCLF Figures - March 2015



5.5.6 Underlying reasons for load shedding

5.6 Load shedding is the reduction of demand to achieve a balance between available generation and demand. If demand significantly exceeds available generation and reduction in demand is not achieved, the system will frequency drop, which may ultimately result in a system black-out.

5.7 It is clear that there was a long lead up to the generation shortages which has led to load shedding in 2014 and 2015.

5.8 The problem Eskom faces is a steady decline in the performance and availability of its coal fleet. This further leads to a lack of ‘space’ to execute the maintenance required to restore the condition of the coal-fired power stations so as to achieve acceptable operating performance. This has been compounded by the delays in bringing on new capacity such as Medupi, Kusile and Ingula.

5.9 The following issues are the primary underlying causes of load shedding:

5.9.1 KLO and WC2010

- (a) Maintenance was deferred to keep plants running which negatively impacted UCLF levels; and
- (b) The high UCLF levels has contributed to a supply/demand imbalance.

5.9.2 Reserve Margin

- (a) A healthy reserve margin should be maintained to achieve system security.

- (b) As a result of poor generation performance and delays in establishing new generation capacity, Eskom's reserve margin has been unacceptably low. With such low levels of reserve margin, unplanned failures of generating units and significant maintenance outages has necessitated load shedding.

#### 5.9.3 Maintenance Backlog

- (a) The 80:10:10 approach has been adopted in order to provide a framework for adherence to philosophy based maintenance.
- (b) Poor execution of planned maintenance outages will negatively impact the system generation availability and supply/demand balance when the system is "stressed" and under high UCLF conditions.

#### 5.9.4 New Build Plant delays

- (a) The delays in bringing new plant online has contributed significantly to the shortcomings in forecasting available generation and has resulted in increased levels of load shedding and/or greater reliance on the OCGTs for mitigating load shedding.

#### 5.9.5 Coal Quality Impact

- (a) Reduced coal quality results in partial load losses which will further impact the system generation and load balance.

#### 5.9.6 UCLF Impact

- (a) High UCLF figures primarily impacts the EAF levels. This means that the system generation and load imbalance is negatively affected.
- (b) Load shedding is the last resort once all the demand side initiatives are exhausted.

## **6 Maintenance philosophies and regimes implemented**

6.1 Eskom's maintenance philosophies are covered in the Generation Sustainability document developed in 2013-2104. It has been further refined in the Generation Maintenance Philosophy document presented to EXCO in January 2015.

6.2 The following issues must be considered when looking at the approach for Eskom's generation fleet:

6.2.1 Proactive maintenance;

6.2.2 Quality of maintenance (Internal/External);

6.2.3 Creating space for maintenance;

6.2.4 Capacity relating to workshop space as well as specialty skills;

6.2.5 Capital (Midlife refurbishment; outage spend and breakdowns);

6.2.6 Operating and maintenance skills (Training, coaching and mentoring); and

6.2.7 Performance based contracting (Internal/External).

## **7 Consistency of reporting on the state of the fleet**

- 7.1 The consistency of reporting on the state of fleet has to be tracked from the sub-committees reporting to EXCO, reporting within EXCO itself and reporting to the Board sub-committees and the Board itself.
- 7.2 The following paragraphs cover the consistency of the reporting with regard to the state of the fleet.
- 7.3 State of the plant with respect to UCLF
- 7.3.1 The following provide a timeline of key reporting done with respect to the UCLF statistics within Eskom. The items below have been tracked from the submissions to EXCO and selected submissions to the Board. The validity, accuracy, completeness and timeliness of this information will be assessed once the full documentation review is completed.
- (a) September 2012 – VGB report on Eskom Outage movement is issued;
  - (b) ARC 27 November 2012 – ARC Committee Report to Board notes the VGB Report where “further postponement of outages will negatively affect plant availability” is stated;
  - (c) MANCOM Meeting 15 January 2013 – Under the Generation Plant Status agenda item, the UCLF figures for Dec and Jan were reported and it was stated that no significant future improvements were foreseen. The “Sustainability of Generation Assets Management” was also presented in the meeting. This document develops the strategy based on additional work done on the VGB report. The MANCOM meeting also state that the plant availability issues affecting system security should be escalated to Board;
  - (d) EXCO 22 April 2013 – MANCOM minutes acknowledged in EXCO meeting with respect Generation Sustainability;
  - (e) Board April 2013 – The strategy and document “Towards a Sustainable Generation Business” and the implications for balancing supply and demand is approved by the Board including the 80:10:10 strategy;
  - (f) Board October 2013 – Board resolution of Generation Sustainability Strategy gives continued support and resolves “Generation will need to be prioritised from a funding and resource perspective”;
  - (g) EXCO December 2013 – EETT reports UCLF figures of 4 500 MW to 6 500 MW to EXCO;
  - (h) EXCO March 2014 – UCLF Deep Dive investigation reported to EXCO;
  - (i) EXCO March 2014 - UCLF figures and impacts from KLO reported to EXCO;
  - (j) EXCO 6 May 2014 – Generation Recovery and maintenance plan reported to EXCO in accordance with Generation Sustainability Strategy;
  - (k) EXCO 26 May 2014 – Eskom Emergency Recovery Task Team reports to EXCO on UCLF impacts;

- (l) EXCO July 2014 – Generation Sustainability Strategy update deferred to next EXCO meeting;
  - (m) EXCO 29 August 2014 - Generation Sustainability Strategy update presented; and
  - (n) Board 31 March 2015 - Generation Sustainability Strategy update presented.
- 7.3.2 The review of the information flow from EXCO and lower committees to the Board and its subcommittees indicate that generally the flow of information has been consistent.
- 7.3.3 While the underlying data has generally been consistently reported within the business, the analysis of the reasons for the poor performance of the Eskom coal fleet has tended to be slanted towards factors seemingly outside the control of the incumbent management (such as age of the plant, historical factors, funding constraints, government policies and directive) and not sufficiently on those factors which should be well within management control.
- 7.3.4 The information presented to the Board and its subcommittees is often very detailed and technical. This does not empower the Board in the decision making process. We would have expected to see suitable summaries and recommendations accompanying the detailed technical information.
- 7.3.5 There may be questions about the timeliness of the information provided to the Board and its subcommittees to allow pro-active decisions to be made. This is further complicated by the large volume of information contained in the Board packs which has led to decisions being deferred to later meetings due to time issues.
- 7.4 Appraisal of Maintenance Contract Pricing
- 7.4.1 Task Order 1 refers to the appraisal of the pricing of the maintenance contracts commissioned by Eskom and the monitoring of the performance of these contracts.
- 7.4.2 Eskom currently has several contracts for the provision of maintenance services for the power stations. The services are provided by the following companies viz.:
- (a) ██████████ – Technical support and maintenance services on air heaters and draught plant fans and manufacture, supply and delivery of air heater and draught fan spares. The contracts have a value of ██████████ for the year 2015;
  - (b) ██████████ – technical support, minor maintenance repairs, enhancement and complimentary services for generators and auxiliaries at Lethabo and Matla power stations. The contract has a value of ██████████ for the years 2013 to 2015;
  - (c) ██████████ – Maintenance services on turbines and associated plant at Eskom generation power stations (Arnot, Duvha Camden, Grootvlei, Hendrina, Kendal, Koeberg, Komati, Kriel, Lethabo, Majuba, Matimba, Matla, Tutuka, Peaking). The contract has a value of ██████████ for the years 2015-2019;
  - (d) ██████████ – Maintenance, repair and complimentary services for boiler plant and high pressure pipework at 13 Eskom power stations;
  - (e) ██████████ – Maintenance, repair and complimentary services for boiler plant and high pressure pipework at 13 Eskom power stations;

- (f) ██████████ – Maintenance, repair and complimentary services for boiler plant and high pressure pipework at 13 Eskom power stations;
- (g) ██████████ – Maintenance, refurbishment, monitoring services and supply of OEM spares on Generation’s boiler feed pumps and condensate extraction pumps. The contract has a value of ██████████ over a five year period; and
- (h) ██████████ – Spares, tooling, component repair, unit overhaul and technical training for Ankerlig and Gourikwa OCGTs. The contract has a value of ██████████ up till the year 2018.

7.4.3 Eskom Group Technology and Commercial has also submitted a ██████████ capacitation strategy. The capacitation of ██████████ would take place via a licence agreement with a proposed 12 year term with ██████████. ██████████ would, during that period, provide to ██████████ and Eskom access to technology, procedures, documentation and training related to the maintenance and repair of ██████████ steam turbines and generators operated by Eskom. The intention is that this would enable Eskom and ██████████ to become self-sufficient with regard to future maintenance requirements for the coal generation fleet. This strategy should be reviewed as this will make resources and skills for outages reliant on one supplier in future years.

#### 7.5 Pricing of maintenance contracts

7.5.1 The pricing of the maintenance contracts and the scope of work completed for the works has not been reviewed in view of the limited time available. In interviews with the former Group Executive for Generation, it was stated that costs of contracts for OEMs for Eskom in South Africa were higher than those in other utilities in Europe for a similar scope of work.

7.5.2 It is also noted that maintenance contracts have suffered persistent cost overruns. This is primarily due to the fact that variation orders are generally produced under the contracts due to ill-defined scope, redefinition of the scope, and additional work and inconsistency in works procedures. This is further complicated by poor contract management and poor execution for the outages.

#### 7.6 Monitoring of the performance of the maintenance contracts

7.6.1 The monitoring of the performance of the maintenance contracts has not yet been reviewed. Information obtained from interviews suggest that the maintenance contracts are not performance based.

7.6.2 Eskom is experiencing challenges with maintenance outage ‘time-slippages’ and post-outage defects are commonly detected which impact the plants’ timely return to service.

### 8 Recommendations

- 8.1 Eskom should review outage management process with regard to management, planning, procurement and ownership to ensure enhanced delivery.
- 8.2 The funding for maintenance should be prioritized and strictly ring-fenced.
- 8.3 The 80:10:10 strategy surrounding Generation sustainability should be reviewed on an ongoing basis.
- 8.4 The UCLF statistics due to outage delays should be separately reported and monitored.

- 8.5 The technical information that is presented to the Board should be distilled and summarised so that the essence of the information can be made available to the Board for decision making.
- 8.6 The maintenance contracts should be performance based and enforced through more focused contract management.
- 8.7 The works procedures should be standardized to the extent practical.
- 8.8 The [REDACTED] capacitation initiatives should be reviewed and tailored as it exposes Eskom to risk of relying on single 'embedded' supplier.

## **CHAPTER 2: DELAYS IN BRINGING THE NEW GENERATION PLANT ON-STREAM, INCLUDING COST OVERRUNS**

### **1 Background**

- 1.1 This Chapter deals with item 2.2 of the Scope of Work set out in Task Order 1.
- 1.2 Item 2.2 of Task Order 1 relates to the delays in bringing Eskom's new generation plant on-stream, including cost overruns. Under this heading the following specific items are provided for:
- 1.2.1 "2.2.1 the current status of the new generation plant and the project management practices designed to bring the generation plant into commissioning stage on time and within budget;
- 1.2.2 2.2.2 the project and contract management philosophies and practices implemented by Eskom in relation to best practices;
- 1.2.3 2.2.3 whether the lessons learnt from previous delays and cost overruns have been documented, communicated to relevant stakeholders and institutionalized to prevent recurrence;
- 1.2.4 2.2.4 whether the underlying causes for cost overruns and delays in completing the new generation plants are known and have been disclosed, and whether the actions taken in response are likely to enhance the likelihood that the projects would be delivered on time and within budget;
- 1.2.5 2.2.5 the measures that have been taken to ensure that the organization is likely to deliver these projects within the current targeted timelines and financial budgets, and whether any significant constraints beyond the control of management have been identified which require special intervention; and
- 1.2.6 2.2.6 whether the reports from EXCO with regard to the status of the new build are consistent with underlying reporting."
- 1.3 In view of the limited timeframes in which this Report was required to be prepared, the contents of this Chapter require further corroboration and verification..

### **2 Brief Historical Overview**

- 2.1 During the late 1960s, South Africa experienced annual economic growth rates of around 6% accompanied by very high growth in electricity demand. Eskom embarked on a programme of constructing large coal-fired stations each having six units with high levels of standardised designs across the new fleet. The scale of the construction and standardisation resulted in competitive pricing from contractors and vendors for most of these power plant projects. This, coupled with the relatively low price of coal resulted in South Africa boasting amongst the lowest electricity prices in the world for several decades.
- 2.2 However, the high economic growth of the 1960s did not continue for long as had been assumed during the generation capacity planning stages. During the late 1970s and 1980s the economic growth rate reduced significantly with a resulting reduction in the electricity growth rate. By the mid-1980s, South Africa had significant surplus generating capacity and Eskom entered an era of trying to operate a power system cost-effectively as opposed to

expanding its generation capacity. Several power plants (Camden, Grootvlei, Arnot and Komati) were mothballed to reduce the operating costs and the completion of Majuba power station was deferred. For the next two decades, the era of surplus generation capacity became entrenched in South Africa with a strong focus on reducing operating costs. In the late 1980s certain plants (e.g. Majuba and Tutuka) were operated in two-shifting mode and in the mid-1990s Eskom implemented its 90:7:3 strategy for power plant operation and maintenance.

- 2.3 During the period from the late 1990s to early 2000s, Government set out its plans to restructure the electricity supply industry. It was intended that Eskom would be restructured and that new generation capacity would be developed by independent power producers and not by Eskom. At the time, the integrated resource plans (developed jointly then by Eskom and NERSA) indicated that new large base load power plant capacity would only be required by around 2012. However, by 2005, it became clear that new capacity would be required much earlier than had been projected by Eskom and Eskom was given the mandate to develop the open cycle gas turbine power plants at Gourikwa and Ankerlig shortly followed by the mandate to develop Ingula pumped storage..

### 3 Eskom's New Build Program

- 3.1 The current new build generation programme construction phase commenced in 2007.

- 3.2 The 3 projects being undertaken (Ingula, Medupi and Kusile) all have characteristics which pose special challenges for Eskom including:

- 3.2.1 The two coal fired plants (Medupi and Kusile) are the largest power plant projects ever undertaken in South Africa and amongst the largest in the world;

- 3.2.2 The boiler technology used for both Medupi and Kusile is based on supercritical technology i.e. they operate at much higher temperatures and pressures compared with conventional pulverised fuel technology in use in Eskom's current fleet of generation. The supercritical technology improves the efficiency significantly compared to conventional boilers;

- 3.2.3 State-of-the-art flue-gas desulphurisation (FGD) will be installed at Kusile (and retrofitted to Medupi), which will be the first time that this is done for large coal power plants in South Africa; and

- 3.2.4 The Ingula pumped storage station will be the largest pumped-storage station in South Africa once completed. However, it posed environmental challenges not previously experienced.

#### 3.3 Medupi coal fired plant

- 3.3.1 Medupi is a greenfield coal-fired power plant project and is located west of Lephalale near the current Matimba power station, Limpopo Province, South Africa. Medupi is the fourth dry-cooled, baseload station built in 20 years by Eskom after Kendal, Majuba and Matimba power stations.

- 3.3.2 The power station will be the fourth (fifth after completion of Kusile) largest coal plant in the southern hemisphere, and will be the biggest (second after Kusile is completed) dry-cooled power station in the world. The boiler and turbine contracts for Medupi are the largest contracts that Eskom has ever signed in its 90-year history.

- 3.3.3 The new power station will comprise six units with a gross nominal capacity of over 840 MW each, resulting in a total capacity of over 5 000 MW. Construction activities commenced in

May 2007, with the first of the six units of the power plant now planned for commercial operation by the 3rd quarter of 2015.

- 3.3.4 To achieve high efficiency, supercritical boilers and turbines are being installed. These operate at higher temperatures and pressures than Eskom's other stations. This baseload station will also use direct dry-cooling due to the water scarcity in the area.
- 3.4 Kusile coal fired plant
  - 3.4.1 The Kusile power station project, which is located near the existing Kendal power station, in the Nkangala district of Mpumalanga, will comprise of six units, each rated at over 850 MW installed capacity for a total capacity of 5 100 MW. Once completed, Kusile will be the fourth-largest coal-fired power station in the world.
  - 3.4.2 The power station will be the first in South Africa to contain flue-gas desulphurisation (FGD) – a state-of-the-art technology used to remove oxides of sulphur, such as sulphur dioxide, from exhaust flue gases in power plants that burn coal or oil. This technology is fitted as an atmospheric emission abatement technology, in line with current international practice, to ensure compliance with air-quality standards, especially since the power station is located in a priority air shed area. The FGD plant is a totally integrated chemical plant using limestone as feedstock and producing gypsum as a by-product.
  - 3.4.3 The plant will use an air-cooling system to help conserve water. The bulk of the coal will be sourced from mine mouths in the local area, with further exploration continuing.
  - 3.4.4 Eskom indicated that the first synchronisation of Kusile Unit 1 is now scheduled for the first half of 2017, with the unit expected to enter commercial operations in the second half of 2017.
- 3.5 Ingula pumped storage plant
  - 3.5.1 Ingula is situated 55 km from Ladysmith, (20 km northeast of Van Reenen) within the Drakensberg range, on the border between the Free State and KwaZulu-Natal provinces. Upon completion it will be Eskom's third pumped storage scheme with an output of 1 332 MW, mostly used during peak-demand periods. The station is expected to be fully operational at the end of 2016. The Ingula pumped-storage scheme comprises an upper dam (Bedford) and a lower dam (Braamhoek).
  - 3.5.2 The principle of a pumped storage scheme is that water is stored in the upper reservoir and released during periods of high electricity demand for power generation into the lower reservoir. Very little if any natural water replenishment takes place into the upper reservoir and during periods of low electricity demand (night time and week-ends) water is pumped back into the upper reservoir to be used for generation during subsequent peak periods.
  - 3.5.3 The distance between the upper and lower reservoirs is 4.6 km, with an elevation difference of about 470 m. The reservoirs are connected through underground waterways to an underground powerhouse complex, which will house four 333 MW pump turbines with a total capacity of 1 332 MW and four generator transformers, and associated tunnels and shafts.

#### **4 Causes of cost overruns and delays**

- 4.1 Some of the causes of cost overruns and delays are discussed below.
- 4.2 Delays in new build decisions

- 4.2.1 The decision for Eskom to develop the new build plants was made late and Eskom was left with tight timeframes to avoid a shortfall in generation capacity. The delay by Government in granting Eskom the mandate to develop the new generation capacity was preceded by a period of policy uncertainty during the early to mid-2000's when independent power producers (IPPs) were earmarked for the development of new generation capacity. The delay in decision-making was compounded by Eskom indicating to Government that new baseload generation capacity was not required until 2012, when in fact new baseload was required by around 2008.
- 4.2.2 When the mandate for new generation capacity was finally granted to Eskom, the system was already starting to show signs of being supply-constrained and (contrary to Eskom's previous optimistic forecast of supply surpluses), it was realised that new generation capacity would need to be brought on line urgently to avoid supply-shortages.
- 4.2.3 As a result, Eskom set unrealistically aggressive timelines for the development of the new baseload projects in an attempt to meet the new revised forecast of supply-shortfalls. Original timelines for commissioning of the 1<sup>st</sup> Unit of Medupi was late 2012-early 2013.
- 4.2.4 A number of project preparation processes were fast-tracked or simply not done (as discussed in paragraph 4.5)
- 4.3 Skills to execute new build projects
- 4.3.1 When the decision to proceed with the new build projects was made, Eskom had limited skills to conduct such a project. Eskom had not developed coal power plants for decades. Experienced power plant staff (mostly operational staff) were moved to the new build programme which left substantial skills gaps at the operating power stations.
- 4.3.2 The new build projects posed special challenges for Eskom which contributed to delays and costs over-runs. The two coal fired plants (Medupi and Kusile) are the largest power plant projects ever undertaken in South Africa and amongst the largest in the world. The boiler technology used for both Medupi and Kusile is based on supercritical technology. Further, state-of-the-art flue-gas desulphurisation (FGD) will be installed at Kusile (and retrofitted to Medupi) which is the first time that this is to be done in South Africa. Although Eskom constructed two pumped storage power plants, the Ingula pumped storage station posed environmental challenges not previously experienced by Eskom.
- 4.4 Contract strategy new build projects
- 4.4.1 A decision was made by Eskom to execute the Medupi/Kusile projects on a multi contract basis rather than structuring the projects on the basis of a minimum number of large contracts. This meant that the responsibility and risk of integrating and managing the overall project implementation was with Eskom. This decision coupled with the shortage of the appropriate skills in Eskom to manage such a large complex project contributed greatly to the new build projects being over-budget and behind schedule.
- 4.5 Pre-construction development work
- 4.5.1 Due to the pressure to start construction caused by the urgent requirement for new capacity, a number of pre-construction activities were not done or were inappropriately executed.
- 4.5.2 No proper feasibility study was conducted to ensure that all technical, commercial and environmental hurdles were identified and mitigated. Some of the issues arising during the

construction phase should have been identified during the feasibility stage and dealt with prior to construction.

4.5.3 The engineering design prior to the tender phase was not adequately done, which led to an under estimation of the project costs and inappropriate designs being utilised. This necessitated significant design changes during the construction phase resulting in contract variations and cost increases. An example is the geotechnical investigation which was not carried out appropriately. This led to changes in the foundations, which caused significant cost increases and substantial delays of the order of 12-18 months.

#### 4.6 Contract and integration management

4.6.1 A productivity analysis conducted on the new build projects by an independent consultant revealed that delays and cost increases were primarily as a result of:

- (a) Poor upfront planning;
- (b) Poor project integration management; and
- (c) Inadequate quality control, which led to inferior components (i.e. boiler tubes at Medupi).

#### 4.7 Contractor failures

4.7.1 There were failures on the supply of some contracts and contractors were replaced during the execution phase, which contributed to delays and cost increases. An example is the [REDACTED] contract by [REDACTED] which was terminated and replaced with [REDACTED].

#### 4.8 Re-work

4.8.1 There were a number of completed work packages that had to be repeated for various reasons which caused delays and cost increase. The reasons for re-works are not always apparent and specific investigation would be required to confirm reasons for particular instances. An example of this is the manufacturing of high-pressure equipment according to incorrect weld procedures, which led to the work having to be re-done. Other work packages related to this failure had to be re-done as well. Had the welding not been rectified, the ability of Eskom to obtain certification to operate the boiler would have been jeopardised.

4.8.2 Post-weld heat treatment was also undertaken incorrectly by a subcontractor and had to be repaired. The reasons for this could well be the lack of the necessary skills and inappropriate quality verification procedures.

#### 4.9 Labour strikes

4.9.1 One of the causes of delays and cost overruns were labour strikes. One of the reasons for labour strikes was that labour is pre-dominantly contracted by the contractors. The contractors have different employment conditions and labour appeared to use this as a bargaining chip during labour disputes. Inexperience with labour issues appeared to have also affected delays.

4.9.2 In the industrial labour market currently there are two major unions, [REDACTED] and [REDACTED], which are in competition for members. Projects such as the new build are used as a platform to compete for membership.

#### 4.10 Project funding

4.10.1 For the new build projects all sources of funding were not secured ahead of commencement of construction.

4.10.2 Eskom's rating has been downgraded several times over the last few years.

4.11 In a few instances, construction was delayed as a result of the lack of funds and only went ahead when new funding was secured.

### 5 Contract management

- 5.1 Due to the tight time frames for submission of this Report, there was insufficient time to assess Eskom's contract management philosophies in detail but we can state the following based on the review work that we have performed.
- 5.2 There appears to be inconsistent treatment of contractors for example the [REDACTED] contract for the boiler control system was cancelled due to the system failure, but the services of [REDACTED] was retained in spite of the non-performance of [REDACTED] in respect of the boiler tube welding.
- 5.3 While Eskom's contract management framework has been in place for at least six (6) years, the establishment of a central coordinating structure for contract management was only established in September 2014, within the Group Capital Division to oversee the implementation of Eskom's contract management practices.
- 5.4 Prior to Sep 2014 contract management framework varied across projects and even between contracts on the same project.
- 5.5 At Medupi, the contract management framework and the principles of the FIDIC Delegation of Authority ("DoA") and the SCM Procedure 32-1034 were not complied with between 2009 and 2013. The Execution Partner (PB) did not align any of its processes and systems with Eskom's contract management framework.
- 5.6 The Engineer (under the FIDIC Contract) mainly focused on the administration of the contracts, to the exclusion of the other responsibilities set out in the FIDIC DoA framework and the SCM Procedure 32-1034. Consequently there was non-compliance with aspects of the PFMA and related public sector good corporate governance requirements. For instance payments beyond the thresholds stipulated in the DCF were usually certified without following the prescribed process set out in the SCM Procedure 32-1032.
- 5.7 Resulting from the various challenges that Medupi has experienced, the project team composition has since 2013 undergone various changes. Consequently, aspects of the FIDIC DoA framework and SCM Procedure 32-1034 are currently being implemented with the Contract Management Office playing an oversight role.
- 5.8 It is apparent that there has been non-compliance with the applicable contract management framework, specifically with regard to the implementation of the Medupi project.
- 5.9 FIDIC contracts for Medupi are in the process of being modified. Notwithstanding the modification, from an implementation perspective, the modification, approval and monitoring processes are susceptible to override.

- 5.10 Eskom must tighten its oversight responsibilities in respect of the implementation of the modification, approval and monitoring processes and the implementation of SCM Procedure 32-1034 in general in order to derive the overall objectives of good corporate governance.

## **6 Lessons learnt from delays**

- 6.1 Some of the lessons learnt at Medupi that were carried forward to the Kusile project:
- 6.1.1 The contract integration planning at Kusile was done on a much more rigorous basis than at Medupi;
- 6.1.2 The quality verification issues experienced at Medupi was avoided at Kusile by implementing appropriate managed quality verification procedures; and
- 6.1.3 A consistent philosophy to labour issues was implemented at Kusile and as such delays as result of labour stoppages were not experienced at Kusile to the extent it was experienced at Medupi.

## **7 Measures for project delivery**

- 7.1 This paragraph deals with item 2.2 of the Scope of Work set out in Task Order 1.
- 7.2 Item 2.2.5 of Task Order 1 relates to the measures that have been taken to ensure that the organization is likely to deliver these projects within the current targeted timelines and financial budgets, and whether any significant constraints beyond the control of management have been identified which require special intervention.
- 7.3 One of the measures taken by Eskom to bolster knowledge and experience was to recruit experienced resources internationally to increase the skills base. Eskom recently announced revised timelines for the Medupi and Kusile indicating that these projects will be further delayed and are now only planned for completion by 2020 for Medupi and 2022 for Kusile. These appear to be more realistic time frames given the current status, but there remains general scepticism as to whether Eskom will be able to achieve this given its past track record on contract management for these projects.

## **8 Consistency of Reporting**


- 8.1 The consistency of reporting with regard to the synchronisation and commercial operating dates for the first unit at Medupi was also tracked based on the evaluation of the reports received at the Board and EXCO levels for a two year period starting from April 2013.
- 8.2 In the Board meeting on 3-5 April 2013, the following resolution was taken viz "*the Board and Exco are still committed to deliver first power from Medupi Unit 6 by 31 December 2013 and will take all steps and actions necessary to ensure that this happens*".
- 8.3 In the same Board meeting, the following resolution was taken viz "*a date for the delivery of first power from Medupi Unit 6 will be confirmed after the independent assessment by VGB and this report will be submitted to the Minister of Public Enterprises by end of April 2013*". This would indicate the existence of some knowledge within Eskom at this point that possible delays would be experienced in bringing the first unit at Medupi on-stream.
- 8.4 In the Board meeting on the 30<sup>th</sup> May 2013, the Financial Director gave a verbal report on progress at Medupi. The following was stated viz "*Independent reviews of the build*

programme had been conducted by [REDACTED], [REDACTED] and [REDACTED], all of which indicated that it was unlikely that Unit 6 would be on line by December 2013, but more likely by April 2014 to mid-2014”.

- 8.5 The following discussion also took place in the Board meeting and was recorded in the minutes viz *“In response to a query as to when the Minister of PE would be advised that the December deadline was unlikely, it was reported that the Minister of PE had been advised during the meeting held on 16 May 2013 that there were risks to meeting this deadline. It was discussed that the Board had never recorded a formal decision that the December 2013 deadline would not be met. The CE recommended that this be addressed under the specific agenda item later”*.
- 8.6 The following resolution was also taken in the 30<sup>th</sup> May 2013 Board meeting based on the information obtained from IFC on the Revised Business Case for Project Medupi viz. *“it was resolved that the revised CO dates of June 2014 for Unit 6 and six months phasing for all the Units with the last unit CO date of December 2016 are noted.”* It should be noted that the “CO date” is mentioned and not the date of first synchronisation (which can be assumed to be 6 months earlier). This would translate to a first synchronisation date of December 2013 or January 2014.
- 8.7 In the Board Meeting of the 2<sup>nd</sup> July 2013, a discussion on the Build Programme was held. The following is noted in the Board minutes viz. *“It was reported that the Minister of PE had requested more details on the status of the build programme as he was concerned about the revised June 2014 completion date because he had not been advised thereof formally and expected a separate formal letter in this regard. It was recommended that Medupi should be dealt with as a separate item with the media ”*
- 8.8 In the MANCOM meeting of the 20<sup>th</sup> August 2013, the Medium Term Outlook (MTO) was presented. The MTO is an adequacy assessment of the South African electricity supply industry on an hourly basis from the FY2014 to FY2019. On slide 9 of the presentation, the assumptions on the CO dates were detailed. This is shown below in Figure 13.

Figure 13: MTO 2013 Assumptions - CO Dates

## MTO July 2013 - Assumptions<sub>1</sub>



### New Build Official Dates for Commercial Operation

Summary	1 <sup>st</sup> unit Commercial Operation Dates		
	Gx Sustainability Adequacy Assessment	MTO July 2013 (Official Dates)	MTO July 2013 (Delay on Official Dates)
Medupi	1 February 2014	31 December 2014	1 July 2015 (6 months delay)
Kusile	1 January 2015	1 January 2016	1 July 2016 (6 months delay)
Ingula	1 August 2014	1 July 2014	1 October 2014 (3 months delay)
Sere	1 May 2014	1 Dec 2014	No delay tested

Medupi & Kusile: Assume 9 months between units

To see adjustments from previous MTO's:  
[Go To](#)

2013/08/07

9

- 8.9 In the Board meeting of the 28 August 2013, a Build Programme review was presented. The Board noted the following with respect to the schedule for Medupi viz.:
- 8.9.1 The integrated schedule of Engineering and Construction Management for Project Medupi Unit 6 indicates a first-unit synchronisation date of end-May 2014.
- 8.9.2 The key risks to the schedule include:
- (a) The welding quality issues relating to both the progress of defect rectification of the previously reported fraudulent post-weld heat treatment (PWHT) and the acceptability of the PWHT to rectify unsuccessful welding procedure qualification record (WPQR);
  - (b) The unsuccessful control & instrumentation (C&I) factory acceptance tests (FAT) for FAT H for the Balance of Plant (BOP) and the FAT for the Boiler Protection System (BPS);
  - (c) The slow rate of completing the loop checks on the control system in order to allow for timely commissioning activities; and
  - (d) The possible re-work of the Re-heater to eliminate the touching of tubes that will lead to early failure of boiler tubes in service.
- 8.10 In the Board meeting of the 28 November 2013, a Build Programme Review was submitted. The Board noted that a first synchronisation date of 15 August 2014 was planned. The New

Build report did indicate numerous risks which may delay the first synchronisation beyond the planned August 2014 date.

- 8.11 In the EXCO meeting held on June 2014, feedback was given on the Medupi project. The following was minuted viz "*First Synchronization (1st synchronisation) of Medupi Unit 6 remains on track for Dec-14 and Commercial Operation (CO) planned is for May-15*".
- 8.12 In the EXCO meeting held on 29 August 2014, an update on the Build Programme was given. The following was minuted viz. "It was reported that first synchronisation for Medupi Unit 6 was still for December 2014. To date the chemical clean had been completed and the site integration had begun. First fire was expected in late September to early October 2014 and the only risk to this milestone was that insulation work would not be completed".
- 8.13 In the Board meeting held on 28th November 2014, an update was given to the Board on the progress at Medupi. It was stated in the minutes that synchronisation of Unit 6 was planned for 24 December 2014.
- 8.14 The summary of our findings on the reporting on the new build projects is as follows:
  - 8.14.1 The reporting on target commercial operation dates (CODs) for new build has been unrealistic.
  - 8.14.2 Despite major issues on project execution it appears this was ignored (welding, Control & Instrumentation, re-heater, etc.) and reported target COD did not adequately reflect the impact of these issues on the timeframes – highly optimistic timeframes were persistently reported.
  - 8.14.3 There was inconsistency of timelines for Medupi across the business – the Board reporting gives optimistic timeframes despite extensions being requested from other parts of the business at the same time;
  - 8.14.4 The Board was informed of progress and target dates but the impact of risks on the timeframes were not adequately addressed in the reporting. A 'head in the sand' approach seems to have been followed by not considering pending risks.
  - 8.14.5 The use of different terminology blurring the distinction between "synchronisation" and "COD" created confusion and inconsistent reporting about Medupi target dates.
- 8.15 The optimistic timeframes had a major impact on Eskom's decisions and planning processes across the business. These optimistic dates were used and this led to KLO, maintenance deferral, diesel forecasts, generation sustainability, MYPD submissions, etc. When the optimistic timeframes were not met it led to further pressure on these issues.

## **9 Recommendations**

- 9.1 Project planning processes to be implemented according to best practices followed internationally and appropriate project management training to be given to staff to increase skills base;
- 9.2 Eskom to review contracting strategy for its large and complex projects to match with skills base within the business;

- 9.3 Accountability for project target dates to be clearly defined and project staff not to be under any illusion as to what their responsibility is with delivering on targets. Regular independent reviews of project target deliveries should be conducted;
- 9.4 Risks of projects should be identified prior to and during the construction phase, and fully integrated into the project planning and decision-making process from project kick-off; and
- 9.5 Contract management processes to be reviewed and strengthened with a view to avoid ambiguity in the treatment of contractors on non-performance.

## CHAPTER 3: HIGH COST OF PRIMARY ENERGY

### 1 Background

- 1.1 This Chapter deals with item 2.3 of the Scope of Work set out in Task Order 1.
- 1.2 Item 2.3 of Task Order 1 relates to the high cost of primary energy (nuclear, coal, diesel, liquid oils and water). Under this heading the following specific items are provided for:
  - 1.2.1 “2.3.1 the primary energy costs currently incurred by Eskom and whether they are commercially supportable;
  - 1.2.2 2.3.2 whether the underlying causes for increase in primary energy costs are known and reported;
  - 1.2.3 2.3.3 whether the strategies and tactics adopted by Eskom to procure primary energy (Nuclear, Coal, Diesel, Liquid Oils and Water) are commercially supportable, in particular the use of ad hoc Diesel suppliers; and
  - 1.2.4 2.3.4 the forecasting model for the use of diesel.”
- 1.3 In view of the limited timeframes in which this Report was required to be prepared, the contents of this Chapter require further corroboration and verification..

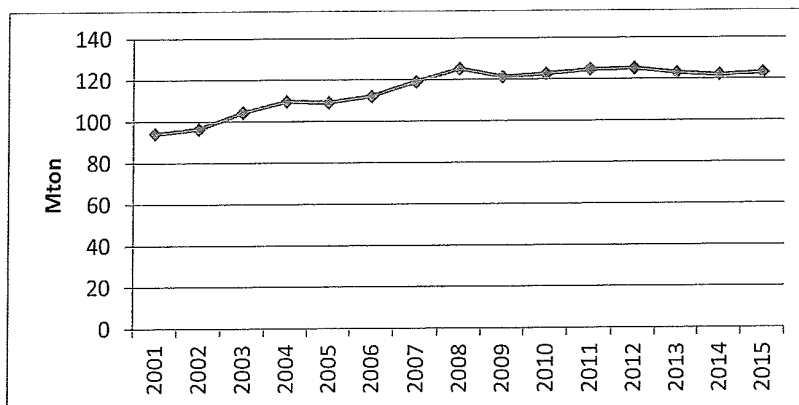
### 2 Brief Historical Overview

- 2.1 Historically, Eskom was de facto the only market for low grade bituminous steam coal in South Africa and as such it had the market power to effectively set prices for this type of coal. The coal prices contracted by Eskom in its long term contracts were comparatively low which contributed in a large part to the historically low electricity prices enjoyed by South Africa during the 1980s and 1990s. As the demand for electricity grew and generating plants increased their outputs to meet the demand, the coal consumption increased to the point where, over the past decade, the coal requirements for power generation have increasingly exceeded the coal volumes contracted by Eskom in its long term contracts. As a result, Eskom has been purchasing increasing quantities of coal on the basis of medium term contracts to supplement the supplies from the long term contract.
- 2.2 Diesel costs incurred by Eskom have increased significantly over the past few years due to the higher than expected levels of operation of the open cycle gas turbines. The gas turbines, being the plants with the highest variable cost of operation, are operated only when no more generation is available from other plants, as mitigation against load shedding. Since the level of load shedding to be implemented at any point in time is due to a combination of planned and unplanned events, the amount of diesel to be used has been difficult to predict and actual cost of diesel has far exceeded the cost of diesel projected in the MYPD.
- 2.3 Overall, Eskom has, over past few years, seen a significant increase in its primary energy costs and a key question is whether these increased costs are due to the prevailing market forces, contractual arrangements and whether or not these costs are commercially supportable.
- 2.4 In the paragraph below, we present our demand side, supply side and pricing analysis for the coal and diesel.

### 3 Demand for coal for power generation

3.1 Figure 14 below provides a graphical illustration of the variation in coal consumed by Eskom for power generation for the period 2001 to 2015. Eskom's consumption of coal increased significantly from around 95 Mton in 2001 to 120 Mton by 2008 i.e. at a rate of 3.4% per annum. From 2009-2015, the coal consumption remained within a fairly narrow band of 120 – 125 Mton per annum.

Figure 14: Coal consumed by Eskom for power generation (2001-2015)

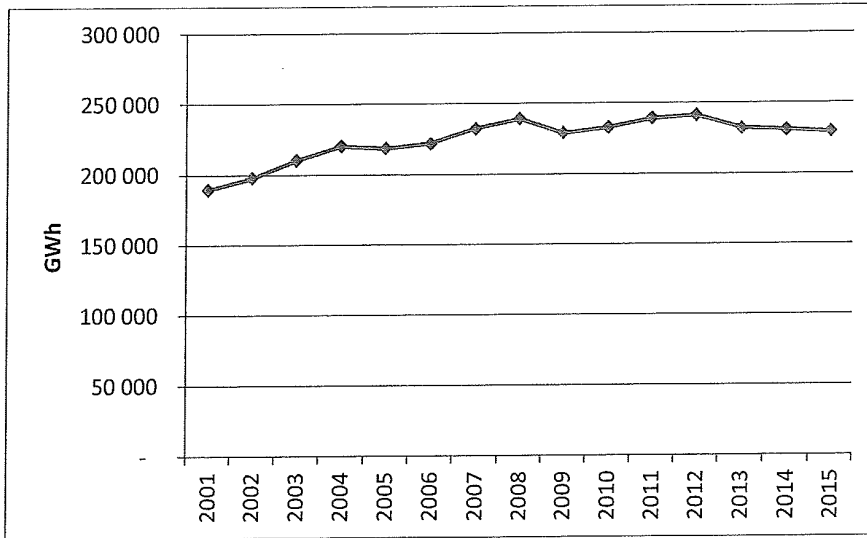


3.2 The increase in the consumption of coal by Eskom has been mainly due to the following factors:

#### 3.2.1 Growth in electricity demand

(a) Figure 15 shows the increase in electricity demand (in GWh) during the period 2001-2008. During the period 2001 to 2008, the electricity energy demand increased on average by around 3.4% per annum which strongly correlates with the growth in the coal consumption. During the period 2008-2015, there was no average annual increase in electricity. Electricity demand effectively peaked in 2008 before the financial crisis. In 2009, electricity demand reduced, then grew marginally in 2010 and 2011 to the same level as 2008. In 2012 demand grew marginally above 2008 consumption but fell away from 2013 to 2015 (similar to 2010 levels) again. During this period, the coal consumption reflected growth in the electricity and remained within a band of 120-125 Mton per annum (2008 consumption 125 Mton).

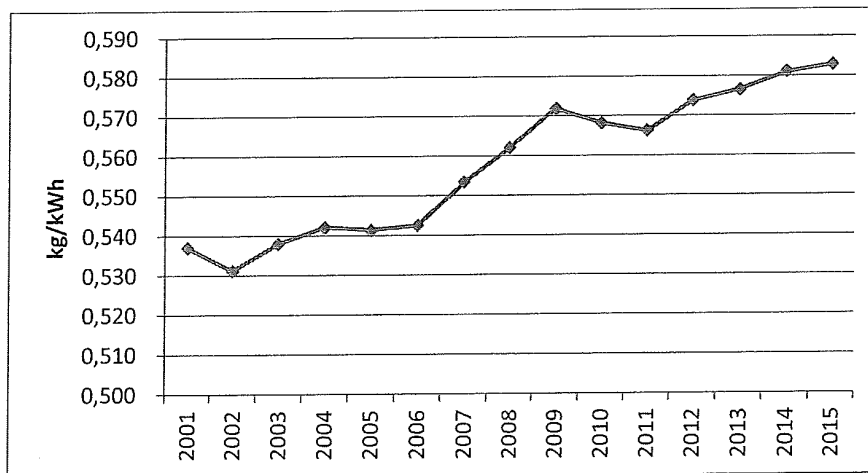
Figure 15: Demand for electricity (2001 – 2015)



### 3.2.2 Increase in the coal burn rate

- (a) Figure 16 below provides a graphical illustration of the variation in the volume of coal consumed per unit of electricity produced (burn rate) for the period 2001-2015. The average annual increase in the burn rate over this period was around 0.6%.

Figure 16: Coal burn rate (2001 – 2015)



- (b) The increase is caused by:
- (i) Plant efficiencies:
    - (A) The deterioration in efficiencies (partially caused by insufficient maintenance) of aging plant and the return to service (RTS) of old power plants (Camden, Grootvlei and Komati have lower efficiencies) that were placed in storage in the early 1990s.

- (B) The increase in coal consumption per unit of electricity since 2001 is evident.
- (ii) Calorific value of coal
  - (A) Reportedly coal heat contents (calorific value – CV) have deteriorated over the time. Although it does not appear that coal CVs have deteriorated to the extent that regular rejection of coal batches has occurred, the tendency in the CVs of coal received has been closer to the lower end of the range of the CVs contracted.
  - (B) When a mining operation commences on a newly developed mine, the operation would be focussed on the better quality coal and as time progresses the quality of coal would deteriorate. Furthermore the multiple contracts entered into by Eskom to fulfil the coal requirements has increased the complexity of managing the coal supplies and more batches of inferior (not to contractual limits) coal was accepted without appropriate verification.
- (iii) Off-shore demand
  - (A) Historically, Eskom was de facto the only market for low grade bituminous steam coal in South Africa and as such it had the market power to effectively set volumes and prices for this type of coal. Accelerated global economic growth, particularly in China and India, has increased the demand for coal globally. Consequently, this has contributed to the increasing prices of coal, with some coal suppliers opting for more lucrative offshore contracts.
  - (B) Furthermore, the increased global demand led to comparatively lower grades of coal being exported i.e. even CVs as low as 25 GJ/Ton. This had the effect that coal supplies to Eskom now are faced with global market competition leading to pressure on price and quality of coal delivered to Eskom.

#### **4 Supply of coal for power generation**

- 4.1 Eskom currently is supplied with coal under three main categories of contracts:
  - 4.1.1 Long Term Cost Plus Contracts;
  - 4.1.2 Long Term Fixed Price Contracts; and
  - 4.1.3 Medium Term and Short Term Fixed Price Contracts.
- 4.2 Long Term Cost Plus Contract supply
  - 4.2.1 The oldest of these agreements are Cost Plus Contracts entered into in the 1970s and 1980s.
  - 4.2.2 The collieries supplying coal under the Cost Plus Contracts were developed as joint ventures between Eskom and the mining company, with both parties investing capital. Under these contracts, Eskom would pay a price for the coal based on a fixed return to the mining company on the capital invested by the mining company. The mining company is responsible

for operating the colliery but Eskom is responsible for paying the operating cost and for making the ongoing capital investments required to achieve production.

4.2.3 These mines are situated next to the Eskom's power stations that they supply, with all coal production dedicated to Eskom. The power stations are supplied using a conveyor system, which means that transport costs are not significant – the exceptions being Majuba and Tutuka power stations. The original colliery developed and earmarked for supply to Majuba turned out to be in a geologically faulted area and costs turned out to be extremely high during the initial operation. The mine was accordingly closed down. Similarly the colliery supplying Tutuka was never developed to its intended production level due to geological difficulties. Other sources of supply were secured which meant that coal has been trucked to Majuba (new contracts fixed price) and Tutuka power stations since around 1996. The coal price is based on mining costs plus an agreed profit consisting of management fees and a return on capital invested by the mining company.

4.2.4 Advantages:

- (a) Historically these were the lowest cost mines in Rand/Ton;
- (b) Eskom had transparency regarding mining operations and had the ability to influence decisions; and
- (c) The long term contracts simplified and facilitated financing of the mine development and operations.

4.2.5 Disadvantages:

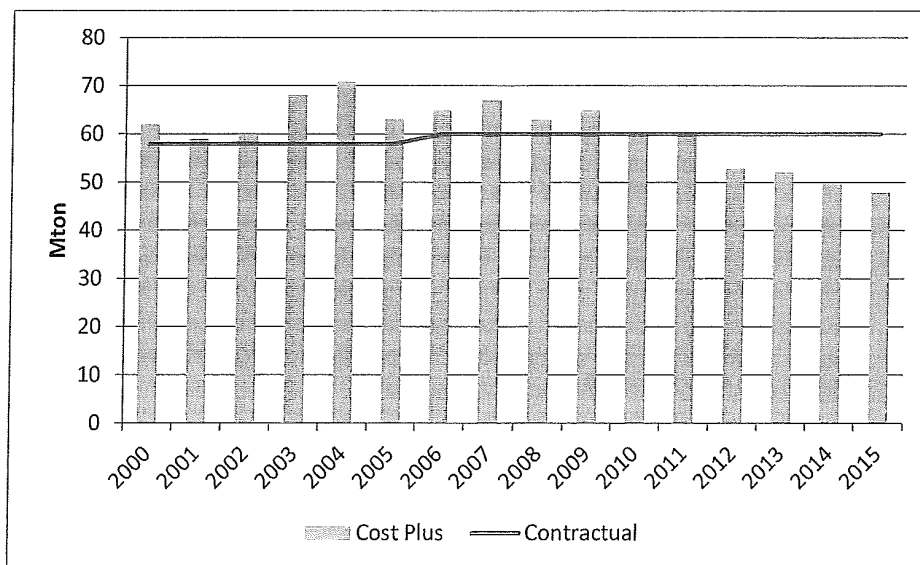
- (a) Eskom carries significant risk as operational costs are passed through to Eskom;
- (b) There is limited incentive for the mining company to optimise operations and improve efficiency; and
- (c) The financial liability lies with Eskom in providing initial and ongoing capital expenditure.

4.2.6 There are currently six of these contracts in place. These are:

- (a) New Vaal colliery supplying Lethabo power station;
- (b) Khutala colliery supplying Kendal power station;
- (c) Matla colliery supplying Matla power station;
- (d) Kriel colliery supplying Kriel power station;
- (e) New Denmark colliery supplying Tutuka power station; and
- (f) Arnot colliery supplying Arnot power station.

4.2.7 Figure 17 presents the coal supplied by the Cost Plus Contracts. From 2012 the supply from these contracts could not maintain the contractual requirement (60 MTon per annum) anymore. The main reason for this is that Eskom has not invested in these collieries to the extent required to maintain the production levels.

Figure 17: Cost plus mine coal purchases 2000 - 2015



#### 4.3 Long Term Fixed Price Contract supply

4.3.1 The next tranche of coal supply contracts entered into by Eskom was the Long Term Fixed Price Contracts. Under these contracts, the mining companies supply coal to Eskom at a fixed price annually escalated according to an agreed composite escalation index. The mines supplying coal under these contracts supply coal not only to Eskom, but also produce and supply products for the export market and other local markets.

##### 4.3.2 Advantages:

- (a) Predictable prices;
- (b) Less price and quality variation risk exposure than Cost Plus; and
- (c) No ongoing capital investment required from Eskom.

##### 4.3.3 Disadvantages:

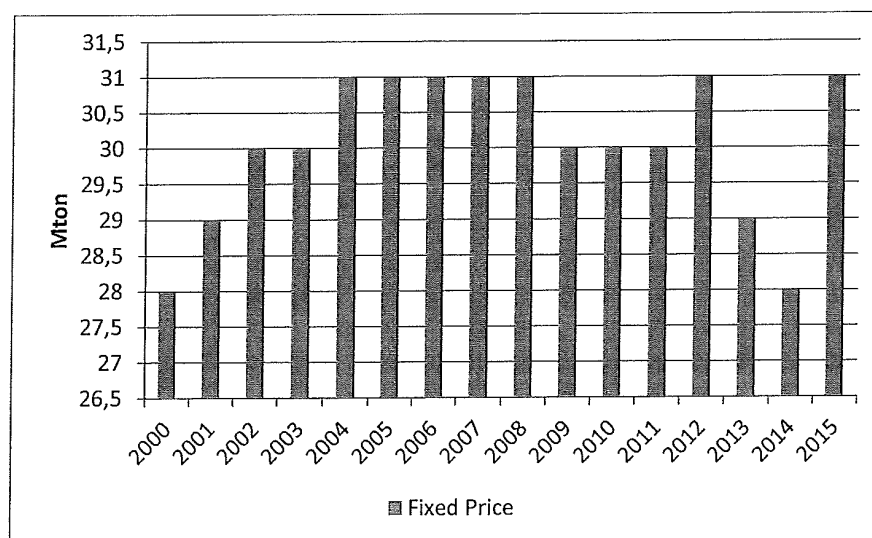
- (a) Negotiated prices can be high if Eskom has limited alternative options at the time and forecasted market conditions favour suppliers; and
- (b) Dependent on global market demand, price and export volumes.

##### 4.3.4 The contracts in place are:

- (a) Grootegeluk colliery supplying Matimba power station;
- (b) Middelburg mining services supplying Duvha power station;
- (c) Optimum colliery supplying Hendrina power station;
- (d) Mafube colliery supplying Arnot power station; and
- (e) Goedgevonden colliery supplying Majuba power station.

4.3.5 Figure 18 presents the supplies from Long Term Fixed Price contracts. Supplies from these contracts have remained fairly steady at 28 – 31 Mton per annum.

Figure 18: Long Term Fixed price coal supplied



#### 4.4 Medium and Short Term Fixed Price Contract supply

4.4.1 As the demand for coal for power generation grew and the Long Term agreements could no longer supply the required increases, Eskom supplemented coal supply from the long term coal suppliers with Medium Term and Short Term Fixed Price contracts.

##### 4.4.2 Advantages:

- (a) Fast and easy to negotiate;
- (b) Predictable prices; and
- (c) Flexibility through short contract durations and road and rail deliveries.

##### 4.4.3 Disadvantages:

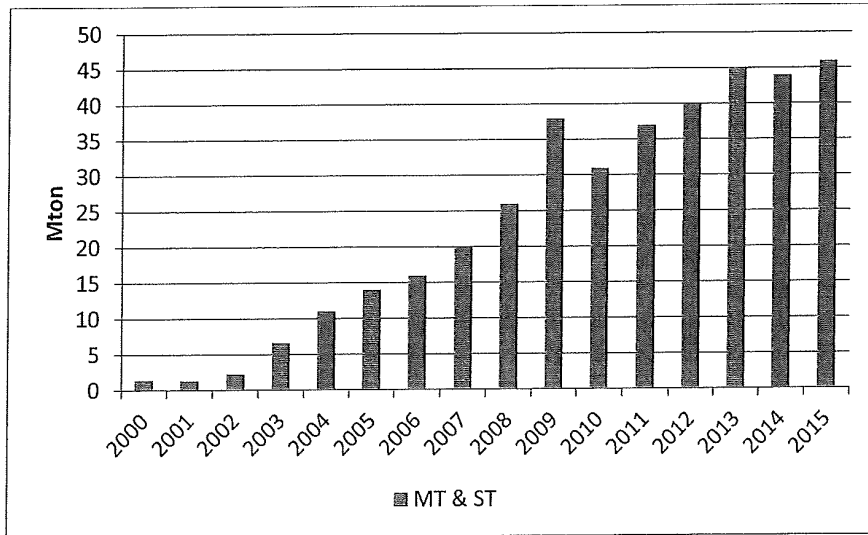
- (a) Substantial price premium for mining marginal deposits and for the miner's higher risk exposure;
- (b) The mines are not located next to the power stations and therefore transport costs are considerable; and
- (c) Considerable contract management resources required as a result of the multiple contracts linked to a power station.

4.4.4 The supplies from these contracts are transported by road and rail to most of the power stations to supplement coal requirements. The exceptions are Matimba and Lethabo power stations, where the requirements are also transported but under Long Term Contracts.

4.4.5 Figure 19 below provides the coal supply levels under the Medium Term and Short Term Fixed Price Contracts for the period 2000-2015. The supply under these contracts has

increased from less than 2 Mton per annum in 2000 to more than 40 Mton per annum in 2015.

Figure 19: Medium Term & Medium Term Fixed price coal purchases



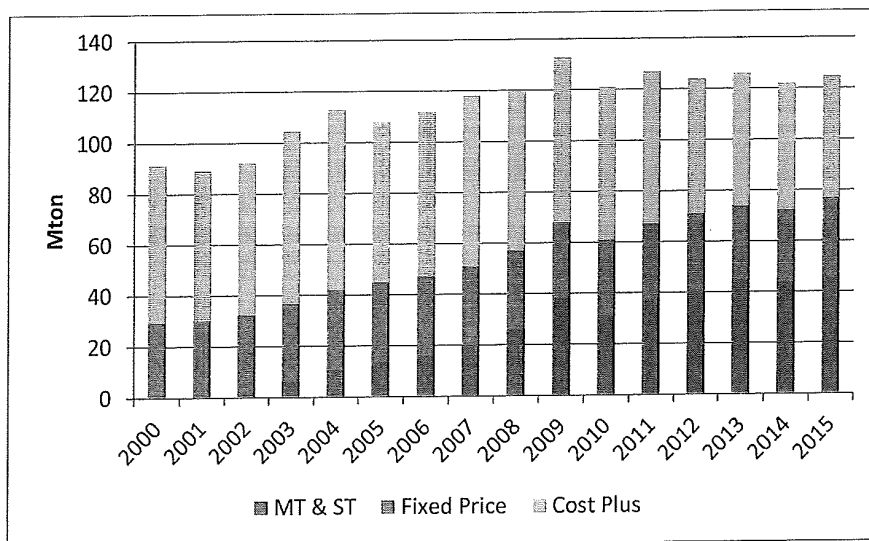
#### 4.5 Eskom's mix of coal supply contracts

4.5.1 Historically Eskom relied on the Long Term Cost plus and Fixed Price Contracts to supply its coal needs. Typical quality of coal supplied by Eskom power stations vary from 18-24 GJ/Ton. Coal plant boilers are designed based on specific coal quality. Export quality coal typically has high calorific values (CV) >27 GJ/Ton. If the coal delivered are not according to specification it means the plant cannot operate at design efficiencies. The Long Term Contracts had quality and quantity measures that were enforced. When the contracts were signed between Eskom and the mining houses for the supply of coal to the existing power stations, the mining houses were required to have a 50 percent contingency proven reserve of coal. However the contractual limitations on the Long Term Contracts did not provide for increased requirements.

4.5.2 The Long Term Contracts could contractually supply a maximum of 95 Mton per annum. The requirement for coal started to exceed the contractual maximum supply from Long Term contracts by 2003. From 2003 up to 2011 the Medium Term and Short Term Fixed Price Contracts provided for the growth in coal requirements and from 2012 the reduction in Cost Plus Contracts below contracted levels meant that these Medium Term and Short Term Fixed Price Contracts also made up the short fall.

4.5.3 Figure 20 presents the mix of coal supplies for the three contract categories over the last 15 years. Currently 38%, 25% and 37% of the requirement is supplied by Cost Plus, Fixed price and Medium Term & Short Term Contracts respectively. The combination of coal supply contracts to Eskom has thus changed significantly over the past 10 – 15 years. This has substantially increased the complexity of managing coal deliveries.

Figure 20: Coal purchased by Eskom from three types of contracts



## 5 Coal pricing

- 5.1 Table 1 below provides the current coal prices for each of the coal supply contracts (Cost Plus, Fixed Price and Medium Term Contracts) and the power stations to which the coal was supplied. The prices under Long Term (Fixed Price and Cost Plus) Contracts vary from [REDACTED] to [REDACTED]/Ton. The average price of coal from the Long Term Cost Plus Contracts is [REDACTED]/Ton including transport costs (all Cost Plus agreements deliveries are by conveyor). The average price of coal from the Long Term Fixed Price Contracts is [REDACTED]/Ton including transport costs ([REDACTED]). The average price across all Long Term Contracts is [REDACTED]/Ton.
- 5.2 The Medium Term Contracts vary between [REDACTED] and [REDACTED]/Ton of coal. The average price of coal from the medium term contracts (excluding transport prices) is [REDACTED]/Ton which is not significantly different from the average long term contract prices (about 3% higher) i.e. the Medium Term Contract prices are essentially the same as the Long Term prices. These price levels are also substantially lower than the [REDACTED]/Ton for export coal, noting that the coal supplied to Eskom are lower quality coals compared to export coal. Adding an average transport cost of [REDACTED]/Ton to the Medium Term Contracts prices, gives an average delivered cost of coal of [REDACTED]/Ton for the Medium Term Contracts. Thus, the transport costs of the Medium Term contracted coal is a significant driver in the increased coal costs experienced over the last number of years.
- 5.3 The average price across the Long Term and Medium Term Contracts including transport costs are [REDACTED]/Ton which is about 50% of the export price of higher quality coal before transporting it to Richards Bay Coal Terminal (RBCT).
- 5.4 Eskom has indicated that there have been changes in coal specification which has led to price increases. In order to determine whether the coal quality specifications have changed over time, the originally designed coal quality specifications were compared to those of the acceptable coal quality specifications determined recently by Eskom. In order to establish a baseline of the qualities suitable for a specific power station, Eskom engineering together with RT&D derived acceptable and rejection coal qualities for each power station utilising a coal quality effect model tool. This model uses plant design and STEP performance data as

provided by the power stations to determine the acceptable and the rejection coal quality (absolute minimum) that the boiler plant can tolerate.



- 5.5 It was found that, in most instances, the acceptable coal volatilities (combustion properties) range was lower than the original contractual specification. This would have no effect on price since the acceptable range is of a lower requirement than the original specification.
- 5.6 In many instances, the original ash content specification was lower than the acceptable range. If coal was delivered to specification it meant that less ash was generated, so less strain was placed on the boilers and ash handling system.
- 5.7 From this brief analysis, it appears that coal specifications over the expended life of the power stations have not changed to the extent that it required major adjustments to the processing of the coal mined.
- 5.8 It must be noted that the actual delivered coal qualities have not been verified.

## **6 Current primary energy costs**

- 6.1 Export and Eskom prices of coal
- 6.1.1 Figure 21 presents export prices of coal at Richards Bay Coal terminal (RBCT) in US\$ terms since start of 2000. Up to the end of 2003 prices traded from around \$20 to \$40/Ton. Subsequently prices started to increase. There are large variations (from \$ 40 to \$160/Ton) across this period, but generally there is an increasing trend of coal prices. However, for the last four years (from April 2011) prices have decreased by about 50%, from the above US\$120 to current prices of US\$60/Ton.
- 6.1.2 Despite the export prices having decreased from more than \$120/Ton to around \$60/Ton in 2015, the R/\$ exchange rate still makes it more profitable for coal suppliers to export coal rather than sell it locally. This alternative market is a significant driver of the local price of coal.
- 6.1.3 Given the downward trend since June 2011, it may be asked why Eskom has not benefited from lower international prices, especially with regard to their Medium Term and Medium Term contracts. Given Eskom's buying power in the industry, the alleged competitiveness of the coal market and declining international prices, it would be reasonable to expect Eskom's marginal coal prices to have decreased during this period. The current weakness of the Rand may have had an effect.
- 6.1.4 To compare with Eskom prices (Eskom buys coal in ZAR), export prices are required to be converted to ZAR. Figure 22 presents the RBCT export prices in ZAR. In the last four years, in nominal ZAR terms the coal price has been trading between R880 and R720/Ton. The export price of coal in ZAR nominal terms has thus not decreased to the extent of US\$ based prices – the reason being that the ZAR has decreased in value from R7 to R12 per US\$ over the same period. In nominal ZAR terms, coal prices have remained the same for the past 4 years. More recently (since Nov 2013), prices have declined from R855 to R720. This may create the opportunity for Eskom to negotiate lower prices for new Short Term Contracts.

Figure 21: Export prices at RBCT since January 2000 (US\$/Ton)

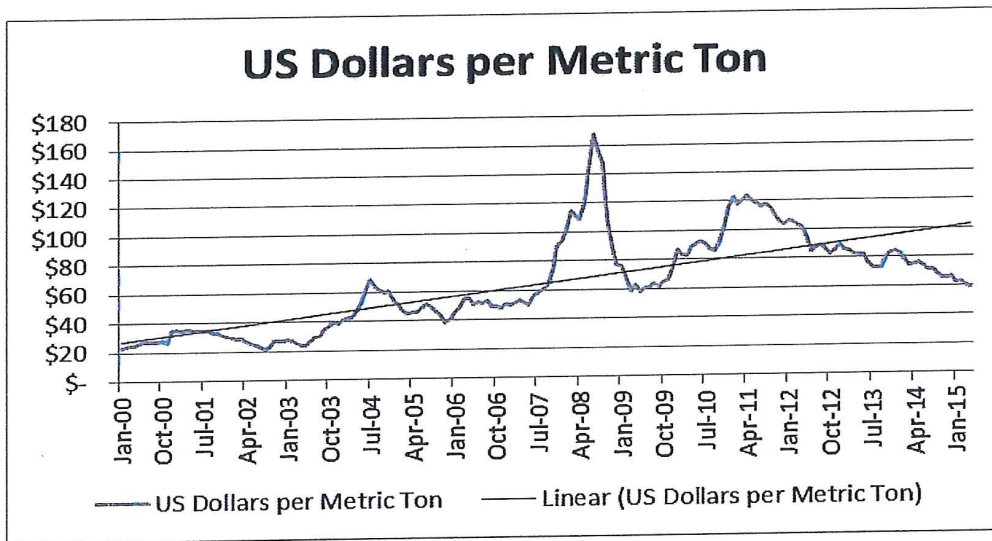
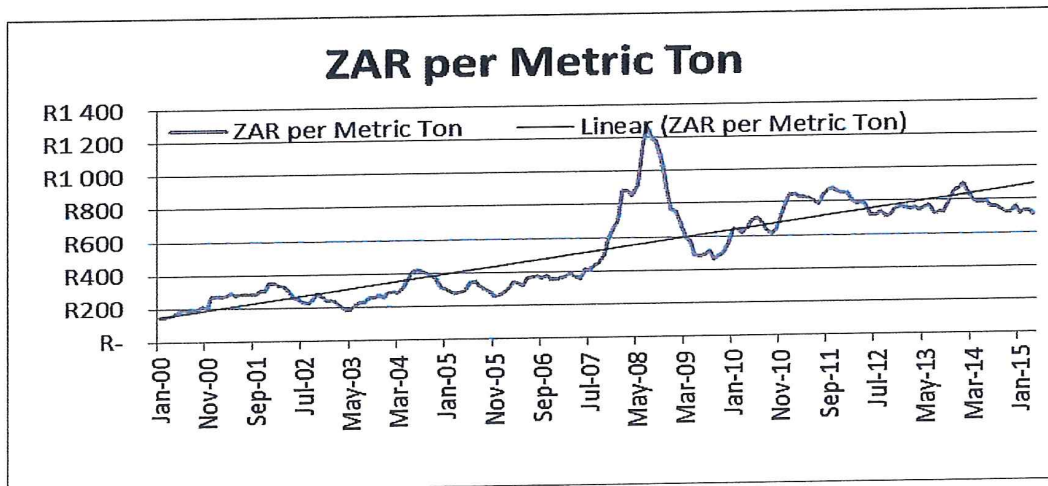


Figure 22: Export prices at RBCT since January 2000 (ZAR/Ton)



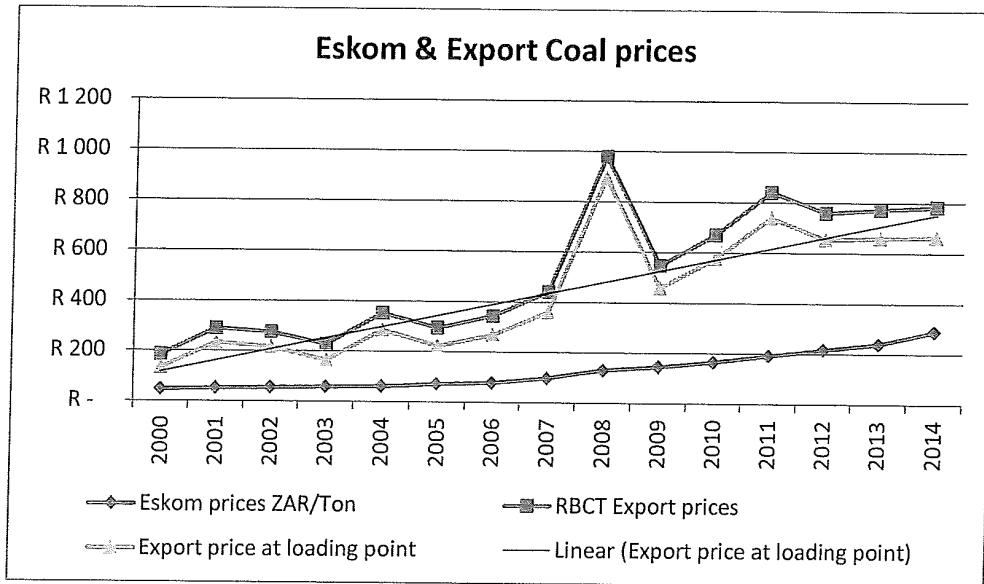
6.1.5 Figure 23 below presents a comparison of RBCT export prices and Eskom average coal prices since 2000 on an annual basis. RBCT export prices are presented excluding an estimate of the average transport prices i.e. the export prices at the loading points before being transported. This is effectively the price at which export coal can be purchased at the collieries.

6.1.6 It is clear that Eskom's average price of coal has been increasing over time. Starting in 2007 the average coal prices paid by Eskom has been increasing more rapidly. Average annual prices paid by Eskom increased on average by 18% per annum from 2006 – 2014 and from 2000 - 2006 increased on average by 9% per annum. For the same periods the export prices have been increasing by 12% and 12.4% respectively on a per annum basis. The Eskom price has therefore been increasing over the last number of years more rapidly than the export prices.

6.1.7 The average price paid by Eskom for the coal purchased in 2014 is [REDACTED]/Ton compared to [REDACTED]/Ton in 2006 which appears to be a high increase in the price of coal. However, the

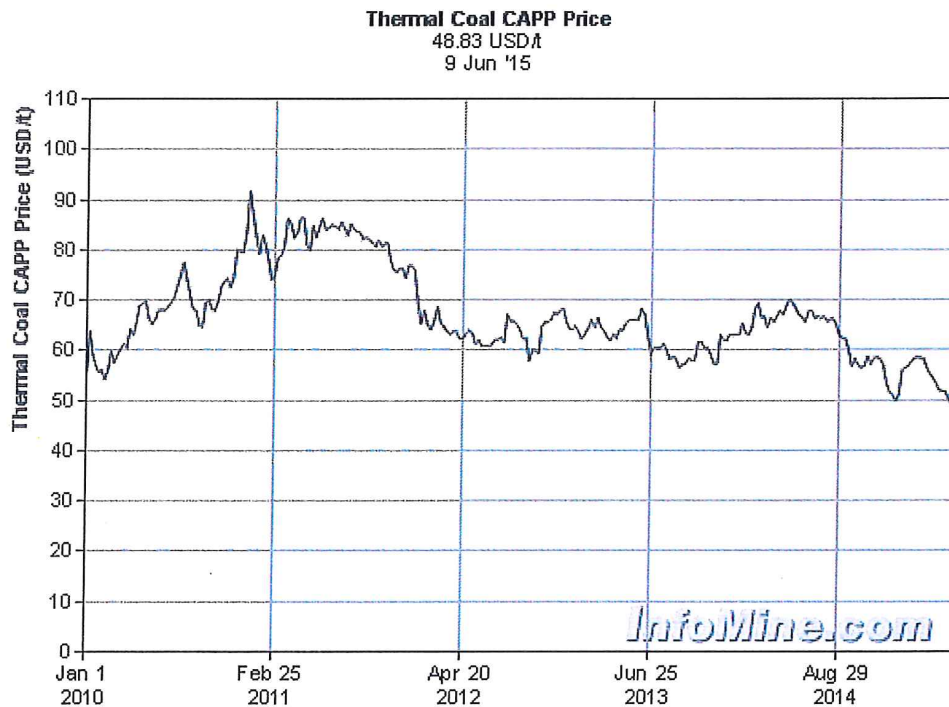
estimated average price of export coal (excluding transport to RBCT) for 2014 is R664/Ton. The Eskom prices are therefore still significantly less than export prices. However as stated above it must be noted that Eskom power stations do not consume the high quality coal that is exported.

Figure 23: Export prices at RBCT and Eskom coal prices since 2000 (ZAR/Ton)



6.1.8 Figure 24 below presents the international trading price of thermal coal. Since September 2014, coal on the international market has been trading from \$50 to \$60 (R600 – R720)/Ton. These costs do not include any transport costs which will add at least another R300/Ton. Importing coal from international sources would increase the price of coal that Eskom is paying by a large margin.

Figure 24: International price of coal (US\$/Ton)



- 6.1.9 Compared to international electricity prices, prices in South Africa still compare favourably towards the lower end but are not the lowest anymore. Furthermore, South African electricity price increases over the last 4-5 years have been at a higher rate than international prices and may well continue to be so for the next few years. South Africa cannot isolate itself from international prices and competition. Similarly, Eskom is faced with international prices for coal. The costs for establishing new mining developments have increased significantly over the last number of years.
- 6.1.10 On average, therefore the prices being paid by Eskom compared to international prices are commercial prices for coal. However, individual coal contracts will need to be investigated to establish whether the prices are commercially supportable given the specifics of the mine and contractual arrangements.
- 6.2 Diesel costs
- 6.2.1 Historically, the requirement for liquid fuels for power generation was very low. Up to 2007 Eskom only had Acacia (171 MW) and Port Rex (171 MW) open cycle gas turbine (OCGT) stations which were only used during emergency situations and occasionally supplying peak demand. As part of the new capacity requirements and the imbalance between base load and peaking capacity, Ankerlig (1 338 MW) and Gourikwa (746 MW) OCGT plants were constructed and commissioned in two phases. First phase construction started in 2006 and was completed in 2007. The second phase construction started in 2008 and was completed in 2009. These plants were intended to serve as peaking plants i.e. operating infrequently for short periods at a time, typically between 400 to 500 hours per year. These plants have much lower capital costs than base load coal fired plants but much higher operating costs. Over a 20 year period, the total lifetime costs of these plants to serve peak demands are lower than coal fired plants. However if these plants are utilised for more than around 1000-2000 hours per year, then the lifetime costs become more expensive than say a coal fired plant.

- 6.2.2 The bulk fuel supply contract to Gourikwa was signed with PetroSA refinery in Mosselbay. The storage facilities at the two OCGT plants were designed to store sufficient fuel for a week's operation at maximum of 8 hours of operation per day. The storage was not designed for semi-continuous use of the plants for extended periods. Ankerlig has various intermediate suppliers all acquiring diesel from Chevron refinery in Cape Town, but does not have a direct supply contract with Chevron.
- 6.2.3 The South African liquid fuels supply industry (fuels derived from crude oil) has been under strain from about 2010/11. The demand for diesel has been increasing sharply over a number of years as a result of the requirement for generation and the sharp increase of diesel powered vehicles on the road. The refinery capacity in South Africa cannot cope with the demand and refined fuels (including diesel) have been imported for a number of years to supplement the refinery supply.
- 6.2.4 The price of liquid fuels derived from crude oil is affected by the international crude oil prices. Figure 25 presents the price of Brent crude oil since 2010. From about the start of 2011 up to the 3rd quarter of 2014, crude oil was trading at above US\$100/BBL. Since the prices have fallen to around US\$60/BBL. Similar to international coal prices the price of crude oil in ZAR terms has not decreased to the same extent as US\$ based prices. However, it has still decreased significantly. Figure 26 presents Brent crude oil prices in ZAR. Resulting from the decrease in oil prices one would expect Eskom would start to pay lower prices for diesel as the effect of lower crude oil prices starts to filter through.

Figure 25: US\$ price of Brent crude oil

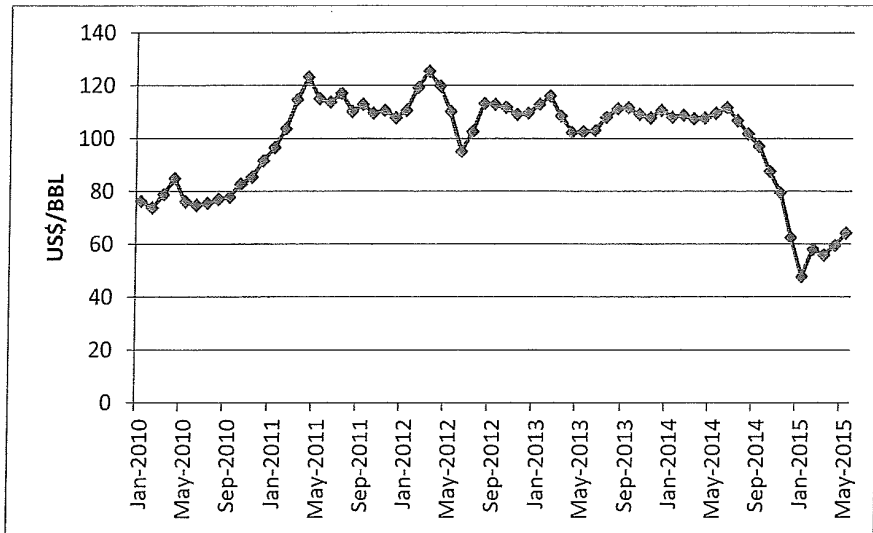
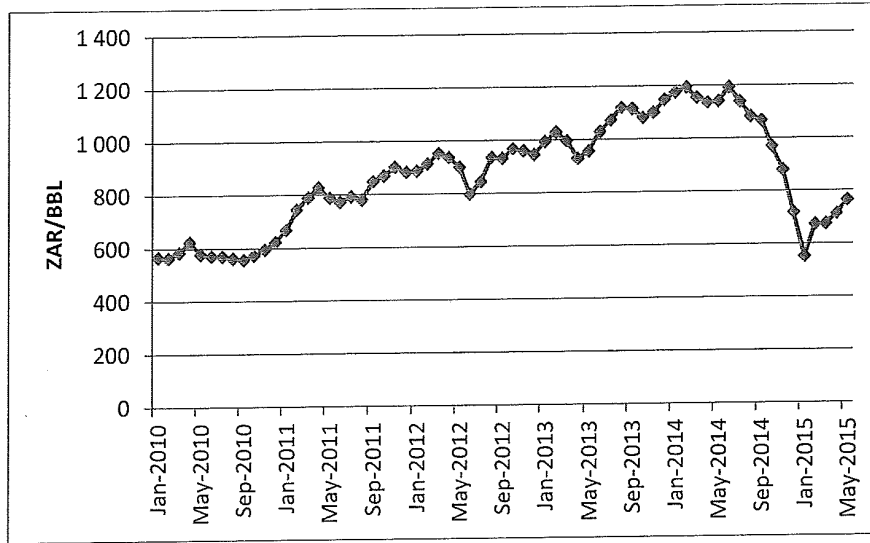


Figure 26: ZAR price of Brent crude oil



6.2.5 Average diesel prices paid by Eskom over the last 3 financial years are provided in Table 2 below. The prices paid by Eskom have not varied much. The average price has come down in the last financial year which follows the drop in the price of crude oil.

Table 2: Current diesel consumption and Eskom prices paid

	Capacity	Efficiency	Heat Rate			
	MW		kJ/kWh	2012/13	2013/14	2014/15
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]

6.2.6 With regard to liquid fuels Eskom is faced with the same realities as any purchaser of fuels derived from crude oil subjected to international oil price variations. Securing a gas supply for the OCGT peaking plant could alleviate this situation.

## 7 Causes for increase in primary energy costs

### 7.1 Coal costs

7.1.1 In this and the following paragraphs we attempt to establish why Eskom primary energy prices have risen so sharply over the last few years. In paragraph 6 of this chapter the increase in Eskom and international prices was presented. The prices of coal paid by Eskom to suppliers have increased for the reasons discussed below.

#### 7.1.2 Increase in the demand for coal

- (a) Paragraph 3.1 presented the increase in coal requirements.

- (b) In terms of energy produced from coal it has remained effectively the same from 2007 – 2014 varying between 120 to 125 Mton per annum. As presented in paragraph 6.1.7 the price of coal paid by Eskom increased from [REDACTED] to [REDACTED]/Ton for this same period.
- (c) The increase in demand for coal internally corresponded with an increase in demand for coal internationally and increased competition for the coal sources which put upward pressure on prices.

#### 7.1.3 Change in the mix of coal supplies (drop in supplies from long term contracts)

- (a) The change in the mix of coal supplied to Eskom has also exerted pressure on prices as result of competition for coal from international purchasers.
- (b) Eskom has not invested in the Long Term Cost-Plus Contracts and the supply of coal from the collieries in question has decreased across the last few years.

#### 7.1.4 Additional coal transported by rail and road

- (a) The Medium Term contracted suppliers are located some distance (20 – 280 km) from the power stations that they supply. The coal has to be transported by road or rail from the colliery to the power station.
- (b) A key contributor to the delivered price of coal from the Medium Term contracts is the transport costs, which makes up about [REDACTED] % of the delivered price of coal of the Medium Term Contracts.

#### 7.1.5 Increased coal requirements from more expensive coal resources

- (a) Technical issues at the lower cost category stations have reduced their availabilities together with the increasing demand, increased the production requirement from the more expensive stations (more expensive coal) such as Tutuka, Majuba, Arnot and the return to service stations.
- (b) From 2004 the contribution to energy production increased from these stations resulting in increased coal consumption from 20 to 35 Mton per annum. Large quantities of coal are transported to Majuba, Tutuka and the RTS stations. This has contributed to the increased average price of coal.

#### 7.1.6 Overall increase in quantity of coal transported by rail and road

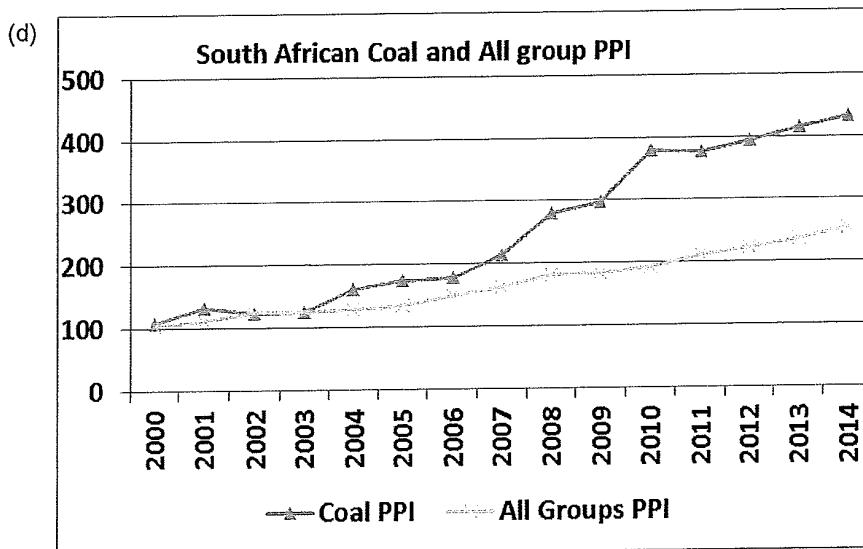
- (a) As a result, the increase in Medium Term Contract supplies and the more expensive power stations producing more electricity, the coal transported by road and rail increased from 10 Mton per annum in 2005 to 64 Mton per annum in 2014 which put significant upward cost pressures on the coal supply prices.

#### 7.1.7 Increased costs at the long term supply collieries

- (a) Existing linked mines have also experienced significant input cost increases because of global increases in the prices of mining equipment and other costs.
- (b) This does not only result in increased cost per Ton on the Cost-Plus Contracts, but also increases costs on the Fixed Price Contracts due to the indexation formulas within these contracts.

- (c) Figure 27 presents the Production Price Index (PPI) for coal mining and the PPI across all economic categories in South Africa. Production costs in the coal mining industry have increased much more rapidly since 2007 than average production costs across all economic sectors, which is a contributing reason for sharp increases in Eskom supplied coal prices.

Figure 27: PPI – Coal and All Groups



## 7.2 Diesel costs

7.2.1 Table 3 presents the utilisation of Gourikwa and Ankerlig OCGT plants over the last 3 financial years. The utilisation of these plants has sharply increased since 2010 as part of the effort to keep the lights on (KLO) to avoid load shedding. Eskom thus had to purchase significantly larger quantities of diesel than what these plants were anticipated to consume. At this increased level of utilisation the cost of fuel for these plants is very high.

7.2.2 The increased utilisation of these plants is primarily as a result of the following three reasons:

- The new build programme (discussed in Chapter 2 of this report) is significantly behind schedule which means that the reserve margin is at critical levels. If these projects were on time, it is expected that they would have reduced the operation of the OCGT significantly;
- The performance of Eskom's existing fleet of coal fired generation has deteriorated (discussed in Chapter 1 of this report). Over the last number of years, the existing coal fleet has failed to perform some of the duties for which the OCGT plant are currently being used; and
- The OCGT plants are also being operated to create the necessary room for coal plant maintenance.

Table 3: Energy produced by Ankerlig & Gourikwa

	Capacity	Efficiency	Heat Rate			
	MW		kJ/kWh	2012/13	2013/14	2014/15

## 8 Procurement strategy

### 8.1 Coal procurement

- 8.1.1 The strategy followed by Eskom in respect of coal procurement was to approach the coal market and to set down the principles upon which Eskom was to procure its additional coal requirements. Eskom intended to increase supply from emerging miners and set down the requirements for BEE participation in the coal supply.
- 8.1.2 It appears Eskom did not follow competitive tendering for the purpose of securing the supplies from the Medium Term and Short Term Fixed price contracts. Whilst the deviations from competitive tendering appears to have been justified under emergency procurement (expected to be short-term in duration), the non-competitive procurement has continued for an extended period of time.
- 8.1.3 It also appears that Eskom did not follow competitive tendering in securing the logistics for coal supply. The logistics cost appears to be substantially higher than the market prices for transporting coal.
- 8.1.4 Capital investment in the Cost Plus Contracts is required to sustain the supply from the mines in question at the contracted levels. However, the suppliers under four of these contracts do not have the required BEE rating and Eskom appears to be constrained with regard to capital expenditure.
- 8.1.5 Eskom could have approached the international coal market to invite competition into the local market. This however would create obstacles in terms of BEE rating, and securing required qualities of coal, and the costs are likely to be higher.
- 8.1.6 The strategy for securing coal supplies need to be revisited in the following areas:
- (a) Investigate how the Long Term Cost Plus agreements can be restructured to improve BEE rating and investing in these mines to increase production to contracted levels or even higher which will reduce the transport costs significantly; and
  - (b) Changing the approach on securing Medium Term and Short Term Fixed price Contracts to competitive tender basis.
  - (c) Change the approach to coal logistics procurement – to be done on a competitive tender basis.

(d) Renegotiate the coal logistics contracts to obtain competitive market prices.

## 8.2 Diesel procurement

8.2.1 The strategy followed in procurement of additional diesel requirements remains unclear at this stage of the investigations. A bulk supply agreement was secured with PetroSA for the supply of diesel to Gourikwa OCGT (plant is located next to PetroSA refinery). However, for the supply to Ankerlig OCGT plant there is no direct agreement in place with the Chevron refinery located in Cape Town. It is unclear why this is the case, although it is believed that it may be due to Chevron's strict payment terms and Eskom's BEE requirements.

8.2.2 It appears that some of the suppliers are not established players in the liquid fuels market and it is not clear how these suppliers have come to supply diesel to Eskom. Eskom has been under severe pressure to secure additional diesel supplies, the extent of which was totally underestimated during the budgeting period. However during the execution phase, in order to keep the lights on, additional supplies had to be secured. As such, it appears that the diesel supplies had to be secured under short notice without following standard procurement practises, which created room for such suppliers.

8.2.3 Direct purchases from the Chevron refinery in Cape Town should be revisited. Ways to secure a more reliable and long term supply should be found.

## 8.2.4 Forecasting model for diesel use

(a) At the time of writing this Report, we were not provided with the diesel forecasting model despite our requests to obtain the model. We have performed our assessment of the diesel forecasts based on other information provided to us.

(b) The production forecasts for Eskom power plants done for the 2012/13 to 2017/18 period submitted for MYPD 3 tariff application to NERSA is presented in Table 4. The production levels for the OCGT (listed as gas) plants are significantly less (2013/14 1 284 compared to actual 3 682 GWh and 2014/15 1 076 compared to actual 3 356 GWh) than the actual utilisation of the OCGT's presented in Table 3. What is evident is that the forecasting for diesel consumption was under estimated by a large margin.

(c) The main reasons for the under estimation are:

- (i) The assumption for the commissioning of first operational units at Medupi and Kusile were for 2013 and 2014 at the time which did not materialise. This led to much higher utilisation of the OCGT plants; and
- (ii) The availability assumptions for the existing fleet of coal fired plant were around 80% compared to the actual availabilities of below 77% experienced.
- (iii) There is no clear policy or guidelines to what extent OCGT plants should be used to prevent or reduce load shedding.

Table 4: Production forecast done in 2010

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Coal	218 963	220 520	226 250	234 919	237 921	243 915	1163 524
Nuclear	12 710	14 239	13 751	12 959	14 197	14 577	69 722
Gas	1 104	1 284	1 075	540	533	538	3 971
Hydro	667	671	670	672	671	671	3 355
Pumped storage	2 970	3 114	5 261	5 955	5 902	5 943	26 175
Wind	0	69	220	221	221	228	958
Virtual station/polluter	0	0	-3 589	-5 725	-6 514	-6 590	-22 418
<b>Total Eskom generation</b>	<b>236 415</b>	<b>239 896</b>	<b>243 639</b>	<b>249 542</b>	<b>252 930</b>	<b>259 281</b>	<b>1245 287</b>

## 9 Primary energy reports to the board

- 9.1 We consider below whether appropriate reporting to the board was done by Eskom management on the key issues relating to primary energy.
- 9.2 From the board papers that have been reviewed with regard to primary energy costs, it appears that key issues on primary energy have been reported to the board. This requires further verification and testing. However, based on interviews and discussions with executives in Eskom, primary energy is a 'black-box' costs and 'complex' and there is a view that there is a lack of transparency of information from Primary Energy.
- 9.3 The following are board meeting references:
- 9.3.1 At a Board breakaway held from 3-5 April 2013 the CE reported that Eskom had a long term coal strategy, however Eskom should motivate for South Africa not to have an unregulated coal industry pricing structure while Eskom pricing was regulated. He had engaged with senior executives from the coal industry on this issue. It was suggested that coal prices had to be delinked from international prices and regulations initiated either on price or volume for exports. It was requested that the work done by Primary Energy in this regard be summarised and distributed to Board for information to allow for discussion on various assumptions.
- 9.3.2 At a Board Investment and Finance committee (IFC) meeting held on the 16<sup>th</sup> April 2013 an extensive presentation was given on the capital expenditure requirement in order to sustain coal supply levels at the cost plus collieries supplying Eskom power stations. The presentation contains the status at each of the cost plus agreements and the capital investment required for each of the cost plus mines. These capital requirements were included in MYPD3 application to NERSA.
- 9.3.3 At a Board Investment and Finance committee (IFC) meeting held on the 16<sup>th</sup> April 2013 the committee notes the implementation of initiatives recommended by the EXCO Investment and Capital Sub-Committee (ICAS), Additional fuel usage at OCGT Power Stations: R2 009 M and Procurement of export quality coal for Arnot Power Station: R200 M.
- 9.3.4 At a Board meeting held from 30 May 2013 the Chairman noted that in his capacity as Eskom's Chairman, he had received many complaints regarding the lack of support from Eskom for emerging miners while they were becoming established. It was requested that a strategy be developed to provide emerging miners with more support in this regard.

- 9.3.5 At a Board Investment and Finance committee (IFC) meeting held on the 8<sup>th</sup> August 2013, the discussion on savings in primary energy costs and ongoing work on this is minuted.
- 9.3.6 At a Board breakaway held from 29<sup>th</sup> Oct to 1<sup>st</sup> Nov 2013, it was noted that primary energy costs would grow by 10.6% p.a. over the next 5 years, primarily due to IPP power purchases. The primary energy strategies presentation submitted to the Board for information purposes was not discussed due to time constraints. The Board noted that additional funding for OCGTs is required but has not been made available by government to date, despite engagement with NT and DPE as requested by the Board. The Board approved the additional spend for OCGTs subject to the funding being obtained from NT/DPE or from within the current approved budget taking into account recovery in terms of the RCA.
- 9.3.7 At a Board breakaway held from 29<sup>th</sup> Oct – 1<sup>st</sup> Nov 2013. Despite the lower growth forecasts, the OCGTs will need to be run intensively to meet the system demand. The 2014 financial year budget amount for OCGT usage was R3.6bn based on a planned EAF of 81.5%. In August 2013 the budget was exhausted and additional funds were approved by the Board amounting to R1.6bn until the end of October 2013. In support of the Generation sustainability strategy (80:10:10), the total funding requirement during the 2013/14 financial year for OCGTs is projected to be R9bn. The Board approves the required total funding of R9bn for OCGT usage in the 2013/14 financial year which is an additional R3.9bn over and above the current budget of R5.1bn.
- 9.3.8 At a Board breakaway held from 29<sup>th</sup> Oct – 1<sup>st</sup> Nov 2013. The objective of the Long-Term Coal Strategy is to secure up to 2 100 Mt of coal and transform the coal supply market by purchasing 64% of coal volumes from Black Owned Miners (50% +1 share) by 2018. Progress on the strategy implementation is on the following key areas:
- (a) Progress on the Coal Supply Strategy
  - (b) Progress on the Emerging Miner Strategy “pillars”
  - (c) High level Status on the Eskom – Led Emerging Miner Fund
  - (d) Cost Plus Mines Life Extensions - High Level Commercial Strategy
  - (e) Progress on Coal Purchases from Black Emerging Miners
- 9.3.9 In this context:
- (a) The Board notes the progress with regards to the implementation of the Long-term Coal Strategy.
  - (b) The Board notes that the long term coal requirements may be adversely impacted, due to the current and potential lower sales growth forecasts, which could have some effect on the implementation of the Coal Supply Strategy.
  - (c) It was requested that the Emerging Miner Strategy be referred to the Board for consideration at an appropriate time.
- 9.3.10 At a Board meeting held on the 28 November 2013 a Coal Strategy Implementation was presented to the Board for approval.
- 9.3.11 At a Board meeting held from 17 Feb 2014. In respect of the OCGTs a question was posed as to whether there was sufficient funding for the mitigating factors or whether additional

funding would still be required. The CE noted that this was an aspect which the Board needed to carefully consider in view of the annual increase in primary energy cost. He pointed out that the business might have to take a risk to find cheaper alternatives as it could not afford the additional R11bn for primary energy and that this represented a big step change. The DE: OCE agreed that this was a big step change but noted that, based on past experience, additional funding would in any event still be required. The FD pointed out that the additional R9bn had been approved by the Board on the assumption that funding would be obtained from Government which had not materialised. The Procurement of additional diesel for Open Cycle Gas Turbine (OCGT) usage and increased primary energy (PE) costs for the financial year ended March 2014 was tabled for approval, details of which were included in the meeting pack. The Acting Chairman suggested a way forward, as well as the proposed communication with the Minister, including the fact that the Board approving the additional spend on the OCGTs could potentially be regarded as reckless trading as the funds were not available. A specific instruction in writing in this regard was thus required from the Shareholder. The meeting confirmed that a directive from the Shareholder would be acceptable for purposes of approving the additional spend. The Acting Chairman adjourned the meeting for purposes of a telephonic discussion with the Minister. Following the adjournment, the Board met in an in-committee session and the Acting Chairman reported that the Shareholder Minister was looking into the matter and would revert within 3 working days. The procurement of additional diesel for Open Cycle Gas Turbine ("OCGT") usage and increased primary energy (PE) costs as detailed below for the financial year ended March 2014 was approved subject to confirmation from the Shareholder of the funding thereof.

- 9.3.12 At a Board meeting held from 27 Feb 2014. In respect of the use of the OCGTs, a written response had been received from the Minister of PE with support for the proposal to continue the use of the OCGTs till the end of March 2014. The Chairman provided feedback on his conversation with the Minister on this matter and noted that some related issues would be discussed as part of the CE's report. The Chairman pointed out that the Minister had undertaken in the letter to engage with Department of Energy and National Treasury re the recovery of the OCGT funding. At the same time, Eskom would have to confirm operational efficiency and provide comfort to the Minister in this respect. The meeting commented on the increased challenges being experienced with maintenance resulting in additional unplanned outages and the increased usage of the OCGTs not being sustainable. Questions were also raised regarding possible alternatives to reduce the reliance on OCGTs. The need for a comprehensive plan was highlighted to enable the Board to make informed decisions. This would also be required to engage with the Shareholder at the end of March 2014 when the OCGT funds had been depleted. Presentation of such a plan in March 2014 would be too late as the OCGT funds would be depleted by then. It was suggested that management focus urgently on this plan and circulate to Board members for consideration and the calling of a special Board meeting if necessary.
- 9.3.13 At a Board Investment and Finance committee (IFC) meeting held on the 16<sup>th</sup> May 2014 Primary Energy division's approach to ensure that a sustainable Black Emerging Miners Development Fund ("Fund") is established and implemented as strategic enabler to unfold Eskom's Black Owned Emerging Miner ("BEM") Strategy, and the approval of the Fund Design and Eskom's monetary contribution of R100 M to the Fund was tabled for approval.
- 9.3.14 At a Board meeting held on the 28 November 2014 issues pertaining to the excessive use of diesel and the cost thereof were discussed. The excessive expenditure above budget on diesel was reported at various board meetings and had to be approved by the Board.

- 9.3.15 At a Board meeting held on the 31 March 2015 a War Room presentation was provided to the Board. This presentation extensively discussed the key issues around the mix of coal sources and the reasons why coal prices had increased so sharply over the last number of years.

## **10 Recommendations**

- 10.1 It is recommended that the following issues be revisited to secure better prices for coal:
- 10.1.1 Conduct the necessary feasibility assessment to determine if the Long Term Cost Plus collieries can be refurbished or expanded to increase production to contracted levels or even higher;
  - 10.1.2 Develop a transparent and structured framework for credible BEE participation in primary energy supplies;
  - 10.1.3 Investigate how the Long Term Cost Plus agreements can be restructured to improve BEE rating where it is required and investing in these mines (if feasible) to increase production which will have large impact on reducing the transport costs significantly;
  - 10.1.4 Changing the approach on securing Medium Term and Short Term Contracts to a competitive tender basis or conduct a pre-qualification process to qualify suppliers; and
  - 10.1.5 Conduct competitive tenders for the coal logistics, especially for the coal transported by road.
- 10.2 It is recommended that the following issues need to be revisited to secure better prices for diesel procurement:
- 10.2.1 For future supplies a more rigorous supplier due diligence procedure should be put in place;
  - 10.2.2 Direct purchases from the Chevron refinery in Cape Town should be revisited and way to secure a more reliable and long term supply should be found; and
  - 10.2.3 Competitive tenders for the diesel logistics should be conducted, especially for the diesel transported by road.

## CHAPTER 4: FINANCIAL CHALLENGES

### 1 Background

- 1.1 This Chapter deals with item 2.4 of the Scope of Work set out in Task Order 1.
- 1.2 Item 2.4 of Task Order 1 relates to Eskom's financial challenges. Under this heading the following specific items are provided for:
- 1.2.1 "2.4.1 the current cash flow position of Eskom and the methodology and models used for cash flow management;
- 1.2.2 2.4.2 whether the cash flow status of Eskom has been reported consistently with available contemporaneous information;
- 1.2.3 2.4.3 the recent costs incurred as a result of the financial instruments that form the nucleus of the borrowing programme, the process that led to their adoption, the existence of other viable and cost effective financial instruments that could have been pursued as alternatives; and
- 1.2.4 2.4.4 establish whether the interest rates attached to the financial instruments that form the nucleus of the borrowing programme are commercially supportable under the circumstances."
- 1.3 This Chapter provides our findings in relation to the reasons for Eskom's financial challenges, and the credibility and correctness of information that Eskom's EXCO provides in their reports.

### 2 Executive Summary

#### 2.1 The Financial Challenges

- 2.1.1 Eskom's financial challenges are considerable. When you unpick the optimistic assumptions in the forecast to the end of this financial year, Eskom appears to be heading for a considerable trading loss, and in cash terms it is set to be below its desired R20bn liquidity buffer despite the R20bn bail-out equity injection.<sup>1</sup> This position also assumes this year's borrowings per the funding programme can all be obtained.<sup>2</sup> There is a significant risk that some of these funds will be subsumed by ongoing operations, rather than the capital build programme they are meant for. This is not a sustainable financial model.
- 2.1.2 Eskom needs a parent guarantee undertaking to be recognised as a going concern, and beyond March 2016 it requires a paradigm shift in its financial levers. Judging by the recent past, however, there is inelasticity in those levers, which creates considerable uncertainty in the medium term outlook:
- (a) Amidst recent public statements Eskom are targeting 25% annual tariff increases, the informal feedback from NERSA in relation to the selective reopener, which contemplates an effective 15.5% increase for the remainder of FY2016, is not

<sup>1</sup> Key assumptions: That diesel spend will cease rather than continue at approximately R1bn a month; that NERSA will grant an extra R4bn tariff this year; that arrears will come down as municipality elections approach; that R13bn cost savings will be made.

<sup>2</sup> Approximately R26bn are required from new facilities i.e. and not draw downs on existing facilities.

positive<sup>3</sup>. This suggests tariffs won't increase sufficiently. Rightly or wrongly, the current appetite for tariff increases does not support Eskom's needs;

- (b) Eskom's cost base seems to be increasing on an on-going basis, whilst sales volumes and collections falter. Historically there appears to have been an institutional resistance to making tough decisions to arrest this trend;
- (c) Reversing the decline in plant efficiency and productivity in the short term is unlikely. The challenges in the generation fleet, described in Chapter 1, may take over 5 years to achieve acceptable performance levels;
- (d) Borrowing is already stretched, and getting increasingly expensive. Last year, securing the borrowing programme required expensive international bonds to correct the low liquidity position and increasingly lenders seek assurances and action from the State before committing. With each credit rating slide another 100 basis points can be added to the finance costs; and
- (e) The equity injection of R20bn was some way below the independently valued R51bn to R150bn required.<sup>4</sup>

2.1.3 Financially, Eskom is in a perilous position and it is expected to get worse. If history is repeated, and we assume it takes five years to turn the tables on the demand/supply balance (see Chapters 1 and 2), Eskom faces the real possibility of a slide into repeated loss making, poorer credit rating, and reduced borrowing options. When funds are secured, the capex programme will lose out to current needs. The new builds will increasingly look too expensive to fund, and the auditors may dispute the going concern assumption. In this way, Eskom can readily slip into a spiral of decline from which it will be ever harder and take longer to reverse.

2.1.4 This scenario has no long term benefits – for Eskom or the country. Sub-optimal decisions are already being made, such as: the decision not to invest in cost-plus mines, and capex outside the new build programme perennially suffer. Ultimately, Eskom will be out of financial levers to pull, the diesel purchases will cease and load shedding will deepen. Inevitably, that will reduce the public's tolerance for tariff increases even further.

## 2.2 The Causes of the Financial Crisis

2.2.1 Eskom is a cyclical business, and during capital intensive periods it stands to reason that without a "war chest", the tariff will be stretched and the borrowing capacity tested. It is a fact that the combination of delays in the new build together with the ailing fleet, Eskom has reached a tipping point that can only be resolved by expensive diesel purchases. A tipping point that has been exacerbated by NERSA's MYPD3 decision to award 8% tariff increases – which after IPP contractual requirements effectively cover inflation in the cost base, whilst allowing little for the replacement of assets, generation of profits or, in fact, adverse shocks against budget. It is not hard to see why Eskom bemoans the MYPD3 decision amidst this current financial crisis.

2.2.2 This is not the whole story, however: "Only when the tide goes out do you discover who's been swimming naked".<sup>5</sup> Based on our review, it would appear that too little has been done in the past two years to get Eskom's own house in order. We have identified many examples

<sup>3</sup> As at the date of submission of this Report, NERSA has rejected Eskom's application.

<sup>4</sup> JP Morgan Report of 2014

<sup>5</sup> Warren Buffet



where the business has not applied sufficient pressure to the one financial lever over which it has greatest control – the cost base:

- (a) Coal usage at R45bn last year is the biggest cost centre in the business, and over 80% of Primary Energy costs excluding the levy, IPPs and diesel. The overwhelming majority of coal usage expenditure is given to suppliers. In the medium to long term timeframe there is undoubtedly inflationary cost pressure on coal, but it is startling how little attention and scrutiny this spend has received in the past two years:
  - (i) The savings made in coal usage from the Business Productivity Program (“BPP”) have not been made in meaningful areas: reducing coal stocks and suspending capex rather than negotiating lower contract rates.
  - (ii) The cost is rising but the reasons trumpeted do not necessarily hold true for the past two years: the general shift from cost plus to MT/ST contracts is fact but in the last 2 years this mix has remained constant. Despite this, the rates negotiated continue to rise above Eskom’s own MYPD3 expectations.
  - (iii) Budget is not achieved (excluding the Medupi coal penalty impact) only through buying (and burning) less coal. Stock levels in six power stations have holdings below the expected level set by Eskom.
  - (iv) There is a peculiarity that whilst on the whole Eskom has bought less coal, in FY2014/15 three power stations bought eight million tons more than planned – and these were through ST/MT contracts and at prices well above the average price paid in the year.
  - (v) In Chapter 3 we have reported on concerns that the rates Eskom pays for road transport are greater than expected.
  - (vi) Despite this, we appear to be the first team, internal or external to Eskom, to attempt to match actual spend to the underlying contracts – the accounting system cannot provide this readily. The finance team needs this information if they are to offer a first line of defence against excessive spend.
  - (vii) There appears to be a lack of challenge to the coal sourcing team. Internal Audit, and senior executives, describe Primary Energy and coal sourcing as a “Black Box” where they struggle to get information. There have been only limited and minor enquiries into the operations that comprise the main cost in the business.
- (b) Various officers commented more generally on their belief that there was “fat” in the cost base, of divisions operating in silos fighting for their “pot” and still preferring a “Rolls Royce” approach to maintenance and activities more generally. This Investigation has not been long enough to identify the quantum of unnecessary spend, but the examples provided to us have been numerous:
  - (i) BPP’s headcount reductions, which were the result of a lengthy and costly design phase, targeted R17bn of much-needed cost savings over the five year period. Despite much rhetoric for six months, we understand this initiative has been abandoned;

- (ii) Arrears in tariffs due have not been effectively countered for two years – the recent success in bringing the municipalities to the negotiating table from direct action shows what was possible;
  - (iii) There is a significant list of examples of questionable procurements, and poor contract management, even including areas that should be in the spotlight such as ad hoc arrangements with suppliers of diesel not subject to discounts despite the purchasing power Eskom have; and
  - (iv) Of over 300 investigations conducted in the past two years by Assurance & Forensics, the department responsible for investigating allegations of financial misconduct, 63 have had sanctions recommended that have not been finalised. 79% of these have been outstanding for more than three months.
- (c) Moreover, various officers have provided to us verbally examples of senior executives seeking opportunities ostensibly for the benefit of themselves at the expense of Eskom: denying Eskom a path to vertical integration of key suppliers, making deals with suppliers outside of the formal procurement process, and/or turning a blind eye to expensive contract breaches. If management's energies are centred on leveraging Eskom's considerable buying power for self-interest, rather than to drive efficiencies, the notion that the tariff is not cost-reflective loses all credibility. This Investigation was not long enough to allow us the time to investigate these allegations.

2.2.3 There would appear to be *prima facie* indicators based on the above that Eskom has breached Treasury Regulations pursuant to The Public Finance Management Act, 1999, and therefore contributed to its own financial challenges.

2.2.4 Described by Eskom as differing "levels of discretion" the void between the Regulator and Eskom when it comes to a definition of a cost-reflective tariff is substantial – approximately R30bn to R40bn annually. The adversarial relationship between these organisations may be partially responsible for the financial challenges Eskom is now facing.

### **2.3 The Credibility and Correctness of Information that Eskom's EXCO Provides in Their Reports Relating to Eskom's Financial Challenges**

2.3.1 Based on our review to date, the information reported to EXCO from Group Finance and the Treasury department in relation to performance against budget, cash status, funding requirements and risk items, as well as the gravity of the financial challenges was accurate, sufficient and timely. EXCO were fully informed.

2.3.2 The Board received regular financial information in the form of the Quarterly Shareholder Report, and a regular Report from the Chief Executive summarising the business position.

2.3.3 We have found no fundamental issues with the credibility and the correctness of information that EXCO has provided in these reports. In particular:

- (a) We found no instances that EXCO altered information when reporting to the Board; and
- (b) We have not identified any significant information that was omitted.

- 2.3.4 On occasions there appeared to be indifference in the way that EXCO presented some financial information to the Board, but in equal measure the Board rarely appeared to raise challenges to financial issues. Access to further information may shed light on this.
- 2.3.5 If there was a weakness in the financial information reported, it was the accuracy of the budgets and timetable in relation to Medupi, and the requirement for diesel. The Finance team were reliant on the business for these details. From our review, there was seeming confusion at EXCO and the Board in relation to the extent of these issues, together with an absence of consideration of the wider financial implications.
- 2.3.6 Two of the most damaging financial challenges that threatened Eskom in the past two years, rising arrears and diesel costs, were discussed by EXCO members and tabled with the Board. However, the resolution on both occasions was to seek help from the State rather than looking inwards to resolve the issue. In neither case was it to good effect.
- 2.3.7 Moreover, in spite of the financial implications of the MYPD3 decision being firmly entrenched in the business, neither EXCO nor the Board took it upon themselves to drive meaningful cost savings in the business. Updates on the worsening situation were regular, however limited combative action was taken:
- (a) There appears to have been insufficient drive applied by EXCO to create worthwhile savings through BPP;
  - (b) Coal usage remained within budget and as a result escaped debate. However, as the single largest stand-alone cost lever it is remarkable no independent scrutiny was applied to this area;
  - (c) Staff cost increases needed to remain within 6%, to ensure no overspend against the MYPD3 tariff allowance and yet an average increase in salaries of 7.6% was sanctioned. In addition, headcount reductions, a cornerstone of BPP, were reportedly rejected by the business; and
  - (d) Senior committees consistently approved additional budgets without knowing where the funding to support them would come from.
- 2.3.8 There are structural deficiencies that may have prevented necessary and constructive challenge to senior management:
- (a) The common membership between EXCO and its sub-committees may have led to insufficient challenge of the decisions when brought to EXCO. Many decisions made by sub committees were simply noted, and not discussed at EXCO. By devolving decision making it may have made it easier for divisions to railroad their own agenda at the expense of the business as a whole.
  - (b) The Internal Audit function and the Assurance & Forensics department only look where they are led or instructed to look. They have little influence over disciplinary sanctions too, which are relinquished to the business, thus limiting their role as the primary independent challenge.
- 2.3.9 The information passed through EXCO in relation to financial challenges, therefore, would appear to have been credible and correct. It has been the collective response from senior executives to these challenges, however, that has been lacking.

2.3.10 There are indications of three underlying causes that may be behind this unresponsiveness at the senior executive level:

- (a) a mentality that it is the State's responsibility to find Eskom a solution – whether driven by a sense Eskom is “too big to fail”, or an under appreciation of the precarious financial status of Eskom;
- (b) a reluctance at the divisional level to apply appropriate pressure to their own cost base because other divisions were not perceived as doing the same; and
- (c) An unwillingness to seek to leverage Eskom's spending power to drive down costs with suppliers as a result of corrupt relationships and personal enrichment.

2.3.11 Further enquiries are required to discern the veracity of these underlying reasons. Only with diagnosis will it be possible to address the apparent intransigence in the management of the cost lever and damaging stewardship of Eskom.

### 3 Eskom's Financial Challenges

#### 3.1 Eskom's Financial Levers

3.1.1 Like all organisations, Eskom has various financial levers which it must use to maintain financial sustainability. As a parastatal and a utility, however, these levers are somewhat unique.

##### 3.1.2 Tariff

- (a) As South Africa's primary electricity supplier, approximately 95% of Eskom's revenue is generated from tariff based sales.<sup>6</sup> For historical reasons, electricity has been charged at below cost-reflective prices. Eskom is entitled to recover from customers via the tariff its costs including a return on assets, and is therefore seeking to transition to a fully cost-reflective price in order to support a sustainable electricity industry.
- (b) From 2006, this has manifested itself in Multi-Year Price Determination (MYPD) through a process of application to and decision by the regulator NERSA. It is essentially a negotiated settlement of the annual increase in tariffs the consumer will be charged, albeit NERSA have the final say and must engage with additional stakeholders.
- (c) The revenue Eskom generates is therefore predominantly a result of the price it obtains from NERSA. A detailed budgeting process and engagement with the regulator impacts on this lever.
- (d) In addition the revenue results will be influenced by collections, and sales volumes. The former is a combination of collections from industrial, mining, commercial, agricultural and residential customers – directly to 40% and 60% via municipalities. The latter depends on new connections, which we understand have been relatively static recently<sup>7</sup>, and demand created by industrial growth.

##### 3.1.3 Ongoing Cost Base

- (a) Costs from ongoing activities are an essential lever in every business. The intention is to spend as little as possible in generating sustainable revenues. Eskom has considerable purchasing power, and now spends approximately R140bn a year. Last year approximately R83bn was expensed on Primary Energy and R26bn on its wage bill to over 45,000 staff.
- (b) As financial levers there are inevitably varying degrees of resistance in the cost base.
- (c) Coal costs
  - (i) Last year R83bn Primary Energy Expenditure was in large part due to coal where costs ran to R52bn. 88% of this is coal usage costs, and is largely paid to coal suppliers.<sup>8</sup> This is the single biggest cost lever in Eskom's business.
- (d) Diesel, IPP and Environment Levy

<sup>6</sup> Eskom's MYPD3 application

<sup>7</sup> Eskom Integrated Reports FY2014 and FY2015

<sup>8</sup> Eskom Operational Report March 2015

(i) OCGT costs of diesel contributed R9.5bn to Primary Energy last year. The prices paid in the wholesale market are regulated restricting Eskom's opportunity for discounts. Eskom has contracted with IPPs procured by the Department of Energy through the REIPPP programme and passes through these costs. They were R9.5bn in FY2015. Eskom must also pay an Environment Levy which was R8.4bn last year. Non-coal Primary Energy levers are not therefore particularly malleable.

(e) Other costs

(i) With interest including that which is capitalised above R20bn and Staff costs of R26bn, there are limited other places in the cost base to target for savings.

#### 3.1.4 Plant efficiency

(a) One way businesses seek to improve their financial performance is to get more from less, in other words to create efficiencies. With a capital intensive company like Eskom, improvements to the performance of the large productive assets are a long term lever to be managed.

#### 3.1.5 Capex and borrowing

- (a) Ten years ago Eskom had no funding requirements and so borrowing levels were approximately R5bn. In 2005, Eskom embarked on an R337bn capacity expansion programme, described in detail in Section 2 of this report. Owing to years without charging a cost-reflective tariff, it made sense to finance the programme with debt. By September 2012 R180bn in debt had been raised.
- (b) Borrowing in the short term, whether from domestic or international capital markets, can be a lever to manage short term liquidity. However, in the long term, given the cost of borrowing in interest payments, and the need to repay facilities (or switch/replace) on maturity, it is important that they are used for investment purposes which will generate a positive return and future income flows.
- (c) Eskom's long term goal is to be financially sustainable as a standalone entity. Currently however, Eskom's credit rating is linked closely to the Sovereign and much of its borrowing requires government guarantees.

#### 3.1.6 Equity

(a) The peculiarity of Eskom is that nearly all its levers return to the State. What Eskom can't fund from the tariff or from borrowing, both reliant to a certain extent on the State, it can only hope to obtain from its parent directly. However, equity injections must be sourced from somewhere, and ultimately that source is taxes from the people of South Africa. This may not be seen as equitable when compared to the tariff as the tax system will not be reflective of electricity consumption.

### 3.2 Financial Responsibilities of Eskom's EXCO

- 3.2.1 Studies show that EXCO members that work well are those that operate like a cabinet, in that when a decision is made all members get behind it; and they understand their division is secondary to the overall business.<sup>9</sup>
- 3.2.2 The Board of Directors have statutory requirements to fulfil including safeguarding the company's assets and driving financial sustainability. In EXCO they entrust stewardship and the distillation of credible and correct information to support them in these obligations.
- 3.2.3 Further obligations are placed on the senior executive at Eskom because it is subject to Treasury Regulations for departments, constitutional institutions and public entities, issued in terms of the Public Finance Management Act, 1999 (PFMA).
- 3.2.4 Of particular relevance from the PFMA:
- (a) An official of an institution may not spend or commit public money except with the approval (either in writing or by duly authorised electronic means) of the accounting officer or a properly delegated or authorised officer.
  - (b) The accounting officer of a department must exercise all reasonable care to prevent and detect unauthorised, irregular, fruitless and wasteful expenditure, and must for this purpose implement effective, efficient and transparent processes of financial and risk management.
  - (c) The accounting officer must ensure that processes (whether manual or electronic) and procedures are in place for the effective, efficient, economical and transparent use of the institution's assets.
  - (d) The procurement procedure must include:
    - (i) an open and transparent pre-qualification process;
    - (ii) a competitive bidding process in which only pre-qualified organisations may participate; and
    - (iii) criteria for the evaluation of bids to identify the bid that represents the best value for money.
  - (e) The accounting authority of a public entity must establish procedures for quarterly reporting to the executive authority in order to facilitate effective performance monitoring, evaluation and corrective action.
  - (f) The accounting authority of a public entity is responsible for establishing systems, procedures, processes and training and awareness programmes to ensure efficient and effective banking and cash management.
  - (g) If an employee is alleged to have committed financial misconduct, the accounting authority of the public entity must ensure that disciplinary proceedings are carried out in accordance with the relevant prescripts. The accounting authority must ensure that the investigation is conducted within 30 days.

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<sup>9</sup> <http://www.campbellmacpherson.co.uk/2013/05/what-does-a-good-exco-look-like/>

- (h) The accounting authority must, on an annual basis, submit to the executive authority, the relevant treasury and Auditor-General a schedule of:
  - (i) the outcome of any disciplinary hearings and/or criminal charges;
  - (ii) the names and ranks of employees involved; and
  - (iii) the sanctions and any further actions taken against these employees.

### 3.3 A Chronology of Key Financial Events Over the Past 3 Years

#### 3.3.1 Background to MYPD3 application

- (a) It has been well documented that Eskom has a cyclical financial story. Historically, as power stations were completed Eskom become cash-positive until it had to build new ones again. A capital intensive phase took place in the 1980s, when the country had experienced a crisis similar to the current one, with a maintenance backlog and extensive load shedding. Eskom had then returned to financial health in the 1990s, until about 2006, when it began another financial decline as it required money for maintenance and its new build programme.
- (b) For years Eskom subsidised the consumer: 1994 to 2002 were poor return years for the company, and the foundation of abundant funds is cumulative. In 2008 "Project Elephant" led to a request for R150bn equity injection for purposes of Capital Expenditure and a one-off 106% price increase. In 2009 R60bn was guaranteed by the government.<sup>10</sup>
- (c) The first Multi-Year Price Determination was for the year to 31 March 2007 and was for 3 years. These years were not cost reflective tariffs; even after the "retrofitted" approach to revise decisions based on actual spend. The plan was that over five years the country would move to "cost reflective" tariffs.<sup>11</sup>
- (d) Over the MYPD2 period, years to March 2011, 2012 and 2013 Eskom applied for a 35% average tariff increase and were granted 25%.<sup>12</sup> There was also a five year commitment to grant another 25% for the ensuing 2 years (i.e. the last two financial years experienced).
- (e) In March 2012 the Department Energy requested consideration of a reduction in the final year of MYPD2 following concerns over the world financial crisis and the negative market performance of South Africa. It appears that at the time, Eskom's Treasury did not support the tariff application being reduced from 25% to 16% but the decision was made and the 25.9% tariff increase was reduced to 16%.<sup>13</sup>
- (f) Many employees in Eskom have told us they considered this to be a mistake. It appears also that the regulator may have initially supported Eskom's request and demonstrated support for the increases alongside lenders.
- (g) The detrimental impact of the decision taken in 2012 to cut the tariff will have purportedly incurred Eskom approximately R55bn in revenue losses over the following 5 year period. By reducing sales in 2012/13 by R7/kwh it cut the base against which future tariff increases were applied.<sup>14</sup>
- (h) This is the uncertain context into which Eskom entered into the MYPD3 application in October 2012.

#### 3.3.2 The financial position at 30 September 2012 – Date of MYPD3 Application

<sup>10</sup> ██████████ Senior Manager Treasury, 10 June 2015

<sup>11</sup> ██████████ Senior Manager Treasury, 10 June 2015

<sup>12</sup> Eskom Holdings Limited: Revenue Application – Multi Year Price Determination 2013/14 to 2017/18 The Decision

<sup>13</sup> ██████████ Senior Manager Treasury, 10 June 2015

<sup>14</sup> ██████████ Group Finance, 22 May 2015

- (a) At the date of the application to NERSA, Eskom's financial outlook was relatively positive. Sales volumes were slightly down but this was offset by a 17.3% increase in revenue per kWh, resulting in an overall increase of 15% on the same point last year. Costs of production were beginning to rise but were still below target levels, leaving a solid profit of R12.6bn, down 1.3%.<sup>15</sup>
- (b) Treasury had liquid reserves of R46bn<sup>16</sup> which was comfortably above the R20bn buffer and the average liquidity days of 186<sup>17</sup> were well above the target of 120 days. Funding was readily available to them to meet their R300bn funding plan, of which 79.5% had been secured at September 2012.
- (c) The Medupi schedule, although delayed, was aiming for the first synchronisation of Unit 6 by November 2013 and full commercial operation by April 2014.
- (d) It was around this time that the EAF was below that required to meet supply without running the OCGTs harder, and hence the first ad hoc diesel purchases were made.
- (e) Against this financial context, Eskom targeted a 16% tariff increase in its MYPD3 Application. See Appendix 1 for the application on a line item basis.

### 3.3.3 The NERSA decision – February 2013

- (a) On 28 February 2013, NERSA published its decision on MYPD3, which approved an 8% year-on-year tariff increase instead of the 16% applied for. In summary:<sup>18</sup>

Totals for the 5 year period	APPLIED FOR Rbn	DECISION Rbn	Shortfall Rbn
Return	186.9	137.7	49.2
Primary Energy Costs	354.9	293.5	61.4
Independent Power Producers (IPPs)	77.7	64.9	12.8
Depreciation	185.4	139.9	45.5
Integrated Demand Management	13.1	5.2	7.9
Operating Costs	269.6	265.3	4.3
<b>TOTAL REVENUES</b>	<b>1,087.6</b>	<b>906.6</b>	<b>181.0</b>

- (b) Just over a week later, the MYPD3 approved revenue figures from NERSA were officially reduced from R907bn per the original determination to R862bn.<sup>19</sup> NERSA had not used the correct volume / tariff figures for the three tariff categories which make up the determination. This lower value when compared to the application gives the R225bn "revenue shortfall" often referred to.
- (c) There is no doubt that this decision amounted to a considerable challenge on the assumptions underlying Eskom's budget. Eskom buys from IPPs on the pass through principle and the IPPs get the full 6% they ask for to cover costs from Eskom,

<sup>15</sup> Presentation of Eskom Interim Financial Results as at September 2013

<sup>16</sup> Cash, cash equivalents and liquid investments in securities at September 2012

<sup>17</sup> Treasury Dashboard September 2012

<sup>18</sup> Nersa MYPD3 decision notice, February 2013

<sup>19</sup> NERSA confirmation letter of revised revenue levels to R824bn dated 8 March 2013

and the remaining 2% of the total 8% the consumer pays. Thus this effectively squeezes what Eskom has to utilise even further.<sup>20</sup>

- (d) It is noteworthy that half of the shortfall related to longer term costs i.e. the building up a return on the assets and covering depreciation. Fundamental disagreement in the valuation of assets had a double impact. NERSA valued the assets at R200bn less than Eskom. The Eskom valuation had included a nominal return and inflation, so NERSA had removed the inflation element, revalued the asset value downwards by R200bn, and not given the full ROA which was phased in at 2-3% per annum.<sup>21</sup>
- (e) In the shorter term, there would not be enough funds to cover the existing budget. Although not necessarily insurmountable, in the first two years of MYPD3 the shortfall created a significant challenge to Eskom's cost base.
- (f) If one considers coal usage, for example, in real terms the application had targeted an annual increase of R4.47bn; however the award priced an R3.75bn increase. Not an onerous challenge, and in fact the discrepancy was down to a differing of opinion on the deterioration of the average burn rate, a feature that can be recovered retrospectively through the Revenue Clearing Account. However, NERSA's starting point was the 2012/13 allowed budget (R31.2bn) which was a value which dated back to 2009 and the MYPD2 application, and not Eskom's forecast spend for FY13 (R35.4bn), and so in fact Eskom would have to reduce coal usage spend in FY14 by 12.5% after inflation, based on the decision (R32.7bn).

### 3.3.4 The financial position at 31 March 2013 – FY13 year end

- (a) At March 2013, the end of the FY13, notwithstanding the recent lower tariff decision, Eskom's financial position was beginning to falter. Debt levels were relatively stable, rising 11% to R203bn<sup>22</sup> and there was a healthy debt: equity ratio of 1.95 below the annual target debt ratio of 2.23<sup>23</sup>. However Eskom would soon be requiring further lending to fund its capital expansion programme, putting pressure on this ratio. It was missing other financial KPIs such as curbing rising costs of production and its ability to cover interest payments on its debt.<sup>24</sup>
- (b) The 2012/13 16% tariff increase resulted in a 16.4% average increase in electricity revenue per kilowatt-hour. However, sales volumes were lower than expected due to lower usage from industrial and mining customers, offset by increased volume to international customers (Botswana and Namibia). This resulted in revenue of R128.9bn, which was slightly down on budget but largely on target.<sup>25</sup>
- (c) Earnings before interest, depreciation and amortisation ("EBITDA") however were over 50% lower than the previous year at R13.9bn, mainly due to the rising primary energy costs. Primary energy saw an increase of 31% on prior year, with only an equivalent 3.7% increase in sales. The Medupi coal contract penalty of R3.7bn, and increased coal handling costs due to strikes resulted in coal usage costs going up, while OCGT usage increased by 302% in order to "Keep the Lights On".

<sup>20</sup> ██████████ Group Finance, 26 May 2015

<sup>21</sup> ██████████ Group Finance, 26 May 2015

<sup>22</sup> Eskom Financial Statements 31 March 2013 – Total Borrowings and Debt Securities

<sup>23</sup> Eskom Financial Statements 31 March 2013

<sup>24</sup> Eskom Holdings Integrated Report 31 March 2013

<sup>25</sup> Business Results Briefing 31 March 2013

- (d) Electricity debtors (before impairments) increased from R14.6bn to R16.7bn at 31 March 2013 of which R1bn was impaired as potentially uncollectable. 36% of this impairment relates to Soweto and municipalities and this was the first year that a provision had been raised against the municipal debt. Soweto debt continued to grow in the year and payment levels were only 24.4%, a collections shortfall of R0.7bn for the year.
- (e) Although the financial statements show a small retained profit of R5.2bn, this includes the effect of one-off gains<sup>26</sup> and capitalization of employee costs, which when removed reveals Eskom to be making a loss before tax of R9.4bn from ongoing activities. This together with a policy to capitalise certain interest costs (i.e. add to the size of the asset under construction rather than expense through the income statement) potentially masked the fragile break-even nature of Eskom's business.
- (f) Liquidity levels were also in decline, with net cash generated by operating activities falling by 28% to R27.7bn.<sup>27</sup>
- (g) Medupi was experiencing various delays, including on technical building equipment and labour protests resulting in the site being closed. Eskom had committed to the Shareholder<sup>28</sup> (and in MYPD3 application to NERSA) that Medupi would be ready for Unit 6 first synch by 31 December 2013, but by April 2013 doubts were arising formally as to whether this deadline would be met. At May 2013, Medupi build costs were overrunning by R8.6bn, above the original R91bn budget.

### 3.3.5 The response plan - April 2013 to November 2013

- (a) Following the MYPD3 decision, Eskom prepared a "Response Budget" in an attempt to close the R225bn gap. This budget was still in excess of what had been approved by the Regulator but was later reduced further several times, i.e. it remained flexible through Board decision. Initiatives to close the gap included cutting costs (later enshrined in the Business Productivity Process "BPP"), increased borrowing and reducing capital expenditure.<sup>29</sup>
- (b) The RCA component was also seen as critical - Eskom believed that the volumes and cost base as calculated by NERSA were wrong and this is borne out by the most recent Regulatory Clearing Account ("RCA") application for year 1 of MYPD3. It has also been seen that SPA customers are paying less in actuality than predicted in the determination.<sup>30</sup>
- (c) Eskom's response appears to have had the measure of the gravity of the situation. We understand that everyone was aware Eskom needed to make some big changes and pursue a number of strategies to manage the risks this decision presented to Eskom's financial sustainability.<sup>31</sup>

<sup>26</sup> Gain from re-measurement of shareholder loan of R17bn and loss on embedded derivative of R6bn

<sup>27</sup> Eskom Financial Statements 31 March 2013

<sup>28</sup> Board minutes 3 April 2013

<sup>29</sup> ██████████ Group Finance, 22 May 2015; Securing financial sustainability (in response to lower tariff decision) May 2013

<sup>30</sup> ██████████ Group Finance, 26 May 2015

<sup>31</sup> ██████████ Acting CFO at the time

- (d) Because of years of non-cost reflective tariffs, there was no slush fund. The changes that were identified by Treasury and Group finance in the following three months to July 2013 were adopted, but successful implementation was not guaranteed<sup>32</sup>:
- (e) Re budget and re-prioritise;
  - (i) A revised budget was forced upon the business as they were resistant to cuts;<sup>33</sup>
  - (ii) The business believed the cost cutting was harsh and as a consequence didn't take ownership of the new budgets, however. Moreover, some areas of the business just continued to expect the same approach which was a "Rolls Royce" approach. Transmission was cited as an offender.<sup>34</sup>
  - (iii) In addition, the capex re-prioritisation was not joined up exposing the silo'd nature of the business. The employee put in charge of this had an IT background and was potentially railroaded by the business divisions – each reportedly fought for their full budget rather than working together and planning spend efficiently. In essence there was limited accountability.<sup>35</sup>
- (f) Monthly report on budget, Quarterly cash projections and risk assessments to be conducted, and the underwriting of risks
  - (i) Although budget to actual was reported on a monthly basis, Caroline Henry indicated that her predecessor Paul O'Flaherty only reported on a quarterly basis to the board.
  - (ii) We have not seen any evidence that monthly budgets were discussed at EXCO. Martin Buys, Group Finance does not recall that monthly reporting of progress against budget to EXCO happened at this time.
- (g) MANCOM Quarterly Review to provide robust challenges to financial position
  - (i) These are discussed in more detail below.
- (h) BPP as a necessity
  - (i) BPP was on top of the R30bn saving which had been built into MYPD3 application and was initially about cost savings through HR and savings in Primary Energy.
- (i) By November 2013, the messages had been repeated and were continually reinforced, and a new initiative emerged which was to manage financial sustainability<sup>36</sup>:

*"The financial sustainability risk combines what was previously defined as the Revenue Shortfall Risk in Group Financial Controller and the Liquidity and Portfolio Risk in Treasury"*

<sup>32</sup> Q1 2013/14 Report to Exco by [REDACTED]

<sup>33</sup> Senior officer within Treasury

<sup>34</sup> ibid

<sup>35</sup> ibid

<sup>36</sup> 10.2.5 Eskom's Financial Sustainability Risks MYPD - Submission Documents

- (j) This initiative had the stated belief that: *"Whilst the risk is substantially contained in the first two years of the five year window, significant challenges remain in the latter part of the determination period. In this regard it is important that with the support of Exco/Board, advance work at risk should commence to proactively collate, coordinate and draft a submission for the NERSA determination targeting years 3, 4 and 5 with a view to be ready for submission in July 2014. This is subject to Exco and Board approval"*

### 3.3.6 Treasury alert - January 2014

- (a) In January 2014, Treasury issued an alert that Eskom would run out of money in the summer of the financial year 2014/15; essentially a 6 month warning.<sup>37</sup>
- (b) Group Finance began to first comprehend the gravity of the financial decline towards the end of the financial year to 2013/14. This concern was relayed to the FD at the time and discussions were purportedly initiated with the Government to escalate the issue. It was generally considered that the company would not be able to survive if the levels of diesel usage continued.<sup>38</sup>
- (c) The actual response to the January alert was the "Back to Boundaries" philosophy and in a sense to rely on Shareholder meetings for palatable solutions.<sup>39</sup>

### 3.3.7 The financial position at March 2014 – FY14 year end

- (a) With a significant gap in the spending budget, Medupi and Kusile still not contributing to supply, and the costs of OCGT fuel to plug the supply gap continually rising, Eskom's financial position fast deteriorated in FY14.<sup>40</sup>
- (b) There were serious concerns about a possible credit downgrade from the ratings agencies given the highly leveraged position of the company, the need for further funds to fill the R255bn revenue gap and the business' reliance on the sovereign credit rating.
- (c) Eskom's liquidity position had improved through funding raised in the year, but this had a negative impact on debt to equity ratio which had risen to 2.06 and the company had diminishing ability to service that debt. The cash position of the group was R30.6bn at 31 March 2014 compared to R28bn in the prior year as a result of gross debt increasing by R51.9bn during the year<sup>41</sup>. The cash outlook was not good, however with a slide below the liquidity buffer anticipated after December.
- (d) Sales volume had been stagnant with only a 0.6% increase on the prior year (against a budgeted increase of 16%). Part of the reason was the power buy backs programme where Eskom intentionally reduced volume from large customers, but this was coupled with an overall decline from sales to industrial customers. Revenue therefore only increased by R10.7bn to R139.5bn, on the basis of the tariff increase of 8%.<sup>42</sup>

<sup>37</sup> ██████████ Senior Manager Treasury, 10 June 2015

<sup>38</sup> ██████████ Group Finance, 22 May 2015

<sup>39</sup> ██████████ Senior Manager Treasury, 10 June 2015

<sup>40</sup> Operational Review March 2014

<sup>41</sup> Debt and Commercial Paper

<sup>42</sup> Eskom Holdings Integrated Report 31 March 2014

- (e) Bad debt arrears were 1.10% of external revenue for the year, compared with 0,82% in the prior year. The Soweto and municipality debt continued to grow and despite Eskom's interactions with National Treasury to assist with dealing with the problem, it was not improving.
- (f) Eskom's retained profit for the year was R7.1bn, an increase on prior year. However, removing the effect of the one-off gain on financial instruments<sup>43</sup> and capitalised staff costs of R5.1bn, the business made a slight profit before tax of R1.3bn. Primary energy costs increased again this year by 15% to R69.8bn, despite static production volumes. In the main this was attributable to the reliance on OCGT and the cost of diesel. Significant reliance was being placed on the OCGT fleet and spending had increased by R5.6bn since March 2013 with an unfavourable budget variance of R6.97bn.<sup>44</sup>
- (g) Savings from the BPP programme were sorely needed but none of the 86 savings opportunities identified in the year had yet to hit the financials.<sup>45</sup>
- (h) The MYPD3 response plan cut the capital programme budget to R251bn (against the original application amount of R337bn) which put Medupi expenditure plans under a new budget. Medupi was R389m over this revised budget, mainly due to increased project manpower required on the project.<sup>46</sup>

### 3.3.8 "Rescue package" to fix the "cash crunch" - September 2014

- (a) In September 2014, the government approved a support package for Eskom to resolve its short and medium term liquidity constraints. This rescue package included an equity injection of R23bn and Sovereign support to a R50bn debt package. Although the equity would ease liquidity pressures in the short term, it would not address the long term sustainability and the additional debt would put even greater pressure on finance costs. The level of debt at September 2014 was R263bn.
- (b) Eskom's cash position had fallen significantly below its R20bn buffer and forecasts at this time showed a consistent decline of liquidity and in fact into overdraft in 2016/17 financial year<sup>47</sup>. The liquidity position was temporarily at least above the buffer at R22.6bn and cash reserves covered its cash requirements for approximately 90 days, reduced from 120 days at 31 March 2014.
- (c) The ratings agencies were seriously concerned with Eskom's financial health and it faced the threat of a downgrade to "junk bond" status, which the business recognised would seriously impede Eskom's ability to raise external funding and increase the cost to borrow.
- (d) The business had a net profit after tax of R9.3bn but was forecasting a year end loss of R2.5bn. As per the trend at the FY14 year end, this was as a result of continued reduction in sales volume, increasing primary energy costs (including the Medupi coal penalty of R2.5bn), rising OCGT costs and the continuing impairments of the

<sup>43</sup> Gain on adjustment to fair value of embedded derivatives of R2bn

<sup>44</sup> Business Results Briefing 31 March 2014

<sup>45</sup> CE Report to the Board 27 February 2014

<sup>46</sup> Business Results Briefing 31 March 2014

<sup>47</sup> Q2 Shareholder Report 30 September 2014

escalating municipality debt.<sup>48</sup>

- (e) The cost of running the OCGTs during the six months amounted to R3.6bn against a budget of R2.7bn and this variance was forecasted to get worse, with R10bn spend predicted by March 2015 against the R6.4bn budget.<sup>49</sup> The initial FY15 OCGT budget of R10.43bn had been revised down to R6.02bn, as the intention had been to purchase cheaper IPP supply options. However, the lower OCGT utilisation did not materialise and additional funding of R4.3bn was approved.<sup>50</sup>
- (f) Again, the total municipal arrear debt kept on rising, from R3.3bn at 30 June 2014 to R4.0bn at 30 September 2014 and the debt was expected to keep rising. The Soweto payment level was 15% for the period ended this time, down from 16% at the end of the first quarter.
- (g) Eskom's recovery plan relied on government intervention but also looked internally for BPP cost savings. R9.8bn of savings were initially identified for the following FY15 and allocated to divisions who were tasked to operate their business within the reduced budget. However, R5.56bn of the initially identified savings had fallen away due to the projected overspend on diesel and the inability to recover municipality debt.<sup>51</sup>
- (h) Construction progress at Medupi had been hindered in critical areas due to industrial action in July 2014. The workforce returned to site by September and, through risk mitigation plans and reassignment of available resources, the target for first synchronisation of Unit 6 remained December 2014.
- (i) As it happened, and given the "rescue package" had no impact in August 2014 (i.e. it is only now being ratified), it was perhaps surprising that Eskom didn't run out of funds as predicted. According to a senior finance officer, in some ways this was a bad thing because the financial precarious nature of Eskom remains intangible to many. In a sense, Treasury lost credibility by not running out of funds.
- (j) This was more luck than judgement, however: For example delays in Medupi meant that by default the business had enough funds and as time wore on different funding options presented themselves.
- (k) These shareholder engagements during the "Back to Boundaries" initiative were ultimately ineffectual however: The R50-R150bn equity injection, as determined by JP Morgan, was not sanctioned, and instead only R23bn crystallised.<sup>52</sup>

### 3.3.9 The financial position at 31 March 2015 – FY15 year end

- (a) This financial year saw the start of regular planned load shedding, as the cost of 'keeping the lights on' through OCGTs and delaying essential maintenance became too much. The possibility of running out of cash and/or insolvent trading became a real fear, as net cash from operations fell below the level of debt repayments and

<sup>48</sup> Q2 Shareholder Report 30 September 2014

<sup>49</sup> Q2 Shareholder Report 30 September 2014

<sup>50</sup> Q2 Shareholder Report 30 September 2014

<sup>51</sup> CE Report to the Board 15 September 2014

<sup>52</sup> According to senior finance officer

interest due<sup>53</sup>. Coupled with falling KPI ratios, Eskom's was showing an inability to cover their financing costs for the first time.

- (b) New debt of R49.5bn was taken on in the year to fund the continued capex programme. However, Eskom was downgraded to sub-investment grade status by both Moody's and S&P and thus the funding was provided at much higher finance costs.<sup>54</sup> Liquidity concerns were heightened as the net cash flow from operating activities of R21.3bn was not sufficient to cover the total of debt due for repayment of R17.1bn as well as the net financing interest payable of R15.3bn resulting in a shortfall of R11bn.<sup>55 56 57</sup> In essence borrowings were starting to be used for ongoing operations.
- (c) Cash and cash equivalent decreased by R11.1bn to R8.0bn <sup>58</sup> during the year due to the increase in debt repayment and net interest payments. Eskom were still significantly below their R20bn liquidity buffer and the outlook at the time indicated that they would remain below for the next 12 months, even when considering the anticipated R20bn Government support package to be received in two tranches in June 2015 and December 2015 and the R7.8bn revenue adjustment agreed with NERSA in relation to MYPD2.
- (d) Free Funds from Operations ("FFO") is an alternative measure of cash generated from operations and FFO as a percentage of gross debt measures the business' ability to pay for its level of gearing and is one of Eskom KPIs.
- (e) At March 2015, Eskom's FFO as a percentage of total debt was 2.45%, which was both below the annual target level of 7.63% and a significant drop from prior year of 9.21%. The decrease was driven by an increase in gross debt of R4bn and a decrease in free funds from operations of R284 million mainly due to a decrease in cash flow from operations. It is also still far below the long term target of 20%, representing a major risk as the rating agencies consider this information in their determination of Eskom's standalone investment potential.<sup>59</sup>
- (f) Medupi and Kusile were further delayed – Medupi was not expected to come fully online until 2019 and Kusile until 2021. As they reach completion, a looming hit to annual reported earnings is expected as interest costs that were capitalised during the construction would be posted to the profit and loss account.<sup>60</sup>
- (g) Eskom's retained profit for the year was R3.6bn, a decrease of 50% on prior year. The earnings included an R2.7bn insurance claim pay-out, which when removed from the financial results as it is a one off gain, leaves a profit before tax of only R1.2bn.
- (h) Sales during the year declined by 0.7% compared to prior year mainly due to load shedding. The increase in electricity revenue from R139.5bn to R147bn was aligned to the mandated growth from the 8% NERSA determination.

<sup>53</sup> Business Results Briefing 31 March 2015

<sup>54</sup> According to Treasury officers, the downgrade added 100 basis points to the debt price

<sup>55</sup> Business Results Briefing for year ended 31 March 2015 (Draft)

<sup>56</sup> Eskom Holdings Integrated Report 31 March 2015 (Draft)

<sup>57</sup> CE Report to the Board 26 Feb 2015

<sup>58</sup> GFC Presentation April 2015

<sup>59</sup> Business Results Briefing for year ended 31 March 2015 (Draft)

<sup>60</sup> Integrated Report (Draft) 31 March 2015

- (i) Residential debt continued to escalate, standing at R5bn, as the provision for bad municipal debts increased by R2.3bn. A decision was made to amend the revenue recognition policy such that sales are only recognised if deemed collectable at the date of sale. External revenue to the value of R6bn was thus not recognised at 31 March 2015. On 6 March, Treasury took action on behalf of Eskom and withheld payment of 'equitable shares' from 60 late paying municipalities.
- (j) Primary energy costs continued to rise as more generating load moves away from coal stations to the more expensive IPPs and OCGTs. The expenditure on the OCGT was R9.5bn and exceeded the original budget by R3.5bn. Overspend on OCGTs is as a result of continued operation of OCGTs at higher than formally expected levels in order to ease the strain on electricity supply.
- (k) During the year, the BPP begun to make savings, however the impact on the income statement was not significant.
- (l) According to a senior finance officer, Eskom had made an R2.5bn profit over the year due to "all of the wrong reasons", i.e. accounting income items. These included: settlement received from the Dhuvu insurance claim as a release of a provision and the effect of embedded derivatives as a result of the Rand/Dollar exchange rate.
- (m) Other than OCGT diesel costs, the largest single adverse shock to budget was the Medupi coal penalty, which pushed coal usage costs above budget. In September 2014, Eskom recognised a penalty of R3bn, and a further R5bn before the year end.

### 3.4 The Outlook

- 3.4.1 The external auditors have put Eskom on notice that they are monitoring the going concern basis assumption.<sup>61</sup> Preparing financial statements on a going concern basis is necessary to provide assurances to stakeholders a business will continue to trade for the next 12 months.
- 3.4.2 Eskom's reliance on renegotiating with NERSA is almost absolute. There is in aggregate an additional R140bn required from the tariff in the MYPD3 period either submitted or work-in-progress. This is not including a "full reopener" to address, among other things, the cost of OCGT diesel for the remaining 3 years.
- 3.4.3 This is in addition to the request to convert R60bn of debt to equity and receive a cash injection of R23bn. These decisions are subject to ratification at the time of writing.
- 3.4.4 The various applications to NERSA are summarised in the table below:<sup>62</sup>

Application	Comment
RCA for MYPD2 (all years)	-Requested R18.4bn; -Awarded on 17 March 2014 R7.8bn; -Came in effect 2015/16 as one off; -Equivalent of an additional 4.7% tariff increase.
MYPD3 Selective Reopener for years 3, 4 and 5	-In relation to IPPs and OCGT costs under-budgeted; -Requested approx. R50bn over the three years; -Decision due 29 June 2015
RCA for MYPD3 Year 2013/14	-February submission 2015; -Coal burn – R2bn; -OCGT – R8bn; -IPP – R2bn; -Opex (manpower/maintenance) wrong base – R11bn; -Depreciation and RoA - R4bn; -Lower revenue (net of offset by ancillary costs) – R11bn; -TOTAL R38bn
RCA for MYPD3 Year 2014/15	-WIP similar to Year 2013/14
"Full Reopener" for MYPD3 years 4 and 5	-WIP – will be submitted in July 2015, with a potential decision in February 2016. It would appear from public statements Eskom is targeting 25% tariff increases.

- 3.4.5 Notwithstanding these applications, at the time of writing the year-end cash position looking forward to end March 2016 is prima facie tolerable. Whilst there is predicted to be a cash squeeze for the summer months, the greater tariffs in winter can reverse that. It is forecast that there will be R33bn in the bank at year end and that in effect Eskom could therefore sustain R1bn a month on diesel.<sup>63</sup> Whilst that might be true, Eskom acknowledge using funds for diesel will significantly deepen the extent of this year's forecast loss and this will impair the financial ratios of Eskom so critical in capital markets.<sup>64</sup>

<sup>61</sup> We understand the auditors will be including an 'Emphasis of Matter' paragraph in relation to Eskom's tentative going concern status in their report on the FY15 financial statements. This type of paragraph is included when a matter is appropriately disclosed in the financial statements but, in the auditor's judgment, is of such importance that it is fundamental to users' understanding of the financial statements.

<sup>62</sup> Information from Group Finance

<sup>63</sup> Senior Finance officer, 10 June 2015

<sup>64</sup> Ibid

3.4.6 Furthermore, the assumptions that underpin this forecast are fraught with risk:

- (a) 2016 is a municipality election year; which will place arrears under more pressure. The budget assumes these will be tamed;
- (b) New builds – A R4bn spend in Group Capital has been moved out (it is claim related) which helps the short term cash position. However there is still considerable risk in the new build programme, and any further delays will cause penalties and a bigger bill in the end.
- (c) Eskom is still waiting for first tranche of the equity funds that formed part of the “Rescue Package”, but effectively R20bn of the liquidity position is to be generated from these injections.
- (d) Diesel has reached this year's budget, but if we assume the EAF remains at 73%, this could reduce the cash float by over R8bn.<sup>65</sup>
- (e) There is an interim price increase to 12.69% and the soon to be ruled on RCA could add an additional 3% approximately (total 15.51%) which will generate R4bn extra revenue. The year-end picture assumes the RCA decision on the 29 June will be positive, however informal feedback does not indicate this will be forthcoming. The window for a longer term solution is closing and there is no guarantee the appetite for tariff increases will be any better in 12 to 18 months.
- (f) The year-end position is also predicated on the assumption BPP savings will be made.

3.4.7 Eskom Treasury recently highlighted the key risks that Eskom faces to execute the borrowing programme, and in turn therefore complete the new builds: Realisation of BPP cost savings; cost overruns on Medupi and Kusile; RCA cost recovery in MYPD3 future years; Declining future ratios; threat of further credit rating downgrades; Inadequate liquidity buffer; Lack of market appetite for Eskom debt; and Inability to execute borrowing programme. In FY2015, all of these risks materialised.<sup>66</sup>

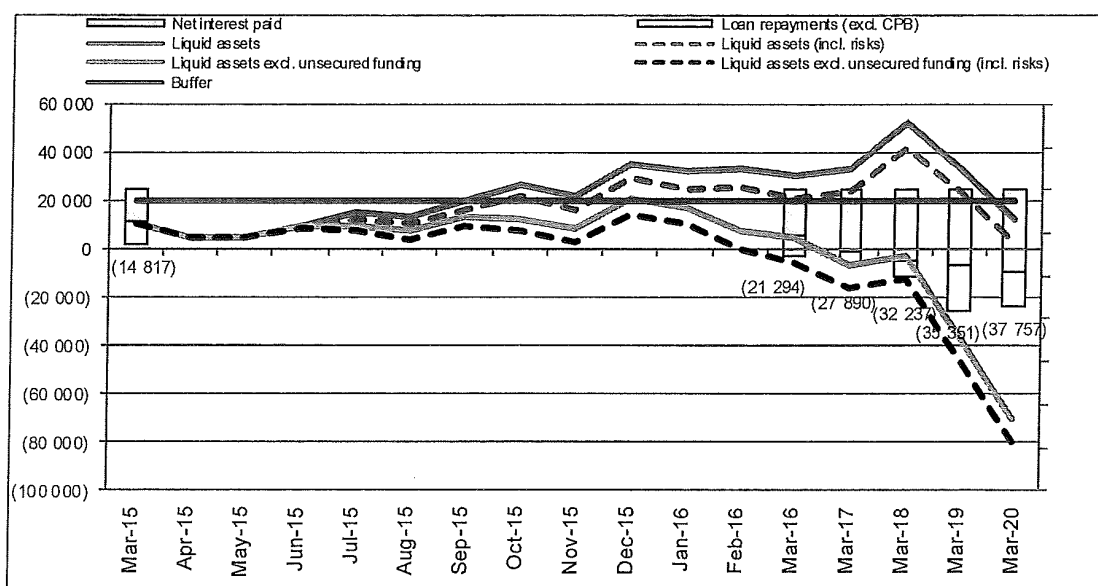
3.4.8 Furthermore, events in the first two months of FY16 have not been good news for ongoing operations, with various line items going adverse to budget, including sales which were down R1.1bn.<sup>67</sup> The following table is taken from “Eskom company monthly review April 2015”:

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<sup>65</sup> According to risks acknowledged by Finance in this cash forecast

<sup>66</sup> Eskom Treasury “Eskom Borrowing Programme and National Treasury Regulations” 12 February 2015

<sup>67</sup> May 2015 budget v actual report YTD



- 3.4.9 The green "Liquid assets" line reflects that the organisation will move above the R20bn buffer from September 2015 and reach the March 2016 R33bn mark.
- 3.4.10 The grey "Liquid assets excluding unsecured funding" line reflects how the same position changes under the worst case scenario, assuming Eskom is unable to obtain any of its currently unsecured funding amounting to R26bn.
- 3.4.11 The blue and black dotted lines take into account the risk associated with additional OCGT spend of R8 07 million and R1bn for the re-capitalisation of ESCAP in 2016
- 3.4.12 If you total up the impact of the various assumptions falling over, even with the R20bn capital injection Eskom may be teetering above an overdraft by year end.
- 3.4.13 Recent history does not place these risks in a good light. Eskom is currently sacrificing its future to survive. If sales and arrears continue to plague Eskom, there is a shortfall in lending, a failure to meet meaningful cost savings, and a continued EAF below 80% prevail (in other words a continuation of the trend of the past 2 years), Eskom's bail-out funds will evaporate.
- 3.4.14 In the absence of a change of heart at NERSA, or any meaningful cost savings by Eskom, further credit rating downgrades can be expected. If the Sovereign suffers a downgrade, or the auditors consider the cost of the new builds unsustainable and challenge going concern further, the implications for Eskom will be dire.



viable to purchase diesel and not use it as it is expensive and Eskom don't have the capacity to store it.<sup>73</sup>

4.2.6 Based on EXCO meeting minutes, it would appear that [REDACTED] first raised the possibility of a longer term solution in May 2014, when he became acting head of T&C Division – indicating Group Capital consider options. This may have included greater storage capacity, or even better links to gas suppliers, however the minutes do not expand on this.<sup>74</sup>

4.2.7 Last year the OCGT diesel budget moved around a lot – up from below R3bn to R10bn, then R9bn, then R6bn before actually costing R10bn (the IPPs, which are also expensive, couldn't make up the shortfall). And yet this year the budget is R2.9bn which has already been spent and it has been suggested that as much as R14bn will be required from June onwards.<sup>75</sup>

4.2.8 The tables below summarises the cost by vendor type over past the three years (NB all prices are gross of the diesel rebate Eskom receives which is approx. R3/l on prices of approx. R10/l):<sup>76</sup>

FY13				
	no. suppliers	Volumes /l	Paid /R	Discount
<b>Contracted Supply</b>	3	426,598,189	4,646,203,082	122,774,474
<b>Out of contract</b>	6	67,785,493	802,030,221	762,547
<b>Total</b>	9	494,383,682	5,448,233,303	123,537,021
<b>Contracted Supply %</b>		86.3%	85.3%	99.4%

FY14				
	no. suppliers	Volumes /l	Paid /R	Discount
<b>Contracted Supply</b>	3	895,857,607	10,752,941,466	273,632,171
<b>Out of contract</b>	17	209,062,951	2,417,511,349	5,159,882
<b>Total</b>	20	1,104,920,558	13,170,452,815	278,792,053
<b>Contracted Supply %</b>		81.1%	81.6%	98.1%

FY15				
	no. suppliers	Volumes /l	Paid /R	Discount
<b>Contracted Supply</b>	3	739,108,873	7,929,882,936	234,664,716
<b>Out of contract</b>	23	267,993,200	2,865,821,316	0
<b>Total</b>	26	1,007,102,073	10,795,704,252	234,664,716
<b>Contracted Supply %</b>		73.4%	73.5%	100.0%

<sup>73</sup> [REDACTED] Primary Energy Accounting, 25 May 2015

<sup>74</sup> Exco meeting minutes 6 May 2014

<sup>75</sup> Senior Finance Officer

<sup>76</sup> Based on analysis performed by [REDACTED] Finance

4.2.9 These values are before rebates, and the values in FY15 are an understatement because they were taken to 11 March 2015, and it was noted on the analysis that there was a considerable delay in processing (and therefore recognising) deliveries in the accounting system.<sup>77</sup>

4.2.10 This high level analysis helps to highlight the following:

- (a) The majority of the purchases are made pursuant to contract agreements with three vendors: [REDACTED], [REDACTED] and [REDACTED]. These are legacy contracts agreed in 2008/2009 and do not appear to have been renegotiated despite the increase in volumes.
- (b) The remainder are termed "supplementary suppliers". It is clear from the table that the number of supplementary vendors have increased as has their share of the total spend. Other than [REDACTED], none of these supplementary or "ad hoc" suppliers applied a discount to the Gazette list price for wholesale diesel. In contrast, discounts of between [REDACTED]c and [REDACTED]c per litre (on a price of approx. R10/l) were given under the contracted supply arrangements.

4.2.11 We consider there are a number of concerning elements in relation to the supply of diesel:

- (a) A cursory review of the web for some of these suppliers conducted by an officer of Eskom contemporaneously suggested they were not well established entities. We were informed that some of the suppliers had rudimentary invoices (for example, prepared in Microsoft Word rather than generated from an accounting system). We are also aware of the news article that indicated [REDACTED] and [REDACTED] were fronted by a [REDACTED] and a [REDACTED].
- (b) We have been told there are anecdotal references to employees establishing companies using their family members, and then removing themselves from the board before probity checks.
- (c) We have also been told that one supplier boasted they bought their diesel from a Congo business man, who bought it from source in South Africa. The use of such intermediaries would appear inefficient and potentially illicit.
- (d) Furthermore, allegedly certain transactions have been performed outside of DoA powers.<sup>78</sup>
- (e) A review of the "incidents management database", Eskom's log of whistleblower allegations, did not identify a record of a concern we understand to have been raised by a finance employee as to the bona fides of some of these ad hoc diesel suppliers.

4.2.12 We have conducted a limited review of invoices in relation to these ad hoc suppliers.<sup>79</sup>

<sup>77</sup> Extract from accounting system regarding OCGT diesel costs

<sup>78</sup> Anonymous source

<sup>79</sup> Suppliers selected for small sample testing: [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED].

- (a) We can confirm the invoices from the earlier periods for a sample of vendors tested are rudimentary in design, and in fact the invoices for three suppliers, [REDACTED], [REDACTED] and [REDACTED] show many commonalities.
- (b) The invoices provided for [REDACTED] contained no contact information with the exception of an address. [REDACTED] was also the only provider of those selected that does not now appear to have a website.
- (c) The Purchase Order for [REDACTED] provided, ref [REDACTED] was for value of [REDACTED]. The two invoices also provided for [REDACTED] both reference this number as the Contract reference. However, the combined sum of these two invoices are in excess of the purchase order value by over [REDACTED];
- (d) Inconsistencies are identified on the invoices provided for [REDACTED]. The first invoice dated in December 2012 contains the company registration number [REDACTED] and provides a bank account with [REDACTED] Bank for payment. Public research suggests that this is the genuine registration number for [REDACTED]. The second invoice dated 11 July 2013 contains the company registration number [REDACTED] and a bank account with [REDACTED] Bank. The third invoice dated 27 November 2013 returns to the former company registration number but retains the latter bank account information.
- (e) The first invoice provided for [REDACTED] has the invoice number "[REDACTED]". This invoice is dated 30 June 2014. This appears unusual when the first transaction identified with Eskom was in April 2014 and various transactions were conducted through to the end of June 2014. It is possible therefore that Eskom was conducting business with [REDACTED] before it had established an invoicing system, which may indicate that it was set up with this specific purpose.
- (f) Inconsistencies were identified with the invoices for [REDACTED]. The bank account provided was different on all three occasions. The second two invoices are also observed to be in a different format.
- (g) The domain for [REDACTED] was observed to have been registered by "[REDACTED]" who provides the contact email address [REDACTED] and telephone number [REDACTED]. Public research identified an individual called "[REDACTED]" on LinkedIn. The profile of this individual states that he has held the position of "[REDACTED]" at Sasol Oil (Pty) Ltd since [REDACTED]. This is an unusual relationship and may represent a conflict of interest.

4.2.13 These represent significant "red flags" over the use and bona fides of the ad hoc suppliers.

4.2.14 Furthermore, we understand that [REDACTED] replaced the General Manager in charge of diesel procurement in an effort to engender a more transparent approach to diesel procurement.<sup>80</sup>

4.2.15 The potential "wastage" due to not arranging discounts with ad hoc suppliers may be in the order of R200m in the past two years (i.e. 37c/R10 is approx. 4% of R5.3bn spent without discount).<sup>81</sup> This is not material in terms of contributing to Eskom's financial challenges, but it

<sup>80</sup> [REDACTED] Exco member, 18 June 2015

<sup>81</sup> Taken from extract from accounting system of diesel PO's placed with ad hoc suppliers

is material in relation to reported "fruitless spend and wastage". Furthermore, it becomes highly material if there are any conflicts of interest.

4.2.16 Additionally, there would appear to be a need to understand and critically challenge why it has taken 30 months to only come up with a shortlist of 6 providers who might be asked to provide discounts of between █ cpl and █ cpl. It is also not clear how a tender process that restricts itself to a bidding war to choose five out of six potential suppliers rather than scores of potential suppliers is likely to drive the best discount. (See Chapter 5 for more details).

4.2.17 The high level chronology is as follows:

- (a) Sep 2012 – Requirement for supplementary suppliers emerges;
- (b) Sep 2013 – RFP CORP 2720 to establish term contracts for a panel of supplementary suppliers closes. 63 responsive tenders are subsequently failed based on the tender criteria;
- (c) Apr 2014 – Application to Board of Directors Tender Committee to cancel the application and conduct a revised tender, now seemingly only changed in that the term will be two years not one year. EXCOP see submission in May 2014 and the Board approves in June 2014;
- (d) Jul 2014 – RFP CORP 3017 opened with 88 respondents;
- (e) Nov 2014 – Internal Audit report notes that some submissions contained pricing information as they were passed to the "functionality" evaluation stage. In addition, some evaluators were found to have their phones on them. These are both breaches of the policy. No sanctions appear to have been recommended, albeit the Board later resolved that the transgressions must be dealt with. However, we have not identified this matter in the Internal Audit catalyst reports.
- (f) Jan 2015 – Technology and Commercial requested a mandate to negotiate with just 6 suppliers – █ & █ (not one of the 31 supplementary suppliers used before), █ (not used before), █ (web presence indicates its employment goal is to keep 2 people employed); █ (█), █, and █. The Board approved subject to discounts being achieved of between █ c and █ c.

4.2.18 █ indicated he was satisfied that the names on the shortlist were not names he had seen before. However, four have in fact been used before. Also, █ uses a phrase on its website that █ uses. As mentioned above, █ and █ use similar invoice templates. This procurement approach does not appear to be entirely optimal. It is remarkable that closer scrutiny has not been placed over this cost item given the financial challenges it has presented.

4.2.19 Concluding comments

- (a) The diesel costs have been a result of Eskom having to mitigate load shedding. It does not make commercial sense, however, to not seek to renegotiate the legacy contracts. It is also concerning that 30 months can pass without a meaningful approach to drive down the cost of ad hoc diesel supplies.

- (b) Taken together with a proliferation of “red flags” over the bona fides of the diesel procurement process, Eskom’s management of this expenditure requires closer scrutiny.

#### 4.3 Tariff impact and Eskom’s response

- 4.3.1 Eskom considers that the current tariff is not cost reflective, and that certainly holds true as a long term view. In the short term with costs under control it wouldn’t in isolation lead to a liquidity scare and an elimination of profits, however.
- 4.3.2 According to Eskom Treasury, the awareness of the financial challenges presented by MYPD3 decision was acknowledged at the EXCO level and was reaffirmed by Finance and Treasury from July to November 2013 in MANCOM Quarterly Review meetings. However, as corroborated by ██████████ and ██████████, the risks in the first two years were seen to be:

*“...largely contained with the processes for embedding of the response budget and implementation of BPP. Disciplined monitoring and execution of the budget remains an ongoing treatment plan”.*<sup>82</sup>

- 4.3.3 There should be no doubt that, in addition to the MYPD2 RCA application, and addressing concerns of funding liquidity and credit ratings, the business had to apply strenuous pressure to the cost base financial lever.
- 4.3.4 Although not in isolation a catalyst for the financial challenges that followed, that NERSA did not reduce Eskom’s predicted sales volumes and they were in reality much lower due to the economic situation has also contributed to a sense the tariff is not sufficient.
- 4.3.5 Given the 2012 tariff reduction and the small annual increase in the MYPD3 decision, even in the short term it is a fact that there was no buffer against which adverse shocks could be absorbed.
- 4.3.6 In addition, the two year claw back time lag during the RCA process exacerbates the problem of adverse shocks: If, for example, the budgeted burn cost was R200/ton and in actuality, it is R220/ton, the difference of R20/ton can be shared with the customer, according to the regulations. The exact split is only confirmed by the regulator retrospectively, however. In the short term Eskom carries the exposure and the uncertainty.<sup>83</sup>

##### *Response budget and coal*

- 4.3.7 Coal Costs and Nersa
- 4.3.8 The budget for coal usage was reduced as part of the Response Budget, but not as far as the MYPD3 decision which required a real reduction in expenditure.
- 4.3.9 According to ██████████, ██████████ for Primary Energy, it had been explained to him by the coal sourcing team that the mines “don’t get out of bed for anything less than a real return of 10-15% per year”. ██████████ confirmed that he had never seen single digit inflation in coal usage costs. Based on this premise, however, the mines and not the power utility were making all the profits in the energy sector in SA.

<sup>82</sup> 10.2.5 Eskom’s Financial Sustainability Risks MYPD - Submission Documents

<sup>83</sup> ██████████ Group Finance, 26 May 2015

- (a) There were a number of assumptions underlying the 10% cost increase Eskom planned for as part of its MYPD3 application, covering burn rate, volumes and mix of sales. These assumptions were underpinned by a bottom up detailed production plan at an individual power station level.<sup>84</sup>
- (b) NERSA indicated to Eskom that they think Eskom are able to improve the quality and technical efficiency of the coal burn.<sup>85</sup> This has not been the case, however, based on the statistics reported, and therefore an element of the RCA relates to this difference of opinion.
- (c) NERSA did accept the price increase component.
- (d) However, critically both [REDACTED] of Internal Audit and a member of EXCO, and recently [REDACTED] T&C Division [REDACTED] stated that to them Primary Energy was a "Black Box".<sup>86</sup> Reportedly, it has been difficult to get information from the coal sourcing team, and it is a highly technical area.
- (e) We understand that [REDACTED] had taken a keen interest in coal sourcing before his departure, and up to June 2013 [REDACTED] of T&C, controlled operations. After [REDACTED] was moved to [REDACTED], he reportedly continued to exercise interest in Primary Energy together with the Head of Primary Energy, [REDACTED].<sup>87</sup>

#### 4.3.10 Inflationary Pressure on Coal Costs

4.3.11 Increases in coal costs, which are described in more detail in Chapter 3 of this report, can be summarised by the following variables/circumstances:<sup>88</sup>

- (a) Cost plus contract replacement: The shortfall in Cost Plus supply is being replaced with fixed Short/Medium Term contracts. This increases the costs of both coal and transport for Eskom. For example, in the FY 2010 – 26% of Eskom's coal was from Short /Medium Term contracts. However, more recently this was 40% of the costs;
- (b) Decreasing volumes of Cost Plus supply: Under production increases the unit costs for Cost Plus mines, due to the fixed price element in the contracts;
- (c) Decreasing coal quality from Cost Plus: The mining houses are supplying coal at quality levels specified in historical contracts agreed in the 70/80s (i.e. just above rejection rate). This was when the mines were running at 70% capacity and hence could afford slippage. Now they are running at 90% and can't hence higher quality of coal is required;
- (d) Production requirements and decreased burn rate: power stations are burning more coal to generate the same electricity, and using more expensive power stations to generate electricity due to the diminishing availability of their fleet. The Generation

<sup>84</sup> 20140228 Final Corporate Plan submitted to DPE and NT

<sup>85</sup> [REDACTED] Group Finance, 26 May 2015

<sup>86</sup> [REDACTED] Internal Audit and [REDACTED] T&C Division [REDACTED]

<sup>87</sup> [REDACTED] T&C Division [REDACTED]

<sup>88</sup> 20141120 Coal Costs History Executive Summary; and 20150331\_Coal Supply War Room Presentation\_IMCv7\_With notes

fleet has changed substantially over time with electricity output growing only by 2% whilst coal usage is up from 92mt in 2000 to 119mt in 2015 (29%);

- (e) Transport costs from Short/Medium Term contracts: These contracts are used to plug the shortfall in coal supply vs. demand. Transport costs associated with these contracts are high, particularly in light of the unpredictable fleet performance which can mean coal has to be transported or diverted a number of times to different power stations;
- (f) No new investment: No significant investments in the industry have been made in the recent past and hence no new opportunities. The last large investment projects are the [REDACTED] mine ([REDACTED]), and the [REDACTED] mine ([REDACTED]). There is typically a 10 year lead time to open up a brand new mine, confirming that it is not an option for Eskom.

4.3.12 Eskom did purportedly consider other ways they could impact/change the market. However, now they do not have available funds to invest in Cost Plus mines, which are cheapest option for them, they need to meet their supply needs elsewhere. <sup>89</sup>

4.3.13 Coal costs (R/ton) have increased at a rate of 20% p.a. since FY08. Given these underlying inflationary pressures, Eskom's coal sourcing team predict the coal prices will increase for the foreseeable future; until the supply and demand curve is resolved, coal costs will continue to increase at above inflation prices. The team also talk of a coal shortage – coal required that has yet to be contracted, that must be rectified.

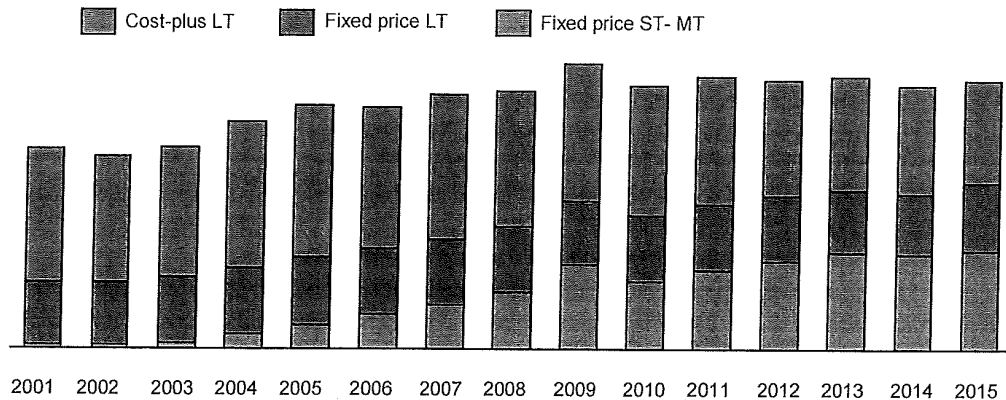
4.3.14 The commercial officers in coal sourcing have explained to the finance team that as long as Eskom is short on coal, they have little negotiation leverage amongst the bigger players. [REDACTED], for example, has deep pockets and hence, apparently, little incentive to invest in the development of a mine in South Africa, taking the risks when they could just wait until the prices increase. If Eskom do contract with the bigger players, the hurdle rate for coming into investment is purportedly to provide the mines with a 16% real return, a rate that Eskom cannot support.

4.3.15 The approach for Eskom is therefore to go towards emerging mines who want to work with Eskom and use the contract to get financing. Financing will only be granted when there is a viable mine, a contract with Eskom and a feasibility study conducted. In addition, these mines tend to have a lack of infrastructure, and knowledge.

4.3.16 We have no compelling reason to doubt this narrative. However this is a medium term view: the trend is a 15 year one. The story of the last two years does not necessarily hold true:

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<sup>89</sup> [REDACTED] Primary Energy Accountant, 25 May 2015



4.3.17 In the financial years FY13, FY14 and FY15 the mix is essentially unchanged:<sup>90</sup>

Values in MT	FY13	FY14	FY15
Cost-plus	52	50	48
Fixed Price LT	29	28	31
ST/MT	45	44	46
Total	126	122	124

4.3.18 Therefore, should the price per ton truly be escalating greater than Eskom's own predictions when they prepared the MYPD3 application, as follows (i.e. given the budgeted cost increase is also predicated on burn rate declining, so volumes required increase and form part of a 10% increase overall):<sup>91</sup>

	FY13	FY14	FY15
R/T average Eskom	253.28	285.01	313.12
% increase	N/a	12.5%	9.9%

*Values are purchases by Eskom excluding Medupi and Kusile divided by delivered tons*

#### 4.4 What has happened at the macro level

4.4.1 Coal usage is one of the primary costs at Eskom, with reported spend steadily increasing over the past three to four years. Coal costs were therefore one of the first areas to be considered under the revised budget post MYPD 3 decision. Despite this, financial data does not evidence any significant reduction in costs.

4.4.2 Coal usage expenditure was within budget for the FY2014 and FY2015, excluding the Medupi Coal Penalty.<sup>92</sup>

4.4.3 Figures reported in FY2014 and FY2015 indicate that, excluding coal penalties incurred on the Medupi and Kusile contracts, coal purchases expenditure was however above budget by 3% and less than budget by just 1% respectively<sup>93</sup>.

<sup>90</sup> Coal presentation "20150331\_Coal Supply War Room Presentation\_IMC v7\_With notes"

<sup>91</sup> Replan 2013, 2014 and 2015

<sup>92</sup> Operational review 3/2014 and 3/2015

4.4.4 This is despite the average rate of coal purchases by Eskom having increased at a consistent rate of 11% in FY2014 and FY2015<sup>94</sup>. The increase has been 9% and 17% for cost-plus and LT-fixed in FY2014 and FY2015 respectively, and 13% and 4% (average for two years 9%) for MT/ST contracts.

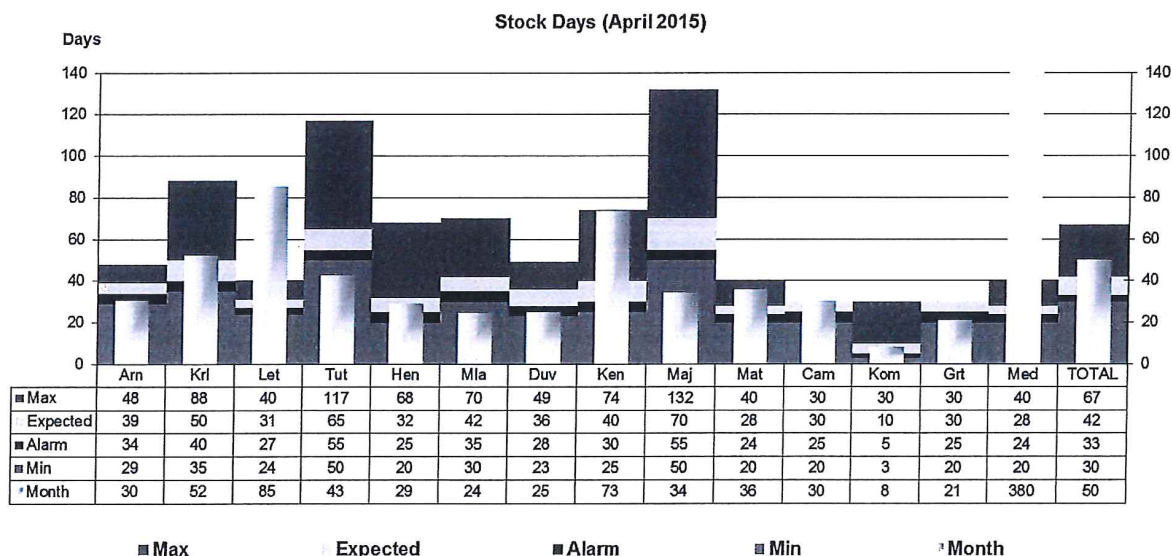
4.4.5 Interrogation of the underlying data suggests that despite rises in rates, coal purchase costs managed to stay close to budget in FY2014 and FY2015 as a result of Eskom having both purchased and burnt less coal than planned.

4.4.6 Whilst this could be justified by increased outages or power station failures, an alternative explanation is that Eskom depleted their stock piles in order to meet budget as opposed to negotiating better rates with suppliers.

(a) *Stock levels*

(b) Amalgamating the stock levels across all power stations, excluding Medupi and Kusile, shows that at the start of FY2013, stock levels were 3.4m tons behind budget. During the year they increased by 22% but remained 3% behind budget at year end<sup>95</sup>. FY2014 and FY2015 show annual decreases in stock levels of 2% and 1%, resulting in them being behind budget by 18% in FY2014 and 1% (as a result of lower budget expectations) at yearend FY2015.

(c) The following graph presented in the Group Finance monthly review in April 2015 represents the stock levels at year end per power station<sup>96</sup>:



(d) This evidences that six of the power stations are in fact below the expected stock levels at year end. Whilst the depletion of stock piles allowed less coal to be purchased, this is not a sustainable solution, nor does it represent meaningful savings

<sup>93</sup> Dentons Work Paper – Coal Costs – Actual vs Budget: “Coal Purchases”

<sup>94</sup> Dentons Work Paper – Coal Costs – Actual vs Budget: “Coal Purchases”

<sup>95</sup> Dentons Work Paper – Coal Costs – Actual vs Budget: “Summary”

<sup>96</sup> GRC Presentation – April 2015

given the continued increase in rates during the period and gradual transfer from Cost Plus and Fixed contracts to Short/Medium Term contracts.

- (e) Whilst on paper this appears to be an effective strategy for keeping costs within budget, it is not a sustainable solution given the finite coal resources available at Eskom. It is delaying the issue of increasing costs, allowing the negotiations on rate to become secondary or not even considered necessary for the division.
- (f) *Costs if Eskom had met budgeted volumes*
- (g) Analysis of coal purchased by power station, excluding Medupi and Kusile, indicates that in total Eskom bought 1% less coal (in tons) than budgeted for in FY2013 and 3% less than budgeted for in FY2014. Coal volumes purchased in FY2015 was in fact 1% above budget due to an increase in Short/Medium Term purchases discussed later<sup>97</sup>.
- (h) These purchases below or close to budget led to savings against budget, i.e. decreased spend of R3.514bn across the three year period, but most of this in 2013FY.
- (i) Had the budgeted tonnage been purchased, with actual rates negotiated, coal costs would have increased by R2.5bn in FY2014 and would have been R1.2bn less in FY2015. This therefore amounts to an R1.3bn saving across 2014 and 2015<sup>98</sup>.
- (j) In addition, the tonnage burnt was less than planned in FY2014 and FY2015 (3.6m tons and 1.5m tons respectively). Had the budgeted tonnage been burnt at actual rates, this would have resulted in a further R1bn in FY2014 and R0.5bn in FY2015 of actual cost to the business<sup>99</sup>.
- (k) *Contract Type*
- (l) Notwithstanding performance against budget, actual volumes purchased declined year on year: by 4.3m tons in FY2014 and a further 2.8m tons in FY2015 (excluding Medupi and Kusile)
- (m) Coal costs are exacerbated by the transfer from Cost Plus and Fixed Price contracts to more expensive Short/Medium Term contracts.
- (n) Excluding Medupi and Kusile, the reduction in volumes purchased against prior year for FY2014 is 76% attributed to a reduction in Cost Plus/Fixed Price contracts and a 24% reduction in Short/Medium Term. Similarly in FY2015, 83% of the decrease in coal purchased against prior year can be attributed to a reduction in Cost Plus/Fixed Term contracts and a 17% in reduction in Short/Medium Price<sup>100</sup>.
- (o) It appears coal sourcing is cutting back on coal procured from cost-plus and LT-fixed more aggressively than from MT/ST contracts.
- (p) The shift is echoed further in the comparison to budget which shows annual shortfalls of actuals vs budget of 2%, 5% and 2% in Cost Plus/Fixed Price contracts vs annual

<sup>97</sup> Dentons Work Paper – Coal Costs – Actual vs Budget: “Coal Purchases”

<sup>98</sup> Dentons Work Paper – Coal Costs – Actual vs Budget: “Coal Purchases”

<sup>99</sup> Dentons Work Paper – Coal Costs – Actual vs Budget: “Summary”

<sup>100</sup> Dentons Work Paper – Coal Costs – Actual vs Budget: “Summary”

surpluses of 1%, 2% and 6% in Short/Medium Term contracts for FY2013, FY2014 and FY2015 respectively<sup>101</sup>.

- (q) This has had an impact on stock levels as the surplus in Short/Medium Term procurement was not sufficient to replace those shortfalls from Cost Plus and Fixed Price contracts.
- (r) Analysis of the cost implications of this move away from Cost Plus/Fixed Price contracts becomes apparent in FY2014 when the percentage increase in costs of Cost Plus/Fixed Price contracts was 5%, versus an increase in 12% for Short/Medium Term contracts.
- (s) Furthermore, where increases in Short/Medium Term purchases were identified, these were observed to be at the higher priced power stations. For example, of the 13 power stations (excluding Medupi and Kusile), Tutuka, Hendrina and Grootvlei were observed to increase tonnage vs. that budgeted by a material amount, i.e. greater than 1m tons. Analysis of actual rate vs. tonnage purchased at these power stations identifies a weighted average rate of ██████/Ton. This is in comparison to a weighted average of ██████/Ton identified for the nine power stations which experienced either increased tonnage less than 1m or less than budgeted. Duvha power station has been excluded from this analysis as it experienced a decrease in Short/Medium Term tonnage during the year.
- (t) In addition, road and transportation costs associated with the purchases would also have increased, further placing the achievement of budget at risk.
- (u) *Macro level concluding comments*
- (v) Eskom has been forced to buy and burn less coal than planned in order to meet budget and accommodate the general rise in contracted rates. The plan itself forced a reduction in volumes purchased year on year as well as coal burned.
- (w) As rates have increased by an average of 11% during 2014 and 2015, it is a reduction in stock levels that is keeping coal usage costs in check.
- (x) The MT/ST contracts are more expensive than LT and Cost-plus. The reductions in volumes purchased come more from LT and cost plus mines.
- (y) It has been argued by Coal Sourcing that the switch from Cost Plus and Fixed Price to Short/Medium Term is due to failure to deliver by the former or resulting from the restrictions placed on capex investments.
- (z) However, it has not been possible to determine at the time of writing whether this is a genuine commercial reason in the short term, i.e. that Eskom's hand has been forced, or whether the coal sourcing team has had a strategy to continue using favoured suppliers in the ST/MT market at the expense of its cheaper alternatives. Further investigations would seek to provide assurance over this.
- (aa) Secondly, it is not clear whether the 9% annual increase in MT/ST contract rates is appropriate, flows from the contracts, or even whether the base rate is a "best price". This is something further investigations would seek to clarify.

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<sup>101</sup> Dentons Work Paper – Coal Costs – Actual vs Budget: "Coal Purchases"

- (bb) As far as we have learnt, no independent team has challenged Coal Sourcing on this during the past two years.

#### 4.4.7 Assessing Coal Spend at the Contract Level

4.4.8 In order to interrogate the substance behind the coal costs, downloads from SAP were provided from the Primary Energy accounts team. These provided evidence of the following:

- (a) A schedule of coal and transport transactions by supplier;
- (b) A schedule of internal orders in which the coal and transport payments are entered into by cost element and assigned to the relevant power station; and
- (c) A schedule of purchase orders associated with the coal and transport payments by vendor and allocating the cost to a coal contract.

4.4.9 The first schedule provides a map of spend on coal by supplier. However, there is no capability in SAP to reconcile these payments to the specific coal contract. Various manual procedures can be performed which can assign the relevant contract in approximately 97% of the transactions. This involves a reconciliation of invoice to payments and may be subject to additional error as they are dependent on an optional field being completed by the individual responsible for data input.

4.4.10 The second schedule provides the breakdown of each payment as per the associated invoice. Whilst the Coal Penalty Adjustment ("CPA") amount is allocated within this schedule to the supplier, the remaining costs appear with references of purchase order and transaction number which do not reconcile or have any corresponding fields to the total invoice or payment amounts.

4.4.11 The contract number and supplier identified from the payment schedule, in addition to the purchase order and transaction numbers from the Internal Order schedule can be reconciled to the third schedule containing a corresponding breakdown of non-CPA related costs. Unfortunately, as shown by the example below, without knowledge of the amounts in advance, it is not possible to reconcile them to the payments. It is also not possible to confirm what the payment relates to, other than what is included in the optional narrative text field.

4.4.12 There is therefore no comprehensive manner in which the total costs per supplier can be linked to a contract. Furthermore, there is no discernible manner in which the system can be used to understand the elements that comprise these costs. Whilst each invoice and associated payment can be traced through and allocated based on a manual reconciliation of, for example, total amounts and/or dates, it does not appear to be possible to do this in the SAP system.

4.4.13 This assessment has been confirmed by members of Eskom's accounting team<sup>102</sup>.

4.4.14 A payment selected at random for the supplier [REDACTED] provides a practical example of this. A completed supplier payment control form with the following breakdown in costs<sup>103</sup>:

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<sup>102</sup> Anonymous sources

<sup>103</sup> Dentons Work Paper – Scan of [REDACTED] – Payment Control Form and Supporting Evidence

Invoice	Amount (Excl. VAT)	VAT Amount	Total Payment (Incl. VAT)
██████ (Coal Basic)	██████	██████	██████
Transport	██████	██████	██████
Total Invoice	██████	██████	██████
CPA	██████	██████	██████
Total Payment	██████	██████	██████

4.4.15 The following steps must then be taken to identify, trace and allocate this payment in the underlying financial data:

- (a) ██████ has the Vendor No. ██████. Searching on this in the Vendor field of the transaction schedule in addition to the total amount of the invoice in the Amount field will identify the invoice entry. This in turn will provide details of:
  - (i) The unique invoice number shown in the "Document No" field;
  - (ii) The associated payment number shown in the "Clearing No" field; and
  - (iii) The associated contract number if entered correctly into the "Assignment No" field;
- (b) In this example the invoice number appears to be ██████ with a corresponding payment number of ██████. The contract number appears to be entered correctly as ██████<sup>104</sup>.
- (c) Searching on the payment number in the transaction schedule then identifies the corresponding payment in which the invoice was included. In this example, this corresponds to a payment posted on 30 April 2015 of value ██████ which we can assume is also therefore related to contract ██████.<sup>105</sup>
- (d) The amount of the invoice excluding VAT can then manually be calculated by removing 14%.
- (e) Searching for the invoice number on the "RefDocNo" field in the Internal Orders schedule can then be used to determine the partial CPA element of this payment, i.e. that relating to this invoice, ██████<sup>106</sup>. It is noted that this step appears to be successful for 62% of payments identified. There is either no reference to invoice number or CPA amount for the remaining 38%.
- (f) Without knowing the individual amounts of the coal basic and transport costs, it is not possible to allocate the remaining payment further. In this example, we can filter the purchase order schedule by contract number which provides us with 22 entries for

<sup>104</sup> Dentons Work Paper - Coal Costs - ██████ Example: Coal Payments 2015

<sup>105</sup> Dentons Work Paper - Coal Costs - ██████ Example: Coal Payments 2015

<sup>106</sup> Dentons Work Paper - Coal Costs - ██████ Example: Internal Orders 2015

2015. It is only by knowing the amounts that we can identify which relate to this payment<sup>107</sup>.

- (g) In this example, it is apparent which entry is transport and which is coal basic, but this is not the case for every supplier.
- (h) The same approach can be taken in the Internal Orders schedule to search on the amount. However, the number of entries in this schedule increases the risk of their being duplicate amounts for different and unrelated contracts. Instead, it is possible to use a combination of the amount, "Purch.Doc" (i.e. the Purchase Order Number) and the "Item" number to find the corresponding entry in the Internal Orders<sup>108</sup>.
- (i) In doing this, one can identify the power station to which these entries have been allocated. In this example it would appear that the coal basic costs have been allocated to "Tutuka Coal Purchases". The transport element appears to have been initially allocated to "Kendal Coal Purchases" but possibly reversed two days later and allocated to "Tutuka Coal Purchases". This is a reflection of cost centre as opposed to actual activity given that in this example the coal was delivered to Majuba.

4.4.16 This provides a practical example of how it is not possible to allocate costs in a comprehensive manner for coal contracts on SAP. Whilst contract allocations can be determined in the majority of payment examples, no further supportable breakdown can be identified without a significant amount of manual input and prior knowledge of amounts.

4.4.17 Given there is no way to prepare a holistic view of the independent elements of coal costs, it is not surprising that this is an area that has received little to no attention in Eskom's history. It begs the question of whether the cost of basic coal can be controlled if it can't even be understood.

#### *Concluding comments – Assessing Coal Spend*

4.4.18 The level of complexity we faced in order to obtain details of 97% of the coal usage spend by contract by month emphasises that no management or peer financial review could have been performed by Eskom to date over this critical cost centre. Without the ability to readily assess spend by contract, and with no possibility to analyse contracts by component part (e.g. base value, transport and CPA) from the accounting system it is not possible to assess whether for example:

- (a) Spend is consistent with the contract;
- (b) Spend is consistent with prevailing Delegations of Authority;
- (c) Source supply and truck routes make sense commercially;
- (d) Expenditure is exhibiting red flags; and/or
- (e) Cost escalations are reasonable and commercially justifiable.

4.4.19 Any reasonable audit of contract management in coal would require this source of information to be able to scientifically select specific invoices and transactions to test the accuracy and correctness of payments.

<sup>107</sup> Dentons Work Paper - Coal Costs - [REDACTED] Example: Purchase Orders 2015

<sup>108</sup> Dentons Work Paper - Coal Costs - [REDACTED] Example: Internal Orders 2015

4.4.20 It would appear, therefore, that in addition to there not being any independent challenge to the contracts negotiated by Eskom in this critical cost centre (see Chapter 5) the business has not sought to conduct a meaningful assessment of the transactions that flow from those contracts. Taken together, Eskom has not taken the opportunity in the past two years to assess a fundamental assumption underpinning their cost base – that the annual increase in costs for coal usage represent best price. Given the financial pressure senior management knew Eskom to be under, this may be considered a dereliction of duty.

4.4.21 Short-Termism in Coal Spend

4.4.22 It is not appropriate to assume coal contracts are being entered into at a best price, given the findings surrounding the procurement conduct in this space, together with the sense it is a “black box”, and the weaknesses in the financial accounting system to readily appraise contract management. The need to get comfort and control over the rates negotiated for coal contracts is paramount given the long term implications of neglecting the cost-plus mines.

4.4.23 A senior finance team officer told us [REDACTED] primary concern in relation to coal at Eskom was over the current impact of the short term trade-off decision taken in YE 2013/14 not to invest in cost plus mines.

4.4.24 In addition to reducing stock levels whilst prices rise, coal sourcing is staying within budget by not contemplating further investment in their Cost-Plus mines, despite contractual obligations. Eskom has not invested over the past two years.<sup>109</sup>

4.4.25 Before the MYPD3 application, coal sourcing wanted R38bn for capex expansion. In the submission this was reduced to R24bn (following efficiencies). Eskom subsequently hit the funding constraints and as a result, Primary Energy capex was removed bar R3bn approved in the Response Plan. Latest approvals indicated Primary Energy has been allocated R5bn to invest. However, there has been a Cabinet letter issued, instructing that Eskom will not invest in any new future coal mines. There is uncertainty as to how Eskom should interpret this and whether this applies to new mines only or also includes the six current Cost-Plus mines Eskom are in business with.<sup>110</sup>

*General expenditure – instances of wastage*

4.4.26 More broadly than coal usage spend, a consensus view emerged from the various finance employees interviewed that in relation to large vendor spend, that there was a disconnect at Eskom between commercial decisions and the company's procurement services. Whilst many discussions take place in the commercial space between the Finance Partner and Technical representatives, Finance had no inability to substantially influence anything.

4.4.27 Furthermore, in terms of budget, the finance team did not do a line by line “general ledger” review of their commercial partners cost centre. GM's would largely need to hit budget with +5% room to manoeuvre. There was no analysis to see whether costs and budgets on a line by line had been met.

4.4.28 Without this level of review, there is no “first line of defence” against the performance of commercial operators either in terms of the substance of performing to budget, or in managing contracts effectively.

<sup>109</sup> [REDACTED] Primary Energy Accounting

<sup>110</sup> [REDACTED] Primary Energy Accounting, 25 May 2015

- 4.4.29 Various interviewees expressed a belief that, in the absence of such a review, the tariff was not entirely to blame for Eskom's financial position. The views expressed were subjective, but one employee attributed Eskom's problems as 40% on cost and 60% on pricing of electricity. Another wouldn't place a value on it but was sure the current "gap" in getting a cost-reflective tariff was a combination of the tariff decision and inefficiencies.
- 4.4.30 In Chapter 5 of this report, we highlight serious concerns in relation to the procurement processes at Eskom.
- 4.4.31 In Chapter 6 we describe examples of where contract management appears to be weak and costly to Eskom.
- 4.4.32 Despite the annual spending power of R140bn, Eskom does not appear to have shown an ability to leverage this for cost savings. Furthermore, several officers have indicated that senior executives have followed an agenda which ostensibly serves to favour suppliers at the expense of Eskom. Such behaviour would be the antithesis to what Eskom needs: optimal procurement decisions which drive efficiencies and cost savings.
- 4.4.33 These example are not necessarily limited to the past two years<sup>111</sup>:
- (a) A forensic report concludes that a supplier was selected for work on Medupi when an alternative supplier had clearly won the tender. Apparently the selected supplier would accept they had never done anything like this project before. In parallel with a three year delay which we understand a █████ report indicated another supplier was responsible for (see below), this procurement decision also caused a three year delay – the inference drawn is that the supplier was a friend of senior officers and so no contract remedies were sought. <sup>112</sup>
  - (b) An investigation into reasons for a three year delay in Medupi purportedly indicates that a supplier had major quality issues and was failing to perform, but no action was taken against them. The inference drawn is that senior management were protecting the interests of the suppliers they had chosen rather than looking after Eskom's interests. <sup>113</sup>
  - (c) A █████ company contracted with Eskom in 2004. █% of its revenue comes from Eskom. █████ bought the entity, and more recently sought to divest the business. An EXCO member reportedly offered R1 to buy the business when █████ put them up for sale to be part of Eskom's group. In the end they asked for €5m. The EXCO member threatened to cancel the contract, but he states he wasn't supported by the board. They continue to provide services to Eskom.
  - (d) Another supplier, a niche provider, obtained █% of their revenue from Eskom. An EXCO member wanted to give them a long term contract, and then leverage this buying power by taking 30% equity together with a clause insulating Eskom from losses. Reportedly, the EXCO member at the time said no. The niche provider was still keen, but as he returned to the Board, someone had out manoeuvred him – a company he believes are linked to an Executive had taken the 30% equity and the relationship with Eskom continued. The inference drawn is that someone in senior management saw an opportunity to enrich themselves, denying Eskom the upside.

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<sup>111</sup> Concerns raised by Exco member

<sup>112</sup> Medupi CI Request Final Audit Report update 11 June (1)

<sup>113</sup> Confidential Eskom Medupi Final Report\_17April 2013

- (e) A similar story allegedly happened with a strategies maintenance contract. This company had █████% reliance on Eskom. A similar deal (40% equity) was presented to the Board, but again the board were reportedly not interested.

4.4.34 In a separate allegation, officers of Eskom have witnessed examples of when suppliers have had bilateral discussions with Board members about securing contracts, outside of any formal procurement process. The inference drawn is that pressure is applied to general managers to accept the terms and choice of suppliers.<sup>114</sup>

#### 4.5 BPP – a fresh approach to the cost lever

4.5.1 Following the MYPD3 decision, in April 2013 it was reported to the Board that even with R30bn of savings already identified, there was an urgent requirement to find additional cost savings<sup>115</sup>. The initiative was called the Business Productivity Programme (“BPP”) and confirmed to be up and running, by the end of May 2013<sup>116</sup>. The programme was led by members of EXCO and scheduled as a standing agenda item at ICAS and IFC<sup>117</sup>.

4.5.2 As described in a presentation submitted to the IFC in August 2013, the goal of the BPP was to: “Deliver sustained productivity improvements that: Re-establish a high-functioning Eskom organisation; Close the funding gap for the MYPD3 period as far as possible, without compromising Eskom’s sustainability; Establish a sustainable, long term cost position beyond the next 5 years”<sup>118</sup>.

4.5.3 There were seven streams where value would purportedly be saved under the BPP<sup>119</sup>:

- (a) Reducing the cost of PE: optimising coal contracts and burn mix;
- (b) Improve efficiency of capital programme: scrub capex portfolio to reduce number and scope of portfolio; and, improve execution efficiency to reduce cost and time overruns;
- (c) Reducing direct and indirect employee benefit costs: Benchmark and streamline business support functions and processes; and, develop, design and implement other voluntary separation packages for staff – taking into consideration risk and operational impact;
- (d) Reduce external spend through efficient procurement practices, price reduction: optimising sourcing strategy by volume, specification and price levers; introduce demand management on indirect costs; reduce the TCO of key item spend; and continuous improvement, i.e. external spend with contractors (with Primary Energy targeted);
- (e) Reduce revenue losses through improved debt management and find additional revenue sources and further improve debt recovery;
- (f) Optimise maintenance costs and processes: implement further lean maintenance approach including policies and KPIs; and, improve supplier collaboration; and,

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<sup>114</sup> An Exco member

<sup>115</sup> Board meeting minutes 3 to 5 April 2013

<sup>116</sup> CE Report to the Board 30 May 2013

<sup>117</sup> ICAS meeting minutes 22 August 2013

<sup>118</sup> BPP IFC Feedback Presentation 13 August 2013

<sup>119</sup> Described in interview and supplemented from BPP updates presented to IFC during the period

- (g) Optimising the balance sheet and alternative funding options: optimise financing costs by managing investment grade and key metrics; and, optimise balance sheet and review asset base, e.g. property portfolio.

4.5.4 Implementation of the BPP was rolled out in three phases<sup>120</sup>:

- (a) Design phase: Finalise and approve value packages at ICAS and confirm financial impact;
- (b) Transition phase: Handover of value packages to the business and mobilise the implementation of cost saving initiatives; and
- (c) Continued Business Productivity: Monitor implementation progress, track realisation of financial benefits and continuously monitor the business for cost saving opportunities.

4.5.5 Targets

- (a) The initial BPP focus was to achieve R8bn in savings. During FY2014 this was increased to between R6bn, primarily due to a R47bn negative impact on the shortfall on account of a reduction in sales projection and a reduction of the RCA by R14bn following re-phasing<sup>121</sup>. The imperative of achieving these targets was widely recognised by both EXCO and the Board, with the BPP being viewed as the core treatment plan to ensure financial stability at Eskom<sup>122</sup>.

- (b) The following table outlines the approximate targets by year<sup>123</sup>:

YR1	YR2	YR3	YR4	YR5	TOTAL
R2.7bn	R9.8bn	R13bn	R16.5bn	R18bn	R60bn
Year 1 was first year of MYPD3	Income statement = R4.6bn; Capex = R2.3bn; working capital R2bn; etc.				

4.5.6 Reported results of the BPP

- (a) In FY14, BPP had a shortfall of R2.3bn in reaching their R2.7bn target<sup>124</sup>.
- (b) In FY15, BPP reportedly realised R9.3bn in savings, resulting in a R0.5bn shortfall<sup>125</sup>. This shortfall is the net remainder of an actual shortfall of R5.5bn which was offset by additional savings made through stretched and new value packages and an underinvestment of R1.5bn in other areas of the business.
- (c) The projections for FY16 are already highlighting a shortfall of R3.4bn against the cash savings target. However, various recommendations and changes to the methodology and focus areas are purportedly being considered to mitigate this.

<sup>120</sup> BPP Presentation – February 2015

<sup>121</sup> BPP Presentation – February 2015

<sup>122</sup> Various Board and Exco meeting minutes, for example Exco meeting minutes 6 November 2013

<sup>123</sup> BPP Presentation – February 2015

<sup>124</sup> BPP Presentation February 2015

<sup>125</sup> BPP Presentation May 2015

#### 4.5.7 Issues identified in the implementation of the BPP and explanation of the shortfalls:

- (a) *Responsiveness*
- (b) Despite the financial imperatives of realising cost savings noted in early FY14, it was not until April 2014 that the Design Phase was complete, taking over a year from its inception to design and agree the targets<sup>126</sup>. It is not clear why the design phase was so time consuming.
- (c) It is possible that decisions were delayed at ICAS. In October 2013, this matter was raised at ICAS, with the Chairman indicating a need for the committee to meet on a more frequent basis and that more time should be devoted to BPP taking into account that they were the gateway for any decisions<sup>127</sup>. The Committee therefore agreed to find time slots every two weeks and schedule meetings going forward to be aligned with BPP. From the evidence provided during the course of the investigation it has not been possible to confirm whether this resolution was implemented.
- (d) It may also be due to a lack of accountability for the initiative in the early stages. It was not until September 2013 that a team of experts was constituted to progress the initiative. These were described as the "best brains" in the business with a mandate to approach the challenge afresh<sup>128</sup>.
- (e) In addition, external consultants were used during this time to analyse the business which may have caused delays, and increase costs with concern raised by the IFC in April 2014 that R32m had already been spent on consultants in support of BPP<sup>129</sup>. Whilst the consultants were allegedly working at risk of 50% (30% for McKinsey) with the balance dependant on achieving targets, when one of the goals had been to cut external expenditure, it is surprising that it continued to be utilised here.
- (f) At FY14 year end when the design phase was complete, Eskom's income statement and ability to maintain a positive cash flow were noted at the Board to be dependent on the savings from BPP in addition to RCA revenues<sup>130</sup>. Without these elements, it was reported that cash flow would be negative in three months and funds for capex would run out in five months. Whilst the financial imperative was recognised here again, the BPP had still not been implemented within the business, perhaps indicating a concerning lack of response or consideration of the severity of the issue<sup>131</sup>.
- (g) Despite this, it then took a further three months to handover the implementation of these targets to the relevant business divisions hence delaying the response even further until July 2014<sup>132</sup>.
- (h) It is noted that the initial plan sought to achieve meaningful savings from FY16 onwards. The BPP was designed to focus in its first two years on the highest priority value packages<sup>133</sup>. Priority ranking was determined by:

<sup>126</sup> BPP Presentation February 2015

<sup>127</sup> ICAS meeting minutes 24 October 2013

<sup>128</sup> Interview with senior finance representative

<sup>129</sup> IFC meeting minutes 1 April 2014

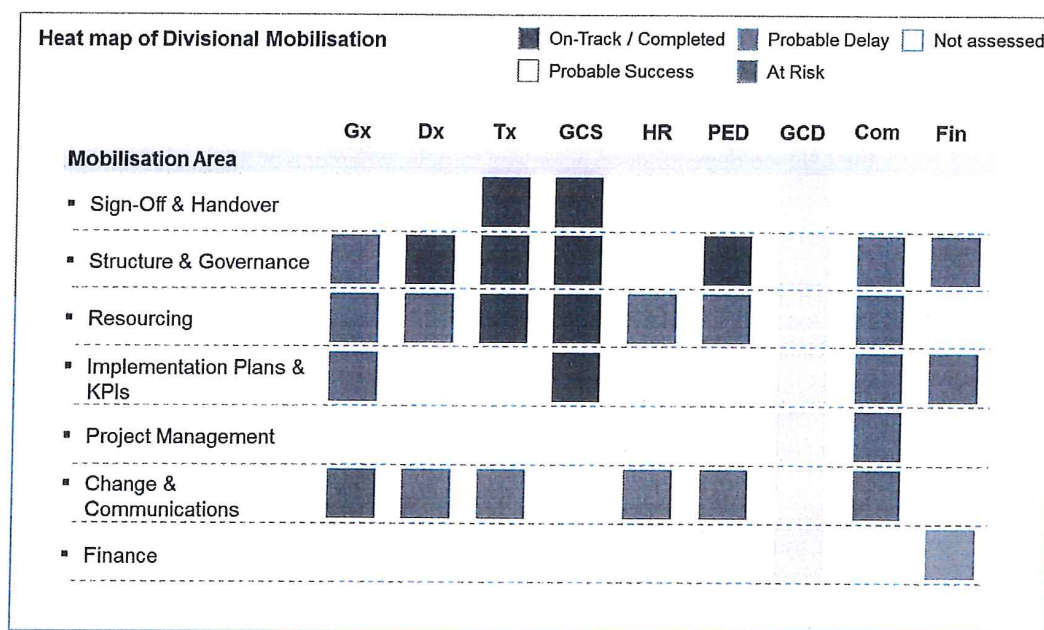
<sup>130</sup> Board meeting minutes 17 and 27 February 2014

<sup>131</sup> BPP Presentation February 2015

<sup>132</sup> BPP Presentation February 2015

<sup>133</sup> BPP Presentation June 2014

- (i) Net present value: a quantitative metric based on value per year inputs; and,
  - (ii) Potential challenge to input: a qualitative metric ranked from 1 to 5 in increasing level of difficulty.
- (i) The highest priority areas were considered to be those scoring the highest in value and most difficult to implement (priority 1) and those scoring the highest in value and easiest to implement (priority 2). This approach was re-issued as a recommendation in helping to achieve FY16 indicating that perhaps this had not been done as intended in the prior years<sup>134</sup>.
- (j) *Business buy-in*
- (k) This phase involved the identification of GMs to act as “sponsors” from the business to drive the cost savings. A central BPP team would oversee the sponsors with a mandate to make sure the initiative was implemented, reporting directly into EXCO and IFC<sup>135</sup>.
- (l) A progress update in May 2014 already began to flag divisions of concern, mostly those that had been allocated higher volumes of savings<sup>136</sup>. The following heat map taken from the update provides an overview of these issues by division:



- (m) It is noted that Generation, Group HR and Group Commercial are three of the areas with highest implementation responsibilities. It could be argued that these should therefore have been the priority and focus of this phase of the BPP, with issues resolved in a timely manner so as not to impact future savings.
- (n) During FY15 there appear to have been various attempts to encourage participation and involvement from the business to implement BPP.

<sup>134</sup> BPP Presentation May 2015

<sup>135</sup> Interview with senior finance representative

<sup>136</sup> BPP Presentation May 2014

- (o) In May 2014, EXCO were informed that no short term bonus would be paid to F Bands due to the objective of R6bn in operating costs and capital savings had not been achieved<sup>137</sup>. The Chief Executive stated that EXCO as a collective had to take the financial constraints that the company faced seriously and that the forfeiture of the bonus would send a signal across the organisation that BPP is not just an issue for the finance division but that it was an organisational wide imperative.
- (p) Furthermore, a review of the programme status in June 2014 concluded that 80% of the initiatives scheduled to deliver savings in FY2015 were not on track<sup>138</sup>. This was reported to IFC, noting that Eskom leadership support was paramount to achieving delivery of the BPP savings.
- (q) In Q2 FY15, a review was scheduled by Internal Audit in relation to the "Financial Planning, Budgeting and Control Process. The review was a management self-assessment, designed to "afford management an opportunity to identify areas of improvement relating to the adequacy and effectiveness of internal controls for Financial Planning, Budgeting and Control Process, formulate design process improvement with firm timelines and self-report thereon"<sup>139</sup>.
- (r) The role of the audit team was to review the completeness and validity of identified improvements opportunities including the robustness of the identified process improvements.
- (s) This review identified that adequate communication is not done throughout the business to ensure the correct understanding of the ad-hoc budget and BPP cuts. The BPP had been in operation for several months by the time this review was conducted and hence this finding is cause for concern. If management were not aware if or how they were supposed to be achieving cost savings by the end of Q2 FY15, it is not surprising that the goals were not met by the financial year end.
- (t) Furthermore, the generic management response provided in the Catalyst report where this finding was noted stated that "[t]he majority of the improvements will be addressed in the budget cycle 2016 to 2020", indicating that the severity of this issue and potential impact on the business was not recognised or appreciated at this stage.
- (u) Interestingly, the shortfall in FY15 was reported as R3.92bn in February 2015, indicating that 36% of the savings had been realised in the last two months of the financial year<sup>140</sup>. This apparent concerted effort towards the end of the financial year may be explained given that KPIs were in part based on achievement of the plan.
- (v) *Aggressive targets*
- (w) The targets were described by the Chief Executive as being a stretch<sup>141</sup>. In addition, some elements were noted as being outside of Eskom's control which may risk delivery. Even though these concerns were noted, reliance on the delivery of R60bn in savings continued, with the Board confirming that the likelihood of this was high in April 2014.

<sup>137</sup> Exco meeting minutes 26 May 2014

<sup>138</sup> BPP Presentation June 2014

<sup>139</sup> Integrated Assurance Catalyst Report – Q2 FY15

<sup>140</sup> BPP Presentation February 2015

<sup>141</sup> Board meeting minutes 2 to 4 April 2014

- (x) Already at this stage, the FY14 target had not been achieved by a shortfall of R2.3bn<sup>142</sup>. This is unsurprising given the project had not been fully agreed or implemented by the business.
- (y) Despite the attempted incentivisation of the business and early warnings of delays and issues during FY15, the target for that year was also not achieved with a shortfall of R0.5bn<sup>143</sup>, having been reduced from a shortfall of R3.92bn reported in February 2015<sup>144</sup>.
- (z) *Misrepresentation of the quality of short term savings*
- (aa) The FY15 shortfall is attributed to OCGT usage, fuel oil, municipal debt, road transport rate, manpower, procurement and various miscellaneous areas such as Majuba rail, SPU debt, Food & Beverage recoveries and Communications<sup>145</sup>.
- (bb) The shortfall was R5.5bn which was offset by R5bn by "New Value packages / Stretch performance". Of this, a number of items would appear to be misrepresentative or only seek to reflect short term gain:
  - (i) R737m is due to the re-phasing of expenditure to later periods, thereby delaying expenditure into later periods with more stringent saving targets;
  - (ii) R768m was in relation to "Various over performances" for which it is difficult to appraise whether they should be legitimately recorded as savings;
  - (iii) R309m was attributed to a reduced utilisation of contract spend on "Boiler Serve". There is no further detail provided but the title might suggest maintenance in which any savings may be detrimental in future; and,
  - (iv) R1.459bn was in relation to underinvestment in voluntary separation packages which would have attributed to the fact that the targets in manpower reduction were not met.
- (cc) Our review of the BPP reporting materials gave the impression that hard, and therefore meaningful, cost savings are not being achieved, but that the divisions find proxy savings to plug the failure against targets. In other words, the division finds in isolation an example of where they didn't spend as much as anticipated and it becomes a "new value package" or a "stretch performance" in a soft area, but in aggregate and in substance savings are not being ingrained.
- (dd) With respect to the areas of shortfall, a number of requests for support were issued in May 2015 to reduce the risks of FY16 and beyond savings<sup>146</sup>. This included the requirement of external support for OCGT and municipal debt, areas which had contributed to R2bn of the leakage in FY15. This seems counterintuitive given that a key area of success in the BPP to date had been reduction in external spend and a strong focus on more effective utilisation of Eskom resources.

<sup>142</sup> BPP Presentation February 2014

<sup>143</sup> BPP Presentation May 2015

<sup>144</sup> BPP Presentation February 2015

<sup>145</sup> BPP Presentation May 2015

<sup>146</sup> BPP Presentation May 2015

- (ee) One employee stated that whilst Eskom got close to their target in the last year, “we don’t know whether it was just through cost deferrals rather than savings”.
- (ff) Another senior officer stated: “the response from the business has also been underwhelming – still too much push back and not “coming to the party”... It is fair to say that BPP was too idle and is too little. It is more opportunistic and efficiencies rather than having a big impact. For example, despite this “drive” someone still goes ahead and spends R160m on hire purchase of cars”
- (gg) The general perception appears to be that the efficiencies recorded under BPP have not had a significant positive impact on the financial position of Eskom. It is possible this is due to a lack of clarity or understanding in where the savings are coming from given that all of the BPP presentations to the IFC do not provide detail of savings, only commentary on leakage and where the gaps are plugged. However, we suspect this reporting style has been selected to conceal failures.
- (hh) *Manipulation of savings*
- (ii) A review of the “BPP 2013/14 actual savings” was specifically requested and conducted by the Internal Audit (“IA”) team in Q2 of FY15<sup>147</sup>. The audit was given the highest priority risk rating with no rating provided for management in relation to the findings.
- (jj) The review identified that at the time the BPP savings were compiled (June 2014), there were no documented guidelines on how the savings would be calculated to ensure the divisions have the same basis and are consistent. Furthermore, there were no supporting documents in terms of calculations, financial records or management information to substantiate how the figures were calculated.
- (kk) Of the savings reviewed of R979.66m, Internal Audit were only able to verify R256.79m. Due to lack of supporting documentation and inconsistencies in the application of the baseline, the following committed line items could not be verified:
  - (i) External spend: Transformers; and, Cables and Conductors;
  - (ii) Finance: the Debt Portfolio;
  - (iii) Revenue Management: Energy Protection and Revenue Losses; Improve Municipal Debt Collection; Improve SPU Debt Collection; and Improve LPU Debt Collection.
- (ll) In addition, the audit team noted that different methods had been used when compiling BPP savings in that:
  - (i) Different baselines were used on the reconciliation calculation, for example, with the full year budget vs actual used in some cases whilst on others the third quarter projections vs actuals were used; and,
  - (ii) Only favourable variances were used to calculate the savings, unfavourable variances were not taken into account.

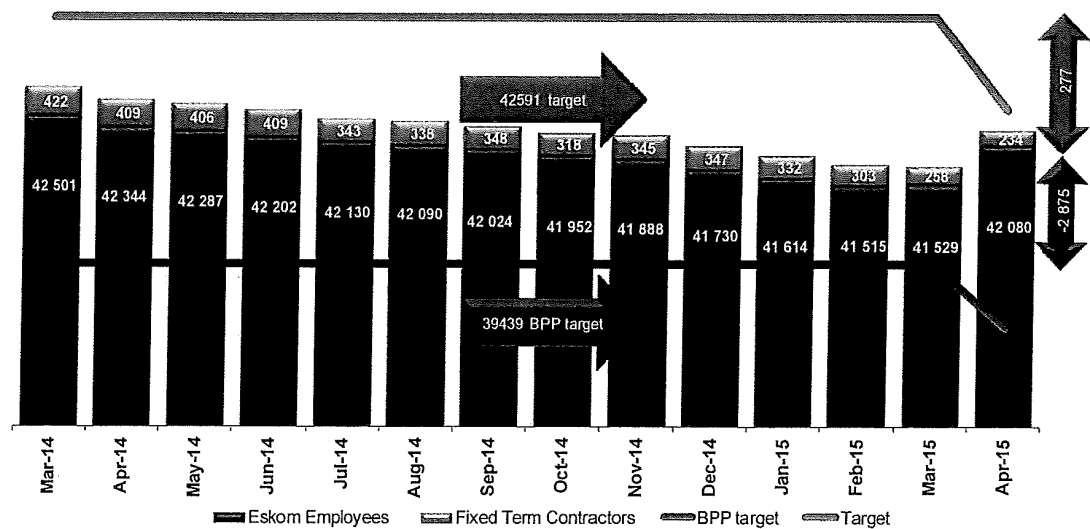
- (mm) If the process by which savings are calculated is not only inconsistent but also favourable, whether intentional or otherwise this calls into question the integrity of any final figures reported.
- (nn) The report provides various recommendations, concluding that they “recommend management treat the highlighted shortcomings as a lesson learnt, and implement the suggested recommendations as possible solutions going forward”. There are no management responses included and no reference to a follow up or equivalent audit being conducted since this review.
- (oo) It is interesting to note that despite these concerning findings, no detail was included in the quarterly catalyst report produced by Internal Audit and submitted to EXCO, the Audit & Risk Committee and various other Governance bodies. It aims to provide management with a summary of significant or important issues identified during the period from their scheduled audits. The audit was referenced but noted as “Not Rated” as opposed to assigned a risk rating to indicate any issues<sup>148</sup>.
- (pp) *Failure to realise planned and meaningful cost savings*
- (qq) Manpower:
  - (i) The initial response to the MYPD3 decision was to limit the number of employees within Eskom to 43,450, including full time contractors<sup>149</sup>.
  - (ii) A review of the recruitment process conducted by Internal Audit in Q1 of FY14 noted that in fact Eskom had already exceeded the 43,450 number by approximately 954 on a gross basis and 294 on a net basis at the end of June 2013.
  - (iii) The findings of the review note that “[t]he strategies currently may not be executable and even if they were, the probability of being within the 43,450 in terms of headcount in the foreseeable future is remote”. They continue, noting that “[c]ommunication to the organisation about Eskom’s position on recruitment has been muted or at best inconsistent and as a result the business units are unclear about the way forward”.
  - (iv) Despite this, under the BPP, the HR function targeted approximately R17bn in total, taking the headcount down even across different divisions by end of MYPD3 period. Despite the manpower package being well designed with a focus on structure, removing duplicative roles, and assigning separate packages to different parts of the business, ultimately there was push back and non-adherence by the business. According to a senior officer responsible for monitoring BPP, in part due to lack of courage and in part based on statement that redundancy would cost as much, it didn't deliver and the whole process has now purportedly been stopped<sup>150</sup>.
  - (v) The following graph was presented in April 2015<sup>151</sup>:

<sup>148</sup> Integrated Assurance Catalyst Report – Q2 FY15

<sup>149</sup> Integrated Assurance Catalyst Report – Q1 FY14

<sup>150</sup> Senior Executive leading monitoring of BPP, 13 May 2015

<sup>151</sup> GFC Presentation April 2015



- (vi) This shows that progress does appear to have been made during FY2015 but Eskom remained significantly behind target, failing to stick to the programme mantra in April 2015 when they increased Distribution and Generation permanent employees by 551.
- (vii) The leakage in FY2015 in this area was reported as R911m and attributed to the delayed implementation of voluntary separations due to the lack of confirmation of separation package criteria<sup>152</sup>.
- (viii) A source from Finance noted that manpower was their biggest cost and that interference from Government had meant there was no appetite for retrenchments.<sup>153</sup> The Government's mandate is to create jobs and that Eskom's management had not been strong enough in curtaining this, citing salary overpayment as an example.
- (ix) Other areas that could have been targeted were the high volumes of overtime hours charged to the business. A review conducted by Internal Audit of the period January 2013 to April 2013 inclusive raised the issue of excessive overtime being charged by the business and the risk of this inflating Eskom's manpower costs<sup>154</sup>.
- (x) This review identified that on average 721,906 overtime hours were being charged by an average of 20,288 employees, just less than half of Eskom's employee base during the 4 month period. No management response could be identified in this report and no reference to a follow up investigation or audit could be identified in the source material provided.
- (xi) The failure to curb headcount, together with an average 7.6% pay rise, means that Eskom have and will spend more on staff costs not less. That

<sup>152</sup> GFC Presentation April 2015

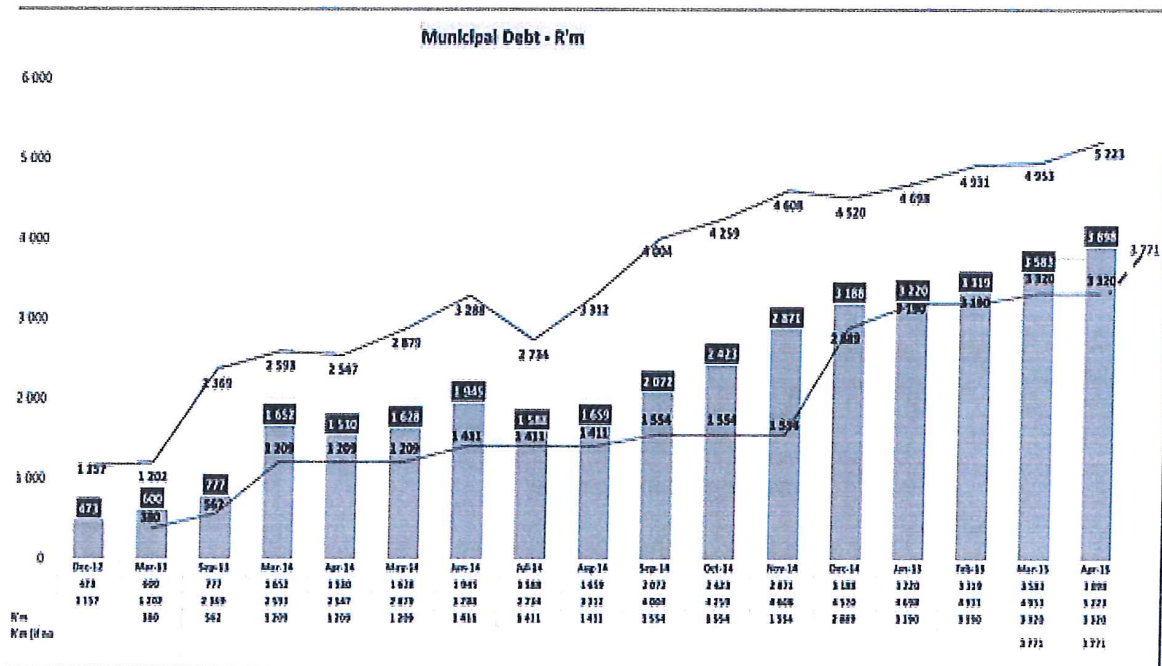
<sup>153</sup> Interview with finance representative

<sup>154</sup> Integrated Assurance Catalyst Report – Q1 FY14

BPP is only claiming a small leakage belies the substance of failure to make meaningful savings in this area.

(rr) Arrears

- (i) The original objective was aimed to reduce Municipal debt from R2.2bn to R1.2bn<sup>155</sup>.
- (ii) Despite this, a leakage of R1bn was assigned to Municipal Debt in FY15. This was explained by challenges in applying contractual mechanisms to recover debt. In addition, disconnections deferred due to interventions by DPE, CoGTA Ministers and court interdicts present further risk of budget overruns for the immediate future.
- (iii) The debt levels were reported here at R4.0bn and were projected to increase to R5bn by year end. This is reflected in the following graph which shows the total overdue Municipal debt at the end of April 2015 as amounting to R5.2bn<sup>156</sup>:



- (iv) It is explained that the National Treasury withheld the March 2015 transfer tranche of the equitable share to numerous municipalities contributed to this. However, it remains a material increase in such a short period.
- (v) Action lately shows how to address the problem of municipalities not paying Eskom, and treating it like an extension of the State. A harder line recently has had positive results, with over 50% of the municipalities coming to the table because Eskom switched off the lights<sup>157</sup>. Despite this, figures as at

<sup>155</sup> GFC Presentation May 2015

<sup>156</sup> GFC Presentation April 2015

<sup>157</sup> Interview with senior finance representative

April 2015 show that payment plans are in place for only R1.4bn of the R4.0bn owed by the top 20 defaulting municipalities<sup>158</sup>.

- (vi) A source from Finance highlighted the example of Soweto when discussing debt collection issues from customers<sup>159</sup>. The source explained that the people there did not want to pay for electricity when they had become used to having it for free. The rising debt has therefore become a problem for Eskom that the Government do not appear willing to assist with due to the large population and hence voting support based there (approximately 5 million out of 45 million in the Country).
  - (vii) In a prior role, the source had been responsible for reporting and remembers being instructed to write off a significant amount of Soweto debt, with the general message coming down from management that it didn't matter. This appears to have then set a precedent amongst the Municipalities in which they simply refuse to pay and wait and see what happens. By the time debt collection later became a concern, it was too late to change public opinion.
  - (viii) It would appear that a proposal to write-off bad debt of R142m for electricity customers was prepared by Customer Services in Q3 FY2015<sup>160</sup>. Prior to submission to ICAS and IFC, Internal Audit conducted a review of the proposal in order to provide reasonable assurance as to whether Eskom's policies and procedures to write-off bad debts were followed by management. The audit found instances of non-compliances with the debts management and collection process with examples where the severance proves had not been activated and not handed over for debt collection. It also identified customer accounts without payment plans and instances of where interest amounts hadn't been charged.
  - (ix) The issues were explained to be due to a "lack of automated controls (the debt collection process was largely manually managed, which increased the possibility of errors occurring), lack of discipline, lack of supervision and failure to exercise due care".
  - (x) Whilst the quantum of write-offs being considered in the scope of this review may have been small, the concerns noted over bad debt management and write off policies provides sufficient cause for concern over the remaining debt portfolio and may help to explain why Eskom failed to reach its recovery objectives.
- (ss) Coal
- (i) A main focus area for BPP was Primary Energy where the costs had been marching up for 3-4 years. The packages comprised a considered approach to the savings that could be made. ██████████ of Primary Energy, came under a lot of pressure from BPP because ██████ been the original designer and architect of the initiative – ██████ was pushed to deliver once ██████ became responsible for implementation.

<sup>158</sup> GFC Presentation April 2015

<sup>159</sup> Interview with finance representative

<sup>160</sup> Integrated Assurance Catalyst Report Q3 FY15

- (ii) Recollections of ██████'s attempts to take on road transport costs vary. On the one hand, ██████ was seeking to gain a discount from a road transport (trucking) supplier, only to be out manoeuvred by an EXCO member. According to ██████, a discount of █% was negotiated by ██████ following an independent report that suggested █% could be achieved. The company then sought to reduce this amount by pointing out it had not enforced the contract which built in cost escalations each year. They argued that the discount had effectively been given in this way. Apparently ██████ was unmoved by this, but the reaction of the truckers at a troublesome time for the CEO was to signal their intention for industrial action and form blockades at Megawatt Park and other sites. The decision taken was to negotiate a █% reduction in costs. ██████ ultimately refused to ratify this contract, and was later suspended and negotiated a settlement. We understand an alternative view is that this industrial action was much earlier and not linked to the 13% which had already been agreed. We have not had the opportunity to interview ██████ as yet.
- (iii) Interestingly coal cost was not an area escalated, of concern or subject to leakage in the February and May 2015 BBP update presentations. This would suggest that the division realised its savings effectively. However, a deeper dive into the coal usage costs and supporting financial or source data provide evidence to indicate the following challenges<sup>161</sup>:
- (A) Rates targets – Coal purchase rates continued to rise throughout the period and appear to remain unchecked by management or responsible parties;
  - (B) Failure to renegotiate contracts – Contracts continued to favour supplier needs with limited to no negotiation identified in the period (see Chapter 5);
  - (C) Stock piles levels – Whilst stock piles were reduced to avoid short term purchasing costs, this only succeeded in keeping coal usage within budget, keeping the increased rates and hard contract renegotiation off the agenda;
  - (D) Burn rate – The burned coal was below budget, again reducing the amount of coal that needed to be purchased during the period.
- (iv) It would appear therefore that the coal costs were not meaningfully cut at any point from March 2013. A representative from Group Finance noted that there should be opportunities to make further cuts on coal, but questioned whether the right people were in place to implement these.
- (v) Furthermore, one area in which leakage in FY15 was identified was in relation to Road Transport Rate of value ██████m<sup>162</sup>. This was explained to be due to the temporary suspension of the negotiated rates agreement. These road transportation costs have been analysed further in Chapter 3.

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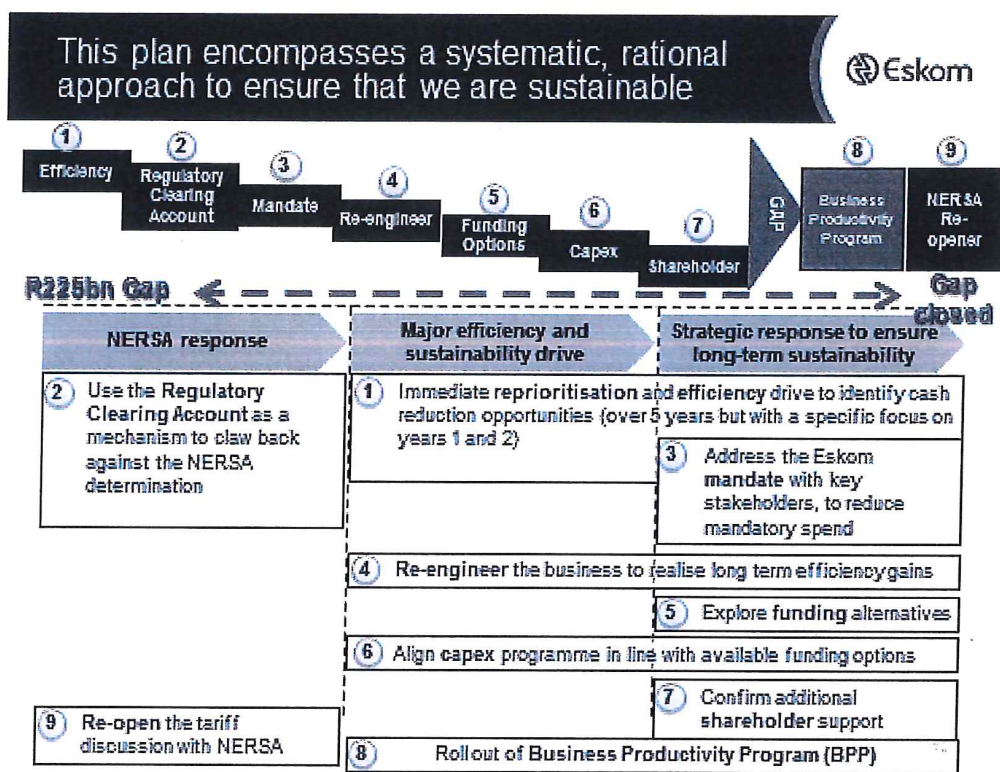
<sup>161</sup> Refer to Dentons team working papers – Coal Cost Analysis – for supporting evidence and references

<sup>162</sup> BPP Presentation May 2015

- (tt) Diesel
- (i) Despite wiping out all other BPP "savings", Diesel was only described as having leakage against plan of R1bn.
  - (ii) It is possible this is based on an assumption the RCA will deliver reimbursement.

**4.6 Other material failures to address financial levers as defined by the response plan**

4.6.1 In addition to BPP there were various elements enshrined in the "Response Plan" which had a greater reliance on external stakeholders, namely: RCAs; re-engineering of the business; Capex re-prioritisation; equity injection; additional borrowing; and assessing the mandate – was Eskom trying to keep the lights on at all costs, or was it seeking to be financially sustainable:<sup>163</sup>



- (a) RCA for MYPD2 delivered just R7.8bn versus R18.4bn, and in any event wouldn't be in place until the current financial year, 2015/16.
- (b) It has been suggested by a senior officer of Eskom that the Capital re-prioritization was not an efficient process due to silos in the business arguing for respective pot of funds.
- (c) The equity proffered was less than requested and seemingly required.
- (d) Borrowing was accepted in the sense of guarantees.

<sup>163</sup> "Securing financial sustainability (in response to lower tariff decision)"

- (e) No structural re-engineering of the business has taken place.
- (f) No clarity on mandate of financial sustainability versus “keep the lights on” has been established. That debate may well be coming to a head.

4.6.2 It is noted that the various initiatives were handled by different teams but as to whether the projection was indicating delivery or not on a case by case basis or as a whole, it is difficult to determine from the records. The reality is that in the two years since the MYPD3 decision Eskom financial woes have only deepened.

#### 4.6.3 Relationship with the State and Regulator

- (a) Recent history informs us that there are fundamental difference of opinions between Eskom and NERSA.
- (b) Eskom purportedly looked at appealing the MYPD3 decision but the Board decided not to and instead focus on the Response Plan (mentioned above).<sup>164</sup> In part Eskom was playing for time: The intention was to reassess in two years’ time when the major shortfalls started to hit (only approx. R34bn of the R225bn shortfall was allocated to the first two years of the MYPD3 period).
- (c) Despite this, the failure to secure sufficient funding through MYPD3 is a fault of both NERSA and Eskom. Whether the balance lies with the former for being harsh on cost base approaches and the latter for being optimistic in key assumptions, the reality of is a remarkable gap: with Eskom requiring R35bn to R40bn in addition to the R150bn revenue funding decision (MYPD3). This cause of this gap might be explained as due to R10bn in sales, R10bn in OCGT, and increases in IPP rates and employee costs. Just how many costs should be reduced, and the tariff increased is hard to deduce given the lack of attention to the cost base.
- (d) Eskom describe the feedback from NERSA as a vacuum or greyness which has contributed to what is known as differing “levels of discretion” between the Regulator and Eskom.
- (e) Given the significance of Eskom’s relationship with the State as it relates to financial sustainability, there is clearly a need for greater lobbying and/or engagement. That may lead to greater alignment of expectations and more certainty over which to drive financial planning.

### 4.7 Funding difficulties as a consequence of the financial pressures

#### 4.7.1 Background of the Borrowing Programme

- (a) The “Borrowing Programme” is a legal requirement for Eskom to prepare on an annual basis and intersects with the Corporate Plan process. The Financial plan includes a budget, i.e. the company needs X per year, which Treasury then are asked to deliver a borrowing plan to match. It is essentially a support function to what is going on in the business and if the financial plan doesn’t recognise certain risks, such as the Medupi start date or diesel spend, then, this would impact on urgency for borrowing and sub-optimal decisions may be made.

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<sup>164</sup> Senior officer in Group Finance

- (b) The five year Borrowing Programme which fed into the revised Corporate Plan following the MYPD decision resulted in a revised borrowing budget for Treasury to meet. There are no defined time frames in the plan so Treasury just have the responsibility to borrow as fast as possible.<sup>165</sup>

#### 4.7.2 Current approved Borrowing Programme to FY19/20

- (a) The Borrowing Programme is made up of five different instruments from a variety of domestic and international lenders. The Borrowing Programme for FY14/15 – FY19/20 shows a funding shortfall of R50bn.

Borrowing Programme 2016-2020	2015/16	2016/17	2017/18	2018/19	2019/20	Total
Bonds domestic	8 000	9 000	10 000	12 000	12 000	51 000
Bonds/ loans International	16 500	11 500	11 500	12 000	12 000	63 500
CPB's	10 000	10 000	12 000	15 000	15 000	62 000
DFI financing	12 269	14 122	8 922	3 233	2 157	40 703
ECA financing	8 551	2 909	3 992	3 325	1 095	19 872
Borrowing Programme	55 320	47 531	46 414	45 558	42 252	<b>237 075</b>
Funding shortfall	10 000	10 000		10 000	20 000	50 000
Total Requirement (Borrowing Programme)	65 320	57 531	46 414	55 558	62 252	<b>287 075</b>

- (b) Treasury will not commit to a borrowing programme that they do not feel comfortable to deliver on. Therefore, they only committed to a Borrowing Programme of R237bn which they know can be achieved and will attempt to go to the market for the remaining R50bn. This is hampered by, amongst other factors, the credit downgrade which occurred since the Borrowing Programme was agreed.<sup>166</sup>
- (c) Treasury are working to the approved funding budget of R55bn for the 2015/16 financial year and over half of the facilities are in place to meet this target.

#### 4.7.3 Sustainability of using borrowing to fund financing costs

- (a) Last year to March 2015 there was a shortfall of R11bn between cash generated from operations and the amount to cover financing costs and debt repayments. This has led to a situation where this shortfall is being covered by borrowings. This is not a sustainable long term strategy<sup>167</sup>
- (b) Debt repayments are forecasted to be R124bn to FY20 while the interest and finance charges total R152bn. This means that cash from operations must generate at least R276bn to cover this, otherwise debt repayment and finance costs will continue to be supported by new borrowing.

Per Budget Income Statement	2015/16	2016/17	2017/18	2018/19	2019/20	
Debt Repaid	-21 175	-16 971	-19 032	-33 895	-32 788	
Interest and Finance Charges	-22 931	-27 193	-30 935	-33 938	-36 921	
	-44 106	-44 164	-49 967	-67 833	-69 709	
Borrowing Programme (Total A)	55 320	47 531	46 414	45 558	42 252	<b>237 075</b>
	11 214	3 367	-3 553	-22 275	-27 457	

<sup>165</sup> [REDACTED] and [REDACTED], Treasury, 13 May 2015

<sup>166</sup> [REDACTED] and [REDACTED] Treasury, 19 June 2015

<sup>167</sup> [REDACTED] and [REDACTED] Treasury, 19 June 2015

- (c) Eskom's recent financial performance indicates that approximately R90bn of these borrowings will be required to quench the thirst of existing loan repayments and interest, leaving just R145bn for the capex programme – effectively half of what is considered required excluding risk items in the new build.<sup>168</sup>

#### 4.7.4 Current Portfolio

- (a) The portfolio at March 2015 was made up of nine instruments:

Instrument	Carrying Value	Comment
Eskom bonds	112,102,558,308	Regularly issued at varying coupon rates based on the market. Auction timetable is agreed with government. Treasury aim to fund between 8 -12bn a year. Go to auction regularly throughout the 12 months.
Promissory notes	40,128,168	4 notes issued at interest rate of ~15%
Commercial paper	7,027,019,562	Issued for 12 month period and typically rolled forward from the prior year. Main external paper for R5.8bn at 6.41%.
Eurorand zero coupon bonds	3,942,207,186	These are legacy bonds from the late 90s
Foreign bonds	48,669,511,216	Require a recently audited balance sheet so can only go to market twice a year. Limited flexibility on implementation. 2 USD bonds issued in the last 2 years: \$1bn at 6.75% and \$1.25bn at 7.13%.
Development financing institutions	62,446,483,850	Drawdowns are linked to the milestones on capital projects. Includes loans from: -African Development Bank totalling R23bn -World Bank totalling R24.6bn Most recently, loan from Agence Francaise Development of €3m.
Export credit facilities	28,487,724,925	Seven facilities, the largest being R9bn from KFW and R10.5bn from BNP.
Subordinated loan from shareholder	26,621,342,810	Government loan converted to equity. This is the calculated debt value.
Rand loans	8,792,235,778	Loans from external banks including Deutsche and JPM
<b>Total</b>	<b>298,129,211,803</b>	

- (i) A detailed list of the Debt, Securities and Borrowings position at March 2015 including the attached interest rate of each is attached at Appendix 2.
- (ii) In addition, Eskom's embedded derivatives portfolio is also managed by Treasury. An embedded derivative is a financial reporting term which represents Eskom's contracts to sell electricity to aluminium smelters where the price linked to the price of aluminium, and are valued based on commodity price and forex predictions.
- (b) Borrowing taken out in FY15
- (i) The borrowing target for FY15 was R62.2bn which was nearly achieved

<sup>168</sup> Assumes the average cash from operating activities of the past three years continues to be obtained

through the following re-financing and new borrowings<sup>169</sup>:

Instrument	Amount	Comment
Export Credit and DFI Drawdowns	15.5	Milestone payments from capital projects
Domestic Bonds	17.2	Pot of funds used to repay maturing debt
Commercial Papers	6.8	
Other funding	7.2	Cross currency swaps
Foreign Bonds	13.8	USD bonds
	60.5	

#### 4.7.5 Overview of borrowing strategy

- (a) Ten years ago Eskom had excess liquidity and the only debt was domestic, standing at around R5bn (compared to R300bn today). The borrowing wasn't necessary, but Eskom wanted to have a presence in the capital markets.
- (b) The strategy was always buy long, cheap and in Rand as that is the currency of operations. If this couldn't be achieved Eskom would move towards short term more expensive instruments. General balance sheet funding was preferred over project finance because it is cheaper and Eskom has a strong balance sheet with long term assets whereas project financing would likely require a revenue stream to attach the financing to.<sup>170</sup> Domestic debt is also preferred because it is less expensive and doesn't require currency hedging.
- (c) Liquidity management has not been a historic issue. The three month spend liquidity buffer of R20bn has been deemed sufficient to absorb shocks and the international capital markets are happy with the level.<sup>171</sup>
- (d) The Borrowing Programme is not a static, legacy portfolio but is constantly being considered. The Treasury team will do fortnightly auctions to gauge the appetite in the markets and in June will canvass the insurance and pensions market.<sup>172</sup>

#### 4.7.6 Current market position

- (a) The key problem in the market for Eskom Treasury recently has been demonstrating a positive trajectory for the business. Treasury receive the necessary support from the National Treasury and the Department of Energy when Eskom target investors but when they effectively renege through tariff decisions, or when the business gives out bad news, such as the Medupi timetable delays, the market starts to back off. In FY15 this has been exacerbated by the income statement ratios which have been affected by the adverse costs to budget. Private fund managers in particular are very negative about Eskom's creditworthiness.
- (b) Eskom also have to compete with others in the domestic market now. The government selling debt in the same domestic market squeezes available cash and

<sup>169</sup> ██████████ and ██████████ Treasury, 19 June 2015

<sup>170</sup> ██████████, Senior Manager Treasury, 10 June 2015

<sup>171</sup> ██████████, Senior Manager Treasury, 10 June 2015

<sup>172</sup> ██████████, Senior Manager Treasury, 10 June 2015

the IPPs are also receiving domestic funding in preference to Eskom because they have a more certain revenue stream (propped up by Eskom itself).<sup>173</sup>

- (c) The credit rating downgrades have had a significant impact on Treasury's ability to raise funds in the market. Following the Moody's downgrade in November 2014, domestically they saw a significant impact on market sentiment towards Eskom debt. Their cost of debt in the market moved from 120 basis points (which was approximately only 1.3% higher than a government bond) to 200 basis points.<sup>174</sup>
- (d) Due to the declining ratios, some investors that didn't require guarantees before now require a government guarantee. Between June 2014 and March 15, Treasury also faced difficulty getting commitment from investors before the government support package was approved and paid.<sup>175</sup>

#### 4.7.7 Details on particular borrowings

4.7.8 There are no particular financial instruments within the borrowing programme that would be described as the "nucleus" as every part contributes to the total required funding. However, we identified some of the key elements of the Programme as follows:

- (a) *Foreign bond placed in January 2015*
- (b) In 2015, a US dollar bond at a 7.13% interest rate was arranged by Treasury. The bond amount was US\$1.25bn which was equivalent to approximately R15bn, being nearly 25% of the annual required borrowing.
- (c) The process for selling Eskom bonds internationally is inflexible and the process is led by three professional banks on Eskom's behalf, so Treasury have very limited authority or ability to influence the issuance process.
- (d) Due to requiring recent audited financial statements, the available windows to issue the bond were June/July 2014 and January/February 2015. Eskom and adviser banks decided not to utilise the June/July 14 window for fear of triggering a downgrade<sup>176</sup> and lack of a defined government rescue package at that time. By January 2015, Eskom's weak financial position had considerable press coverage, there was weak investor confidence given the management changes and Moody's downgrade to sub-investment grade in November 2014 such that they had no other option than to accept the deal presented.
- (e) The price of 7.13% was higher than the bond issued 18 months earlier at 6.75% and caused speculation internally over the high price. In addition, as the face value price of the Bond was in USD, Eskom has a policy to hedge 100% of foreign debt which added a further 7% to the cost of the bond. The bond is hedged through fixed currency swaps, which are based on the Inter-bank swap curve formula and cannot be influenced by participants.
- (f) When Treasury had initially gone to the market in October 2014, the price was 6.83 for a 10 year bond. However, with the additional downgrade and the start of load

<sup>173</sup> ██████████, Senior Manager Treasury, 10 June 2015

<sup>174</sup> ██████████ and ██████████, Treasury, 19 June 2015

<sup>175</sup> ██████████ and ██████████, Treasury, 19 June 2015

<sup>176</sup> When on "negative credit watch", any borrowing triggers a downgrade unless you have positive news within 90 days.

shedding in November 2015, coupled with a fall in the performance of overall South African debt, Eskom were only able to get 7.125% from the market in January 2015.<sup>177</sup>

- (g) The overall price would have had to build in the risks for investors not only of the negative business news, but also the investment in emerging markets and the need to hedge the rand. The R14bn funding out of a total R60bn planned funding is a significant portion and to secure such a volume of funding from elsewhere was not feasible or sensible given Eskom's financial position. Domestic private fund managers would not support lending of R10-20bn at one time and the only other option domestically would be from government related entities such as the State Pension fund. This forced Eskom to look internationally. A failure to secure the funding would have led to a liquidity collapse (or no money in the bank) by March.<sup>178</sup>
- (h) *Eskom domestic bonds issued in 2014/15*
- (i) There are a number of options to take when an existing bond is maturing. They can be allowed to mature and Eskom will then re-issue a new bond in its place or the bond can be exchanged for another bond with longer maturity. The price of the bond will vary based on the current market conditions and the term length. This has ranged from around 2% to 10%.
- (j) *World Bank Loan*
- (k) Eskom currently have two USD and one Rand World Bank loans in their portfolio of US\$68m (R835m), US\$29m (R352m) and R23bn. The Rand loan from the World Bank attracted adverse commentary because they falsely assumed the World Bank had "forced" R22bn in spend on "FGD" at Medupi. The work was required irrespective of the World Bank facility.
- (l) *Chinese Debt offer*
- (m) Five years ago, the South African government signed a Memorandum of Understanding with the China Development Bank to provide project finance funding but the facility was never utilised. In December 2014 this was reignited and Eskom were introduced by the National Treasury to the Chinese delegation. At this time, there was no term sheet specifying volume or amount but they were 'putting the money on the table'.
- (n) Treasury went away to identify suitable capital projects and went to the Board for a special resolution to allow them to negotiate the R50bn facility. Although the size of the facility is unusual in its scale, the indications are that the price will not be better than elsewhere in the market, such as international bonds. The negotiations are ongoing.<sup>179</sup>
- (o) Certain commentators thought that the price may be too high because Transnet had done a similar deal at a better price, but Transnet is not at junk bond status.<sup>180</sup>
- (p) *OPIC and MIGA debt opportunities*

177 [REDACTED] and [REDACTED], Treasury, 19 June 2015

178 [REDACTED] and [REDACTED], Treasury, 13 May 2015

179 [REDACTED] and [REDACTED], Treasury, 19 June 2015

180 [REDACTED], Senior Manager Treasury, 10 June 2015

- (q) Eskom currently has two opportunities from development financing institutions (DFI):  
[REDACTED]  
[REDACTED] and [REDACTED]. They are worth [REDACTED] in total.
- (r) Conversations with these DFIs have been taking place since mid-2013 and the negotiations typically have a long gestation period. Treasury's initial plan was to secure the funding by October 2014 as the funding would have helped during the FY15. However, the delay was from the DFI side as they wanted to ensure that the government injection package was agreed and secure before they went to their internal credit committee.<sup>181</sup> In addition, the DFIs had not been through the lending process to an entity that was on negative ratings watch before and so there were delays internally. Treasury are still in negotiations with both [REDACTED] and [REDACTED] and hope to have the loans completed by October 2015.<sup>182</sup>

4.7.9 Concluding comments – Were there any alternatives and is cost of borrowing on these instruments commercially supportable?

- (a) Given the financial position of Eskom, the Treasury function is operating with very few borrowing options. Externally the credit downgrades, Medupi delays, reliance on the government and changes in management have all contributed to a poor public image with domestic investors. Internally, MYPD3 response plan requirement for borrowing, the cash flow issues, and an already heavily invested position in the large capex programme that needs to be completed places additional pressure on ensuring the Borrowing Plan is met.
- (b) The prices Treasury are concluding for new instruments such as the US dollar bond and loans from DFIs may appear to be higher than past financing costs, but are a reflection of the market they are operating in and the implications of negative trajectory in financial indicators.
- (c) Treasury are acutely aware that Eskom needs a positive story financially, and that without meaningful changes to the tariff and cost savings, the build programme will require increased borrowings at a higher cost of funding that will only harm Eskom in the long run, or further more radical funding options.<sup>183</sup>

**4.8 Other significant factors that may have contributed to the financial challenges**

- 4.8.1 Internal Audit ("IA") and Assurance & Forensics ("A&F"), along with external functions comprise Eskom's second line of defence. They are collectively responsible for regulating and controlling Eskom's policies, procedures and controls and the business adherence to them.
- 4.8.2 Discussions were held with the appropriate representatives from the business and a review conducted of source data made available which included investigation reports and

<sup>181</sup> [REDACTED] and [REDACTED], Treasury, 19 June 2015

<sup>182</sup> [REDACTED] and [REDACTED], Treasury, 19 June 2015

<sup>183</sup> Eskom Treasury – Eskom Borrowing Programme And National Treasury Regulations – 12 February 2015

management information reports<sup>184</sup>. This provided a comprehensive narrative of the mandate, activities and effectiveness of these functions, as described in the sections below.

#### 4.8.3 Internal Audit

- (a) *Mandate*
- (b) [REDACTED]  
[REDACTED] the IA function at Eskom is responsible for conducting internal audits throughout the financial year. These audits can be both planned or at the request of a business division or management directive and can cover the review of a specific division, process or business initiative, for example an Audit over Contracts Management at Eskom.
- (c) Audits are also scheduled in response to major incidents experienced at Eskom, for example a Technical Incident Investigation over the Duvha Unit 5 RFWT Incident in December 2013.
- (d) Due to constrained resources, aside from a handful of specifically requested Internal Audit reports, the Internal Audit reports were not available during the course of this Investigation. However, quarterly Integrated Assurance Catalyst Reports were provided that are prepared by [REDACTED]'s team in order to summarise audits conducted and any major technical incidents occurring during the period.
- (e) The intention of these reports is to provide management with high level statistics pertaining to the audits and major investigations conducted throughout the period. They are primarily based on the individual planned and requested audits conducted by the IA team. Details of significant matters are discussed in full, with several useful sources of information providing a high level view including:
  - (i) A dashboard of planned and requested audits conducted in the period, categorised by business function and graded based on results and priority risk;
  - (ii) Details of major incidents reported through the period, i.e. fire or trips, with a summary of factors and impact to the business, including financial impact on limited occasions;
  - (iii) A heat map and supporting narrative covering the salient points of finalised audit reports, including major investigations and providing an overall audit rating for each area; and,
  - (iv) Statistics of internal and external audit findings by division and incident/audit type which is of limited use as a standalone section as contains no detail.
- (f) *Issues and restrictions identified*
- (g) The quarterly Catalyst reports from FY14 and FY15 suggest that were over 200 audits and reviews conducted. Review of the audit topics and findings of these audits, where included, indicated that on the face of it:

<sup>184</sup> All findings reported in this section unless otherwise stated have been obtained from a combination of interviews conducted with members of the IA and A&F teams, the quarterly catalyst reports provided for FY2014 and FY2015 for IA and A&F and the whistle-blowing and investigations log.

- (i) The audits were diverse and appeared to be representative of the business divisions, processes and initiatives at Eskom. However, there is limited review of large procurement and contract matters, specifically in relation to the purchase and management of coal;
  - (ii) The audits were process and control focused – the correct paperwork was in place, no further work was considered necessary;
  - (iii) There was limited to no consideration of financial impact of key findings such as control failures in procurement processes; and
  - (iv) Findings from the audits are reported to the business at which point IA appear to be no longer responsible or involved in the sanction or remedy, with exception of being able to escalate non-remediation to the Board and management committees in subsequent reports.
- (h) An interview with an appropriate representative from IA confirmed that these audits were designed to review procedures and controls only. IA is responsible for the reconciliation of paperwork to procedure and if no issues are identified, they are not mandated to look any further.
- (i) A number of instances have been identified where external third parties have been engaged to conduct investigations on behalf of IA. An example of this was an audit conducted by ██████████ in December 2014 into the tender for an ad hoc panel for the supply and delivery of diesel to Ankerlig power station<sup>185</sup>. The audit identified a number of significant procurement issues including: Permitting evaluators to enter the facility with prohibited electronic devices; and, Non-removal of pricing information on supplier submission files prior to handing over to the functionality teams for evaluation. As a result a number of sanctions and recommendations were made to the business.
- (j) IA do not appear to be responsible for logging or following up on such external reviews. It is possible that any recommendations and sanctions are the responsibility of the business. However, it has not been possible to confirm this or determine whether sanctions, such as those from the above audit were implemented during in the time available for this Investigation.

#### 4.8.4 Assurance & Forensics

- (a) *Mandate*
- (b) ██████████, A&F respond to whistle-blowing reports and referrals from within the business. There are a number of mechanisms for receiving these reports as follows:
  - (i) Toll free line: Used regularly by both external suppliers and internal employees wishing to remain anonymous. Also commonly used by leavers (as opposed to via exit interview);
  - (ii) Web based reporting: Anonymous online access;

<sup>185</sup> Pro-active Assurance Report – Ad Hoc Panel for the Supply and Delivery of 500ppm sulphur Diesel to Ankerlig for 2 years CORP – December 2014

- (iii) Email: Anonymous email set up for employees to use;
  - (iv) One on One: Stand by representative available from the A&F team on a daily basis for face to face reports;
  - (v) Management Reporting: Incidents or allegations that they are informed of by management;
  - (vi) Referrals: From the ethics team or HR on matters they are unable to satisfy; and,
  - (vii) Dead Letter Drop: Anonymous letters received by the A&F office.
  - (viii) Historically, the Chief Executive has also been a key source of reports. Prior to his departure, [REDACTED] was heavily involved and encouraging of anti-corruption and assurance activity and would receive various whistle-blowing reports on [REDACTED] which he would forward to the A&F team. This has not been the case more recently due to the quick turnover in those holding the position and limited time in which such mechanisms or trust from the employees can be established.
- (c) Each report is purportedly logged on an Excel spreadsheet until such time that the team can migrate to the SAP system. The reports are then assessed and either accepted by Forensics or referred to the relevant part of the business. For example, allegations involving theft are passed directly to the relevant business unit. Referral statistics are typically higher than what is left for Forensics to investigate.
  - (d) In interview, it was confirmed that A&F respond to reports and allegations received through the mechanisms listed above. A&F do not get persuaded to disregard or ignore particular areas/allegations.
  - (e) Of the reports received, A&F have the specific mandate of investigating allegations related to white collar crime, i.e. Fraud and Corruption. There were a limited number of these relatively and as such, the team also followed up instances of irregularities, i.e. policy or process failures which could in theory lead to instances of white collar crime. Such investigations form the majority of their workload.
  - (f) They may also be requested to investigate matters relating to white collar crime that have been identified during the course of an audit, i.e. if controls had been identified to be dangerously weak then the A&F team could be called in to follow up with an investigation.
  - (g) Forensic Catalyst Reports (independent of the Integrated Assurance Catalyst reports) are prepared by A&F on a quarterly basis and provide management with a holistic view of forensic investigations conducted during the period. They are based on the individual forensic reports completed for each investigation conducted.
  - (h) It provides high level statistics on the investigations conducted by the team in the quarter, categorised in various ways and analysed for trends and themes. No details of investigations or findings are included.
  - (i) The reports are submitted to EXCO, the Audit & Risk Committee and various other Governance bodies.

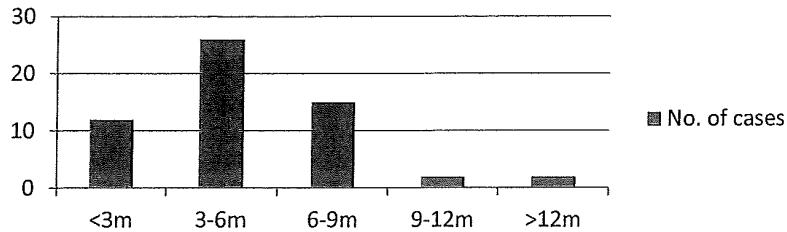
- (j) *Issues and restrictions identified*
- (k) Interviews with appropriate representatives and review of a sample of investigation reports and the summary Catalyst reports identified the following apparent issues and restrictions placed on Eskom's A&F team.
- (l) Manual management of whistle-blowing and investigation reports
  - (i) The Excel log maintained by A&F to log and summarise whistle-blowing and investigation reports was provided for the FY2013 to FY2015.
  - (ii) A total of 860 entries were observed in the log. Within the log, the first items considered are the origin, related parties and descriptions of allegations are summarised. Details of the initial assessment are then completed with a decision recorded on whether an investigation will be conducted. If so, later fields are also completed with investigation findings, recommendations, sanctions and management responses.
  - (iii) Each of the fields are free text. Whilst attempts have been made to categorise types of allegation and decision selected, these fields are not always completed and are subject to variation and manual error. Whilst possibly manageable for small volumes of cases, this makes understanding the data and assessing the holistic view challenging and prone to error.
  - (iv) Furthermore, managing whistle-blowing and investigation reports in Excel is not considered secure and does not provide a supportable, reliable audit trail of activity.
- (m) Lack of control over investigations conducted
  - (i) As identified in the catalyst reports, the volumes of referrals are high. Of the 860 reported entries in the whistle-blowing log, 286 were labelled as having been referred to the business. In many cases the notes state that the matter had been discussed and the relative manager of the division or area had agreed to take on responsibility for the investigation.
  - (ii) This may be due to lack of resources of A&F. However, once "Referred", they no longer have any involvement or knowledge of what actually took place, if anything. This leaves the process and control open to manipulation by the business.
    - (A) A&F have never been prevented from conducting an investigation. However, they do not have a mandate to review unless something has been reported to them. It was reported in interview that they also require a degree of evidence prior to conducting a review and hence do not respond to hearsay or allegations identified in the press. However, a high level review of the log indicates that this is not applied on a consistent basis.
    - (B) A&F are rarely brought in on IA matters and investigations, with no instances being recalled in relation to coal, OCGT, procurement, tender or contract management matters.

- (iii) Furthermore, A&F do not appear to be responsible for investigations involving senior employees, i.e. those in Board or Committee level positions unless specifically requested by the Board. The Board conduct investigations at the senior level, using A&F on an ad hoc basis or not at all.<sup>186</sup>
- (iv) For example, A&F were allocated a discrete task by the Board to conduct digital forensics on the laptops of two members of senior management in order to determine who originated the letter referred to in the [REDACTED] [REDACTED] allegations. The rest of the investigation was handled by the Board with A&F having no further involvement or knowledge.
- (v) Aside from this example, other investigations that A&F could recall in interview or have had limited involvement with involving F-Band level of seniority include:
  - (A) Investigation into [REDACTED]: A&F were informed by his manager of allegations in relation to a trip to the US and conflict of interest relationship as the Chairperson of an IT company. A&F did not identify any findings against him in this matter. The employee was later suspended, they understand in relation to another matter in which they had no involvement;
  - (B) Investigation into former EXCO member: Allegations understood to be in relation to insubordination and hence not in the remit of A&F.
- (vi) No other instances of investigations into EXCO or equivalent F-Band level members could be recalled. However, it is possible that the Board may have received such allegations directly.
- (vii) It is noted that even where A&F are able to control their scope, there is evidence to suggest that the financial impact is not considered and that each investigation is given the same degree of time and resource no matter what the impact of the allegation or issue may be.
- (viii) Review of the investigation log identified that of the 306 investigations conducted by A&F during the two year period, the PFMA implications and/or financial impact had been completed in only 12 cases. The quantum of these 12 cases was estimated at just under R4m. As above, this may in part be due to the log not having been updated correctly. However, a sample review of the individual investigation reports supports a general lack of consideration over financial impact. The effectiveness of A&F in having effectively protected Eskom's financial position and prevent wastage and fraud is therefore unclear.
- (n) Lack of control over sanctions and remedies
  - (i) A&F are not involved in the handling or remedy of their investigations. They are also not able to dispute or override decisions subsequently made by the business.
  - (ii) A&F provide recommendations as a result of their investigations which predominantly relate to either: disciplinary proceedings; or, control

<sup>186</sup> According to A&F officer

enhancements. These are detailed in the individual investigation reports which are presented to the Client, i.e. the Manager responsible for the investigation and/or employee(s) being investigated.

- (iii) The relevant business unit is then responsible for carrying out the recommended actions.
  - (iv) Should the recommendation be disciplinary action, Incident Response ("IR") are engaged and an independent tribunal held over the matter. These are chaired by an independent adjudicator from the business and the facts of the case reviewed. Neither A&F nor the Client has influence or involvement in this process.
  - (v) The implicated employee is the only individual or body that can appeal the final decision. However, instances where the outcome differs from the opinion and recommendations of A&F are noted and escalated in the Catalyst Reports if appropriate.
  - (vi) Should the investigation confirm instances of crime, the A&F investigation and subsequent internal action will continue but the matter is also reported to the SAPS (SA Police).
- (o) Lack of control over sanction or remedy implementation:
- (i) Similarly to IA, the only remedy available to them for pursuing management action and feedback is to report non-adherence in the A&F quarterly Catalyst reports.
  - (ii) In order to encourage timely finalisation, management responsiveness is tracked following investigation completion. When this occurs, the status of the investigation for A&F is transferred to "Completed". It then remains at this status until management feedback or action is confirmed, at which time it can be transferred to "Finalised".
  - (iii) Should actions remain outstanding; the matter is escalated to the relevant Group Executive and raised to senior management in the quarterly Catalyst reports.
  - (iv) Of the 860 whistle-blowing reports received during the period, 306 were selected for further investigation by the A&F team. Of the 306 investigations, 63 had been labelled as "Completed" but not yet finalised.
  - (v) Date analysis was not possible for six of these entries as no completion date had been manually entered.
  - (vi) The following graph depicts the length of time recommendations and sanctions from the remaining 57 cases have been outstanding:



- (vii) This suggests that 79% of cases in which sanctions have been recommended to management have been outstanding for over three months. When some of the sanctions involve dismissal due to fraudulent conduct or equivalent this figure is astonishing.
  - (viii) It is noted that the numbers provided above are indicative only. Due to manual errors in the underlying data and lack of requirement to categorise in a consistent manner, only a manual review of the text fields for recommendations and sanctions would determine whether any were actually recommended. This has not been possible under the time constraints of this review.
  - (ix) This lack of responsiveness from the business was escalated by A&F on a number of occasions in the more recent quarterly catalyst reports. However, improvements have yet to materialise.
- (p) Ineffective Declaration of Interest database:
- (i) The ethics department is responsible for a database containing conflict of interest declarations. Employees and management are required to declare their interests in a form, submitted via Eskom's intranet. The declarations are stored indefinitely and a full audit trail retained for any changes volunteered by employees during the year.
  - (ii) Whilst the forms are purportedly mandatory, there are limited comprehensive checks to ensure that all interests, particularly those of senior management are complete. In addition, many examples of non-compliance or issues have been identified by IA and A&F during the course of their investigations. For example, an audit conducted in Q2 2013 into the Residential Mass Rollout programme identified that of the 44 employees involved in the tender process, 27% had not completed the declarations for FY2013 and 41% for FY2012<sup>187</sup>.
  - (iii) It was explained during interview that a Special Investigations Unit recently conducted an exercise to map conflict of interest declarations to payments, suppliers and employees. This holistic review completed in December 2014 and identified approximately 20 low level employees who had non-declared interests. No findings were identified against individuals from middle management and above. This is surprising given various issues and problems with declarations of interest identified by IA and A&F as described above.

<sup>187</sup> Quarterly Integrated Assurance Catalyst Report – July to September 2013

- (iv) It was explained procedures had previously been in place during the tenure of ██████████ who purportedly enforced the regular checking of EXCO members, asking A&F to review the declarations of interest provided and reconcile it against CIPC (local database of companies) in order to identify any discrepancies. This procedure is no longer in operation.
- (v) Such checks should be reinstated to ensure the ongoing prevention of fraud and abuse. In addition, attempts should be made to use the system to its maximum effect. For example, queries could be run on the back end of the database to enable searches by vendor name. This would be particularly relevant or helpful for when new suppliers or employees are on-boarded for checking potential issues. Further considerations on probity checks can be found in Chapter 5.

#### 4.9 The conundrum of Eskom's going concern

- 4.9.1 The recent focus on costs has resulted in the adoption of a "Capital Projects Schedule". This is prepared on a quarterly basis by a dedicated team responsible for its management and submitted to ICAS for approval. The primary focus is achievement of the current year allowance. However, the five year outlook is also considered to ensure the total budget allocated is ultimately adhered to, i.e. most recently set at R260bn over five years. This figure is noted to include owners development costs (i.e. manpower), but excludes interest.
- 4.9.2 Whilst included in budgets, capitalised interest is never included in reported figures of capex spend due to its uncontrollable nature. Notwithstanding this, the results have been close to predicted over the past couple of years.<sup>188</sup> Rules on what you can and can't capitalise will be upheld by the external auditors.<sup>189</sup> The benefit of this accounting policy for Eskom is that there is no impact to the income statement. With R13.3bn capitalised in FY2014 and R17.4bn in FY2015, had these finance costs been expensed Eskom would have recorded significant losses.
- 4.9.3 In general, Eskom need to show that there is no impairment of assets to the auditors. (NB. To ensure the asset value on the books is not higher than the income it will generate in the long run). The impairment tests consider anticipated revenue assumptions and calculate expected net cash values which is then reconciled to the book value to calculate any impairment. Because Eskom has long term assets the consideration of whether these assets are impaired is interconnected with the question of whether it is a going concern. In essence the question is whether on the tariff trajectory, future cost predictions and access to capital markets, Eskom can afford its build programme.
- 4.9.4 If Eskom is to remain sustainable, it must generate a positive cash flow. Under the regulatory methodology, Eskom receive a rate of return on their assets, even when under construction. Once in operation, they would then get depreciation and a return on the assets. For that reason, a forward pricing curve is used to assess impairment.
- 4.9.5 On the basis that the tariff should provide a profit taking into account both depreciation and a return on assets, impairments are not anticipated. In the consciousness of Eskom, because of this regulatory truism and because it is "too big to fail" it is hard for Eskom to make

<sup>188</sup> ██████████, Group Finance

<sup>189</sup> By definition a fixed asset is treated as such because it will generate positive future income flows (on a discounted cash flow basis) – depreciation of the asset you create is effectively matched against the income generating period so that even though you spend the cash in year one, the hit or expense in the income statement is spread out over the life of the asset

assumptions on the tariff that doesn't cover its requirements in the medium term. If you based the forecasts on historical performance however, Eskom will fail which sets up a conundrum as to the going concern basis.

4.9.6 The latest going concern review assumed inter alia:<sup>190</sup>

- (a) Eskom is awarded an extra R4bn from the RCA selective reopener from July 2015;
- (b) Additional revenue amounting to R16.7bn was included for 2016/17 and R29bn for 2017/18. This is an estimate of a partially successful RCA adjustment for years 1 and 2 of MYPD3.
- (c) OCGTs limited to 5.6% peaking factor; and
- (d) All BPP and other cost savings are made.

4.9.7 The following table, which is based on these assumptions, shows a positive cash balance, which is why, primarily, no impairment is indicated from the analysis:

Income Statement Summary	Rm	2016	2017	2018	2019	2020
Revenue		171 643	195 383	224 366	245 546	268 884
Primary Energy		88 899	97 444	104 183	114 749	125 694
Operating Expenditure		68 781	70 319	72 910	80 501	88 774
Operating Profit /(Loss) Before Net Fair Value and Net Finance Cost		13 963	27 620	47 274	50 295	54 416
Other Income		1 166	1 334	1 468	1 543	1 623
Net Fair Value Gain/(Loss) Financial Instruments, Excluding Embedded Derivatives		(3 724)	(3 299)	(3 546)	(3 123)	(2 669)
Net Fair Value Gain/(Loss) on Embedded derivatives		919	1 425	1 336	1 444	1 536
Operating Profit /(Loss) Before Net Finance Cost		12 323	27 081	46 532	50 160	54 905
Net Finance Income/(Cost)		(11 017)	(15 006)	(21 647)	(32 799)	(42 791)
Share of Profit of Equity - Accounted investees		-	-	-	-	-
Profit/(Loss) Before Tax		1 306	12 075	24 885	17 361	12 114
Income Tax Expense		366	3 381	6 968	4 861	3 392
Profit/(Loss) for the year		941	8 694	17 917	12 500	8 722

Summarised cash flow	2016	2017	2018	2019	2020
Cash from operations	37 397	48 146	72 975	83 144	89 236
Cash required to repay loans and interest	(47 982)	(46 139)	(52 642)	(71 845)	(75 282)
Cash available for investment	(10 585)	2 007	20 333	11 299	13 954
Investment activities	(61 652)	(48 507)	(45 981)	(75 907)	(80 607)
Cash required to fund investment activities	(72 237)	(46 500)	(25 648)	(64 609)	(66 653)
Net borrowings	76 368	51 371	46 700	47 564	46 555
Movement in cash and cash equivalents	4 131	4 871	21 051	(17 045)	(20 098)
Closing balance cash and cash equivalents	15 725	20596	41 648	24 603	4 504

<sup>190</sup> Position paper – going concern final approval

4.9.8 The going concern test commentary provides the following conclusion:

*"For the next 12-15 month period there is a high level of certainty regarding the cash flow projections and ability for Eskom to continue as a going concern. This is supported by the fact that the all risk scenario is cash positive over this period. The scenarios do not take into account Eskom's ability to access undrawn facilities with local banks which will assist with short-term cash requirements.*

*During the subsequent period, although a reduced cash flow is anticipated, management is confident that there are options to manage this situation. Based on this, the directors can conclude that Eskom will be a going concern in the immediate future."*

4.9.9 The main problem with this conclusion is that it does not contemplate a world in which diesel costs are required for some time, and NERSA's approach is not to force additional tariffs on the country. It also assumes build costs won't increase on top of their existing projected budget (see Section 2) and that Eskom has the mettle to make meaningful cost savings. Whilst borrowing would paper over these cracks, there is a limit. Treasury officers have stated that they will struggle to borrow R260bn and that they feel that around R237bn is roughly what they can achieve, based on the current market appetite. If there is another six months of the downward trajectory in financial indicators Eskom is on, the auditors may not be so confident about Eskom's going concern status.

4.9.10 The following table compares the existing cash flow model with one flexed purely to show the average of the last three years' cash from operating performance holds constant for the five year period. The funding shortfall is highlighted by the closing cash balance in 2020:

Latest Going Concern Model						
	FY2016	FY2017	FY2018	FY2019	FY2020	Total
Cash from operations	37,397	48,146	72,975	83,144	89,236	330,898
Cash required to repay loans and interest	(47,982)	(46,139)	(52,642)	(71,845)	(75,282)	(293,890)
Investment activities	(61,652)	(48,507)	(45,981)	(75,907)	(80,607)	(312,654)
Cash required to fund investment activities	(72,237)	(46,500)	(25,648)	(64,608)	(66,653)	(275,646)
Net borrowings	76,368	51,371	46,700	47,564	46,555	268,558
Movement in cash and cash equivalents	4,131	4,871	21,052	(17,044)	(20,098)	(7,088)
Closing balance cash and cash equivalents	15,725	20,596	41,648	24,603	4,504	

Assumes past three years' performance continue						
	FY2016	FY2017	FY2018	FY2019	FY2020	Total
Cash from operations	29,000	29,000	29,000	29,000	29,000	145,000
Cash required to repay loans and interest	(47,982)	(46,139)	(52,642)	(71,845)	(75,282)	(293,890)
Investment activities	(61,652)	(48,507)	(45,981)	(75,907)	(80,607)	(312,654)
Cash required to fund investment activities	(80,634)	(65,646)	(69,623)	(118,752)	(126,889)	(461,544)
Net borrowings	76,368	51,371	46,700	47,564	46,555	268,558
Movement in cash and cash equivalents	(4,266)	(14,275)	(22,923)	(71,188)	(80,334)	(192,986)
Closing balance cash and cash equivalents	7,328	(6,947)	(29,870)	(101,058)	(181,392)	

## 5 How Financial Information was reported

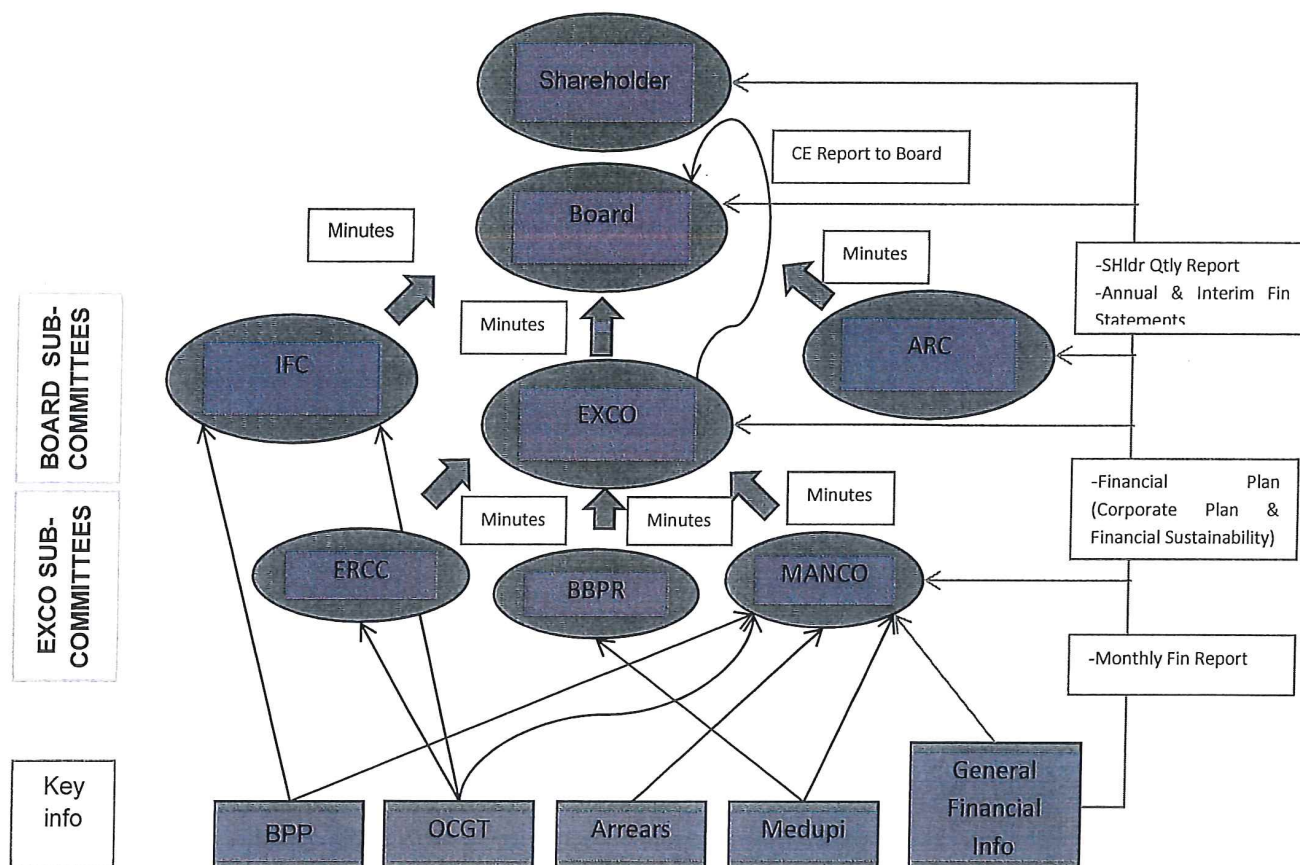
### 5.1 The Flow of Financial Information Through EXCO

5.1.1 The Group Finance, Regulation and Legal Division has eight operating units (OUs) of which there are three which feed financial information to Eskom Management:

- (a) Treasury (██████████)
- (b) Financial Planning & Economic Regulation (██████████)
- (c) Financial & Management Reporting (██████████)

5.1.2 Information is communicated via regular written reports, special issue written reports and verbal presentations at committee meetings.

5.1.3 The following diagram<sup>191</sup> sets out the flow of financial information to Eskom management and is explained further below.



### 5.2 Financial reporting to EXCO

5.2.1 Eskom is managed through a number of sub-committees, each with a specific focus. The EXCO itself is made up of the General Executives from each Operating Unit, as well as the

<sup>191</sup> Compiled from information provided in interviews and review of meeting minutes

Finance Director and the Chief Executive. Sitting below EXCO are eight sub-committees as follows:

- (a) Procurement
- (b) Management Committee Review (MANCOM Quarterly)
- (c) Management Committee Operations (ManCo Ops)
- (d) Nuclear Management Committee (NMC)
- (e) Investment and Capital Assurance (ICAS)
- (f) Technical Governance
- (g) Emergency Response Command Centre (ERCC)
- (h) EXCO Build Process Review (BBPR)

5.2.2 Each sub-committee is chaired by a member of EXCO, and the majority of EXCO members sit on multiple sub-committees. For example, at April 2015, N Velei, the acting Finance Director was a member of EXCO, chaired the ICAS sub-committee and was a member of Procurement, ManCo Ops and MANCOM Quarterly sub-committees<sup>192</sup>.

5.2.3 EXCO receive financial information from various sources. The most frequent of these is the Monthly Finance Report which is sent directly to the EXCO directors via email. However, there is no monthly discussion forum for EXCO.<sup>193</sup> This detailed discussion takes place quarterly at the ManCo Review sub-committee meetings. The ManCo Review committee receive quarterly reports from Treasury and Group Finance on their performance for the last three months. This information is summarised in the ManCo Review meeting minutes which are provided to EXCO for review.<sup>194</sup>

5.2.4 The quarterly Shareholder Report is the formal source of the full financial performance of the business. These are prepared quarterly by Group Finance and bring together various inputs from the different operating divisions, as well as a second review by the Finance Director.<sup>195</sup>

5.2.5 The reports are typically passed through EXCO, however, this is seen as more for their reference than comment or action. No challenge on the content of the report is typically forthcoming from EXCO<sup>196</sup> as the main review process is from the Audit and Risk Committee ("ARC"). ARC approves the reports subject to acceptance by the Board, however, in practice the Board will generally agree provided the report has ARC approval. The time frame to prepare and provide these to the Shareholder is tight and would not be achieved if the Board reviewed in advance.

5.2.6 A key part of the Shareholder Report is made up of Group Finance's Monthly Financial Reports provided to EXCO. These are prepared monthly by Financial & Management

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<sup>192</sup> Overview of sub-committee members – attached to Exco meeting minutes 1 April 2015

<sup>193</sup> ██████████, Group Finance, 19 June 2015

<sup>194</sup> Our review of MANCOM Review minutes was limited to meetings on 4 February 2013, 29 April 2013, 24 July 2013 only.

<sup>195</sup> ██████████, Group Finance, 19 June 2015

<sup>196</sup> Group Finance, 19 June 2015

Reporting and supported by the Finance representative from each Division who assist to provide narrative on the operational activity and associated financial impact.<sup>197</sup>

5.2.7 The Corporate Plan was presented to EXCO and approved for onward submission to the Board in February 2014. The Corporate Plan sets out the strategy, financial plan and borrowing programme for FY15/16 to FY20/21 and contains detailed analysis and forecasting based on Eskom's current financial position. It is reviewed annually. The Financial Sustainability Plan is a subset of the Corporate Plan and is something that has been reviewed more frequently in the past two years due to the focus on profitability and liquidity of the business.

5.2.8 The Integrated Report and Annual Financial Statements, as well as the Interim Financial Statements, are also provided to EXCO for their review once a year before submission to the Board.

5.2.9 The BPP team report directly to EXCO on their progress.

5.2.10 A detailed summary of the regular reports provided to EXCO and ManCo Review are set out below:

Presentation type	Prepared by	Frequency	Intended recipient	Other Reviewers	Notes
<b>Integrated Report / Financial Statements &amp; Interim Financial Statements</b>	Group Finance	Bi-annually	Public	EXCO, Board, Shareholder	-
<b>Shareholder reports</b>	Group Finance	Quarterly	Shareholder	ARC for review, accepted by Board (no challenge), EXCO for reference (no challenge)	Includes input from various Divisions; collated by Group Finance such as Investment Monitoring Report
<b>Financial Plan as part of Corporate Plan; Financial Sustainability Plan</b>	Group Finance	Annually – with updates on Financial Sustainability	Board EXCO	EXCO	Produced for the next 6 years. Sustainability Plan focuses on profitability and liquidity.
<b>Monthly Financial Reports</b>	Group Finance/Martin Buys	Monthly	EXCO <sup>198</sup>	-	Sent via email to EXCO directors. Form basis of SH Report
<b>Business Results Briefing</b>	Group Finance	Annual	EXCO	-	Annual commentary on the financial position at year end.
<b>Treasury Quarterly Performance (incl dashboard and Performance Dialogue Template)</b>	SGM: Treasury	Quarterly	ManCo Q EXCO	Board Shareholder	Feeds into Shareholder Report
<b>Finance Business Performance results (including Dashboard and Performance Dialogue Template)</b>	GM: Group Financial Controller	Quarterly	ManCo Q EXCO	-	-
<b>Shareholder Compact and Incentive Scheme</b>	FD	Quarterly	ManCo Q EXCO	Board Shareholder	-

<sup>197</sup> ██████████, Group Finance, 19 June 2015

<sup>198</sup> ██████████, Group Finance, 22 May 2015

### 5.3 Treasury and Cash flow information to EXCO

5.3.1 Cash flow within Eskom is managed and monitored by the Treasury division. The division sits as part of Group Finance and has a main reporting line to EXCO. Treasury also reports to various Board sub-committees including ARC, IFC and the EXCO sub-committee Manco Review. There is no direct interaction between Treasury and the Board and all reports are filtered through EXCO or, in the case of the Shareholder Report, ARC.<sup>199</sup>

5.3.2 They are adequately staffed with a 60 person team and are well-qualified with a range of skill sets. Over the last two years of this review, there has been some leavers and the team admit they struggle to find the relevant skills in house to replace those leavers.<sup>200</sup>

#### 5.3.3 Monthly Cash Flow forecast

- (a) Treasury use a Cash Management Software tool separate to Eskom's SAP Financial System. Each month, all divisions are required to provide a template of their cash flow forecast, which is input into their cash prediction model to produce the overall Monthly Cash Flow forecast. A variance analysis compared with last month is performed and this forecast then forms the basis of the Cash Lab report (see below).<sup>201</sup>
- (b) Business Partners know their divisions and risks best and therefore are required to update the risks to their budget which will then feed to Treasury.
- (c) The Monthly Cash Flow forecast is presented to all Finance Business Partners from each Division who can raise issues or inaccuracies if necessary.

#### 5.3.4 Cash Lab Report

- (a) A monthly "Cash Lab" meeting is held between heads of finance from the businesses, formerly under the chairmanship of the Finance Director but now moved to the Financial Controller. The purpose of this meeting is to discuss liquidity requirements of the business in practical terms and control and monitor the risks. The report analyses positions for the next five year period as well as liquidity on a daily basis for the next two months.<sup>202</sup>
- (b) The report is derived from the Monthly Cash Flow Forecast, and a view is taken on the base assumptions in the Monthly Cash Flow. A cost is not considered certain until the relevant committee has approved the budget amount for that item. Where forecasted costs cannot be accurately captured or assessed, it is described as a risk item, and the risks items are flexed based on the likelihood of the cost materialising.
- (c) For example, in the case of the BPP or the Medupi delays, Treasury will run several scenarios based on advice from the business, on assumptions that 75% of the savings will be materialised, or 80% of the cost will occur in FY15.
- (d) The Cash Lab committee has no decision making authority. The Cash Lab Reports from the Cash Lab meetings are issued to the Finance Director, IFC and EXCO and

199 [REDACTED] and [REDACTED], Treasury, 13 May 2015

200 [REDACTED] and [REDACTED], Treasury, 19 June 2015

201 [REDACTED] and [REDACTED], Treasury, 19 June 2015

202 [REDACTED] and [REDACTED], Treasury, 13 May 2015

are available in Monthly Finance Reports which we understand are submitted to ManCo Review.

- (e) The tracking of the variance between budgeted and actual cash levels sits with the Financial & Management reporting team.

#### 5.3.5 Treasury Quarterly Reports

- (a) A Treasury Quarterly report, signed off by the Finance Director, is provided to ManCo Review and various Board Sub-Committees such as ARC and IFC.
- (b) An extract of the figures are then included in the quarterly Shareholder Reports.<sup>203</sup>

### 5.4 Budgeting and forecasting process

5.4.1 The business' financial budget is aligned with the 5-year MYPD submission to the regulator and follows a well-documented process. As the MYPD submission is formally submitted to NERSA, it means that the agreed five year budget is not subject to flex and will only change under extreme circumstances. The OCGT budget was set in the regulatory submission and so even though higher usage has been subsequently forecasted, the budget cannot be adjusted. An adjustment can be made to the formal MYPD budget in the case of differing sales volumes to those predicted.<sup>204</sup>

5.4.2 The Quarterly forecasts are used to adjust the budget and used as 'the new reality to measure against'.<sup>205</sup> The Quarterly Forecasts, updated in June, September and December, capture significant movements in the cost base, which are then included in monthly reports provided to EXCO. Each of the General Executives within EXCO should already be aware of forecasted changes as they will be involved in producing their division's Forecast.<sup>206</sup>

5.4.3 Upon changes in the cost base, the finance business partner will work with the divisions to understand the cost implications but each operational division would be responsible for bringing it to the attention of the necessary people on a monthly basis. The Cash Lab sessions will assess the cash impact of the change, and should a fundamental shift in the funding plan be forecasted, the Cash Lab would identify this.

### 5.5 Financial reporting to the board

5.5.1 All financial information and reporting to the Board will be via EXCO in the first instance, with no direct written or verbal submissions from Group Finance. The Chief Executive will typically verbally summarise or include in the "CE Report to the Board", an overview of the business' financial status.<sup>207</sup> This is drafted by finance and reviewed by the Financial Director.

5.5.2 The Chief Executive's report to the Board was the main forum in which messages regarding the financial status of the business were passed to the Board. The CE reported to the Board on a regular basis between April 2013 and March 2015, at least at the quarterly Board meetings, and during 2014 more frequently. The Chief Executive changed three times in the period - B Dames was Chief Executive until March 2014, and was replaced by an interim CE, C Matjila, who took over for six months until October 2014 when T Matona was placed in the

<sup>203</sup> ██████████ and ██████████, Treasury, 13 May 2015

<sup>204</sup> ██████████, Finance Business Partner, 13 May 2015

<sup>205</sup> ██████████, Finance Business Partner, 13 May 2015

<sup>206</sup> ██████████, Finance Business Partner, 13 May 2015

<sup>207</sup> ██████████ Group Finance, 22 May 2015

position.

5.5.3 The other regular reports received by the Board were the Audited Financial Statements annually and the Shareholder's Quarterly report for review prior to submission to the Shareholder. This is prepared by Group Finance and will include detailed financial information based on the Monthly Financial Reports.<sup>208</sup> Group Finance also produces a monthly report comparing actual performance to budget which was provided to the Board.<sup>209</sup>

5.5.4 A detailed table of the regular financial reports received by the Board is set out below:

Presentation type	Prepared by	Frequency	Intended recipient	Other Reviewers	Notes
SH report	Group Finance	Quarterly	Shareholder	ARC for review, accepted by Board (no challenge), EXCO for reference (no challenge)	Includes financial information from operational reports
CE Report to Board	CE	Quarterly	Board	-	Summary of Finance operation report – input from the FD.
Financial Plan as part of Corporate Plan; Financial Sustainability Plan	Group Finance	Annually – with updates on Financial Sustainability	Board EXCO	-	Produced for the next 6 years. Sustainability Plan focuses on profitability and liquidity.
Monthly report on budget	C Henry	Monthly	Board	EXCO	Previously provided on a Quarterly basis to the board by O'Flaherty

5.5.5 In the period of review, the Board also received a number of ad-hoc presentations from Group Finance<sup>210</sup> which included:

- (a) MYPD3 Update, referred by IFC (Mar 13)
- (b) Overview of the Sustainability Gap and Response Dimensions (Apr 13)
- (c) Borrowing programme as input to the Eskom corporate plan 2014/15-2017/18. (Feb 14)
- (d) Key issues from the audited financial statements (June 14)
- (e) Financial Sustainability Report (Sept 14)
- (f) Eskom's current liquidity position –presented by the FD (Mar 15).

5.5.6 The ERCC Special Committee of the Board also regularly discussed the lack of money for diesel from around late 2013. This committee would report to the Board Chairman.<sup>211</sup>

<sup>208</sup> ██████████, Group Finance, 22 May 2015

<sup>209</sup> ██████████, Senior Manager Treasury, 10 June 2015

<sup>210</sup> Board meeting minutes

<sup>211</sup> ██████████, Senior Manager Treasury, 10 June 2015

## 5.6 The IFC and Financial Reporting

- 5.6.1 The Investment and Finance Committee (IFC) is a sub-committee to the Board, which is made up of Board members and the Finance Director alongside invited General Executive from EXCO. Its mandate is to deal with investment decisions and has delegated authority by the Board to approve certain budgets, which include OCGT costs and the BPP. For example, in the case of OCGT costs, in FY14/15, the approval of the contingency budget for these costs was delegated to IFC. EXCO do not approve the OCGT budgets and budget increases.
- 5.6.2 The IFC does not receive monthly financial reports from Group Finance, nor does it approve the Shareholder Report which is reviewed by ARC, a separate Board sub-committee. The IFC will review the annual Financial Plan and its members will have access to the Quarterly Shareholder Report through the Board.<sup>212</sup>
- 5.6.3 The IFC also received regular updates on the progress of the BPP, capex projects including Medupi and OCGT costs from the relevant General Executive.

## 5.7 Treasury Reporting to the Board

- 5.7.1 The main line of communication between Treasury and the Board is during the approval of the Borrowing Programme, produced and presented to the Board as part of the Corporate Plan. Any feedback from the Board on the Borrowing Programme will be delivered immediately to Treasury for attention.<sup>213</sup>
- 5.7.2 Other borrowing and cash flow related issues will be presented in other sub-committees and Treasury are not made aware if they are discussed at Board level.<sup>214</sup> Again, the Treasury Quarterly report will be included in the Shareholder's Quarterly report which is submitted to the Board.

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<sup>212</sup> ██████████ Group Finance, 22 May 2015

<sup>213</sup> ██████████ and ██████████, Treasury

<sup>214</sup> ██████████ and ██████████, Treasury, 13 May 2015

## 6 The Credibility and Correctness of Information Relating to Eskom's Financial Challenges

### 6.1 Assessment of financial reporting to EXCO, IFC and the Board

#### 6.1.1 Structure of financial reporting

- (a) The reporting structure of Eskom is made up of a number of sub-committees to the Board and EXCO. This structure relies on the production of meeting minutes documenting the discussions and issues raised at each committee, which are then provided to the superior committee in the form of a truncated report showing what was resolved. The style and content of these reports may lead to some key financial messages not feeding through to the EXCO or the Board.
- (b) ManCo Review Quarterly is where the majority of the detailed and robust discussion on the financial position of the business is generated and where any red flags or concerns are raised at a granular level.<sup>215</sup> However, the structure of the information flow means that the minutes of the ManCo Review meeting will only be provided to EXCO for discussion but not the Board. No monthly financial reports are discussed at EXCO level and the Board are only provided with the EXCO meeting reports which do not include any financial discussion that took place. The Board must therefore rely on EXCO to inform them on a timely basis of key issues and financial red flags.
- (c) The most comprehensive report received by both EXCO and the Board on the financial status of the business is the Quarterly Shareholder Report. However, we understand that there have been no instances where either the Board or EXCO have discussed this report in detail, or challenged the content and how risks were being managed, choosing to rely on the ARC approval.<sup>216</sup>
- (d) We noted that the EXCO members made up the majority of individuals sitting on the EXCO sub-committees, just in various different combinations. For example, at April 2015, EXCO member ██████████ was Chairman of Manco Operations, and a member of Manco Review, MMC, Technical Governance, ERCC and EXCO Build Review Steering Committee. Another example, also at April 2015, the Chairman of EXCO ██████████ (Interim CE) is also Chairman of Mancom Review, and Chairman of EXCO Build Review Steering committee.<sup>217</sup>
- (e) We noted very little discussion or challenge of the sub-committees resolutions in the EXCO meeting minutes and this could be because the structure curtails any robust discussion of issues presented to EXCO by the sub-committees. Many of the members have already discussed and approved the resolutions at the sub-committee meeting and it is the same individuals making the decisions at the sub-committee that are ratifying those decisions at EXCO, perhaps lacking independence in the process, or at least making robust challenge from other members of EXCO difficult.
- (f) The IFC do not appear to get direct updates on the financial status of the business. Given that a key part of their role is the approval of material budgets, as delegated from the Board, it would appear sensible to ensure that the IFC have a full financial

<sup>215</sup> Our review was limited to only three MANCOM Quarterly meeting minutes.

<sup>216</sup> Group Finance, 22 May 2015

<sup>217</sup> Appendix 3 - Table of committee members in Exco minutes 1 April 2015

picture in order to make those decisions. We understand more recently, however, that the CE and FD do have responsibility to report to IFC directly.

#### 6.1.2 Accuracy of financial reporting

- (a) We found no evidence that the financial information provided to EXCO or the Board was inaccurate or deliberately manipulated.
- (b) However, there were occasions identified where the accuracy or completeness of information provided to the Board was called into question. In April 2013, regarding discussion on the newly initiated BPP, "a member was concerned that the Board was being requested to make decisions without all the information"<sup>218</sup>. In August 2014, ██████████ ██████████ told EXCO that all statements made to Board Committees should be factual so as to ensure that the Board did not make decisions on incorrect information. There is an implication in that statement that incorrect or subjective information had been given to the Board Committees in the past.<sup>219</sup>

#### 6.1.3 Culture of approving budgets without funds

- (a) There was evidence in the minutes that various committees, from the IFC up to the Board, would grant approval for an increase in budget without knowing whether funding was available for the project or transaction. The main example of this was diesel supply for OCGT, for which the Board approved additional budget of R9bn until March 2014 but there was no mention in the minutes of where the funds will be sourced given there was already an overspend compared to the budget.<sup>220</sup> In February 2014, the Board approved further OCGT diesel spend of R1.6bn and it was noted in the meeting that the Minister would be informed of the additional fuel purchases and be requested to confirm if funding will be made available.<sup>221</sup> In May 2014, the IFC approved an additional cost of R194m for IPPs, but the committee acknowledged at the same meeting that did not know how they would fund it and discussed how the funding will be found.<sup>222</sup>
- (b) These instances reveal the fact that senior committees are not thinking about funding in the correct way. The mentality of approving initiatives "subject to funding" rather than "subject to budget"<sup>223</sup> shows a lack of awareness of the financial difficulties the company is in. The lack of sensitivity to budgets by the business may indicate a 'too big to fail' attitude and reliance on state bail-out.

#### 6.1.4 Culture of poor financial budgeting

- (a) Eskom's financial budgeting process could be called into question. The first example was the continual over-spend against OCGT diesel budget. Throughout early 2014, the budget was continually over-reached and further extensions were approved by the Board. EXCO discussed the fact that it was "a real risk that both of the projections referred to above are not realistic in light of the current usage of the OCGT fleet." Yet

<sup>218</sup> Board breakaway session 3 to 4 April 2013

<sup>219</sup> Exco meeting minutes 29 August 2014

<sup>220</sup> Exco meeting minutes 14 January 2014

<sup>221</sup> Board meeting minutes 17 February 2014

<sup>222</sup> IFC meeting minutes 16 May 2014

<sup>223</sup> Senior Officer, Treasury, 10 June 2015

no action seems to have been taken to remedy these poor projections.<sup>224</sup>

- (b) Secondly, the presentation of the Corporate Plan FY14/15 – FY17/18 and supporting financial plan to the Board in February 2014: The financial plan is necessarily highly subjective given the uncertainty of incoming revenue of the business. Both the cash flow and income statement projections in the financial plan, therefore, were dependent on the business achieving additional funding through RCA claims as well as R60bn of cost savings from the BPP<sup>225</sup>. However, attaining a full RCA grant of R31bn, as admitted by the CFO<sup>226</sup>, would be of low likelihood while the BPP had yet to realise any cost savings at this date. As the CFO said, the financial plan is underpinned by “serious game-changing assumptions”:<sup>227</sup> We would expect that a long term plan of this nature to follow an element of prudence<sup>228</sup>, combined with accepting some conditional probabilities into the projected figures. The method of planning and budgeting appears to have been more aspirational than sensitive to probabilities attached to the inflows and outflows. Risk items are logged and monitored, however.

#### 6.1.5 Assessment of Treasury reporting

- (a) How complete and accurate are the cash flow reports feeding to EXCO?
- (i) Both the Treasury Quarterly Report and the Cash Lab report provide EXCO, as well as the relevant sub-committees, with sufficient and in-depth information regarding the cash flow position of the business. The Treasury Quarterly reports are very detailed in laying out progress and status of borrowings and cash flow, while the Cash Lab distils the information into a shorter and more candid account which assesses probability of certain costs occurring.
- (ii) In March 2014, [REDACTED] were appointed to perform an audit on the internal financial controls relating to the Formulate Borrowing Programme and Funding Plan Process – in other words, to assess whether Eskom had optimised its funding sources at the required time and at acceptable risk levels. The audit gave Eskom Treasury a clean bill of health.<sup>229</sup>
- (iii) Treasury uses a robust cash flow model to derive predicted cash flow numbers that feed into the Monthly Cash Flow Forecast and the Cash Lab reports.<sup>230</sup> These predictions rely on the input from the Finance Business Partners at each division to provide Treasury with accurate and timely budget forecasts, which appears to be the biggest risk to the accuracy and timeliness of the forecasts.
- (iv) Treasury deals with these risks by applying conditional probability of the risk materialising and will not input a full cost into the model until it is officially

<sup>224</sup> Exco minutes 14 January 2014 referring to OCGT over-spend of R1.9bn against R1.6bn budget.

<sup>225</sup> Board meeting minutes 17 February 2014

<sup>226</sup> Board meeting minutes 2 April 2014

<sup>227</sup> Board meeting minutes 2 April 2014

<sup>228</sup> A fundamental concept under International Accounting Standards, the prudence concept states that a transaction or an asset should only be recorded once it is certain, while an expense transaction or liability should be recorded only when it is probable.

<sup>229</sup> Key Internal financial Controls – Formulate Borrowing Programme and Funding Plan Process

<sup>230</sup> [REDACTED] and [REDACTED], Treasury, 19 June 2015

approved by management. Uncertainty around the Capital Build projects produce the biggest swing in the cash forecasting model, but most other changes to the projections are much smaller.

- (v) We found no deficiencies in the completeness and accuracy of cash flow reporting, or the methodologies used in the reporting process.
- (b) How timely are the cash flow reports provided to EXCO?
- (i) In January 2014, Treasury reported to EXCO on the serious effect that diesel spend was having on the liquidity of the business. The 'Funds Availability at January 2014' report presented to the Chief Executive stated "the ongoing utilisation of liquid funds, generated mainly from additional borrowing activity, to fund operational requirements is concerning and not sustainable as Eskom still need to roll out a large portion of the proposed R251 billion capital programme. If decisions are not made taking into consideration the existing circumstances both in terms of profitability and cash then Eskom's going concern and longer term outlook will continue to be negatively impacted."<sup>231</sup> Although presented, the minutes do not show any discussion on this report by EXCO. EXCO subsequently passed this message to the Board at the next Board meeting in February 2014.
  - (ii) It does not appear from the Treasury Quarterly Report at September 2013 that there was a dramatic downturn in the liquidity position and no cause for immediate alarm. Liquidity days were outside of target (180 days against target of 120 days) but had been for some time, and cash itself was above the R20bn buffer and higher than it had been in March 13 (R38bn vs R23bn in March 13). The Treasury submission at the MANCOM Q meeting in September 13 shows no discussion of liquidity and in fact, the focus was on unpaid invoices.
  - (iii) The cash lab forecast had shown declining liquidity forecasts throughout the year<sup>232</sup> and although it was viewed within treasury regularly, this information may not have been sufficiently considered by EXCO or its sub-committees. The EXCO committee did not discuss the cash flow forecasts itself, however discussions did take place at the ManCo Quarterly review, where EXCO members were largely represented.
  - (iv) In November 2013 Treasury submitted a presentation to the Manco Ops meeting in which it described its view of Eskom's Financial Sustainability risks as a result of the MYPD3 Revenue shortfall, and the impact on liquidity and portfolio risks. It was noted that the response budget and the BPP implementation was the focus of the current and next year and that liquidity was being monitored. It also pushed for greater buy-in from EXCO and the Board to address a reopener for the years 3, 4 and 5.
  - (v) When Treasury told EXCO in January 2014 that cash would run out by May 2014, it was on the basis of the current state of limited funding options, high OCGT spend and Medupi build continuing on schedule. The announcement in January effectively gave the business six months warning of negative

<sup>231</sup> Funds Availability at January 2014' attached to Exco meeting minutes 15 January 2014

<sup>232</sup> According to a Treasury officer

liquidity. As it happened, delays in Medupi meant a lower spend against budget and the government support package gave some comfort to potential lenders resulting in a situation where they did have enough funds.<sup>233</sup>

- (vi) It would appear that the escalation of the liquidity scare, and the requirement to cut costs were communicated on a timely basis to EXCO in the sense that members also attended Manco Review meetings.

## 6.2 Assessment of how well the Board/EXCO communicated and dealt with specific financial challenges

- 6.2.1 This assessment is based on review of meeting minutes and other documentation. We have not interviewed any members of the Board on these specific financial challenges.
- 6.2.2 Was the Board/EXCO aware of the declining financial situation, specifically rising OCGT costs and the consequent liquidity crisis? Did they question the prices being paid for diesel?
- (a) It appears that it was not until the February 2014 board meeting that the Board came to appreciate the significant and serious liquidity situation the Eskom business was in. Dames' CE report in February 14 conveys how the OCGT costs are extremely high and not sustainable. He told the Board that there were limited operating reserves available to Eskom and no means to fund the diesel spend, with government injection not forthcoming.
- (b) At that Board meeting, the Corporate and Financial Plan was submitted for 14/15-17/18 financial years. Amongst other problems, it was conveyed that continued use of OCGT for next three months was projected to cost R10.2bn, the regulator hadn't confirmed if it would cover these costs and as a consequence, it was predicted that liquid reserves would run out in three months.<sup>234</sup>
- (c) Based on the questions and discussions by the Board in the minutes, they appear surprised by the state of the businesses, in particular the liquidity position. The acting Chairman enquired over the time left before cash resources were depleted and stated that the Board needed to urgently make a decision on funding of the unfunded levers in the best interest of the company. He supported the suggestion of a crisis committee being established.
- (d) The Board held a robust discussion at the meeting saying that a plan was needed to engage with the Shareholder on funding and requested management to focus urgently on the plan and report back to the Board, calling a special Board meeting if necessary. The Chairman also asked whether there were any other viable option to the OCGT costs other than load shedding, but as stated in the Corporate Plan, the best alternatives would still require R8bn (vs R10bn for OCGT).
- (e) Why was the February cash flow report a surprise?
- (i) Throughout 2013, the CE reports to the Board highlighted the growing OCGT burden and the fact that it was not sustainable. In October 2013 the Board approved an additional R9bn budget for OCGT usage, subject to the funding being obtained from National Treasury and/or the Department of Energy and the Board were told the next month in November 2013 that the budget

<sup>233</sup> [REDACTED], Senior Manager Treasury, 10 June 2015

<sup>234</sup> Board meeting minutes 17 February 2014

approved in the prior month would be used by March 2014 if there was no improvement in the situation. They therefore would have been aware of the growing costs.

- (ii) This November meeting was the last Board meeting before February 2014. Dames submitted a detailed CE report but it did not highlight the red flags or urgent cash implications associated with the OCGT spend. Towards the end of the report, the key risks to the business are set out, of which the third of these risks (after New Build and Security of Supply) was diesel spend.
  - (iii) ██████ report showed no sense of urgency regarding this issue or recognition that liquidity was a serious problem. His report does not comment on liquidity, nor does it not set out the short/medium term impact of the diesel spend risk. The only response to the risk was that "BPP forms the core of the treatment plan". The Board, having approved a significant extra budget in October 2013 for OCGT costs, were aware of the rise in spending above plan but the impact on the rest of the business; in particular liquidity was not made clear.
- (f) Were the business and Chief Executive aware of the position prior to February?
- (i) EXCO, as with the Board, were aware of the OCGT costs spiralling because of the budget overruns that had to be requested from the Board. However, EXCO were only told in the strongest terms at the January EXCO meeting by Group Finance that the liquidity situation was in serious decline.
  - (ii) It would appear that the sense of reporting was that in the short term Eskom could survive and that the long term solution was paramount. To underline this, we understand that a *JP Morgan* report on the potential for spiralling funding problems was presented in a Board Breakaway in October 2013.<sup>235</sup>
  - (iii) Further enquiries should be made to assess the state of the cash lab during this period, whether the diesel forecast was accurately reflected, and how the consultations with the National Treasury and Department of Energy, if any, impacted the forecasts.
  - (iv) The sense of surprise to the cash crisis may well stem from the fact the Medupi start date was not formally acknowledged before the end of 2013, and/or that it was felt the State would support Eskom in the resulting diesel expenditure: the bad news on both counts, when fed into the liquidity outlook, only crystallising in January 2014 as the corporate plan was compiled.
- (g) What was the response once the Board were aware?
- (i) In April 2014, the IFC approved additional allocation of R750m for OCGT to be added to the R10.85bn already allocated and a letter had been sent to the DPE to request financial assistance<sup>236</sup>. In June 2014, the CE commissioned an Emergency Task Team in relation to the company's financial position and it presented a detailed overview of the crisis financial situation to the Board in June 2014.

<sup>235</sup> ██████ and ██████, Treasury, 13 May 2015

<sup>236</sup> IFC meeting minutes 1 April 2014

- (ii) In August 2014, the IFC also escalated that the Board needed to answer whether or not to continue with the use of the OCGT plant. In September 2014, the message to the Board was that, at current usage rates, the current diesel budget will be used up by November 2014. The Chairman suggested Eskom approach the Strategic Fuel Panel to request the supply of cheaper bulk diesel fuel.
  - (iii) In November 2014 at the IFC, management tabled a presentation on the OCGT contingency but the committee were hesitant and only approved R1bn. The IFC asked management to go away to consider the options and strategy around load shedding.<sup>237</sup> Increasing diesel usage was raised again in November 2014 and January 2015 to the Board but no resolutions were made. At March 2015, the FD presented on the severe liquidity position due to high diesel expenditure and delays in funding. She explained that an MOU with Transnet was being drafted for the supply of diesel.
  - (iv) By November 2014, OCGT overruns seem to have been accepted as the norm, as comments from Finance such relating to "the negative impact on finances of an increase of R8Bn in OCGT costs for the 2014/15 financial year" are merely noted in the EXCO meeting<sup>238</sup>. Once again between December 2014 and February 2015, EXCO were aware of OCGT spend increasing outside budget and in April 2015, EXCO reported the Board had approved an extra R2.8bn budget.
- (h) Was getting a better price for diesel ever raised?
- (i) The issue of getting better diesel prices was discussed by EXCO in May 14, raised by the Acting GE: T&C M Koko, who "questioned as to how the diesel consumption could be used to get better prices." The CE Matjila stated "this should be part of an overall business discussion (not just EXCO) to take the purchase of diesel out of the operating space and looking at Eskom as a whole in order to ensure that management crafts more sustainable strategies going forward."
  - (ii) The IFC minutes ratified a resolution made by ICAS to negotiate an increased discount of 6-8c/litre on diesel for OCGT as part of the BPP<sup>239</sup>.
  - (iii) As mentioned above, at March 2015 the FD told the Board that an MOU with Transnet was being drafted for the supply of diesel.
  - (iv) Although there were some passing remarks regarding getting a better price for diesel, this does not appear to ever be fully discussed or debated by either EXCO, IFC or the Board. The focus throughout the period and still today appears to be to seek outside stakeholders to remedy the problem.

<sup>237</sup> The IFC asked Exco to consider research to determine the extent of load shedding that could be tolerated; hold discussions to assess the impact that load-shedding would have stakeholders; and should begin to consider the best possible ways and strategies of how the Shareholder could be notified about the true state of affairs around load shedding.

<sup>238</sup> Exco meeting minutes 17 November 2014

<sup>239</sup> IFC meeting minutes 1 April 2014

- (i) Responses from the CE to the financial situation
  - (i) The CE Report from Matjila in September 2014 conveyed to the Board in what appear to be *prima facie* much stronger terms than his predecessor, the ramifications of the situation. Matjila states "Eskom's Balance sheet is significantly compromised; cash flow analysis states will be negative cash by May 2015". He goes on to say that 'Drastic measures must be taken to ensure Eskom's financial viability.'<sup>240</sup>
  - (ii) However, when [REDACTED] presents his first CE Report to the Board in November 2014, he does not appear to believe the business is in a dire situation. He talks of an 'unfortunate coincidence of an economy under performing and Eskom being central to the economy' and that 'we are not yet in crisis.....but....cannot allow current financial constraints curb our ambition and ... will work towards the future rather than one anchored by our current constraints.'<sup>241</sup>
  - (iii) Without more context, such as interviewing [REDACTED], it is difficult to conclude with any certainty, but there is a hint of the "too big to fail" mentality in this statement.

### 6.2.3 Medupi – the communication of Unit 6 synchronization delays to the Board

- (a) The DPE had reiterated at the Board Breakaway in April 2013 that the deadline for the Unit 6 completion must be December 2013. In the same meeting, EXCO appears to disregard a consultancy report tabled at the meeting which stated that the first synchronization was likely to be late and instead informed the Board they are still committed to deliver by 31 December 2013 and will take all steps and actions necessary.<sup>242</sup>
- (b) It was clear the Board was frustrated with the lack of a 'single clear view on commencement date' from EXCO in April 2013. The Board felt that it was important to get transparent and full disclosure to ensure it could consider the matter appropriately.<sup>243</sup> There was even a suggestion in February 2013 from the Minister that at the time of the MYPD3 application, the fact that Medupi would be delayed was known to the business. The FD refuted that these delays were only reported in December 2012, after the application submission<sup>244</sup>.
- (c) In August 2013, the Chief Executive reports to the Board that Medupi is still on schedule<sup>245</sup> but this message changes by November, when he states in his Report to the Board that the possibility of a delay is high<sup>246</sup>. Although a Board meeting was held between August and 28 November, no reference was made at this interim meeting to the pushback in completion.
- (d) There is much uncertainty around the synchronisation date of Unit 6 and this is revealed in the messages being conveyed by EXCO to the Board. It is possible that

<sup>240</sup> CE Report to the Board 15 September 2014 ([REDACTED])

<sup>241</sup> CE report to the Board 28 Nov 2014 ([REDACTED])

<sup>242</sup> Board breakaway session 3 to 4 April 2013

<sup>243</sup> Board breakaway session 3 to 4 April 2013

<sup>244</sup> Board breakaway session 3 to 4 April 2013

<sup>245</sup> CE Report to Board 28 August 2013

<sup>246</sup> CE Report to Board 28 November 2013

the liquidity crisis announced in January was only possible once the business had accepted Medupi would not come on line at the end of December 2013, and the drains up energy availability plan had been crafted with obvious ongoing requirements for diesel. In a sense, the collective business acceptance of this would have finally impacted the cash lab modelling.

6.2.4 Medupi – did the Board and EXCO appreciate the financial impact of delays?

- (a) In May 2013, the Medupi cost to completion estimate increased by R13.7bn and a revised budget approval was submitted to the IFC. In September 2013, labour strike delays at Medupi are discussed by EXCO, in which they estimate that the strikes cost R2bn and recognised that it will continue to escalate if the situation is not resolved.<sup>247</sup> In February 2014, the new commissioning date was confirmed as December 2014 and the Chief Executive told the Board that the delay costs so far have been absorbed into contingencies provisions. A year later, the Board were told by the CE that the revised December 2014 deadline had not been met and an anticipated R30bn increase in executing the project plus provisional funding of R10bn was required.<sup>248</sup>
- (b) Although there was regular discussion around the delays in the Medupi first synchronization date and the budget revision at both IFC and Board level, there did not appear to be discussion at either the EXCO or Board about the overall financial effect of the Medupi delays on the business, in particular the link between the cash shortage, diesel spend and Medupi.

6.2.5 BPP – were the Board and EXCO fully aware of the slow progress made by BPP and what was their response?

- (a) In September 2013, approximately five months after the programme was launched, it was acknowledged by the EXCO that the BPP was not working as quickly as management would like. This was due to resource constraints and a task team was set up to accelerate implementation. A deadline of March 2014 was targeted for approving R50bn of savings.<sup>249</sup>
- (b) Between September 2013 and March 2014 no real discussion took place at EXCO or IFC level regarding the BPP. However the CE did report to the Board on the BPP methodology in November 2013 and February 2014, saying that the initial phase to define savings would be complete in March 2014 but there was still a gap of R5bn to be identified.
- (c) In March, the BPP team were still only “preparing the organisation to ensure productivity improvements could be sustained” rather than materialising any savings. In April 2014, the Board were told that identified savings stood at R57.1bn but with only R1bn realized. The CE communicated that although the savings were essential, not all BPP savings would materialise as some were outside of Eskom’s control and the new savings target of R60bn was a stretch target.<sup>250</sup>
- (d) In May 2014, there was a push from the CE that BPP needed to be the business imperative across Eskom and be taken seriously, not just by Finance. The loss of

<sup>247</sup> Exco meeting minutes 16 September 2013

<sup>248</sup> Board meeting minutes 16 February 2015

<sup>249</sup> Exco meeting minutes September 2014

<sup>250</sup> CE Report to the Board 2 April 2014

bonuses linked to BPP savings also helped deliver the message.<sup>251</sup> In June 14, the Emergency Task Force presented to the Board that they were looking to identify cash unlocking opportunities in the Balance Sheet.<sup>252</sup> going 'further than BPP'.

- (e) In August 2014, the CE questioned all Divisions as to why items identified as not critical should not be removed from their budgets and called for an independent investigation over one particular GE's budget cutting.<sup>253</sup>
- (f) EXCO did not discuss BPP again for three months until November 2014 when the FD reported that "the success of BPP would not be apparent until the last year of the MYPD3", perhaps providing an excuse for the slow progress.
- (g) Dames appears to appreciate the slow initial progress in the BPP in September 2013 when he applies more resources to the project. In May 2014, the new CE Matjila appears to see that the programme is not being taken seriously by the business and drives the message that BPP is something the whole business must engage in. He commissions an Emergency Task Force, withholds bonuses and scrutinises those GEs who were not producing the required savings. However, under the new CE, Matona, this drive from Matjila appears to be lost and negative progress ensues, including the fact that originally identified savings of R5.9bn are no longer available<sup>254</sup>.
- (h) The progress on BPP appears to have been consistently communicated to the Board throughout the life of the BPP, however, we have not seen any challenge from the Board on this progress. Given they were aware of the necessity and urgency for the BPP to deliver savings, one would expect greater challenge from the Board.

6.2.6 Arrears - was there sufficient discussion by EXCO/Board about serious, growing financial impact of arrears?

- (a) The issue of municipality arrears was not discussed often at Board or EXCO level, as the main forum would be MANCOM Quarterly. As early as April 2013, it was reported at MANCOM Quarterly that it was the first year that the provision for municipalities was for more than 90 days.<sup>255</sup> This message of the growing provision was not passed on to the Board at that time.
- (b) It was first mentioned by EXCO in August 2013, in which they wanted to work with National Treasury to collect the debt and the Board discussed the arrears in September 2013 in relation to management's response to perceptions that Eskom would simply write off the debt if a customer did not pay.<sup>256</sup>
- (c) The provision has grown significantly by January 2014 and EXCO do note the direct impact this has on cash flow at their meeting. The topic was reported again in May 2014, when the FD reported to EXCO that she had begun discussions with National Treasury to consider ring fencing the payment of government grants to

<sup>251</sup> Exco meeting minutes 6 May 2014

<sup>252</sup> Board meeting minutes June 2014

<sup>253</sup> CIO claimed additional savings of R1Bn, but had included R320m of savings that had already been banked from IT insourcing. Board minutes 29 August 2014

<sup>254</sup> Board meeting minutes February 2015

<sup>255</sup> MANCOM Q meeting minutes 29 April 2013

<sup>256</sup> Exco's response was that the strategy was move to prepaid meters and then a write off might be considered.

municipalities.<sup>257</sup> In September 2014, the interim CE reiterated to the Board that the municipal debt was likely to continue to increase.<sup>258</sup> The CE reported to the Board in February 2015 how the municipal debt was eroding the BPP savings.

- (d) EXCO commissioned a position paper in January 2015 to engage the government stakeholders on the issue and in Mar 2015, a detailed analysis of defaulting municipalities would be provided to National Treasury for consideration around withholding grant payments.
- (e) There was awareness of the growing debt levels amongst management and the CE's report to the Board kept them abreast of the debt levels at regular intervals.<sup>259</sup>
- (f) However, this appears to be another area where Eskom are relying on government support to bail them out. The idea of working with National Treasury to collect the debt was first raised in August 2013 at EXCO, but it appears that it was not until May 2014, nine months later, that any progress was made on that front.

#### 6.2.7 Fundamental failure to reduce the cost base

- (a) In addition to assessment of the correctness and credibility of the financial information that flowed through EXCO, we have identified areas where, given their import and the obvious financial challenges Eskom faced, it would have been reasonable to assume a level of challenge and debate would have been conducted at EXCO on them, namely:
  - (i) Coal usage costs;
  - (ii) Manpower headcount and salary pay rise; and
  - (iii) Diesel ad hoc expenditure and other areas of procurement that were subject to red flags including potential influence of senior executives.
- (b) Our review has not identified commensurate challenge in these areas. It is possible, due to limitations placed on the Investigation to date that these matters were in fact tabled.
- (c) If no meaningful acts were taken to reduce or challenge the cost implications of these areas, this would appear to be a failing on the part of EXCO. Further enquiries should target these areas, therefore.
- (d) It is noted with some concern that in reaction to the MYPD3 decision the FD actually tabled a discussion around whether managing the 8% tariff increase would be a bad thing for Eskom in terms of credibility with NERSA: "How should Eskom manage the reputation risk associated with "If Eskom can make this work, then they were gaming the process at 16%"<sup>260</sup>

#### 6.2.8 Concluding comments

6.2.9 We found the following in our assessment of the financial and treasury budgeting, reporting

<sup>257</sup> Exco meeting minutes 6 May 2014

<sup>258</sup> CE Report to the Board September 2014

<sup>259</sup> CE Report to the Board 6 February 2015

<sup>260</sup> Board meeting minutes 14 March 2013

and information flow within Eskom:

- (a) The Board receives regular financial information in the form of the Quarterly Shareholder Report, but relies on the CE Report to the Board as the main summary of the business position.
- (b) The CE Report has not always conveyed the seriousness of some financial messages.
- (c) The accuracy and timeliness of both financial and treasury reporting to EXCO and ManCo Review cannot be faulted. If there was an instance in which the Board appeared surprised at bad news, the liquidity crisis alert in January 2014, this is most likely to have been a consequence of a collective denial to accept Medupi would be late, and diesel would still be required throughout that year, rather than a weakness in the financial reporting. In fact, given the financial warnings levied at EXCO and the Board between July 2013 and November 2013, bad news might reasonably have been suspected.
- (d) There is a lack of independence between EXCO members and its sub-committees which may mean less challenge of the issues at EXCO level. This lack of independence inhibits the concept that when sitting on the Executive Committee, EXCO divisional heads should put their division's agenda second to the overall business, as most sub-committee roles appear to be allocated based on the skill set of the divisional head.
- (e) IFC perform a budget approval role on behalf of the Board, but did not seemingly receive regular financial status reports.
- (f) There is a culture of setting unrealistic and inaccurate budgets, which are consistently not met.
- (g) Senior committees are happy to consistently approve additional budgets without knowing where the funding to support them will come from.

6.2.10 We found the following in our assessment of the communications on specific business issues and how the Board and EXCO dealt with those issues in the last two years:

- (a) Options and strategies to improve the price of diesel have not been adequately discussed at EXCO or Board level. Whether more substantive discussions were held elsewhere, those minutes would not have filtered upwards to the Board. What solutions were tabled appeared to seek outside State support, rather than reassess existing procurement.
- (b) There was confusion at Board level as to the message from EXCO surrounding the completion of Medupi, and neither EXCO nor the Board appear to have made a direct link between the delays and the wider financial impact on the business (outside of the Medupi capex budget).
- (c) The Board were aware of the necessity of the BPP savings but there was insufficient challenge from the Board around the slow progress of the BPP. Despite some focus from interim CE Matjila, there appears to have been insufficient drive applied by EXCO to what was meant to be the cornerstone of Eskom's response to the MYPD3 decision in years 1 and 2.

- (d) The Board were updated on the arrears position by the CE. EXCO do not appear to respond promptly to dealing with the issue, relying on government intervention to solve the issue.
- (e) Unless a line item was going adverse to budget it does not appear to be considered a financial problem. Because coal usage remained within budget it does not appear to have attracted much debate as a stand-alone cost lever at either EXCO or Board. Furthermore, despite being fully aware staff cost increases needed to remain within 6%, headcount reductions were resisted during the period and an average of 7.6% increase sanctioned.

6.2.11 Based on the information made available to us and reviewed to date we have found no fundamental issues with the credibility and the correctness of information that EXCO has provided in their reports relating to Eskom's financial challenges. In particular:

- (a) We found no instances that EXCO altered information when reporting to the Board.
- (b) We did not identify any significant information that was omitted.
- (c) On occasions there appeared to be indifference in the way that EXCO presented some financial information to the Board, but an equal indifference was shown by the Board itself to discuss or address financial issues.

6.2.12 Further enquiries may confirm a disconnect between the business and EXCO in relation to the Medupi start date, energy availability predictions and the likelihood of further expensive diesel purchases as early as September 2012 (see Chapter 2 for more details). The financial consequences of this should be deemed material, as knowledge of this would have assisted the borrowing programme to be better planned, and opportunities to find alternative options or obtain cheaper contracts for diesel supply could have started much earlier.

6.2.13 What is apparent, however, is that despite the financial implications of the MYPD3 decision being firmly entrenched in the reporting and activities of the past two years, not enough has been done to remedy the financial repercussions. This lacklustre approach is even in spite of the impact of the diesel costs, falling sales volumes and poor debt collections.

6.2.14 There are indications that three underlying causes may be behind this unresponsiveness at senior executive levels:

- (a) a systemic mentality that it is the State's responsibility to find Eskom a solution – whether driven by a sense Eskom is "too big to fail", or an under appreciation of the precarious financial status of Eskom;
- (b) a reluctance to apply appropriate pressure to the cost lever because the business is too silo'd and such savings represent what economists call a "public good"<sup>261</sup> – in other words, making savings in your division doesn't necessarily benefit the organisation as a whole, so it is suboptimal for individuals to make those savings when they have no guarantee others will "dig into their own pockets"; and
- (c) an unwillingness to seek to leverage Eskom's spending power to drive down costs with third parties. This may again be due to the systemic mentality that funds will be

<sup>261</sup> The defining characteristic of a public good is that consumption of it by one individual does not actually or potentially reduce the amount available to be consumed by another individual

found, or there may be a more sinister motivation based on personal enrichment and corrupt relationships.

- 6.2.15 The information passed through EXCO in relation to financial challenges would appear to have been largely credible and correct. It has been the collective response from senior executives that has been lacking.

## 7 Recommendations

- 7.1 A critical analysis should be conducted at Board level of the cash status over the next 12 to 18 month period. Sensitivity analysis should be applied to the risk assumptions in the model, together with key members of the finance community. Contingency plans should be put in place to manage worst case scenarios. This modelling should be less from a Treasury perspective and more from a management perspective. The following should be noted in this regard:
  - 7.1.1 Currently the emphasis is on the need to arrange new facilities in the borrowing programme, whereas sensitives should be applied to the borrowing programme just like other variables;
  - 7.1.2 Arrears should be contemplated again based on historical empirical evidence. At the moment these are not modelled due to the difficulty in predicting the actions of external stakeholders;
  - 7.1.3 Less aspirational assumptions should be applied to BPP savings, diesel expenditure and costs, more generally;
  - 7.1.4 Less aspirational assumptions should be applied to tariff increases and sales volumes;
  - 7.1.5 Consideration should be given to weaker financial ratios, negative trajectory story and credit rating impacts; and
  - 7.1.6 The model should be free of constraints dictated by the approved budget and plan, and all "at risk" items should be critically appraised.
- 7.2 Over the medium term planning timeframe, the corporate plan should be remodelled based on historical performance and the desired capex programme. Assumptions for all variables, including the new build costs and timetables, should be more prudently appraised. This analysis would be for management eyes only to assess the shortfall in the new build and other capex plans against the existing borrowing program. IFC (most likely) should be tasked with considering all funding options to meet the shortfall.
- 7.3 A thorough investigation should be conducted into the "red flag" areas of the historic cost lever. The investigation should include unfettered access to all information sources, including emails. In particular, the commercial *bona fides* of the following should be determined:
  - 7.3.1 Coal usage expenditure; and
  - 7.3.2 Ad hoc suppliers of diesel.
- 7.4 BPP cost savings should be critically challenged. An assessment of performance against design should be conducted to determine the underlying reasons for the *prima facie* limited results of efforts to reduce the cost base.
- 7.5 The Board should enforce reporting lines between Internal Audit and ARC. Special consideration should be given to empower Internal Audit, and Assurance & Forensics, in order to enable them investigate proactively and control the enforcement of sanctions that flow from the findings of their work.

## TABLE OF APPENDICES TO CHAPTER 4

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1	MYPD3 Application – detailed line item basis	[3.3.2 - pg 11]
2	List of the Debt, Securities and Borrowings position at March 2015	[4.6.4 – pg 55]
3	Overview of EXCO sub-committee members at April 2015:Appendix to EXCO meeting minutes 1 April 2015	[5.2.2 – pg 71]

**APPENDIX 1**

**MYPD3 Application – detailed line item basis**

<b>Table 55</b>	<b>Prjectns 2012/13</b>	<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>	<b>2016/17</b>	<b>2017/18</b>	<b>MYPD 3</b>
<b>Generation primary energy</b>							
<b>Coal burn costs (Rm)</b>	35 376	37 010	41 966	47 282	52 351	57 703	236 312
<b>Coal handling</b>	1 041	1 087	1 163	1 246	1 356	1 510	6 362
<b>Water</b>	1 532	2 082	2 414	2 615	2 750	2 955	12 816
<b>Open cycle gas turbines (OCGT)</b>	2 642	3 592	3 258	1 788	1 898	2 056	12 592
<b>Nuclear</b>	368	471	471	678	767	856	3 242
<b>Other primary energy costs</b>	2 543	2 348	2 070	1 932	1 901	2 197	10 449
<b>Environmental levy (Rm)</b>	8 105	8 842	9 037	9 324	9 490	9 746	46 439
<b>Total Generation primary energy (Rm)</b>	<b>51 607</b>	<b>55 433</b>	<b>60 380</b>	<b>64 865</b>	<b>70 512</b>	<b>77 022</b>	<b>328 212</b>
<b>Independent power producers</b>							
<b>Department of Energy - renewable IPPs (Rm)</b>		1 428	8 987	13 879	16 249	17 353	57 895
<b>Department of Energy - peaking IPPs (Rm)</b>		1 001	2 841	3 147	3 160	3 191	13 340
<b>Short term IPPs, MTPPP (Rm)</b>	4 784	2 760	1 473	1 017	735	498	6 483
<b>Total IPPs (Rm)</b>	<b>4 784</b>	<b>5 189</b>	<b>13 302</b>	<b>18 043</b>	<b>20 143</b>	<b>21 042</b>	<b>77 719</b>
<b>IPPs (GWh)</b>	2 795	4 152	6 214	8 233	9 015	9 071	36 686
<b>Average cost for IPPs (c/kWh)</b>	171	125	214	219	223	232	212
<b>Other primary energy purchases</b>							
<b>Distribution IPPs</b>	8	8	9	9	10		36
<b>Demand market participation Rm)</b>	4 552	3 275	1 973	1 972	1 835	2 001	11 056
<b>Imports purchases (Rm)</b>	2 970	3 611	3 006	2 810	2 973	3 243	15 644
<b>Other primary energy purchases (Rm)</b>	<b>7 531</b>	<b>6 894</b>	<b>4 988</b>	<b>4 792</b>	<b>4 818</b>	<b>5 244</b>	<b>26 737</b>
<b>Total Eskom primary energy (Rm)</b>	<b>63 921</b>	<b>67 517</b>	<b>78 669</b>	<b>87 699</b>	<b>95 474</b>	<b>103 308</b>	<b>432 667</b>
<b>Operating costs</b>							
<b>Human capital net after capitalisation (Rm)</b>	21 166	22 540	24 740	26 765	29 313	31 364	134 721
<b>Maintenance</b>	10 342	12 020	13 288	15 839	18 120	16 855	76 122
<b>Cost of cover</b>	961	2 158	1 828	1 678	1 025	485	7 174
<b>Arrear debt</b>	763	927	1 051	1 215	1 388	1 511	6 092
<b>Other</b>	11 948	13 212	14 045	15 438	15 500	17 263	75 458
<b>Operating costs before efficiencies target (Rm)</b>	<b>45 180</b>	<b>50 857</b>	<b>54 952</b>	<b>60 934</b>	<b>65 346</b>	<b>67 478</b>	<b>299 568</b>
<b>Efficiency targets</b>	- 3 000	- 6 000	- 6 000	- 6 000	- 6 000	- 6 000	- 30 000
<b>Net operating costs excl IDM (Rm)</b>	<b>42 180</b>	<b>44 857</b>	<b>48 952</b>	<b>54 934</b>	<b>59 346</b>	<b>61 478</b>	<b>269 568</b>
<b>Integrated demand management</b>	7 748	2 941	2 709	1 862	1 966	3 612	13 090
<b>Net operating costs incl IDM (Rm)</b>	<b>49 930</b>	<b>47 798</b>	<b>51 661</b>	<b>56 796</b>	<b>61 312</b>	<b>65 090</b>	<b>282 658</b>

<b>Human capital gross (Rm)</b>	26 858	28 045	29 946	32 215	34 995	37 442	162 643
<b>Human capital staff complement</b>	43 450	44 281	44 834	45 188	45 600	45 600	
<b>Assets and depreciation</b>							
<b>Regulatory replacement asset base (Rm)</b>	709 145	779 203	852 266	919 665	981 854	1 043 100	
<b>Replacement depreciation (Rm)</b>	25 884	30 792	34 631	37 076	39 669	43 218	185 385
<b>Return on assets (Rm)</b>		7 271	14 643	31 187	51 878	81 885	186 864
<b>Return on assets - real (%)</b>		0.9%	1.5%	3.2%	5.2%	7.8%	
<b>Equity returns (Rm)</b>		- 13 927	- 11 860	964	20 054	51 265	46 497
<b>Returns sacrifice (Rm) @ 8,16% WACC</b>		- 58 208	- 58 628	- 48 243	- 31 256	- 6 299	- 202 633
<b>Returns sacrifice (Rm) @ 8,9% WACC</b>		- 59 374	- 59 914	- 49 416	- 32 739	- 7 875	- 209 319
<b>Capital expenditure (excl IDC) (Rm)</b>	64 861	72 107	68 016	64 934	67 098	65 000	337 155
<b>Revenue and price increases</b>							
<b>Total revenue (Rm)</b>	128 895	153 378	179 604	212 758	248 332	293 501	1 087 574
<b>Standard tariff revenues (Rm)</b>	122 489	146 188	171 497	204 264	241 350	286 205	1 049 503
<b>Exports and special pricing agreements (Rm)</b>	6 407	7 191	8 107	8 494	6 982	7 297	38 071
<b>MYPD 3 price increase % (nominal) - Eskom's application</b>	16%	16%	16%	16%	16%	16%	
<b>Nominal price level for standard customers (c/kWh)</b>	60.66	71c/kWh	82c/kWh	95c/kWh	110c/kWh	128c/kWh	
<b>Real price level for standard customers (c/kWh)</b>		67c/kWh	73c/kWh	80c/kWh	88c/kWh	96c/kWh	
<b>Sales (GWh)</b>	222 028	227 404	229 513	235 638	239 113	244 026	1 175 694
<b>Eskom production (GWh)</b>	236 414	239 896	243 639	249 542	252 930	259 281	1 245 289
<b>Funding</b>							
<b>Interest costs (Rm)</b>	15 767	21 198	26 503	30 223	31 824	30 619	140 366
<b>Debt levels (Rm)</b>	232 242	287 951	330 617	355 982	366 914	333 011	
<b>Economic parameters</b>							
<b>Growth domestic product (GDP) %</b>	3.8%	4.0%	4.0%	4.0%	4.0%	4.0%	
<b>Consumer price index (CPI) %</b>	5.2%	5.5%	6.0%	6.0%	6.0%	6.0%	
<b>Producer price index (PPI) %</b>	6.0%	6.2%	6.0%	6.0%	6.0%	6.0%	
<b>Sales growth (%)</b>	-1.4%	2.4%	0.9%	2.7%	1.5%	2.1%	

# CHAPTER 5: INTEGRITY OF PROCUREMENT PROCESSES AND COMPLIANCE WITH LEGISLATION AS WELL AS ESKOM'S PROCUREMENT POLICIES

## 1 Background

- 1.1 This Chapter deals with item 2.5 of the Scope of Work set out in Task Order 1.
- 1.2 Item 2.5 of Task Order 1 relates to the integrity of the procurement processes and compliance with legislation as well as Eskom's procurement policies. Under this heading the following specific items are provided for:
  - 1.2.1 "2.5.1 the procurement policy, processes and procedures designed by Eskom in relation to the Constitution of the Country, other relevant key legislation and key governance protocols, including best industry practice;
  - 1.2.2 2.5.2 whether the procurement policy and related Eskom policies including but not limited to conflict of interest and the processes to deal with non-compliance, are consistently adhered to. Also, establish whether in instances where transgressions are identified, appropriate sanctions are applied;
  - 1.2.3 2.5.3 whether the procurement processes are effective to ensure that Eskom obtains the best quality products and services at the best price".
- 1.3 The following pieces of legislation and documents were reviewed for the purposes of this section of this Report:
  - 1.3.1 The Constitution of the Republic of South Africa, 1996 (Act No 108 of 1996);
  - 1.3.2 The Public Finance Management Act, 1999 (Act No. 1 of 1999) ("PFMA");
  - 1.3.3 The Treasury Regulations issued in terms of the PFMA;
  - 1.3.4 SCM- A Guide for Accounting Officers/Authorities – National Treasury February 2004 ("Treasury Guidelines");
  - 1.3.5 The Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000) ("PPPFA");
  - 1.3.6 PPPFA Regulations;
  - 1.3.7 The Companies Act, 2008 (Act n0.71 of 2008);
  - 1.3.8 The Broad Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
  - 1.3.9 Eskom's Procurement Supply Chain Management Policy – 32 – 1033 ("SCM Policy");
  - 1.3.10 Eskom's Procurement and SCM Procedure - 32 - 1034;
  - 1.3.11 The Eskom Delegation of Authority Policy 240- 62072907 ("DOA");
  - 1.3.12 Tender Committees Terms of Reference;



- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

1.3.18 Catalyst reports for:

- (a) 2014 April – June;
- (b) 2014 July – September;
- (c) 2014 October – December; and
- (d) 2015 January – March;

1.3.19 Chairman's approval - RR Coal Road Haulage Contracts 1 April 2014 to March 2018;

1.3.20 Round Robin Resolution - Coal Haulage Rates Model (signed off pack);

1.3.21 Final PwC Rates Model Investigation Report;

1.3.22 Eskom Coal Supply Strategy 2012 Presentation;

1.3.23 Eskom Coal Supply Strategy 2012 Board Presentation – Summary;

1.3.24 Eskom Coal Supply Strategy 2012 Main Document; and

1.3.25 Eskom Coal Supply Strategy 2012 Executive Summary.

1.4 In addition, several Eskom personnel were interviewed.

1.5 The annexures referred to in this Chapter are included in Schedule 6.

## **2 Item 2.5.1 of Task Order 1**

2.1 As indicated above, item 2.5.1 of Task Order 1 states as follows: "the procurement policy, processes and procedures designed by Eskom in relation to the Constitution of the Country, other relevant key legislation and key governance protocols, including best industry practice".

2.2 This part of the report deals with the following:

2.2.1 Supply Chain Management ("SCM") policy's alignment with the regulatory framework; and

2.2.2 SCM policy's alignment with the industry practice.

## 2.3 Alignment of Eskom's Procurement Policy with the Regulatory Framework

### 2.3.1 Overview of the Regulatory Framework

- (a) Section 217 of the Constitution provides that "When an organ of state ... contracts for goods or services, it must do so in accordance with a system which is fair, equitable, transparent, competitive and cost-effective."
- (b) This constitutional prerogative is echoed in s51(1)(a)(iii) of the PFMA, which requires accounting authorities to ensure that their entities have and maintain "an appropriate procurement and provisioning system which is fair, equitable, transparent, competitive and cost-effective". The PFMA further provides for National Treasury to issue regulations and instructions for "the determination of a framework for an appropriate procurement and provisioning system which is fair, equitable, transparent, competitive and cost effective".
- (c) The National Treasury Guidelines prescribe five fundamental aspects that must be dealt with in a compliant SCM policy:
  - (i) demand management;
  - (ii) acquisition management;
  - (iii) logistics management;
  - (iv) disposal management; and
  - (v) supply chain performance.
- (d) Demand Management:
  - (i) The SCM policy must at the minimum prescribe processes and procedures for:
    - (A) conducting a needs assessment to ensure that goods and services are acquired in order to deliver the agreed service;
    - (B) determining the specifications of the goods and services to be procured;
    - (C) ensuring that requirements are linked to the budget; and
    - (D) ensuring that the supplying industry has been analysed.
  - (ii) Ultimately good demand management ensures that value for money is achieved.
- (e) Acquisition Management:
  - (i) The SCM policy considerations relevant to acquisition management, are:
    - (A) how to decide on the manner in which the market will be approached;

- (B) how to establish the total cost of ownership of a particular type of asset;
  - (C) how to ensure that bid documentation is complete, including evaluation criteria;
  - (D) how to evaluate bids in accordance with published criteria; and
  - (E) how to ensure that proper contract documents are signed.
- (f) Logistics Management:
- (i) With regard to logistics management, the SCM policy must at the minimum address:
    - (A) the setting of inventory levels;
    - (B) receiving and distribution of material;
    - (C) stores, warehouse and transport management; and
    - (D) the review of vendor performance.
- (g) Disposal Management:
- (i) With regard to disposal management, the SCM policy must at the minimum address:
    - (A) obsolescence planning;
    - (B) maintaining a data base of redundant material;
    - (C) inspecting material for potential re-use;
    - (D) determining a disposal strategy; and
    - (E) executing the physical disposal process to generate payments.
- (h) Supply Chain Performance:
- (i) The SCM policy must set out a monitoring process undertaking a retrospective analysis to determine whether the proper processes have been followed and whether the desired objectives were achieved.
  - (ii) Some of the issues that arise in this context are:
    - (A) compliance with norms and standards;
    - (B) cost efficiency of the SCM process (i.e. the cost of the process itself); and
    - (C) whether supply chain practices are consistent with Government's broader policy focus.

2.4 Overview of the Eskom SCM Policy and Procedures:

2.4.1 In this section we provide a high level overview of whether Eskom's SCM policy and procedures address the five fundamental aspects required by the National Treasury Guidelines to be addressed in a compliant SCM policy. The table below presents the overview.

NATIONAL TREASURY GUIDELINES	APPLICABLE PROVISION IN ESKOM'S SCM POLICY & PROCEDURES
Demand Management	<p>The policy sets out the following aspects as a precursor for the commencement of a procurement process:</p> <p>a) Forecasting and estimating requirements facilitated by the end user</p> <p>b) Front End Planning process which will include:</p> <ul style="list-style-type: none"> <li>• Demand analysis</li> <li>• Commodity analysis</li> <li>• Industry sector analysis</li> <li>• Development of a supplier preference model</li> </ul> <p>c) Establishment and specifying a Need/procurement/Scope by</p> <ul style="list-style-type: none"> <li>• taking into account the budget, scope of work and business need; and</li> <li>• developing a technical specification document to show the scope/specifications</li> </ul> <p>d) Developing a commercial strategy which must at the minimum address the following considerations:</p> <ul style="list-style-type: none"> <li>• Technical/functionality</li> <li>• Project strategies</li> <li>• Financial; and</li> <li>• Commercial</li> </ul>
Acquisition Management	<p>In so far as acquisition management is concerned, the SCM policy provides for:</p> <p>a) Application of a hierarchy of supplier preference:</p>

- Existing Framework Agreement - used mainly for strategic procurement categories or national contracts - also known as commodity sourcing. Displays economies of scale through bulk buying
  - Internal suppliers - based on existing agreements for day to day needs
  - Other state owned companies
  - External suppliers or market at large - where internal suppliers or SOEs are unable to supply the requirements then the market can be tested
- b) Range of procurement processes:
- Non-competitive enquiries (Expression of Interest ("EOI") and Requests for Information ("RFIs"))
  - Pre-qualification enquiries - used when it is costly to process large volumes of tenders; for complex contracts; and established panels with similarly skilled suppliers
  - Competitive tenders (Request for quotations ("RFQs") and Requests for Proposals ("RFPs")) - where an innovative solution is sought or end user needs cannot be adequately described or specified
  - Delegation of Authority Framework with varying degrees or levels of delegation depending on the transaction value (Group Executives, Procurement Practitioners, E-Band Managers, Tender Committee, etc.)
- c) Dual and triple adjudication
- d) Compiling bid documents
- e) Bid evaluation - criteria, role of the cross function teams and Tender Committers
- f) Urgent and emergency procurement - used where

	<p>delivery is of critical importance and where immediate action is required to avert a risk</p> <p>g) Sole source procurement - where only one supplier exists in the market or is an established supplier</p> <p>h) Negotiations without prior tendering - used for sole procurement or where services and/or goods obtained from the Original Equipment Manufacturers ("OEM")</p> <p>i) Competitive negotiations - two supplier no prior tendering - used where market research shows that there are only two capable and independent suppliers</p> <p>j) Unsolicited bids</p> <p>k) Deviation from the SCM procedure and condonation of same</p>
Logistics management	<p>The SCM policy provides processes for attending to the following aspects:</p> <p>a) Managing delivery</p> <p>b) Management of task orders</p> <p>c) Materials management</p> <p>d) Optimisation</p> <p>e) Data management</p> <p>f) Inventory classifications</p> <p>g) Inventory categorisation</p> <p>h) Materials requirement planning</p> <p>i) Warehousing and haulage</p> <p>j) Storage facilities</p>
Disposal management	<p>The SCM Procedure provides for the following:</p> <p>a) Disposal strategy</p> <p>b) Concluding disposal agreements</p> <p>c) Disposal mechanisms:</p>

	<ul style="list-style-type: none"> <li>• Emergency disposal - same as acquisition</li> <li>• Transfers - between Business Units</li> <li>• Auctions</li> <li>• Negotiations</li> <li>• Cash and carry</li> <li>• Tender</li> </ul> <p>d) Compliance with environmental legislation and other relevant framework</p>
Supply chain performance	<p>The SCM procedure provides for a proactive auditing of commercial transactions to provide assurance regarding the manner of executing procurement or disposal processes. However, the SCM policy and procedures are silent on reviews of achievement of desired objectives at the end of the contract period.</p>

2.4.2 The details in each of the processes highlighted above reveal that sufficient focus, detail and attention has been placed on designing procedures to achieve the requirements of the Treasury Guidelines. In almost all the 5 aspects highlighted above, sufficient detail has been provided on how Eskom should align its procurement strategies and processes to the realisation of, amongst others, Supplier Development and Localisation ("SD&L") objectives and principles.

2.4.3 There remain, however, certain deficiencies which must be addressed and which are dealt with elsewhere in this chapter.

2.4.4 Preferential Procurement Policy and Framework Act 5 of 2000 ("PPPFA")

- (a) Eskom's exemption from the PPPFA expired on 8 September 2012 and Eskom has been required to comply with the PPPFA since that date. In addition, Eskom is obliged to comply with the PFMA and the Competition Act 89 of 1998 ("Competition Act") in regard to procurement processes.
- (b) The PPPFA provides the conditions for preferential allocation and evaluation of tenders as provided in section 217 of the Constitution of the Republic of South Africa Act 108 of 1996 ("Constitution"). It aims to ensure that procurement remains transparent and cost effective while allowing for a degree of preferential allocation.
- (c) Eskom's strategy in regard to compliance with the PPPFA requirements was highlighted in a document called "Review of Eskom's Business Risks". This document was submitted to the Eskom Management Committee ("MANCOM") meeting held on 17 October 2013. In this document, it was acknowledged that:

- (i) as a state owned entity, Eskom is required to comply with section 217 of the Constitution which establishes that procurement systems/practices are to be fair, equitable, transparent, competitive and cost effective;
- (ii) the Competition Act endorses the abovementioned procurement systems/practices through a requirement to promote and maintain competition in South Africa;
- (iii) Eskom is obliged to avoid the following anti-competitive practices in its supply chain operations: abuse of dominance, demarcation of markets, price discrimination, and merger control;
- (iv) a possible bid rotation based on prequalified suppliers on a panel who haven't been reviewed over-time is problematic;
- (v) the following key treatment actions are to be put in place in order to treat the risk exposure:
  - (vi) Eskom should arrange training sessions with Competition Commission to create awareness anti-competitive practices;
  - (vii) Eskom must advance a directive for open vs closed tendering of current prequalified Panels to determine relevancy and market competitiveness related to products;
  - (viii) Eskom should update the New Engineering Contract to include clauses dealing with anti-competitive practices;
  - (ix) Eskom is to update RFP documentation requiring suppliers to declare their non-participation in anti-competitive practices as prohibited by the Competition Act;
  - (x) the procurement practitioners are to be encouraged to go out into the open market and request information on products/services suppliers whose capabilities they are unfamiliar with. This will enable them to properly scope the product/services suppliers and estimate prices in accordance with the End-User requirements and budgetary constraints of Eskom; and
  - (xi) all RFIs and RFQs are to be channelled via email facilities to a dedicated Tender Office for transparency purposes.
- (d) At an EXCO meeting held on 4 February 2014, EXCO noted and approved the summary of decisions taken by MANCOM at its meeting held on 17 October 2013. The Board, in turn, on 27 February 2014 and 29 May 2014, noted and approved the summary of decisions taken by EXCO at the EXCO meeting held on 4 February 2014. However, the meeting pack for the Board meeting held on 27 February 2014 does not appear to include the EXCO report for the EXCO meeting held on 4 February 2014. The document called "Review of Eskom's Business Risks" also does not appear in the Board pack.
- (e) There have been discussions at all levels of Eskom in regard to the need to comply with the PPPFA:

- (i) the minutes of the meeting held on 13 March 2013 of the Executive Committee Procurement Sub-committee ("EXCOPS") indicates that EXCOPS regarded it as "irresponsible for it not to comply with legislation of the country" and accordingly resolved that all items of the agenda for the tabling and approval of strategies be postponed to a future meeting after the commercial division has applied its mind on how to comply with the PPPFA;
- (ii) in submissions made to the Board Tender Committee ("BTC") on 8 May 2013 and EXCOPS on 26 April 2013, it was stated that a phased approach to reach compliance with the PPPFA by 30 April 2013 was to be adopted, subsequent to the Board resolution of 27 February 2013 requiring Eskom to be in compliance with the PPPFA;
- (iii) the issues of compliance with the PPPFA and the expiration of the relevant exemption were raised at the Quarterly MANCOM Meeting held on 29 April 2013. Specifically, according to the April 2013 Quarterly MANCOM Meeting Minutes, Group Commercial expressed concern with regards to PPPFA, since the exemption had expired on 7 December 2012. It was recommended that Group Commercial should provide the organization with clear guidelines on compliance with PPPFA. It was suggested that commercial strategies should be submitted to the relevant Committees for them to decide and provide guidance. (April 2013 Quarterly MANCOM Meeting Minutes, page 19) [Note: the MANCOM report for the meeting held on 29 April 2013 was not tabled at any EXCO meeting.];
- (iv) a submission document entitled "Approval of a Revised Procedure for the Reconsideration of Supplier Registration Statuses" (submitted to EXCOPS for its meeting held on 16 July 2013) sets out a timeline for the events in respect of this procedure. This timeline indicates that in April 2013 "Eskom becomes compliant to the [PPPFA] as instructed by the Eskom Board. The PPPFA creates legislative remedies for Eskom to deal with abuse to the procurement system. The PPPFA Regulations are addressed in the revised reconsideration of supplier registration status framework" [Note: The EXCOPS report for the meeting held on 16 July 2013 was tabled and noted for approval by EXCO at the EXCO meeting held on 6 May 2014. The Board approved the EXCO report for the EXCO meeting held on 6 May 2014 at the Board meeting held on 29 May 2014];
- (v) during their meeting on 16 July 2013, EXCOPS delegated the authority to approve a revised "Procedure for the reconsideration of Supplier Registration Statuses" to the Group Executive ("GE") for Technology and Commercial. This procedure was revised due to increased litigation from suppliers for undue and unfair supplier suspensions. The revised procedure was prepared by Eskom Risk and Governance ("R&G") and Legal with the assistance of ██████████ Attorneys and Advocate ██████████. We have not yet had the opportunity to verify whether the new procedure has been approved by the GE: Technology and Commercial. [Note: The EXCOPS report for the meeting held on 16 July 2013 was tabled and noted for approval by EXCO at the EXCO meeting held on 6 May 2014. The Board approved the EXCO report for the EXCO meeting held on 6 May 2014 at the Board meeting held on 29 May 2014.];

- (vi) the issue of PPPFA compliance further arose at the next MANCOM Quarterly Meeting held on 27-28 July 2013. Specifically, the July 2013 Quarterly MANCOM Meeting Minutes provide that the issue of the PPPFA arose and ██████ asked for clarity from commercial in terms of application of PPPFA/SD&L. In response it was stated that end-user training on the PPPFA will be undertaken in the near future. It was resolved inter alia that a clear communication be sent out from commercial regarding the Eskom status pertaining to PPPFA. (July 2013 Quarterly MANCOM Meeting Minutes, p. 15) [Note: the MANCOM report for the meeting held on 27-28 July 2013 was not tabled at any EXCO meeting.];
  - (vii) at a Board meeting held on 27 February 2014, management sent a briefing note to the Board cautioning against adhering to the Minister of Public Enterprise's extension of the PPPFA exemption, stating that this did not amount to an exemption in terms of the PPPFA and that Eskom is non-compliant and acting in contravention of the PPPFA; and
  - (viii) at a BTC meeting held on 16 April 2014, Notification of the Revision of the Eskom Procurement & Supply Chain Management Policy 32-1033 and the Eskom Supply Chain Management Procedure 32-1034 was tabled for noting. The updated procedure and policy had been approved by EXCO and was submitted to the BTC for noting. These documents are subject to an annual review cycle and practice notes are issued in between as and when deemed necessary.
- (f) At an EXCO meeting held on 7 May 2015, it was noted that Eskom's exemption from the PPPFA expired on 8 September 2012 and during the 2013/14 reporting period, Eskom paid R317 million on contracts entered into in contravention of the PPPFA. Further contraventions were identified in the current financial year. It was reported that in many cases, the PPPFA contravention related to administrative breaches, such as contracting with suppliers prior to receipt of original tax clearance certificates.
  - (g) It appears that there has been a commitment towards ensuring the continued development of Eskom's procurement policy, processes and procedures. Based on the documents reviewed thus far, this appears to have been communicated to all levels of the organisation. In addition, it appears that there is ongoing training provided in regard to PPPFA compliance. However, despite this, there still appears to be contraventions of the procurement processes.
  - (h) The underlying reasons for these contraventions are not apparent and would require further investigation and interviews with members of the BTC and EXCOPS.

#### 2.4.5 Governance

- (a) The DOA was approved by the Board with effect from 1 April 2013.
- (b) Eskom had reviewed the manner in which decisions need to be taken within the organisation. There was a concern that there was a lack of empowerment and a clear delegation of authority was needed.
- (c) The DOA addresses the delegation from the Board to executives. It will be supported with further delegations by the executives to other employees in the organisation.

- (d) The DOA was developed by a team consisting of representatives from key areas of the business. The draft DOA was circulated to all MANCOM members and also discussed at the MANCOM meeting. The DOA was also submitted to and approved by the Investment and Finance Committee (“IFC”) and BTC.
- (e) The revised DOA seeks to achieve the following:
  - (i) a one-stop shop with key policies summarised in the delegation framework;
  - (ii) simplified decision matrix (approval and recommendation); and
  - (iii) accessibility and user friendliness and this will be supported by: standardised group/divisional delegations, a database of frequently asked questions and index of key issues; and training.
- (f) A Governance Review was tabled for EXCO approval at an EXCO meeting held on 16-18 September 2013. The difficulties and confusion in regard to the establishment of the Board committees, the EXCO sub-committees, the associated reporting lines and overlaps of responsibility were reported. The EXCO report for this EXCO meeting held on 16-18 September 2013 was tabled and noted by the Board at its meeting held on 28 November 2013. A summary of the Governance Review was provided in the Board meeting pack for the meeting held on 28 November 2013.
- (g) Yet, despite the existence of this governance framework, it was also reported at an EXCO meeting held on 19 August 2014 that there were instances where executives had colluded with Board members to bypass governance processes. This had created a toxic work environment and “a possibility of governance collapse”. A deterioration was noticed in regard to adherence to governance principles, such as: failure or refusal to implement Board decisions, abuse of confidentiality of documents, leaking of documents by executives to the media and Board members. [Note: the EXCO report for the meeting held on 19 August 2014 does not appear to have been tabled for noting and approval to the Board. Only reference to approval of the EXCO report for the meeting held on 29 August 2014 has been found.]
- (h) At an EXCOPS meeting held on 19 September 2014, the GM: Assurance and Forensics tabled a response document, the purpose of which was to realign the committee on the rules and responsibilities of each stakeholder in the commercial value chain. There were concerns relating to the apparent overlap of roles and responsibilities in practice between different role players which could cause confusion and expectation gaps. [Note: We have not found reference to this meeting report being tabled at any EXCO meeting.]
- (i) We were informed that board members were not always adequately prepared for board meetings, did not always read the board pack and sometimes lacked the capacity to understand the technical information included in board packs.

## 2.5 Industry Practice

- 2.5.1 Task Order 1 requires us to investigate whether Eskom's procurement policy and procedure is aligned to industry practice.
- 2.5.2 For purposes of this Report, we consider “industry practice” to entail the procurement practice in general of companies or entities of a size similar to Eskom, in the South African market.

For the avoidance of doubt we note that we have not made comparative studies with regard to the procurement practice undertaken by international power generation and distribution companies or entities. The time limitations of this Investigation and the scope of such comparative studies have rendered the latter unachievable.

- 2.5.3 Notwithstanding the above qualification, we further note that within the parameters of South Africa, Eskom has the largest procurement spend and is regarded as the leading single procurer within the region. Therefore the extent to which one may compare Eskom's procurement practice with "industry practice" is limited.
- 2.5.4 Consequently, in assessing Eskom's procurement practices, we have considered its policies and procedures against the following industry procurement practice objectives:
- (a) seeking continuous improvement in affordability and value for money, based on total cost of ownership;
  - (b) enhancement of healthy competition among suppliers in order to improve the quality of procurement;
  - (c) preserving the highest standards of honesty, integrity, impartiality and objectivity;
  - (d) promoting fairness and efficiency among suppliers so as to maximise value for money;
  - (e) providing clear specifications for requirements which would encourage innovation;
  - (f) enhancing transparency in the procurement process by making available the broad criteria intended for the evaluation of bids, to evaluate bids objectively and to notify the outcome promptly; and
  - (g) achieving the highest professional standards in the management of contracts.
- 2.5.5 Assessed from a high level perspective, Eskom's SCM policies and procedures would appear to be aligned with normal industry practice. We have identified certain gaps in Eskom's SCM processes and procedures that cause misalignment with normal industry practice.
- 2.5.6 Misalignment with the Legislative Framework and Industry Practice
- (a) As indicated above, Eskom's SCM policy and procedure are to a significant extent aligned with the applicable regulatory framework and industry practice. However, there are certain aspects that may in practice, be misaligned with the applicable regulatory framework and industry practice. These aspects are discussed below.
  - (b) There is misalignment in certain respects between Eskom's organisational structure and the Eskom DOA framework. The various changes in the organisational structure over the years have to some extent not been aligned with the Eskom DOA framework. For instance the position previously held by the General Manager-Primary Energy is currently occupied by a Senior General Manager, a designation that does not carry delegated authority.
  - (c) The use or involvement of cross functional teams for scoping or designing commercial strategies and later evaluating bids may compromise the integrity of the procurement processes. Industry practice dictates that officials involved in the

development of the scope and specifications of bids should not be involved in the evaluation of those bids.

- (d) The Evaluation Committee's terms of reference and criteria for membership are not clearly defined or standardised. Lack of clarity in this regard further exposes the procurement process to possible management override and manipulation.
- (e) Over reliance on pre-qualification and sole sourcing has countered the purpose of supplier development and localisation in so far as preference is continuously given to Original Equipment Manufacturers ("OEMs") and pre-qualified suppliers. It is also worth noting that such over reliance on a small pool of suppliers could expose Eskom to collusion and/or price fixing.
- (f) Although the SCM processes and procedures lay out the pre-conditions for emergency procurement, self-created emergencies may always lead to abuse of the system. In almost all cases of emergency procurement, the deviation from procedure is condoned. This is an area where often only retrospective action can be taken. It is difficult in practice to ascertain whether indeed the emergency was self-created, especially where the emergency was due to a technical aspect which is eventually fixed by the procured intervention. Furthermore, there are insufficient checks to prevent technical emergencies that are caused by negligence or a lack of the required skills or training.
- (g) Regular reviews are not conducted at the end of contracts to establish whether the particular procurement served its purpose. In situations where such reviews are conducted and lessons documented, there is no evidence to suggest that the lessons learnt are adequately applied in future procurement transactions.
- (h) A consistent feedback process is lacking in terms of which learnings result in modification or enhancement of SCM policies and procedures.

### **3 Item 2.5.2 of Task Order 1**

- 3.1 As indicated above, item 2.5.2 of Task Order 1 states as follows: "whether the procurement policy and related Eskom policies including but not limited to conflict of interest and the processes to deal with non-compliance, are consistently adhered to. Also, establish whether in instances where transgressions are identified, appropriate sanctions are applied".
- 3.2 This section of this Report accordingly focuses on the implementation of Eskom's procurement policies and the failures that occur in the course of implementation. A statistical analysis of all Eskom procurements is not possible within the time frames of the Investigation. We have considered a subset of procurements in order to draw conclusions in respect of the above. In particular, we have considered coal procurements and diesel procurements, in addition to a few specific procurements that have been selected for the purposes of illustration. In addition, we have conducted various interviews with Eskom personnel to obtain information in this regard and have considered certain reports produced by Eskom's Assurance & Forensics department.
- 3.3 Coal Procurement
  - 3.3.1 A review of the integrity of the procurement processes for coal procurement was undertaken. This Report details the factual findings of the review, based on the information that was made available to us.

3.3.2 Certain key personnel were interviewed for the purposes of this section on coal procurement.

3.3.3 The following table indicates the key documents reviewed.

Documentation reviewed	
Negotiation documents	<p>Various coal supply contracts</p> <p>Various coal haulage agreements</p> <p>Offer and acceptance letters for short term contracts</p>
Procurement guidelines	<p>Correspondence dated 25 March 2013: Enquiries Suzanne Daniels: Compliance to the PPPFA</p> <p>National Treasury guidelines on Fruitless and Wasteful expenditure: May 2014 ("Treasury guidelines")</p> <p>PPPFA and Regulations ("the PPPFA" and "the Regs")</p> <p>National Treasury Implementation guide: PPPFA regulations 2011 dated 1 December 2011</p> <p>Eskom's Procurement and Supply Chain Management Policy – 32- 1033 dated 16 May 2014 (the "1033 policy")</p> <p>Eskom's Procurement and Supply Chain management Procedure- 32 -1034. Dated 16 May 2014 (the "1034 procedure")</p> <p>Primary Energy Division Contracting Requirements for Coal: November 2013</p> <p>Eskom standard conditions of Tender: February 2012</p>
RFP audits	<p>Audit report 14 March 2013: Tender evaluation process review for enquiry number GEN 3198- for the supply of coal to various Eskom Power Stations (the "3198" audit)</p>
Board mandate submissions	<p>Primary Energy Division reports</p> <p>Executive summary dated 12 August 2008 and supporting documents: Board resolution to approve the negotiation and conclusion of medium term contracts for the supply and delivery of coal (the "2008 BTC proposal")</p>

	<p>Executive summary dated 28 September 2010: Interim feedback on negotiations and contracts concluded with suppliers for the supply and delivery of coal (the "2010 BTC proposal")</p> <p>Executive summary 26 March 2014: Feedback on negotiations and contracts concluded with suppliers for the supply and delivery of coal and the relevant coal supply agreements (the "2014 BTC proposal")</p>
Audit reports	<p>Preliminary Report #2- Consulting review on the execution of the medium term coal procurement mandate within PED and related supporting and ancillary documents ("Preliminary Report 2")</p> <p>Preliminary Report #3- Consulting review on the execution of the medium term coal procurement mandate within PED and related supporting and ancillary documents ("Preliminary Report 3")</p> <p>Preliminary Report #4- Consulting review on the execution of the medium term coal procurement mandate within PED and related supporting and ancillary documents ("Preliminary Report 4")</p>

3.3.4 The review covers the procurement of coal from 2013 to 2015.

### 3.3.5 Background to Coal Procurement by PED

- (a) Eskom's Primary Energy Division ("PED") is responsible for the procurement of coal.
- (b) In order to assess the procurement of the coal contracts, it is important to understand the background to coal procurement as many of the contracts concluded from 2008 to 2010 are still in existence.
- (c) PED made a proposal to the EXCOPS in August 2008 for a mandate to enter into short and medium term coal contracts. This proposal is recorded in the 2008 BTC proposal documents.
- (d) The rationale behind the mandate was that long term mines were under delivering, resulting in an increased need for short term contracts ("STC" or "STCs"). STC purchasing, which increased during the preceding four years, was driving the cost of coal upwards significantly. Consequently, the following representations and assumptions were made by PED in the 2008 BTC proposal in order to motivate for the MTC procurement mandate.
  - (i) STCs are not long enough to abate the effects of an emergency situation, and they do not go far enough to prevent an emergency situation from materialising shortly after the short term procurement. The STCs expired prior to any significant advances being in made in procuring longer term

contracts and did nothing to abate emergencies arising from a shortage of coal. The negotiation period for long term contracts was in excess of 8 years.

- (ii) In order to ensure the sustainable supply of electricity, the shortfall should be addressed with medium term contracts ("MTC" or "MTCs") with a view to reducing emergencies and to ensure security of supply. Significant MTCs were required until the long term strategy came into effect.
  - (iii) It was stated that (i) "Eskom will only negotiate delivered price contracts", (ii) "in the event that rail capacity is available that would be the first choice of transport in an attempt to reduce road traffic", and (iii) "with the current limited rail transport options available this mandate assumes road transport will be used".
  - (iv) The delivered prices were subject to transport costs. An average of █████/ton was used for quantification of transport costs as sources and distances had not been identified and finalised.
  - (v) The supply contracts would be prepared by the contracts department within GPE and reviewed by Corporate Legal.
  - (vi) Coal would be supplied at the existing quality specifications for the respective power stations.
  - (vii) Any changes to the transport mandate would be presented to the BTC.
  - (viii) Eskom would not contract with traders of coal but only with owners of a source or where a valid contractual joint venture ("JV") exists between the relevant parties.
- (e) In terms of the Corporate and Generation Directives "Procurement and Supply Chain Management Procedure (332-188), the medium term coal supply team ("MTCS Team") was given an MTC procurement mandate by the BTC on 11 September 2008 to enter into MTCs for the supply of coal from October 2008 until March 2018.
  - (f) Long term contracts were expected to materialise in the interim.
  - (g) The mandate approved in terms of the 2008 BTC proposal was never updated to align it with the 1034 procedure, 1033 policy, PPPFA or the Treasury Regulations. As a result, the procurement procedure being implemented by PED appears to still relate to the pre-2013 dispensation when the provisions of the PPPFA were not mandatory.
  - (h) We accordingly understand that coal is procured in terms of the MTC procurement mandate approved in terms of the 2008 BTC proposal and not in terms of the 1033 policy and the 1034 procedure and that most contracts are awarded in the absence of a tender process.

### 3.3.6 Sourcing Strategy

- (a) An assessment of the PED sourcing strategy based on the information provided to us indicated that coal sourcing involved:
  - (i) concluding long term contracts;

- (ii) negotiating medium and short term contracts; and
  - (iii) sourcing new coal sources with current and new suppliers.
- (b) According to interviews conducted, a request for coal sourcing originates with an end user in conjunction with the team who does demand and supply planning. We were informed that the vast majority of coal supply agreements ("CSA" or "CSAs") were concluded in the absence of any tender process. Further, we understand that potential suppliers of coal would approach PED and negotiations regarding coal supply would commence. The view was expressed that if the coal "can burn", the supplier was registered on the supply database and the supplier would be assisted up to the process of becoming a vendor. Not all suppliers become vendors. It is unclear why some suppliers, who meet the applicable criteria, do not become vendors while other suppliers, who do not meet the applicable criteria, become vendors. Time is wasted when negotiations are conducted with non-compliant bidders. This time could be well spent with suppliers who fully comply with all the applicable criteria at the time when negotiations commence.
- (c) By way of example, in one case a CSA was approved in 2014 and modified in 2015. According to the information provided to us, the supplier in this case did not meet the applicable BEE requirements at the relevant point in time in that it only had 29% black ownership (as opposed to the 50% plus 1 required). We were informed that a CSA was nonetheless entered into with this supplier on the basis of representations as to how the supplier would become compliant by 2016, despite the fact that there were other suppliers who met the applicable BEE requirements. This aspect requires further investigation.
- (d) We were informed that there is no process in place to verify or authenticate the documents and information provided by potential suppliers. It is possible for suppliers to provide false information and fraudulent documents without detection. The verification of documents requires further investigation.
- (e) We were informed that many emerging miners do not comply with all the coal supplier requirements, and that the decision to appoint a coal supplier vests in a single person who finally decides which supplier will receive a CSA and which supplier will be excluded. This presents risks, and adequate checks and balances should be introduced.
- (f) It appears that negotiations are not limited to price only. In terms of the 1034 procedure (which PED does not apply), suppliers who do not meet the applicable requirements or who do not provide all the required documents are required to be excluded prior to the commencement of negotiations. We have been informed that certain suppliers are engaged with and accommodated in order to bring them into compliance. We were not provided with any explanation as to why certain suppliers were so accommodated and not others.
- (g) The inconsistencies in application of the procurement policies have been attributed to decisions made by the General Manager (Primary Energy Division): Fuel Sourcing and the General Manager (Acting): Fuel Sourcing. There appears to be no consistent policy or set of protocols in place regarding how the suppliers are contacted or how communications are shared. This requires further investigation.

- (h) According to Eskom's Contracting Requirements for Coal (November 2013), the potential supplier should be in possession of the following information and documents prior to its engagement with the Fuel Sourcing Team:
- (i) Environmental and Legal Requirements:
    - (A) Valid Mining Right/Permit and Off-Take Agreements where applicable;
    - (B) Approved Environmental Management Program Report;
    - (C) Latest Detailed Closure Cost Assessment Report;
    - (D) Integrated Water Use License Application/Permits (IWULA); and
    - (E) National Environmental Management Act 98 (NEMA) authorisations;
  - (ii) Safety and Health Requirements:
    - (A) Safety Health and Environmental Policy;
    - (B) Letter of Good Standing with the Compensation Commission;
    - (C) A copy of legal appointments and related qualifications; and
    - (D) Baseline Safety Health and Environment (SHE) Risk Assessment.
- (i) We were informed that the above mentioned requirements are not strictly complied with.
- (j) On successful negotiation, an offer and acceptance letter is generated prior to drawing up the CSA agreement. We have been informed that the price, price escalation, quality, power station, coal source and transportation points are fixed at this stage and cannot be changed in the final CSA.
- (k) It is unclear to what extent the CSAs are concluded timeously after execution of the offer and acceptance letter. The signed offer and acceptance letter is referred to the coal operations unit within PED, which is tasked with concluding and managing the CSA. It appears that the offer and acceptance letter gives the supplier leave to start supplying coal to Eskom. There is no follow up whether the contract is concluded on the same negotiated terms. Coal operations does not report back to PED: coal sourcing with regard to whether the suppliers comply with the agreed terms. This exchange of information is important as it could allow for defaulting suppliers to be removed from the supplier database and for more reliable suppliers to be sourced, which would improve competitiveness and cost effectiveness.
- (l) We were not provided with precise information concerning the turnaround time for conclusion of the CSA after an offer and acceptance letter is signed. There are indications that there might be significant delays in the conclusion of a CSA.
- (m) We were informed that the supply of coal sometimes occurs without a CSA. This placed the security of supply of coal at risk, which could affect the planning, logistics and stock days.

- (n) Some of the interviewees advised that they had no knowledge of suppliers who were removed from the database because they did not comply with their contract terms, nor of any sanctions imposed against defaulting suppliers.
- (o) Not every CSA is reviewed by Legal Services. This is contrary to the 2008 BTC proposal that stated that Corporate Legal will review the coal agreements. We were informed further that even when Legal Services does review a contract, it has been common practice for PED to disregard their recommendations and do as they please. PED has been described as being "on a frolic of their own", with or without Board approval and without any sanctions, even if input is given by Legal Services at Board meetings. This has been stated by several interviewees. Nonetheless, an interviewee from PED stated that Legal Services does review the CSAs and that SD&L does have an input on the BEE side.
- (p) However, as a specific example, an SD&L interviewee mentioned that he reviewed a certain coal agreement. He did not recommend the agreement and recorded his disapproval in writing and referred it to PED. Notwithstanding his recommendation, the contract was then awarded. It appears, based on information reported to us, that it was represented to the BTC that no such objections had been made.
- (q) We were informed that PED has its own team that attends to coal supply agreements and that in some instances the CSAs are outsourced to external law firms.
- (r) One of the interviewees mentioned that everyone knows that PED acts differently and this can be seen in the way that they present things to the Board. When questioned about this he mentioned that PED "would come in and say what they want and get it". Furthermore, he mentioned that maintenance, procurement and systems control work in silos. There is no planning ahead to prevent emergencies. It was mentioned that PED amends existing contracts without seeking input from Legal Services, and that even when the BTC is informed that Legal Services had no input into the recommendations by PED, the BTC still approves PED's requests. It was reported further Legal Services did not review any of the STCs. This interviewee stated further that some junior miners are sidelined, even though they meet all the requirements.
- (s) One of the interviewees mentioned that he is aware of only 2 persons in PED who have been sanctioned in the 12 years that he has been employed at Eskom.
- (t) It appears that PED ignored their own policies regarding the award of contracts to suppliers with the highest ranking. Annexure C (see Schedule 6) indicates that the highest scoring supplier did not receive a CSA. No reason was provided to us for this other than the overarching "demand for coal by Eskom and the shortage of supply".

### 3.3.7 Coal Supply Agreements

- (a) A list of the Long and Medium term agreements currently in operation was provided to us and is set out in Annexure A (see Schedule 6). Annexure B (see Schedule 6) sets out the STCs that have been reviewed by us. The documentation relating to the negotiation and award of CSAs should be reviewed to test the information set out in this section of this Report.
- (b) We understand that there was a RFP process sometime during 2008-2010, and again in 2014, but that no contracts were awarded due to flaws in the RFP processes.

PED appears to be of the view that a tender process does not suit the coal procurement process.

### 3.3.8 Medium Term Contracts

- (a) The contracting principles that were developed as guidelines for negotiations and included in the 2010 BTC proposal are contained in Annexure D (see Schedule 6). The relevant contracting principles and standards are as follows:
- (i) Eskom will not contract with suppliers who do not operate legally;
  - (ii) Eskom wants to contract with owners of mining resources of value adding agents [*sic*];
  - (iii) suppliers must prove, or give warranties and undertakings that there is, compliance with relevant legislation before contracting;
  - (iv) suppliers must provide the prescribed documents, including a BEE certificate;
  - (v) the penalty principle is that the defaulting party must put the other party in the same financial position it otherwise would have been in;
  - (vi) under-delivery and under off-take must be dealt with in the prescribed manner;
  - (vii) suppliers are to have pre-certified stockpiles that meet the rejection levels in the contract taking into account that suppliers will be given a reasonable period of time to meet specs and mathematical averaging will be allowed, as an exception;
  - (viii) coal quality measurement should be at source; and
  - (ix) the contract price adjustment clauses are to be based on recognised nationally/internationally published indices.
- (b) The escalation rates varied between contracts. Our assessment of the terms and conditions of various MTCs seem to indicate that the factors taken into account to determine the escalation varies as does the individual weightings for specific factors. There does not appear to be any consistency in applying price escalation formulae. Policy guidelines regarding the escalation basket were not consistently applied. The rating varied between suppliers. Certain factors were taken into account for some suppliers and ignored for others.
- (c) A list of weakness and improvements in negotiating contracts was included in the 2010 BTC proposal. See in this regard Annexure E (see Schedule 6). We note the following.
- (i) Sourcing of suppliers took place on an ad hoc and crisis management basis. It was suggested that this could be improved by introducing a RFP process and by better planning and forecasting.
  - (ii) Contracts lacked standardisation, and were concluded in haste. Some contracts were never signed and transport risks and costs were not covered at times. The suggestion was to improve involvement with stakeholders,



respondents by the end of April 2010;

- (iii) no evaluation report had been compiled as at the end of April 2010;
  - (iv) there was no coal supply agreement in place prior to the commencement of coal supply by some suppliers; and
  - (v) "a disproportionately high number of respondent's had common individuals as shareholders and directors" – while this is not under Eskom's direct control and may even be for legitimate business reasons, there may be reason to suspect anti-competitive behaviour among some of the respondents to this tender.
- (i) We note that the independent audit report that we have been provided with is in draft form.
- (j) It appears as if PED refers to the base price of coal when they determine whether the cost of coal falls within the mandate. A clear policy should be adopted in this regard, which PED would be required to implement.
- (k) Preliminary Report #2 is a review of the execution of the Medium term coal procurement mandate within PED conducted by Group Audit ("A&F"). This audit covered the procurement of coal in terms of the procurement mandate.
- (l) A&F reviewed 7 files from the 17 suppliers. The following findings were made and recorded in the report:
- (i) the documentation used for short listing suppliers was not adequate;
  - (ii) the documentation qualifying the suppliers as a BWO was not verified as the certificates submitted were not signed;
  - (iii) there were concerns about the off-take agreements in that PED was negotiating with suppliers that do not have proven agreement between the owner of the mining right and the supplier which creates a security of supply and legislative compliance risks;
  - (iv) financial review of certain suppliers had not yet been performed at the time of the review;
  - (v) certain teams in PED believed that other teams in PED operate in silos; and
  - (vi) the spreadsheet for consolidating the RFP process contained errors.
- (m) Inadequate financial due diligence in respect of certain suppliers could result in fruitless and wasteful expenditure.
- (n) It was recommended that:
- (i) verification of information should be performed before the start of negotiations;
  - (ii) PED should develop consistent processes for negotiation purposes – gatekeepers should be agreed on and implemented;

- (iii) financial analysis should be performed on suppliers to ensure financial sustainability of the suppliers; and
  - (iv) due diligence assessment of non-financial risk should be performed so that the full risk profile of the supplier can be identified.
- (o) Preliminary Report #2 included notes from the Senior Manager Medium-Term Coal Sourcing in which management undertook:
  - (i) not to contract with suppliers without the requisite documents including valid take-off agreements; and
  - (ii) to conduct financial evaluations on all suppliers that will be contracted with.
- (p) Preliminary Report #2 indicated that the findings affected four companies who still supply coal to Eskom. These are:
  - (i) ██████████ (did not have an environmental assessment report);
  - (ii) ██████████ (coal supplied in the absence of a CSA);
  - (iii) ██████████ (could not supply coal at the required specification); and
  - (iv) ██████████ (could not supply the contracted volume of coal as a result of issues with plant capacity).
- (q) It appears that no penalties could be imposed against certain defaulting suppliers as they were delivering on the basis of the offer and acceptance letter and not a CSA. We were unable to determine within the available time whether any penalties were imposed against the above mentioned suppliers. These contraventions must be seen in light of the contract values referred to in Annexure F (see Schedule 6). Due to time constraints, it was not possible to verify whether the above mentioned adverse findings were brought to the attention of the BTC.
- (r) Preliminary Report #3 was compiled by A&F on 26 August 2010 following another review of the MTC procurement mandate. The review was limited to the commercial process relating to offer and acceptance as mandated to the MTCS Team by the BTC. The followings findings were made:
  - (i) the offer and acceptance letter is a temporary document which does not contain sufficient terms to safeguard the interests of Eskom;
  - (ii) the offer and acceptance letter does not make provision for levying penalties for under delivery in terms of quality and quantity and does not make provision for coal rejection;
  - (iii) consequently PED and the power stations accepted coal at lower specifications, which could have resulted in the Eskom power plants operating at a level below average and causing more damage to the stations;
  - (iv) the late signing of contracts puts PED in a position where it is not able to enforce quantities and qualities, which may lead to alternative coal having to be sourced at a higher price; and

- (v) ██████, ██████, ██████ and ██████ were identified as some of the suppliers who delivered coal below the agreed volumes – in the absence of enforceable agreements PED could not recover losses in the form of penalties.
- (s) Management undertook to have signed CSAs by September 2010 and to include penalty clauses in the purchase orders as an interim measure.
- (t) Preliminary Report #4 was compiled by A&F on 4 March 2011. This report was compiled after PED gave feedback to the EXCOPS regarding progress on the Medium Term mandate. The scope of the review was to ensure that the required terms of the mandate were adhered to. The following findings were made:
  - (i) ASGI-SA requirements formed part of the RFP process and the requirements were not fully implemented and detailed in PED's submission to the EXCOPS.
  - (ii) Feedback was given to EXCOPS on all contracts that were concluded as part of the Medium Term Mandate. The details of the STCs were not individually stated in the submission document. The names of the companies and the directors were not disclosed. It was recommended that submissions should contain all the suppliers' information in order to provide adequate information for proper decision making.
  - (iii) Management undertook to treat all suppliers equally in terms of Eskom's BEE procedures.
- (u) Preliminary Report #4 and the independent audit indicate that PED was not vigilant regarding the detection of conflict of interests.
- (v) We understand that one of the coal suppliers is currently being investigated by a Special Investigation Unit ("SIU"). Furthermore, in this case the contract was awarded to a trader, which is contrary to the policy to only enter agreements with source owners and not traders – we were not able to ascertain the available time whether a joint venture arrangement was in place.
- (w) We have been informed of a supplier that was awarded a contract at a higher price than would otherwise have been agreed because the supplier had financial problems.
- (x) In 2013, A&F conducted a review of the tender evaluation process for the RFP and tender process of GEN 3198 ("the 3198 review") to assess whether it was in line with the 1034 procedure. No contract emanated from the tender process due to poor quality of information received from tenderers. It was found that PED did not comply with the 1034 procedure and the evaluation process was not fair, transparent and consistent. In this report, A&F made the following findings:
  - (i) suppliers were inaccurately shortlisted mainly because mandatory returnable documents required for tender evaluation were not considered as criteria for elimination;
  - (ii) technical and SD&L evaluations were not fairly performed – a significant amount of scoring errors and inaccuracies were found;

- (iii) SD&L, Health and Safety, Environmental and Logistics Evaluation Reports were not signed off or approved by management;
  - (iv) there was no pricing evaluation report;
  - (v) the logistics evaluation was unfair because the suppliers were evaluated on the mode of transport and not a specific logistical requirement;
  - (vi) evaluation scores were not consolidated to ensure that the most advantageous tenders were identified; and
  - (vii) the overall evaluation report contained various inaccuracies.
- (y) Based on the findings in the 3198 review it appears that there was very little improvement since the recommendations and undertakings arising from Preliminary Reports #2, #3 and #4. The adverse findings of the various Preliminary Reports and the independent audit indicate that there is an incomplete audit paper trail of negotiations held with suppliers. This incomplete record of certain transactions affects the transparency of the commercial transactions.
- (z) In 2014, PED represented to the BTC that the negotiations and contracts concluded to date were within the mandate approved and that the total value of the coal procured was still within the total value that was mandated by the BTC during 2008 (Executive Summary submitted to the BTC dated 16 April 2014, para 3.3, page 5).
- (aa) At para 3.5 on page 5 of the Executive Summary, the following mitigation strategies (amongst others) are identified in respect of various environmental, legal and contractual risks:
- (i) coal supply agreements should be given to suppliers at the commencement of negotiations;
  - (ii) thorough check of adherence to legislative requirements prior to contracting and ensuring that supplier visits are conducted and sign off obtained prior to contracting;
  - (iii) suppliers to be contract managed and contractual remedies enforced; and
  - (iv) building up the supplier base and thereby ensuring that there are alternate suppliers to contract with.
- (bb) The submission checklist annexed to the Executive Summary indicates the following:
- (i) the proposal was within budget;
  - (ii) the proposal underwent financial evaluation and the evaluation was verified by Corporate Finance;
  - (iii) there were no legal implications;
  - (iv) Corporate Legal input was obtained and the approval sought was consistent with legal input; and
  - (v) due consideration was given to employment equity.

- (cc) Attached to the above mentioned Executive Summary is a document with the heading "Approval of negotiated outcome", dated 7 March 2014, which indicates that the purpose of the submission is to request that the Medium Term mandate awarded in 2008 remain open until 2018. The submissions included the following representations:
- (i) that the total value of coal procured was still well within the total value that was mandated by the BTC in 2008;
  - (ii) the weighted average price of coal at [REDACTED] was still well within the escalated mandated price (this includes the coal and transport portions);
  - (iii) qualities were higher than the original mandate;
  - (iv) the improved coal quality delivered increased the power station thermal efficiency and mitigates against coal related load losses;
  - (v) three life of mine contracts were concluded with [REDACTED], [REDACTED] and [REDACTED];
  - (vi) prices negotiated during 2010 to 2013 were better than the mandated prices of 2008; and
  - (vii) the modes of transport that were negotiated were in the order of conveyor first, rail second, and then delivered and FCA last.
- (dd) Below is a list of the MTCs and STCs that were concluded after 2010, up to 2014, as provided to us.



to be inconsistent with another document issued by Finance, which is dealt with in the next paragraph.

- (gg) An assessment of certain correspondence from Treasury dated 10 March 2014, and which is attached to the Executive Summary, makes various observations which are not consistent with some of the representations referred to above. The above mentioned correspondence states the following (amongst others):
- (i) the total contract value reported is per calendar year as it has been escalated with reference to each contract base date and escalation date to 2013. The reported contract value is not aligned to Eskom's financial year and cannot be compared to the MTC total budget in 2013 and 2014 financial years;
  - (ii) the contract values are reported in 2013 real terms and do not reflect the approximate nominal commitment of the concluded contracts in terms of the agreed CPA;
  - (iii) it is therefore recommended that the nominal values (price and contract value) based on the agreed escalation rates and transport costs be included in the feedback to the Board (showing an approximate value of the total contract commitments). The total contract commitments could then be monitored against the PED budget and cash projections;
  - (iv) the escalation basket used for the MTCs was not approved by the BTC as part of the mandate as a result of different weights having been agreed with different suppliers;
  - (v) it is recommended that a basket with recommended weightings be submitted to BTC for approval. This would facilitate a level of control of and certainty on the actual contract commitments and spend, as the agreed weightings would be within a mandated range; and
  - (vi) an instance was identified where a cancellation fee of ██████ that was agreed with ██████ which was not part of the mandate approved by BTC.

### 3.3.9 Short Term Contracts

- (a) It appears that STCs are entered into on an emergency basis.
- (b) The vast majority of STCs are concluded on an FCA basis where Eskom carries the risk during delivery to the power station. The initial procurement mandate of 2008 required transport costs to be on a delivered basis and not an FCA basis.
- (c) Information gathered during interviews indicates that there is sometimes interference from senior levels in the awarding of coal supply contracts. The above mentioned information has not been tested or verified due to time limitations and lack of availability of certain information sources (such as emails).
- (d) We were informed that questions could be raised concerning the awarding of transport routes as some suppliers are awarded preferential (and more lucrative) transport routes. It was stated that the transport rates are standard in terms of the coal haulage agreements. However, preferred transporters were given more lucrative routes.

### 3.3.10 Long Term Contracts

- (a) We were informed by some interviewees that only two long term contracts were concluded since 2008.
- (b) It was stated that the Medupi supply contract resulted in a significant penalty being paid by Eskom. It appears that the penalty is not included in the calculations that are conveyed to the BTC regarding the cost of coal. However, penalties such as this should be taken into account when determining compliance with coal budget.

### 3.4 Diesel Procurement

3.4.1 A review of diesel procurement was undertaken in order to give us an understanding of the procurement processes implemented in this aspect of Eskom's business. The focus of this section is on the diesel contracts pertaining specifically to the Open Cycle Gas Turbines ("OCGT" or "OCGTs") situated in Atlantis (Ankerlig) and Mossel Bay (Gourikwa).

3.4.2 Eskom uses the services of contracted and non-contracted suppliers for diesel.

#### 3.4.3 Contracted Suppliers of Diesel

(a) In and around 2008 Eskom contracted with the following entities for the supply of diesel for its OCGTs, which contracts are for a period of ten (10) years respectively, ending in 2018:

(i) [REDACTED];

(ii) [REDACTED]; and

(iii) [REDACTED].

(b) In addition, Eskom has a fuel storage agreement with PetroSA, which commenced in 2009 for a period of 5 years, and which was subsequently extended for a further 5 years in 2014.

(c) A perusal of these contracts suggests that Eskom's interests are adequately protected. In particular, Eskom is paying what appears to be a reasonable price for diesel supplied, being discounted as follows:

(i) [REDACTED] (wholesale list price minus [REDACTED] cpl);

(ii) [REDACTED] (wholesale list price minus [REDACTED] cpl); and

(iii) [REDACTED] (wholesale list price minus [REDACTED] cpl).

#### 3.4.4 Non-contracted Suppliers

(a) In September 2012, electricity demand exceeded supply, resulting in an emergency being declared by the Emergency Response and Command Centre ("ERCC") team. As far as the OCGTs were concerned, an emergency was declared by [REDACTED], Peaking Power Station Manager at Ankerlig on 7 September 2012, in respect of the supply of diesel.

(b) Commodity Sourcing made a motivation for the procurement of additional diesel due

to constraints encountered by the contracted suppliers.

- (c) A recommendation was made for the emergency procurement of diesel totalling 25 thousand tons for an approximate cost of R250 million, envisaged to end on 30 November 2012.
- (d) This motivation was approved on 10 September 2012 by [REDACTED] as per a duly executed Delegation of Authority dated 30 August 2012.
- (e) Subsequently, Commodity Sourcing began contacting known fuel suppliers enquiring whether they had the capacity to supply the required fuel on an emergency basis. The relevant employees in Commodity Sourcing signed declarations of no interest.
- (f) The following 8 non-contracted suppliers were used and the Board subsequently ratified the emergency diesel purchases from them:
  - (i) [REDACTED];
  - (ii) [REDACTED];
  - (iii) [REDACTED];
  - (iv) [REDACTED];
  - (v) [REDACTED];
  - (vi) [REDACTED];
  - (vii) [REDACTED]; and
  - (viii) [REDACTED].
- (g) At the same time as the ratification, Commodity Sourcing was authorised by the relevant Board committee to issue a tender for the purpose of constituting a panel of diesel suppliers on an "as and when required basis" for a 5 year period.
- (h) Commodity Sourcing was furthermore authorised to negotiate fair and reasonable prices and place orders with existing non-contracted suppliers for the period not covered by the ratification i.e. from 21 February 2013 until a panel of suppliers was appointed. The results of negotiations was to be reported to EXCOPS upon finalisation.
- (i) It appears that the 8 entities mentioned above supplied diesel to Eskom at the following rates:
  - (i) [REDACTED] (wholesale list price minus 10 cpl per litre);
  - (ii) [REDACTED] (wholesale list price);
  - (iii) [REDACTED] (wholesale list price plus 15 cpl);
  - (iv) [REDACTED] (pricing not provided);

- (v) [REDACTED] (Ankerlig 1069 cpl and Gourikwa 1089 cpl);
  - (vi) [REDACTED] (1109 cpl);
  - (vii) [REDACTED] (1267 cpl); and
  - (viii) [REDACTED] (1080 cpl).
- (j) At this stage we are unable to state whether the above mentioned prices are fair and reasonable, save to state that these prices are far in excess of the discounted prices negotiated with the 3 contracted suppliers who offered discounts between [REDACTED] cpl and [REDACTED] cpl. The variance between the prices paid to contracted suppliers and the prices paid to non-contracted suppliers is so large that a reasonable inference would be that there is scope for better prices to be negotiated.

#### 3.4.5 Request for Proposals (RFP CORP 2720)

- (a) In September 2013 the aforementioned RFP was issued with the objective of establishing a panel of supplementary suppliers of diesel. Sixty three responsive tenders were received and subsequently all failed for allegedly not meeting the tender criteria.
- (b) Accordingly, this RFP was withdrawn and a new RFP was issued as set out below.

#### 3.4.6 Request for Proposals (RFP CORP 3017)

- (a) In April 2014, an application was made to the BTC to cancel RFP CORP 2720 and to issue a revised tender RFP CORP 3017. Approval was granted in June 2014 by the Board. RFP CORP 3017 differs from its predecessor only in that the terms for which the supply of diesel is needed was reduced from 5 years to 2 years.
- (b) Eighty eight bids were received of which 38 were found to be eligible for the evaluation phase in July 2014.
- (c) Of the 38, a shortlist of 6 suppliers was identified to be negotiated with in order to constitute a panel of 5 suppliers, to wit:-
  - (i) [REDACTED];
  - (ii) [REDACTED];
  - (iii) [REDACTED];
  - (iv) [REDACTED];
  - (v) [REDACTED]; and
  - (vi) [REDACTED].
- (d) A panel of 5 suppliers has not been appointed as at 15 June 2015.
- (e) The purpose of appointing a shortlist would ordinarily be (amongst others) to ensure that there is a sufficient depth in the potential counterparties to allow meaningful

negotiations to take place. A shortlist of 6 out of which 5 panel suppliers are to be appointed would seem to leave little scope for meaningful negotiations.

- (f) We are aware that a Pro-Active Assurance report dated December 2014 was compiled relating to CORP 3017 by [REDACTED], an external auditor. It found, inter alia, that some of the evaluators had their phones on them during evaluation and, in addition, some tenders contained pricing information in them and were nevertheless passed to the 'functionality evaluation' phase. Both these instances are breaches of procurement policy and the principle of fairness. It is unclear whether Eskom acted on the aforesaid report since the list consisting of six shortlisted respondents to the tender identified during the tender evaluation meeting remains unchanged.

#### 3.4.7 Interview with a senior manager with knowledge of diesel procurement ("Witness Diesel-A")

- (a) Witness Diesel-A stated that there were actually 31 suppliers of diesel for the OCGTs for the years 1 April 2012 to 1 April 2015, and not 11 (3 contracted and 8 non-contracted) as we had initially been informed. He stated further as follows.
- (i) The diesel supplied to Eskom at Ankerlig is produced at the [REDACTED] refinery in Cape Town. Historically, Eskom purchased diesel directly from Caltex. However, [REDACTED] tightened their payment terms and dropped their credit limits for Eskom due to various issues regarding payment. Eskom was therefore subject to stricter payment terms, which resulted in Eskom seeking to obtain supplies through third parties. Little appears to have been done to rectify this situation and to return to dealing directly with Chevron as opposed to dealing with third parties.
- (ii) The quality of invoicing from smaller operators suggested a lack of accounting platform and was highly questionable, particularly in light of the amounts being paid to them. Many of the smaller operators do not have a website or contact details. He did not disagree with the notion of diesel suppliers being set up as shell companies, noting that many of them appear to have no substance or infrastructure. [REDACTED] was raised as an example, with him stating that he was unable to find details of this company in the public domain. However, he did not use, for example, the registration number to investigate further due to it being outside of his remit.
- (iii) There is a list price issued by the refinery that includes a road levy, which can be claimed back. It is therefore possible to get a discount on the list price. The highest discount is understood to be a 43cpl discount. Of the 31 Eskom suppliers, only 5 or 6 suppliers receive and pass on this discount, the rest do not. He questioned why they would continue to purchase through suppliers that did not offer this discount versus those that do.
- (iv) [REDACTED] is the only company used for the transporting of diesel. Rotram is a transport company within the Eskom group. Whilst Rotram does not currently have tankers, he noted that the cost of purchasing tankers would have been offset long ago if Eskom had utilised this subsidiary instead of [REDACTED].
- (v) In response to the concerns listed above, Witness Diesel-A has drawn up a list of the 31 suppliers and the total amounts paid to them, along with a full

audit trail for every invoice paid. He has asked the Process Control Assurance Manager at the site to investigate the companies and prepare a file. He stated that he had provided this information to his General Manager, expressing his concerns, but that no action had been taken. The matter was also brought to the attention of Assurance & Forensics, but Witness Diesel-A is not aware of any follow up action having taken place. Furthermore, he was not aware of any challenge to or review of the commercial decisions or tenders relating to the purchase of diesel.

- (vi) Despite these concerns, he was confident that there were no issues with delivery of stock or payment of suppliers. Many of the smaller operators are B-BBEE certified for which Eskom can get recognition.
- (vii) He explained that there was a second route by which Eskom sometimes purchased diesel independently of the main route, namely via "floating vessels". These are hired tanker ships that dock at the port in Cape Town or Mossel Bay harbour as and when required (i.e. when an order is placed). He was not familiar with the terms of these deals but believed Eskom paid demurrage charges.
- (viii) He confirmed that Eskom required regular diesel purchases due to limited storage capacity. There are some storage tanks in the fleet. However, these are designed to cover peak times only, as per the original specification of the OCGTs. The rate at which diesel is currently being used is far in excess of what the plant and tanks were designed for.
- (ix) He stated that a tender was issued earlier in the year to change/confirm the suppliers, led by Procurement. His team was not involved. He understands that the tender is now closed and that there is a shortlist of suppliers that Eskom will deal with in the future. He noted that this process had not yet gone through the BTC.
- (x) He raised the issue of people authorising diesel purchases without the necessary authorisation levels. He stated that the latest purchases had not been authorised according to the applicable Delegation of Authority.
- (xi) He also flagged that orders being implemented without authorisation continue to breach budget. He stated this had been raised to the Financial Director, but that the deals continued without going through the applicable procedures. He was not aware of who was leading or involved in this.

#### 3.4.8 Interview with a senior manager involved with diesel procurement ("Witness Diesel-B")

- (a) Witness Diesel-B advised that diesel is sourced from the so called ad hoc suppliers on the authority of a resolution of the BTC adopted at a meeting on 7 March 2013, which provided for the following:
  - (i) ratification of the emergency purchase of diesel from the 8 non-contracted suppliers;
  - (ii) granting of authority to Commodity Sourcing to issue an open tender for the purposes of establishing a panel of service providers who would supply a

minimum of 25% of the required quantities of diesel on an 'as and when required' basis;

- (iii) granting of authority to Commodity Sourcing to negotiate fair and reasonable prices and place orders with non-contracted suppliers for the period not covered by the above mentioned ratification (from February 2013 until a panel of suppliers is appointed);
  - (iv) requirements for non-contracted suppliers to be as follows:
    - (A) a valid wholesale licence;
    - (B) letter from a credible source from which diesel will be sourced; and
    - (C) a letter of financial support (presumably from a bank or other financial institution).
- (b) Witness Diesel-B stated further as follows.
- (i) His instruction was "to go out and find diesel" on the basis of projections which come from Generation Production Planning. These projections are firstly sent to the contracted suppliers and in the event that there is a supply shortage, the non-contracted suppliers are engaged.
  - (ii) The individuals who engaged the first batch of non-contracted suppliers, were his predecessors, one [REDACTED] and [REDACTED], who appointed the aforementioned non-contracted suppliers based on the criteria set out in paragraph 3.4.8(a)(iv) above.
  - (iii) The monitoring of non-contracted suppliers was based exclusively on their performance. Their places of business were never inspected. No investigations in respect of conflicts of interest were initially conducted. Subsequently, probity checks have been conducted by Assurance & Forensics.
  - (iv) There were never more than 12 non-contracted suppliers at any given time as it was too difficult to manage a larger group.
  - (v) A discount was not originally negotiated with the non-contracted suppliers as the diesel purchases were being made in an emergency situation and there was no time to do so.
  - (vi) In the meanwhile, the 63 bids responding to tender CORP 2720 all failed to meet the tender criteria.
  - (vii) Tender CORP 2720 was withdrawn and reissued under CORP 3017. A shortlist of 6 suppliers have now been identified, but their appointment has not been confirmed as anticipated in and during the first quarter of 2015. The appointment is now envisaged to take place in the first half of 2015.
  - (viii) It was acceptable for the tender process to take 30 months. The process was not deliberately manipulated.

- (ix) He had no problem with a [REDACTED] ( [REDACTED] ) or a [REDACTED] ( [REDACTED] ) supplying diesel to Eskom as long as the entities met the criteria set out in paragraph 3.4.8(a)(iv) above.
- (x) As Eskom is purchasing diesel for the generation of electricity (as opposed to being used for transport), it receives a rebate from the South African Revenue Service (SARS). The rebate fluctuates and changes during every financial year. It is currently R3,94 per litre, which would translate into a substantial amount taking into account the volumes of diesel purchased for the generation of electricity.
- (xi) The Board will sit in and, during August 2015, ratification will be sought via EXCOPS for the purchase of diesel from the remaining non-contracted suppliers.

#### 3.4.9 Interview with an employee in Legal Services ("Witness Diesel-C")

- (a) Witness Diesel-C's role is to provide legal advisory services.
- (b) He stated as follows.
  - (i) Upon advice being sought from him, the business units do not consistently follow the advice given.
  - (ii) Legal Services is often side lined when it comes to the conclusion of contracts for diesel and coal, i.e. it is only some of the time that their "legal opinion" would be sought, and if sought and provided, would be used selectively.
  - (iii) On occasion he would be invited to attend meetings of the ERCC team, which consists only of EXCO members and effectively acts as an EXCO in and during an emergency as occurred in and during September 2012 when the emergency procurement of diesel was authorised.
  - (iv) Members of the ERCC would rotate intermittently.
  - (v) He is aware that the contracts pertaining to the contracted diesel suppliers had to be renegotiated (to provide for increased volumes), but is unaware whether this has in fact been done, as Eskom is paying too much for diesel sourced from the non-contracted suppliers.
  - (vi) He categorically states that Procurement, more often than not, does as it pleases and in the process the Legal Department is overridden or ignored. This is a historical problem and has been ongoing for many years.

#### 3.4.10 Interview with an employee having knowledge of Supplier Development & Localisation ("SD&L") issues ("Witness Diesel-D")

- (a) Witness Diesel-D stated as follows.
  - (i) SD&L conducted a review of the already mentioned 8 non-contracted suppliers of diesel on the request of the relevant sourcing unit. SD&L uses various verification agencies which they use to verify the details of suppliers. Eskom does not itself verify the veracity of any documents or information

furnished to it. The vetting was conducted based on certain criteria, such as a certificate confirming BBE status, tax clearance certification, banking details and safety requirements.

- (ii) He is not aware of the non-contracted suppliers, other than the 8 mentioned in paragraph 3.4.4(f) above.
- (iii) He understands that a Board decision adopted Eskom's official policy as being that black owned companies are preferred suppliers as opposed to the large companies that are not BEE compliant. This is the reason why the non-contracted suppliers of diesel were preferred as opposed to the large oil companies which are not 100% BEE compliant, even if that meant Eskom would be paying a premium price for diesel. (We understand that the understanding of Witness Diesel-D in this regard is not accurate and requires further testing.)

#### 3.4.11 Analysis

- (a) There are indications that a fair and equitable process was not followed in the appointment of non-contracted suppliers. This was initially justified on the basis of emergency. There are indications that the additional non-contracted suppliers might not have been appointed under a suitable delegation of authority.
- (b) The time taken to appoint a panel of suppliers (30 months) is a matter of concern and requires further investigation.
- (c) It appears that persons who are responsible for key decisions regarding diesel procurement have limited information available to them. It appears further that their authority is capable of being influenced.
- (d) Witness Diesel-B like some of the other interviewees appear to have had no real authority, despite in some instances on the face of it being made to look as if they did.
- (e) The portfolios of certain individuals appear to have been treated as token portfolios, since their expertise has been stated not to have been sought when it should have been, and when it was sought, their inputs were in certain instances ignored.
- (f) Various interviewees seem to have conflicting views about the high price of diesel procured from non-contracted suppliers. On the one hand, it was stated that this arose from the fact that these supplies were procured in an emergency where there was no time to negotiate prices. However, it is now almost three years since an emergency was declared and there does not appear to have been any attempt to negotiate better pricing since. Another view was that black owned companies are preferred suppliers as opposed to the large companies that are not BEE compliant, even if that meant Eskom would be paying a premium price for diesel. We are not convinced by this reasoning as black owned companies can be given preference whilst at the same time negotiating reasonable prices for diesel supplied by them.
- (g) The following irregularities are noted.
  - (i) There are indications of a failure to adequately monitor Eskom's affairs, resulting in a perceived "emergency" in September 2012. This emergency

appears to have been reasonably foreseeable. As a result, the benefits of a normal procurement process were not achieved

- (ii) There are indications that not enough was done to renegotiate supply volumes with the contracted suppliers.
- (iii) The delay in appointing a panel of ad hoc diesel suppliers is of concern. The delay would serve to benefit non-contracted suppliers who continue to supply on what was initially an emergency basis.
- (iv) Failure to act on the independent audit report in relation to Tender CORP 3017 is of concern.
- (v) In view of the above, there is a risk that the delays in appointing a panel might have been manipulated to the benefit of the non-contracted suppliers.

3.5 [REDACTED] Contract Modification

[REDACTED]

[REDACTED]

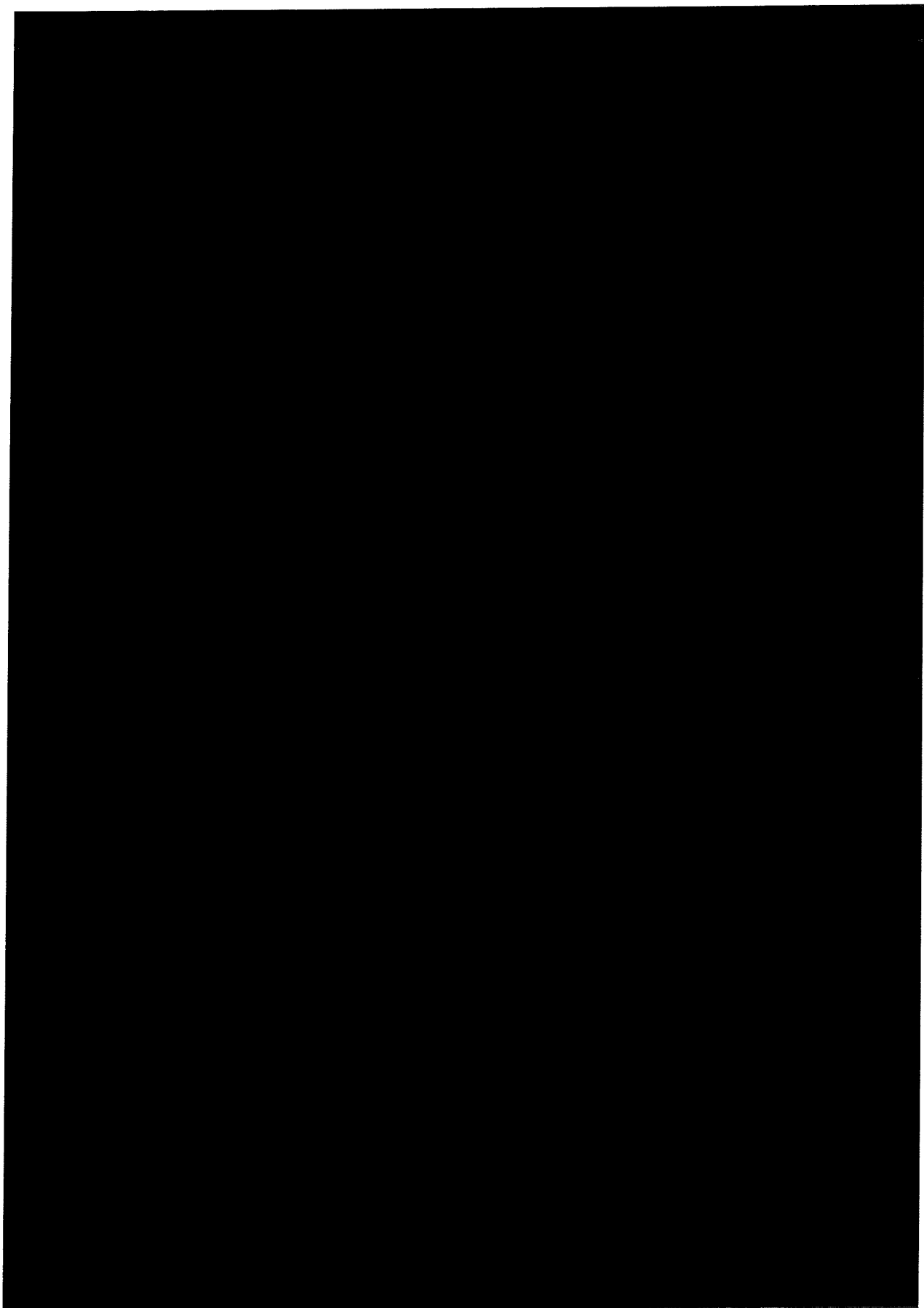
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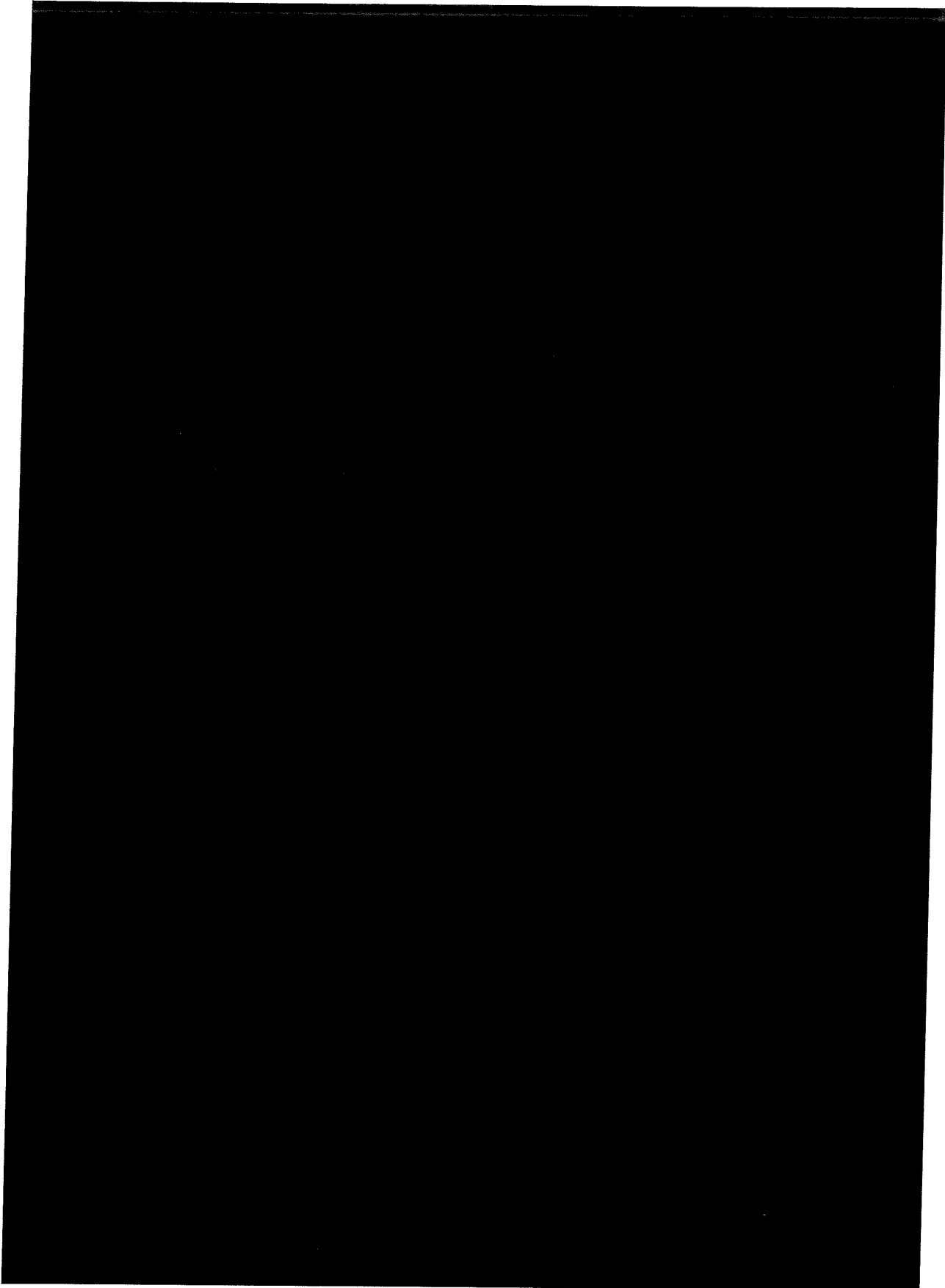
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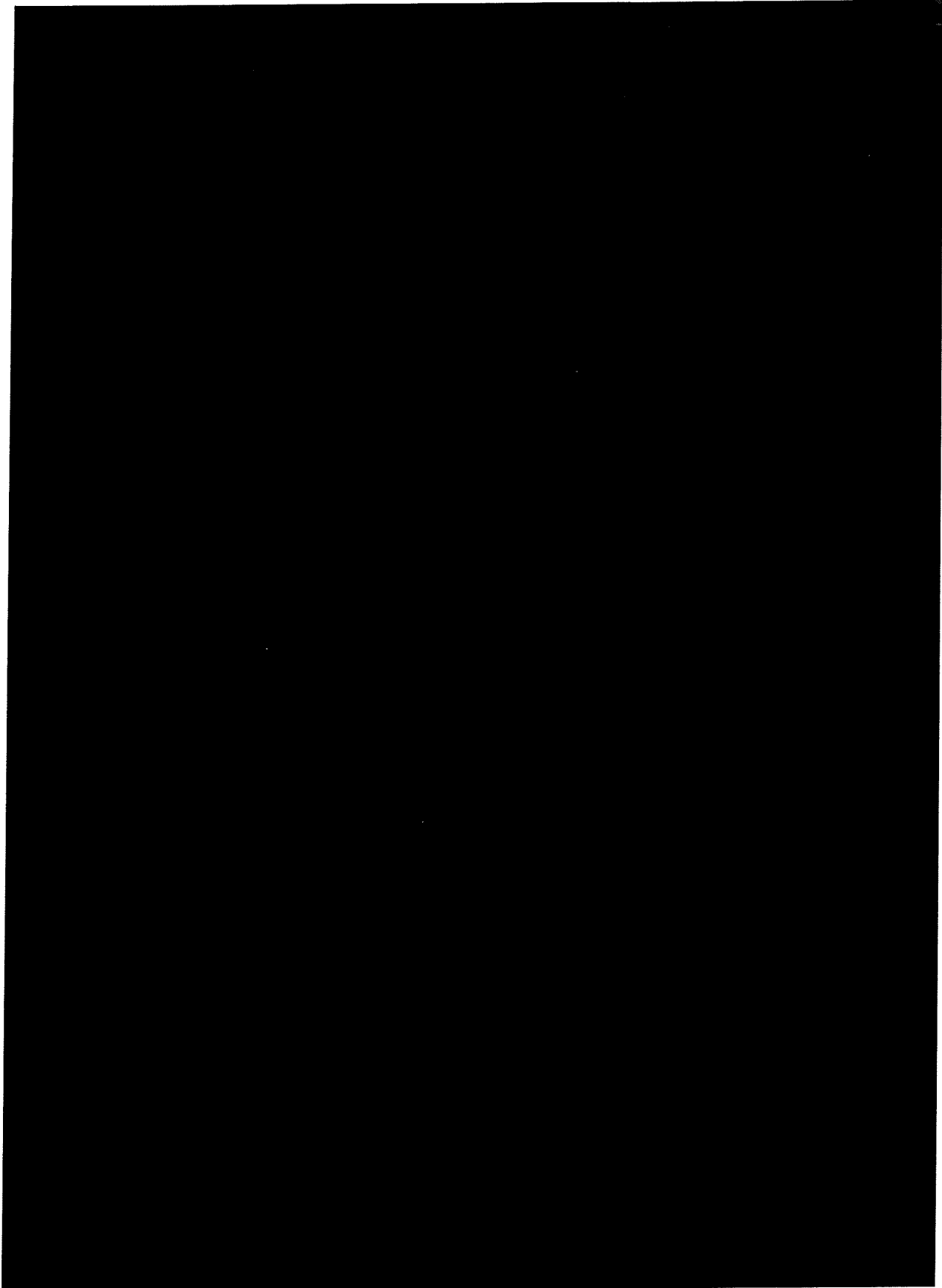
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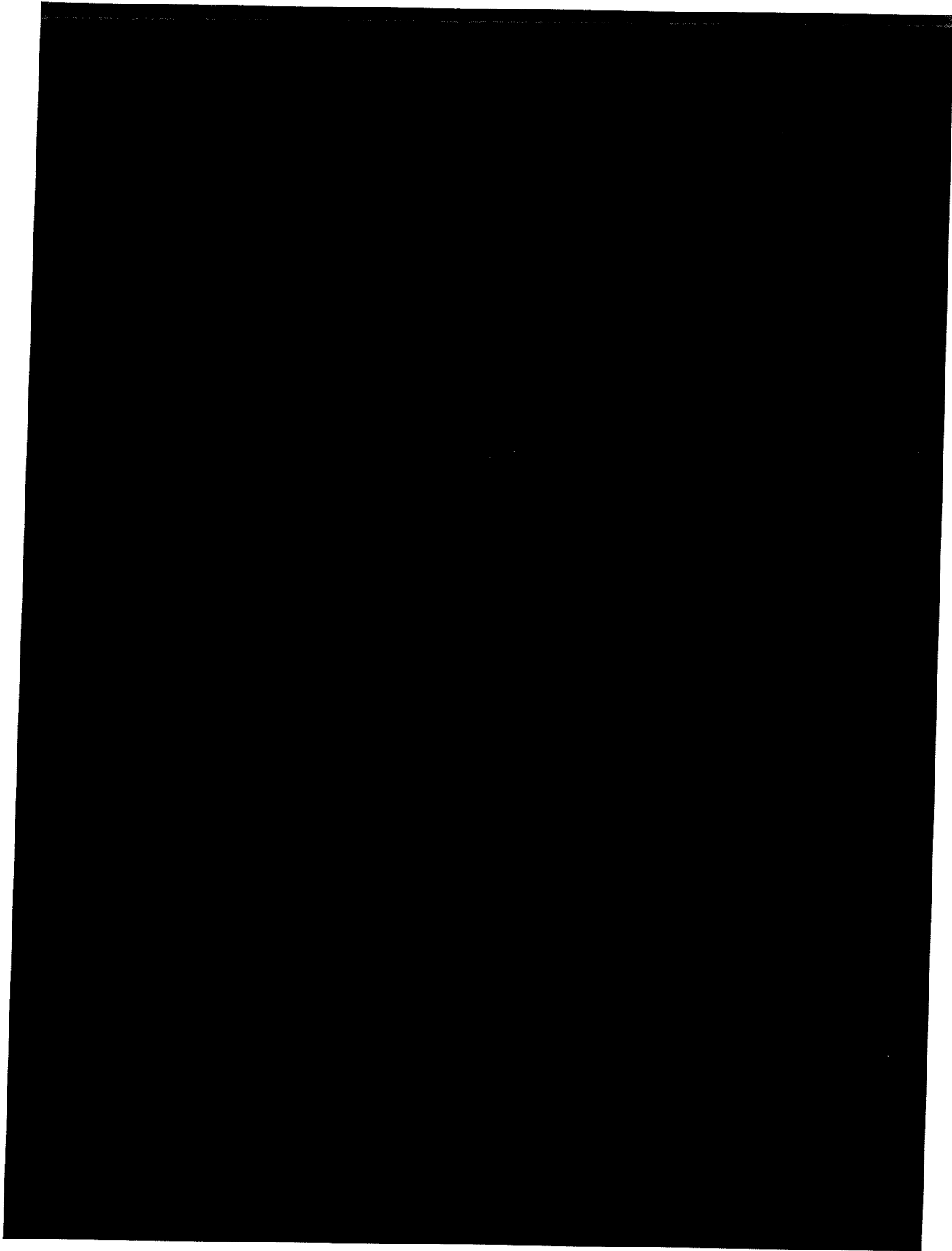
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3.6 Conflict of Interest

3.6.1 The Eskom Conflict of Interest Policy document sets out the obligations of employees and directors with regards to conflict of interests and the declaration and management of these interests. It appears that although a Conflict of Interest Policy exists, there seems to be no proper implementation and management of the policy.

3.6.2 Generally, prior to approving a contract modification or award above certain thresholds, Eskom appoints consultants to perform probity reviews for the purposes of ensuring that no

conflict of interest exists between the relevant suppliers and Eskom's authorising committee members (which includes EXCOPS members, Eskom Board members, Cross Functional Team members and their respective spouses).

3.6.3 In Annexure G (see Schedule 6), we consider how EXCOPS deals with the results of these probity reports. From our investigation, it appears that the results of the conflict checks are not always brought to the attention of EXCO and the Board.

### 3.7 Other Aspects of Non-Compliance

3.7.1 Besides the above categories of procurement we have also considered procurement transactions below the EXCOPS' delegated authority threshold of R300 million. In this regard we placed reliance on the Assurance & Forensics Catalyst reports for the period from January 2015 to March 2015.

3.7.2 Some of the common areas of non-compliance include:

- (a) supplier preference by employees, either during the award of the contracts or when issuing work orders;
- (b) misrepresentation by suppliers to either secure contracts with Eskom or to derive additional financial benefit; and
- (c) employees benefiting from Eskom tenders through indirect relationships with suppliers.

3.7.3 There are indications that:

- (a) tender processes are sometimes influenced by senior personnel, and in certain instances, this has the further consequence of inaction in the event of non-performance;
- (b) corporate opportunities are sometimes diverted from Eskom to third parties; and
- (c) senior personnel sometimes develop supply arrangements and then exert influence to procure the issuing of a contract in respect of those arrangements.

3.7.4 It has not been possible to test and verify much of the information received in respect of issues arising in connection with specific procurement exercises due, amongst others, to the shortened period of the Investigation and lack of access to certain key sources of information (such as emails) and certain potential interviewees.

### 3.8 Existence of Processes Aimed at Addressing Non-Compliance

3.8.1 Eskom's Assurance & Forensics Department conducts regular proactive assurance tests on all procurement transactions that are within the scope of the EXCOPS' and the BTC's delegated authority. However, the proactive assurance tests are focussed on ensuring compliance with the requisite process and procedural requirements. In other words, proactive assurance is unable to detect fraud, collusion and aspects of executive override within the process.

3.8.2 In the context of executive override, we were informed by certain interviewees of the view that some senior executives ran Eskom through certain well placed proxies. The above mentioned information has not been tested or verified. Had the Investigation continued to the

originally contemplated end date, it is likely that this information would have been capable of being tested, inter alia with reference to the email records to which we requested access.

- 3.8.3 In addition to the proactive assurance tests, Internal Audit also conducts audits on procurement transactions handled by EXCOPS and the BTC. However, the audits in this regard are only conducted once a matter has been referred by the audit committee. Consequently, in circumstances where there is no reference from the audit committee or requests from various business units, glaringly suspicious transactions will not be audited. Some of the transactions that have been audited in the past financial year are:
- (a) manufacturing, supply and delivery of grinding elements and media to various power stations (pro-active audit of the evaluation phase);
  - (b) provision of maintenance on milling plant at Camden Power Station (upon request from the chairperson OPEX Tender Committee); and
  - (c) contract strategy and invitation to Tender Enquiry Gen: 3251-R – Inspection Authority Services for various power stations including Koeberg Nuclear Power Station.
- 3.8.4 In all the abovementioned cases, Internal Audit found the process undertaken to be non-compliant with Eskom's SCM processes and procedures. All the tenders were subsequently cancelled and the process restarted.
- 3.8.5 The Internal Audit unit also conducts probity tests on employees of Eskom involved in procurement transactions. However, these probity tests are limited to spouses, which leaves the system open to manipulation by relations other than those that are spousal in nature.
- 3.8.6 The other layer used by Eskom to address non-compliance with its SCM process is the Forensics Department. We highlighted above some of the findings contained in the Catalyst reports issued in the first quarter of 2015. However, it is worth noting that most of the matters referred to Forensics are those below the R300m threshold. Secondly, it is also worth noting that the Forensics Department only investigates matters referred to it and that it does not investigate matters proactively.
- 3.8.7 We conclude that Eskom does have processes in place to deal with non-compliance with the applicable SCM processes. However, given the size of Eskom's procurement spend, it is likely that there is insufficient capacity within Eskom's Assurance & Forensics unit to consistently ensure adherence to processes aimed at dealing with non-compliance. Furthermore, the work of the above mentioned units suffers from certain deficiencies, in that:
- (a) Internal Audit and Forensics looks at matters reactively, i.e. only in referrals; and
  - (b) the investigations of Assurance are proactive, but are limited in scope and focused on procedure.
- 3.8.8 In a submission made to the BTC on 8 May 2013 (no reference to this meeting report having been tabled and noted by the Board) and to EXCOPS on 26 April 2013, the legal department of Eskom identified the risks of non-compliance with the PPPFA and PFMA. It was stated that "the risks in respect of non-compliance remain in that court applications may be brought to set aside such tenders and contracts awarded, findings of irregular expenditure and financial misconduct in terms of the PFMA may still be imposed and the resulting sanctions of criminal prosecution may following terms of the PFMA. The Auditors will raise the issue of non-compliance in the Directors report and the audit opinion is unqualified. Other legal issued

relating to the interpretation of the PPPFA provisions requires engagement with the National Treasury and other stakeholders.” [Note: The EXCOPS report for this meeting was tabled for noting and approval by EXCO at its meeting held on 27 June 2013. The Board noted and approved the EXCO report for the EXCO meeting held on 27 June 2013 at the Board meeting held on 28 August 2013. However, these risks do not appear in the EXCO report to the Board in the Board meeting pack for the Board meeting held on 28 August 2013.]

3.8.9 However, it appears that, although the risks of non-compliance were made known at various levels of the organisation, Eskom’s procurement processes are still not consistently adhered to. It was observed in a BTC Meeting held on 12 February 2014 that “the organisational culture was one where procurement processes were being bypassed in pursuit of and preference for sole and/or continued use of existing suppliers, without any solid rationale”. The meeting report for the BTC meeting held on 12 February 2014 was tabled and noted for approval by the Board at its meeting held on 29 May 2014. This meeting report is included in the meeting pack for the Board meeting held on 29 May 2014 (and bears reference to this statement regarding procurement processes).

3.8.10 We set out in Annexure H (see Schedule 6), specific instances of non-compliance and transgressions identified thus far in our review relating to procurement processes and procedures.

3.8.11 It also appears that in some instances, transgressions of the procurement policy are identified, but no appropriate sanctions are imposed. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

### 3.9 Nature of Sanctions Adopted

- 3.9.1 As noted above, the sanctions recommended by Internal Audit include cancellation and reissue of tenders. In some instances Internal Audit has recommended retraining of officials involved in irregular processes.
- 3.9.2 On the other hand, where the Forensic Department has investigated irregularities, some of the sanctions that have been recommended include:
- (a) referral to South African Police Service (SAPS) for further investigation and eventually prosecution by the National Prosecution Authority (NPA); and
  - (b) disciplinary action which may result in suspensions, dismissals or warnings.
- 3.9.3 Follow up on whether these sanctions were implemented would have been conducted in the remaining period of the Investigation.

## 4 Item 2.5.3 of Task Order 1

- 4.1 As indicated above, item 2.5.3 of Task Order 1 states as follows: "whether the procurement processes are effective to ensure that Eskom obtains the best quality products and services at the best price".
- 4.2 The effectiveness of the procurement policy to Eskom in enabling the sourcing of the best quality products and services at the best prices must be assessed with reference not only to a formal analysis of the content of that policy, but also on the basis of its application in practice.
- 4.3 Based on the evidence gathered in the course of the Investigation, it appears that Eskom's procurement policies and procedures are well developed. If properly implemented, Eskom would be well positioned to obtain quality products and services at the best prices. We note that there are certain improvements that could be introduced to address the deficiencies in Eskom's procurement policy – these are dealt with in our recommendations below.
- 4.4 As indicated in the previous sections of this chapter of this Report, it appears that manipulation of the system through executive or management override, in addition to the exploitation of gaps presented by the use of prequalification, emergencies and sole sourcing, remain the prime threats to obtaining the fruits of the SCM policy and procedure.
- 4.5 There are indications that the paper trail associated with the tender process might be abused to conceal underlying duplicity.
- 4.6 There are indications that the procurement processes applied in respect of coal and diesel are not effective to ensure that Eskom obtains the best quality products and services at the best price.
- 4.7 In Annexure I (see Schedule 6), we set out specific instances where the best quality products and services were not obtained as a result of ineffective procurement processes.
- 4.8 In a Final Catalyst Report dated April-June 2013, the following procurement irregularities were identified:
- 4.8.1 contract specifications designed to suit a specific supplier to the exclusion of others;
  - 4.8.2 supplier preference when issuing orders;

- 4.8.3 employees not following procurement process when awarding, managing as well as when terminating contracts;
- 4.8.4 conflict of interest (no declarations); and
- 4.8.5 awarding contracts to suppliers who do not satisfy all prerequisites.
- 4.9 An analysis of available quarterly Risk and Resilience Reports evaluating various corporate and business risks of Eskom indicates that, starting from the second quarter of 2013/2014, MANCOM was informed of and recognized inter alia "the risk of excessive cost of procurement caused by poor planning, collusion and anti-competitive practices, leading to poor financial performance by Eskom." (Risk and Resilience Report for Quarter 2 of 2013/2014, page 127):
- 4.10 The Risk and Resilience Report for the second quarter of 2013/2014 states that the above mentioned risk is caused by the following:
  - 4.10.1 overall poor demand planning in Eskom;
  - 4.10.2 un-updated supplier database and the tendency to procure through the closed tender vs. open tender route leads to creation of a bar to entry by new suppliers; and
  - 4.10.3 that the open market is not tested for competitive prices and/or innovative products.
- 4.11 Notably, the section of the report where respective measures to treat the risk should be proposed is left blank. This suggests that, at the time of preparation of the report, the risk was identified and reported. However, no steps aimed at mitigation of the risk were proposed.
- 4.12 According to the relevant July 2013 Quarterly MANCOM Meeting Minutes, a MANCOM member expressed his frustration with the procurement processes in place which was hampering the ability to order simple products, such as light bulbs and pointed out that submissions for procurements had now been pushed out to three weeks prior to ordering. In response it was stated that Group Commercial was busy compiling a procurement plan which would ultimately be tabled to MANCOM for approval. A MANCOM member suggested that Group Commercial be held accountable on contract management and suggested that the tracking of contracts should be a KPI for Group Commercial.
- 4.13 EXCO approved The Enterprise Risk and Resilience Report for Quarter 2 of 2013/14 as tabled at an EXCO meeting held on 6 November 2013. This report was tabled for recommendation to submit to the Audit & Risk Committee, details of which were included in the meeting pack. The EXCO report for the meeting held on 6 November 2013 was tabled and noted for approval at a Board meeting held on 27 February 2014.
- 4.14 The submission of quarterly Risk and Resilience Reports indicates that Eskom has a procedure in place in order to evaluate various corporate and business risks. Thus, presumably, MANCOM was informed of the various risks, including the above discussed risk of excessive cost of procurement caused by poor planning collusion and anti-competitive practices, leading to poor financial performance of Eskom.
- 4.15 Furthermore, the executive summary to one of the risk and resilience reports for 2013/2014, specifically outlines the risk and resilience reporting schedule for all the key stakeholders, including the Board Audit and Risk Committee, EXCO and MANCOM (quarterly and monthly). (Executive Summary to the Risk and Resilience Quarterly Report for Q1 of 2013-2014, pages 4-6). Thus, it appears that the procedure of communicating information about the risks and

decision-making mechanisms on different levels of Eskom management regarding the relevant risks are in place. The Risk and Resilience Quarterly Report for Quarter 1 of 2013-2014 was tabled for noting at the EXCO meeting held on 29 July 2013. The EXCO report for the meeting held on 29-30 July 2013 was taken as read and noted at the Board meeting held on 28 August 2013.

- 4.16 It should be noted that certain attempts to improve procurement process have been reported: For example, Enterprise Development, Regulation & Legal Support reported in this respect that in quarter 4 of 2013 legal support was strengthened to Group Commercial and tender committees by highlighting legal issues that may impact on Eskom procurement (Regulation and Legal Quarterly Report to MANCOM Q1 2013, page 1; Regulation and Legal Quarterly Report to MANCOM Q4 2013, page 1.)

## **5 Recommendations**

- 5.1 We set out below our recommendations in respect of procurement.
- 5.2 The principle of substance over form must be implemented in the context of procurement. There appears to be a risk of procurement policies being approached formalistically as a "tick box exercise". The substantive approach could be achieved, inter alia, by (i) placing greater emphasis on the principles underlying the procurement process and monitoring achievement of these principles (in addition to compliance with the usual procedural requirements), and (ii) developing checks and balances to address high risk aspects where the usual procedural requirements could fail or be manipulated. The substantive approach to procurement should be reinforced by suitable training programmes, with a view to institutionalising this approach.
- 5.3 Learnings from failures in procurement processes should result in modification and enhancement of the SCM policy in order to institutionalise those learnings.
- 5.4 The manner in which different procurement processes are utilised must be reviewed. In this regard, guidelines should be developed to ensure that switching from one procurement process (such as open tender) to another (such as closed tender) is not manipulated in the context of a specific procurement exercise. In addition, such switching should be subject to enhanced scrutiny, for example by way of automatic referral to a compliance audit.
- 5.5 There must be better follow up of audit findings to ensure that audit findings are adequately addressed and that the learnings from audit findings are institutionalised.
- 5.6 Forensic investigations of allegations of misconduct involving executive interference in procurement processes should be prioritised. The mandate of such investigations must be sufficiently broad and resourced so as to be able to identify such interference and impose suitable sanctions.
- 5.7 Guidelines and checks and balances should be developed to prevent, mitigate and identify executive interference in procurement exercises. By way of example, the enhanced compliance function referred to in paragraph 5.11 below could be designed to form part of such a system of checks and balances.
- 5.8 The practice of simply withdrawing tenders and reissuing them should be carefully considered to ensure that misconduct is not ignored and/or inadequately investigated.
- 5.9 The feasibility of utilising independent external service providers for the purposes of evaluation and adjudication should be explored.

- 5.10 A more proactive and comprehensive approach to monitoring procurement processes should be developed.
- 5.11 The compliance function must be enhanced and reinforced. This function must be independent from the normal operational processes of Eskom. By way of example, the feasibility of having a compliance function that reports directly to the Board or Eskom's shareholder should be explored.
- 5.12 The legal function must be enhanced and reinforced.
- 5.13 Eskom's SCM policy must be reviewed to ensure that it is aligned with Eskom's organisational structure and DOA framework.
- 5.14 The approach used in involving cross functional teams in the evaluation of bids should be reconsidered. The SCM procedure should prescribe:
  - 5.14.1 the process for appointing members to bid evaluation committees;
  - 5.14.2 the duration of the appointment; and
  - 5.14.3 the applicable terms of reference.
- 5.15 Periodic supply chain performance reviews should be implemented to assess whether the sourcing methodology applied is likely to give rise to the desired outcome.
- 5.16 The merits of extending the scope of probity tests beyond the current spousal level should be investigated.
- 5.17 The merits of conducting a detailed comparative study on procurement methodologies applied by international state owned and private energy generation and distribution companies should be considered.
- 5.18 Where appropriate, the possibility of designing bespoke procurement procedures for particular types of procurement should be explored, without derogating from the principles of section 217 of the Constitution and related legislation.
- 5.19 The procurement processes applicable to coal and diesel must be reviewed and subject to enhanced scrutiny.

## **CHAPTER 6: CONTRACT MANAGEMENT, IN PARTICULAR HIGH COSTS ESCALATION, FREQUENT MODIFICATIONS, PENALTY COSTS INCLUDING CAPACITY WITHIN ESKOM TO MANAGE CONTRACTS GENERALLY**

### **1 Background**

- 1.1 This Chapter deals with item 2.6 of the Scope of Work set out in Task Order 1.
- 1.2 Item 2.6 of Task Order 1 relates to contract management, in particular high costs escalation, frequent modifications, penalty costs including capacity within Eskom to manage contracts generally. Under this heading the following specific items are provided for:
- 1.2.1 "2.6.1 Contract management policy, in relation to its strategic focus, procedures and resources. Are the policies consistently applied to safeguard the organization from failures to enforce its rights and counterparty claims;
- 1.2.2 2.6.2 whether the design of the contracts (fit for purpose) is appropriate with regard to contract terms;
- 1.2.3 2.6.3 whether there is a defined modification approval and monitoring process which is adequate and effective. Further, to also establish reasons as to why contract modifications often result in increased costs and delays; and
- 1.2.4 2.6.4 whether there exists a contract performance monitoring system, in the maintenance of the Generation fleet".
- 1.2.5 We adopted a two phase approach to assess the above mentioned aspects:
- (a) conducting a desktop review of the information and documents received from Eskom; and
  - (b) conducting interviews with Eskom personnel to either:
    - (i) seek clarity on matters identified in the course of the desktop review; or
    - (ii) confirm our preliminary observations arising from the desktop review.
- 1.2.6 As part of our desktop review, we analysed the following documents:
- (a) Eskom's Procurement Supply Chain Management Policy – 32 – 1033 ("SCM Policy");
  - (b) Eskom's Procurement and SCM Procedure -32- 1034;
  - (c) The Eskom Delegation of Authority Policy 240- 62072907 ("DOA");
  - (d) Tender Committees Terms of Reference;
  - (e) Process Control Manual – Establish Contract Environment

- (f) Process Control Manual – Manage Project Delivery
- (g) Process Control Manual – Close – out Contracts
- (h) Process Control Manual – Projects Contract Management
- (i) Eskom Supply Contract – [REDACTED]
- (j) Delegation of Authority & Responsibility Structure Standard – FIDIC Form Contract
- (k) Delegation of Authority & Responsibility Structure Standard – The engineering and construction contract – NEC (ECC) Form of Contract
- (l) Delegation of Authority & Responsibility Structure Standard – The engineering and construction contract – NEC (ECSC) Form of Contract
- (m) the New Engineering Contract (“NEC”);
- (n) NEC Short Contract;
- (o) NEC Professional Services Contract;
- (p) NEC Term Services Contract;
- (q) NEC Short Term Services Contract;
- (r) NEC Adjudicator’s Contract;
- (s) FIDIC suite of contracts-
  - (i) FIDIC Yellow Book (Design and Construction); and
  - (ii) FIDIC Red Book (Construction).
- (t) Variation Order overview for the New Builds - Medupi
- (u) FIDIC KPI Report April and May 2015;
- (v) NEC3 Term Service Contract – Howden Power (Technical support and Maintenance);
- (w) Agreement – [REDACTED];
- (x) Agreement – [REDACTED]; and
- (y) Agreement – [REDACTED].

1.2.7 Various Eskom personnel were interviewed for the purposes of assessing the effectiveness of Eskom’s contract management policies.

1.3 The annexures referred to in this Chapter are included in Schedule 6.

## **2 Item 2.6.1 of Task Order 1**

- 2.1 As indicated above, item 2.6.1 of Task Order 1 states as follows: "Contract management policy, in relation to its strategic focus, procedures and resources. Are the policies consistently applied to safeguard the organization from failures to enforce its rights and counterparty claims".
- 2.2 Below we discuss the components of Eskom's contract management policy framework with regard to the following aspects:
  - 2.2.1 key policy instruments;
  - 2.2.2 key procedures; and
  - 2.2.3 location of the function within the organisation.
- 2.3 From a policy framework perspective, Eskom's contract management framework comprises of:
  - 2.3.1 Eskom's Procurement and SCM Procedures 32-1034;
  - 2.3.2 NEC DoA Framework;
  - 2.3.3 FIDIC DoA Framework;
  - 2.3.4 various PCMs;
  - 2.3.5 NEC agreements (depending on the applicable contract category); and
  - 2.3.6 FIDIC suite of contracts (depending on the applicable contract category).
- 2.4 Procurement and SCM Procedure 32-1034
  - 2.4.1 In terms of Eskom's Procurement and SCM Procedures 32-1034, Eskom appoints an agent as a contract manager for each contract concluded by Eskom. The contract manager must be trained on the PCMs for contract management, the NEC and/or FIDIC suite of contracts, amongst others. The contract manager's role is to be the first point of contact between Eskom and the Supplier during the execution and delivery phase of the project.
- 2.5 NEC and FIDIC DoA Framework
  - 2.5.1 The NEC DoA framework is designed to provide assurance that the delegation of authority for contracts is carried out strictly in terms of the PFMA and to ensure that controls on contract expenditure are consolidated and enhanced.
  - 2.5.2 The contract mandate is delegated to a project manager, who acts on behalf of Eskom, and takes accountability for the contract. The project manager is required to act for the employer and give effect to the contract, including the signing of any agreements, and issuing of consents or other necessary or related documentation.
  - 2.5.3 The purpose of the framework is to centralise control of contract related project expenditure, and accountability for the contract, and ensure that DCF contingency remains with the project manager, supported by the Project Compensation Events Committee.

## 2.6 PCMs

2.6.1 The PCM's describe the processes and procedures to be followed by the Procurement Practitioners across the various operational areas when delivering the required outputs of the end users/customers with clarity, effectiveness and accountability.

2.6.2 The PCMs apply uniformly throughout Eskom, its divisions and wholly owned subsidiaries, in addition to entities in which Eskom has a controlling interest and which operate in terms of South African Law and are subject to the PFMA.

## 2.7 NEC Suite of Agreements

2.7.1 The standard form agreements used by Eskom have self-contained contract management mechanisms.

2.7.2 The NEC suite of agreements provides for the following contract management mechanisms (amongst others) in varying degrees:

- (a) open book account – where contractor invoices for the actual costs incurred;
- (b) pain/gain sharing – parties commit to sharing savings and losses from budget;
- (c) amendments to the works;
- (d) early warnings – contractor obliged to warn the employer of any potential risks to the project as soon as same is brought to the contractor's knowledge;
- (e) compensation events;
- (f) risk registers;
- (g) stipulated timeframes for handling changes and compensation events;
- (h) periodic risk and progress reporting;
- (i) mutual understanding of the parties' obligations;
- (j) appointment of an inspection authority;
- (k) adherence to agreed programmes; and
- (l) assessment of results of performance.

## 2.8 FIDIC Suite of Agreements

2.8.1 The FIDIC suite of agreements provides for the following contract management mechanisms (amongst others) in varying degrees:

- (a) processes for conducting valuations and making payments to contractors;
- (b) variation processes that deal with:
  - (i) modification of the works programme and delivery; and
  - (ii) adjustment of the contract price;

- (c) processing claims from both employer and the contractor; and
- (d) extensions of time.

2.9 Implementation of the Contract Management Framework

2.9.1 In assessing whether the above mentioned contract management framework has been consistently implemented, we have had regard to the following:

- (a) the relationship between the contract management framework and Eskom's strategic focus;
- (b) the resources available to implement Eskom's contract management framework; and
- (c) examples of non-compliance.

2.9.2 Although Eskom's contract management framework has been in place for at least six (6) years, the establishment of a central coordinating structure for contract management was only recently implemented. We were informed that as a result of the recent restructuring process, a Project Support Office/Contract Management Office was established in September 2014, within the Group Capital Division to oversee the implementation of Eskom's contract management practices.

2.9.3 Prior to September 2014, the implementation of the contract management framework varied from one project to another. With specific regard to the New Builds Programme (specifically, Ingula and Medupi), the practice as described by the officials interviewed varied depending on the particular contract.

2.9.4 With regard to Ingula, the NEC suite is currently in use. As such, contract management is conducted in line with the principles stipulated in the relevant NEC contracts. We have been advised in this regard that the principles articulated in the NEC DoA framework and the SCM Procedure 32-1034 are generally complied with.

2.9.5 However, with regard to Medupi, we have been informed that the contract management framework and the principles of the FIDIC DoA framework and the SCM Procedure 32-1034 were not complied with between 2009 and 2013. [REDACTED]

[REDACTED]

[REDACTED]

2.9.7 The focus was mainly on the administration of the contracts, to the exclusion of the other responsibilities set out in the FIDIC DoA framework and the SCM Procedure 32-1034. Consequently, there was non-compliance with aspects of the PFMA and related public sector good corporate governance requirements. For instance, payments beyond the thresholds stipulated in the DCF were usually certified without following the prescribed process set out in the SCM Procedure 32-1032. This meant that a party that was not officially authorised to bind

Eskom to various financial commitments was actually acting ultra vires. This situation could affect Eskom's right to repudiate certified payments or challenge their validity.

2.9.8 As a result of the various challenges that Medupi has experienced, the project team composition has undergone various changes since 2013. Consequently, aspects of the FIDIC DoA framework and SCM Procedure 32-1034 are currently being implemented with the Contract Management Office playing an oversight role.

2.9.9 The Contract Management Office is at present capacitated with 8 officials. Its current focus is oversight of the contract management processes and procedures undertaken by officials in the implementation of the New Build Programmes. Although it plays mainly an oversight role, it is our view that enhancement of its capacity will increase Eskom's ability implement the contract management processes set out in the FIDIC and NEC DoA frameworks in addition to the requirements of the SCM Procedure 32-1034. This may also enable the Contract Management Office to undertake proactive measures in order to avert aspects of non-compliance with Eskom's contract management policy and procedure.

2.9.10 In consideration of its youthful existence, the officials responsible for the administration of the Contract Management Office were unable to cite any examples of non-compliance with the contract management framework that has occurred in the 8 months since the establishment of its office. However, they did admit that previous challenges related to the slow pace at which engineers and project managers processed claims and compensation events. As a result, more focus is now being placed on the implementation of PCMs and DoA frameworks for NEC and FIDIC, upping the pace of processing claims and capacitating the engineers and project managers. It is expected that with the intervention of the Contract Management Office and alignment of the project team's methods with the contract management framework, some of the Key Performance Indicators listed below will be met.

KPI	TARGET
Employer	Support Employer with Target 25% reduction by March 2016 of the total of the Employer's Claims as at the end of March 2015
Claims processing time	Reduce number of Claims in process >120 days by 50% by end FY2015
Claims registers	All Packages Feeding into CMO Steering committee throughout FY2015
Variation Orders (VO) registers	All Packages Feeding into CMO Steering committee throughout FY2015

2.9.11 A review of quarterly reports to MANCOM evidence acknowledgment of problems with contract management. For example, Risk and Resilience Report for Quarter 3 of 2012/2013 addresses the issue of inadequate contract management specifically. As mentioned above, this report notes that that advances have been made regarding strengthening of systems, processes and competencies at project and portfolio level, and as a result this risk is

diminishing. However, continued vigilance is required as it is evident that contractors are continually seeking opportunities to gain an advantage over Eskom. (Risk and Resilience Report for Quarter 3 of 2012/2013, page 22.)

2.9.12 System and Market Operator Division reported in quarter 1 of 2013/2014 that resources and appropriate structures for IPP contract management are not in place. (System and Market Operator Quarterly Report to MANCOM Q1 2013, page 8)

2.9.13 [REDACTED]

2.9.14 At an EXCO meeting held on 2 and 3 May 2013, the GE: Technology & Commerce reported that suppliers' complaints on the manner in which Eskom was managing contracts were seldom escalated by junior management for action. In this regard, it was noted that disciplinary action took too long to be completed. The EXCO report for the meeting held on 2 and 3 May 2014 was tabled and noted by the Board at its meeting held on 30 May 2013. However, this statement relating to the management of contracts referred to above is not mentioned in the report to the Board.

2.9.15 At the EXCO meeting held on 2 November 2014, it was noted that various approvals have been obtained for diesel usage and short term IPPs, but no funding had been released. As a result, it was stated that the decision making process should be reviewed around the actual implementation of decisions. In two instances, 9 IPP contracts were extended (as discussed in a submission to the Board on 26 February 2015 re: Eskom War Room Feedback) and a contract for diesel was entered into with Chevron (as discussed and approved at the EXCOPS meeting held on 29 January 2015), regardless of the fact that there were no budget approvals available. This was authorised in terms of the emergency procurement procedure which was implemented in accordance with War Room instructions. We would need to investigate the decisions made by the Emergency Response Co-Ordination Committee which implements contracts in terms of the emergency procurement process.

2.9.16 In conclusion, it is apparent that there has been non-compliance with the applicable contract management framework, specifically with regard to the implementation of the Medupi project. Notwithstanding the challenges linked with poor pre-implementation planning, the non-alignment of the Execution Partner's role with the requirements set out in the contract management framework is likely to have exacerbated the situation.

**3 Item 2.6.2 of Task Order 1**

3.1 As indicated above, item 2.6.2 of Task Order 1 states as follows: "whether the design of the contracts (fit for purpose) is appropriate with regard to contract terms".

3.2 In this section, we consider whether the design of contracts is appropriate with regard to contract terms.

- 3.3 The type of contracts used by Eskom has been traversed in the previous section regarding the contract management framework. In brief, Eskom uses the NEC and FIDIC suites of contracts for its engineering projects.
- 3.4 The NEC and FIDIC contracts are well established internationally for engineering projects. It is a generally accepted view that the NEC and FIDIC contracts are well designed to ensure smooth project implementation. Notwithstanding the above, we have been advised that the project teams for Medupi and Ingula have had to undertake some modifications to the addenda of the contracts to cover the following aspects.
- 3.4.1 Inclusion of key dates in the NEC contract [REDACTED] – the NEC contract makes provision for payment based on key dates as one of the options the contracting parties may elect. However, it appears that at the time of contracting no option was chosen, an error that was subsequently discovered by Eskom and resolved by arbitration. Consequently, the contract had to be modified to select key dates as a payment option. It appears that the problem was not the contract design itself, since NEC provides for key dates as one of the options for payment. The parties should have dealt with this matter as part of the contract negotiations. It is our view that the above mentioned issue is indicative of inadequate knowledge of the workings of NEC in all of the relevant units of Eskom.
- 3.4.2 We have been informed that the FIDIC contracts for Medupi are in the process of being modified in order to align the addenda to the new/modified project implementation schedule and business plan. This issue, as well, is not related to contract design.
- 3.5 We have also been informed that the project teams on the New Build Programmes are currently implementing a knowledge base, in terms of which learnings are recorded for future use. It is expected that the learnings will be used for future programmes from a contracting and project management perspective. However, it is worth noting that each project presents unique features that cannot be transposed onto future projects. Importantly, the success of this process will rely heavily on the ability and willingness of future project teams to implement these learnings. Specific interventions should be designed to institutionalise not only these learnings, but also a project management approach that focuses on identifying learnings and institutionalising them on an ongoing basis as an institutional culture.
- 3.6 Both the NEC and FIDIC suites provide for the template clauses to be (i) amended, and (ii) supplemented by additional clauses. A review of the typical amendments and supplementations made by Eskom appear indicative of a checklist approach in certain respects. We understand that amendments and modifications are negotiated in the pre-contract phase. There was insufficient time for the Investigation to determine the precise drivers behind these amendments and supplementations, particularly, the extent to which learnings from previous and existing contracts inform the amendments and supplementations in new contracts and whether this process is being institutionalised.
- 3.7 With regard to contracts other than NEC and FIDIC, we note that these contracts are sometimes not fit for purpose in that the contractual provisions do not adequately protect the interests of Eskom.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3.8.2 Generally, a force majeure clause is designed to give a party relief in circumstances that that party cannot control. It does not appear to be appropriate for a contract of this nature to include a force majeure that is more burdensome on Eskom in a force majeure event and therefore forcing Eskom into contract modification negotiations in the event of a force majeure.

3.9 We have noted in Chapter 5 merely on the basis of a letter of offer and acceptance, without a comprehensive coal supply agreement having been entered into. This creates substantial risks for Eskom and is not appropriate or fit for purpose.

#### **4 Item 2.6.3 of Task Order 1**

4.1 As indicated above, item 2.6.3 of Task Order 1 states as follows: "whether there is a defined modification approval and monitoring process which is adequate and effective. Further, to also establish reasons as to why contract modifications often result in increased costs and delays".

4.2 In order to address this issue, we consider:

4.2.1 the processes and procedures set out in the contract management framework that relate to modification approval and monitoring; and

4.2.2 the adequacy and effectiveness of these processes.

4.3 Processes and procedures

4.3.1 Besides the processes and procedures set out in NEC and FIDIC contract models regarding modifications, approval and monitoring, the Procurement and SCM Procedure 32-1034 provides for a modification process which entails the following.

(a) The Delegated Approval Authority originally approves a contract with a fixed contract value and duration. The contract value is used to execute the contract according to the approved scope of work or services.

(b) The approval may entail a provision for a contingency value and time based on the risk assessment of the transaction.

(c) The contingency is approved to allow the Eskom Agent to manage compensation events/variation orders as per the NEC/FIDIC contracts without requesting further approval of the Delegated Approval Authority in respect of funds/time associated with the claims.

- (d) The discretion of the Eskom Agent is subject to the limit of the contingency approved by the Delegated Approval Authority.
- (e) If the value of a modification exceeds the contingency amount or 20% of the original contract value, a motivation should be made as to why a new contract must not be considered based on a new commercial process.
- (f) Based on the market valuation of the modification, a decision will be made to either proceed with the approval of the modification or engage in a new commercial process.

4.3.2 In terms of the Procurement and SCM Procedure 32-1034, some of the circumstances that may necessitate a modification are:

- (a) increase in cost as a result of a contract being required for periods longer than what was originally agreed to;
- (b) material or significant changes to conditions of contract which may result in an increase in the contract value or duration;
- (c) changes to specifications, design or scope which were unforeseeable at the time of tender and contract award;
- (d) increase in quantities of assets or goods or services already provided for in the scope of the contract; and
- (e) changes in the country of origin/manufacturer of assets or goods, which affects the foreign currencies provided for in the contract.

4.3.3 The procedural aspects for obtaining the modification approval are similar to those applied in seeking approval for a new transaction, i.e. apply for approval of a mandate from the relevant Tender Committee depending on the Delegated Approval Authority for that commodity and the transaction value.

4.3.4 There appears to be a preference towards the modification of existing contracts rather than going back to market and issuing an open enquiry in respect of additional work that needs to be done. This could result in non-competitive pricing and the manipulation of the procurement process towards a preferred bidder.

4.3.5 In Annexure J (see Schedule 6), we set out examples of inadequate and ineffective modification approval and monitoring processes.

#### 4.4 Assessment of Effectiveness and Adequacy

4.4.1 From a purely procedural perspective, the modification processes highlighted above are effective and adequate in ensuring that Eskom's modification, approval and monitoring processes are aligned to its SCM Procedure 32-1034. This ultimately ensures that in undertaking modifications, approvals and monitoring, Eskom complies with the requirements and principles of the PFMA and general good corporate governance standards.

4.4.2 Notwithstanding the above, one cannot rule out the fact that from an implementation perspective, the modification, approval and monitoring processes are susceptible to political override, collusion and other corrupt practices. We note that various aspects of non-

compliance with SCM Procedure 32-1034 are discussed in greater detail in clause 2.6.7 of the procedure, which deals with the integrity of the procurement processes in Eskom.

4.4.3 It is therefore incumbent upon Eskom to tighten its oversight responsibilities in respect of the implementation of the modification, approval and monitoring processes and the implementation of SCM Procedure 32-1034 in general in order to derive the overall objectives of good corporate governance.

#### 4.5 Contract Modifications – Increased Costs and Delays

4.5.1 There are various reasons why contract modifications often result in increased costs and delays, specifically with regard to the New Build Programme.

4.5.2 In order to contextualise the relationship between modifications and increased costs and delays on the New Build Programme, the factors listed below must be considered.

- (a) Legacy issues arising out of the delayed decision to implement a Capital Expansion Programme in 1998:
  - (i) It was predicted in 1998 that the country would face an energy crisis by 2004 if its generation capacity was not increased.
  - (ii) However, a decision to delay the implementation of a Capital Expansion Programme was made. This would eventually dictate the methodology through which the New Build Programmes would be implemented from 2006 onwards.
- (b) Poor project planning and incomplete feasibility studies:
  - (i) The energy crisis in 2006 forced Eskom to fast track the implementation of the New Build Programme while simultaneously attending to emergency planning.
- (c) Poor contracting strategies:
  - (i) The contracting strategy adopted, specifically with regard to Medupi (the Execution Partner model as discussed above), is responsible for some of the modifications, delays and cost escalations.
- (d) Project team inexperience in the management and implementation of similar projects:
  - (i) There was a shortage of skills and experience needed to undertake and manage the implementation of a programme of the size of the New Build Programmes.
- (e) Political override:
  - (i) Political pressure dictated time frames, specifically between concept design and project implementation.
  - (ii) There was therefore insufficient time dedicated to proper planning and contracting.

4.5.3 The prevailing view seems to be that as a consequence of the above mentioned issues (amongst others), the implementation of the New Build Programmes has encountered various modifications in relation to the following:

- (a) quantities;
- (b) quality;
- (c) design changes;
- (d) omissions;
- (e) additional work;
- (f) schedule changes;
- (g) strikes;
- (h) fatalities; and
- (i) frivolous claims from contractors.

4.5.4 In almost each of the above aspects, Eskom has undertaken cost related modifications as a result of claims or compensation events linked to either the actual cost of the modification or standing time.

## **5 Item 2.6.4 of Task Order 1**

5.1 As indicated above, item 2.6.4 of Task Order 1 states as follows: "whether there exists a contract performance monitoring system, in the maintenance of the Generation fleet".

5.2 The contract management framework discussed above applies to all engineering contracts in Eskom, including contracts for the maintenance of the generation fleet. We have been informed that all generation fleet maintenance contracts are currently NEC agreements which stipulate the following as part of the contract performance monitoring system:

- 5.2.1 Performance will be measured by the employer against those areas which contribute to the employer's business and for which the contractor is compensated;
- 5.2.2 Early warnings for potential risks that would arise out of the contractor's inability to provide resources required to do the work;
- 5.2.3 The contractor must maintain the agreed base crew for each designated power station all year round;
- 5.2.4 Changes to the base crew must be negotiated with the project manager;
- 5.2.5 The contractor must comply with quality procedures and codes, station needs, and the scope of the relevant contract or task order;
- 5.2.6 The contractor must adhere to programmes submitted by the project manager;
- 5.2.7 Completion of each task order occurs after the tests identified in the task order have taken place, the test are accepted by the supervisor, and the contractor has completed the task

order to such an extent that allows the employer to meet the operating requirements specified in the task order;

5.2.8 The evaluation team assesses the results of the performance of the plant and the contract annually;

5.2.9 The duties of the evaluation team are to:

- (a) determine adjustments of the applicable fees;
- (b) review plan performance;
- (c) review productivity;
- (d) review technical practices/applications;
- (e) review site procedures and constraints; and
- (f) review cost peculiarities; and

5.2.10 The contract fee is designed to reward excellent performance:

- (a) a performance fee of 4.5% applies if the relevant performance target is achieved;
- (b) a slip and rework incentive fee applies in terms of which (i) a bonus is earned for shortening of an outage, and (ii) penalties are imposed for the number of days lost due to slip and rework; and
- (c) incentives apply in respect of weld repair rates.

5.3 Notwithstanding the existence of the above mentioned performance monitoring system, we were informed that the biggest driver of contract modifications and cost escalations with regard to maintenance of the generation fleet is the age of the generation fleet. We were informed that the average age of the majority of the generation fleet is between 30 and 40 years. As a result, the scoped/budgeted needs vary from the actual needs once the fleet is stripped for maintenance. However, we note that age of the Eskom generation fleet compares favourably with other jurisdictions where the performance of the generation fleet is more stable.

5.4 It appears that the challenges arising from fleet age are exacerbated by poor planning in so far as it relates to Eskom's failure to conduct the relevant outage maintenance in accordance with the fleet's maintenance philosophy.

5.5 Notwithstanding the above, one cannot rule out that to some extent the escalation of costs may be attributed to:

5.5.1 the small pool of fleet generation maintenance experts whose resources are stretched to meet Eskom's demands;

5.5.2 lack of sufficient technical capacity within Eskom to project manage and/or supervise the work done by the maintenance teams;

5.5.3 negligence by the maintenance teams;

- 5.5.4 deliberate misstatement of the level of work required at the scoping phase in order to get the relevant contract; and
- 5.5.5 small pool of original equipment manufacturers which narrows the scope of the spares market and subsequently leads to price escalation.

## **6 Recommendations**

- 6.1 For Eskom to manage the challenges arising out of modifications and escalation of costs, we suggest the following.
- 6.2 There is a need to strengthen Eskom's capacity to plan for the implementation and management of capital intensive projects. Although there is sufficient skill and expertise within the organisation, deploying Eskom engineers to work alongside contractors would fast track skills development on similar programmes for Eskom engineers. Care should be taken in developing such programmes to ensure that contractor liability is not inadvertently transferred to Eskom. Appropriate legal support should be procured for these purposes. In this regard, a contracting strategy that mitigates and sufficiently transfers project risks between the parties must be explored in consideration of the unique needs of each project/programme.
- 6.3 A semi-autonomous Project Site Establishment should be constituted with the capacity to expeditiously attend to procurement, legal and technical issues on a day to day basis.
- 6.4 The capacity of project managers and engineers must be strengthened to enable them to expeditiously attend to project management issues as and when they arise.
- 6.5 The contract management support and oversight function that lies within the Contract Management Office must be strengthened to enable the unit to proactively intervene prior to risks escalating into cost or time related events.
- 6.6 All procurement practitioners must be trained in contract management skills to enable them to contextualise the impact of properly designed sourcing strategies on the entire project implementation value chain.
- 6.7 Adequate legal resources should be allocated to project managers to ensure that legally sound decisions are taken.
- 6.8 External technical expertise should be made available to objectively and independently advise project managers on the merits and demerits of pending modification requests. However, this must be balanced with the time scale within which a decision must be made in order to avert delays that could arise from a drawn out consultative process.

## **CHAPTER 7: SECURITY FAILURES AND ACCOUNTABILITY AT ESKOM AS A NATIONAL KEY POINT**

### **1 Background**

- 1.1 This Chapter deals with item 2.7 of the Scope of Work set out in Task Order 1.
- 1.2 Item 2.7 of Task Order 1 relates to security failures and accountability at Eskom as a national key point. Under this heading the following specific items are provided for:
  - 1.2.1 "2.7.1 Eskom's strategies/plans with regard to safeguarding of Key National Points; and
  - 1.2.2 2.7.2 Whether there is any reason why the persistent information leaks are not being arrested? If they are or have been dealt with, whether there has been a sanction imposed upon the responsible people."
- 1.3 Various employees in Group Security were interviewed, and documents reviewed, for the purposes of this section of this Report.

### **2 Item 2.7.1 of Task Order 1**

- 2.1 As indicated above, item 2.7.1 of Task Order 1 refers to "Eskom's strategies/plans with regard to safeguarding of Key National Points".
- 2.2 We consider below the adequacy and effectiveness of the strategies and plans ("strategies") in place to safeguard the Eskom National Key Points ("NKP" or "NKPs") in terms of the risks associated with security issues, the NKP legal regime and the management of security related concerns at NKPs and at management level.
- 2.3 Background
  - 2.3.1 The owners of NKPs are subject to a number of duties in relation to security.
  - 2.3.2 Several of Eskom's facilities have been declared NKPs and Eskom is therefore required to comply with the requirements of the NKP legal regime in respect of these facilities. These facilities include substations and all the power stations. A list of the NKPs is set out in Appendix 1 to this Chapter.
  - 2.3.3 The Eskom NKP sites are managed at site level. The manager at site level reports to Group Security.
- 2.4 The NKP Legal Regime
  - 2.4.1 The applicable legislation regulating National Key Points is as follows: NKPs Act No. 102 of 1980, as amended ("NKP Act"); and Regulations GNR.1731 of 1982: Regulations regarding the Appointment of Guards by Owners of NKPs and the powers of such guards ("NKP Regulations").
  - 2.4.2 In terms of the NKP Act, a place or an area can be declared as a NKP by the Minister of Police of the Republic of South Africa (the "Minister") if, at any time, it appears to him/her that such a place or area is so important that its loss, damage, disruption or immobilisation may

prejudice the Republic of South Africa, or whenever the Minister considers it necessary or expedient for the safety of the Republic of South Africa or in the public interest.

- 2.4.3 Declaration of an area or a place as a NKP imposes on its owner a duty to take steps aimed at ensuring the security of the NKP to the satisfaction of the Minister. The owner is required to bear the relevant costs to such extent as the Minister may determine.
- 2.4.4 Failure to comply with the obligations imposed in respect to safeguarding the NKPs, as provided in the NKP Act and the NKP Regulations, is an offence.
- 2.4.5 Notably, the NKP Act imposes liability on any person who obstructs security of a NKP, as well as for unauthorised disclosures of any information relating to the security measures applicable at or in respect of any NKP or in respect of any incident that occurred there.
- 2.4.6 The Regulations set out detailed requirements related to employment of security guards at NKPs. These requirements concern, inter alia, the Minister's authority to set the number of security guards for a particular NKP, mandatory provisions to be included in the employment agreements with security guards, job application procedures, persons prohibited from being hired as security guards, provisional hiring, training and issuance of a certificate of competency by the Minister to the security guards. A prospective employee security guard is required to sign a declaration of appointment as security guard in the form provided in Annexure A to the Regulations. Section 8 of the Regulations outlines the reasons for dismissal from a position of a security guard at a NKP.
- 2.4.7 The Regulations provide security guards with broad powers related to safeguarding the premises of the NKP, including identification procedures, examining articles, materials, vehicles, containers and other objects, taking necessary actions in case of danger of a threat, procedure of conducting searches and seizures, and making arrests.
- 2.4.8 Owners of NKPs are required to supply security guards with the necessary equipment, including, inter alia, fire-arms or other necessary accessories, weapons and ammunition, etc. The owner is required to arrange for secure storage of such movable items and to ensure that they are not used by the security guards when off duty, unless permitted to do so.
- 2.4.9 The Regulations also require a control security guard representing the owner to be present at all times when security guards are on duty and provide for the appointment of a chief security officer.
- 2.4.10 The Regulations require the owner of a NKP to keep an "Occurrences Book" for the purposes of logging occurrences, incidents and acts prejudicially affecting security of the NKP, if any. Furthermore, the Regulations require owners to issue internal regulations in terms of NKP Act in the form provided in Annexure B to the Regulations, in order to track security guard appointments.
- 2.4.11 Failure to comply with the obligations imposed in respect to safeguarding NKPs is an offence and is subject to imposition of a fine or punishment by imprisonment.
- 2.4.12 The Regulations also impose liability, for, inter alia:
  - (a) interfering with the security guards in the performance of their duties;
  - (b) provision of false or incorrect information when applying for a job as a security guard at a NKP;

- (c) various violations of obligations by guards and owners; and
  - (d) unauthorized disclosures of information such as composition or membership of security guards, their duties, methods, movements and deployment of security guards, or occurrences or acts prejudicially affecting the security of a NKP.
- 2.4.13 In terms of the NKP Act and the NKP Regulations, the Minister is provided with a wide range of powers related to regulating and setting security requirements for specific NKPs.
- 2.5 Security Issues
- 2.5.1 Appendix 2 to this Chapter deals with security issues relating to the NKPs.
- 2.6 Security Issues Discussed at MANCOM and Other Committees
- 2.6.1 Appendix 3 to this Chapter deals with security issues discussed at MANCOM and other committees.
- 2.7 Interviews with Employees
- 2.7.1 A synopsis of the interviews held with employees is provided in Appendix 4 to this Chapter.
- 2.8 Findings
- 2.8.1 Analysis of Eskom's NKP documents indicates that are several internal policies and procedures aimed at safeguarding NKPs from security risks. These include:
- (a) the Security Recovery Plan;
  - (b) the Security Strategy programme;
  - (c) the Information Security Programme;
  - (d) the data leakage protection tool;
  - (e) the locking down and encryption of USB ports;
  - (f) file rights management plan; and
  - (g) an action plan to deal with potential cyber security attacks.
- 2.8.2 However, it appears that these security policies have not been successfully implemented despite the issues having been identified as far back as 2013. The A&R minutes of 9 May 2014 reports that "initiatives were being considered to provide early warning signs" for security breaches. This is one year after the Board approved a Security Strategy Programme which was supposed to bring major change and enforce certain controls.
- 2.8.3 Internal policies and procedures are sometimes not complied with and compliance is not monitored. There are indications that responses to security issues are knee-jerk responses once the breaches have occurred. There appears to be very little pro-active strategies in place – there appears to be inadequate planning for the prevention of security breaches.
- 2.8.4 Security breaches occurred at most NKP sites, such as:

- [REDACTED]
- (b) theft of data equipment and the information contained on the data equipment;
- (c) picketing at power stations and lack of co-operation from the SAPS;
- (d) potential cyber security attacks;
- (e) information leakages by email, telephone and employees;
- (f) information leakages relating to tender information;
- [REDACTED]; and
- (h) potential hacking attempts.

2.8.5 An analysis of the evidence as reported in the documentation indicates that the threats to security of the NKPs are, inter alia:

- (a) lack of security technology equipment;
- (b) inadequate vetting process of employees, couriers and contractors;
- (c) inadequate reporting and timeous investigation of security related incidents;
- (d) security at point of entry to NKPs;
- (e) investigative capacity of security guards;
- (f) classification and protection of confidential information;
- (g) risks relating to security technology systems;

■ [REDACTED]

■ [REDACTED]

- (j) inadequate checks on system software;
- (k) inadequate asset identification;

■ [REDACTED]

■ [REDACTED]; and

- (n) inadequate use of NDAs and confidentiality agreements.

2.8.6 The Security Strategy Programme that was approved by the Board in 2013 was intended to bring major change and enforce certain controls. Despite this the following incidents occurred as indicated in the documents that were reviewed:

- (a) 2013 – there was still no information retention policy procedure in place;
- (b) February 2014 – there was a reported breach of tender information;



- 3.7 The persistent information leaks are not arrested because there are no strategies or checks and balances in place to prevent, intercept, monitor or punish information leaks. There seems to be inadequate training of employees on the handling of confidential information.

#### **4 Recommendations**

- 4.1 Attention must be given to the "business as usual" environment. Security standards and technology must be upgraded and implementation of the updated policies must be fast-tracked. The silo mentality of different divisions and units that deal with security must be addressed.
- 4.2 GS must foster relationships with the SAPS in order to ensure that security risks are adequately addressed.
- 4.3 There should be regular stakeholder meetings with contractors to address security risks and to discuss sanctions for security breaches.
- 4.4 Emphasis should be placed on continuous employee training relating to security risks.
- 4.5 IT policies relating to information security must be implemented and compliance must be strictly monitored.
- 4.6 The adequacy of NDAs and confidentiality undertakings required of employees and contractors should be reviewed and suitable steps taken.
- 4.7 A comprehensive policy relating to information security should be developed. The policy should deal with IT aspects, debugging, security risks, training and the like.
- 4.8 Spot audits of the security recording and reporting at NKP sites should be conducted. The occurrence books should be inspected to see if security incidents were reported.

## National Key Points

Province	NKP Name	SAPS Station	Date Declared
Free State	Perseus Transmission Station	Dealesville	29 May 1981
Free State	Lethabo Power Station	Viljoensdrif	03 April 1985
Northern Cape	Hydra Transmission Station	De Aar NC	10 February 1982
Gauteng	Apollo Transmission Station	Lyttelton	10 February 1982
Gauteng	Minerva Transmission Station	Wierdabrug	29 May 1981
Gauteng	Eskom National Control Centre Simmerpan	Germiston	10 February 1982
Gauteng	Grootvlei Power Station	Heidelberg	30 June 2010
KwaZulu Natal	Impala Transmission Station	Empangeni	10 February 1982
KwaZulu Natal	Pegasus Transmission Station	Dundee	10 February 1982
KwaZulu Natal	Drakensberg Power Station	Bergville	10 February 1982
KwaZulu Natal	Athene Transmission Station	Empangeni	18 March 1997
Mpumalanga	Camden Power Station	Ermelo	27 March 2009
Mpumalanga	Hendrina Power Station	Hendrina	10 February 1982
Mpumalanga	Kriel Power Station	Kriel	10 February 1982
Mpumalanga	Arnot Power Station	Hendrina	10 February 1982
Mpumalanga	Sol Transmission Station	Secunda	10 February 1982
Mpumalanga	Matla Power Station	Kriel	10 April 1982
Mpumalanga	Duvha Power Station	Witbank	10 April 1982
Mpumalanga	Tutuka Power Station	Standerton	03 April 1985
Mpumalanga	Kendal Power Station	Ogies	26 September 1988
Mpumalanga	Komati Power Station	Blinkpan	30 June 2010
Mpumalanga	Majuba Power Station	Amersfoort	25 August 1997

Mpumalanga	Vyeboom Pumping Station	Badplaas	11 January 2011
Mpumalanga	Bosloop Pumping Station	Machadodorp	11 January 2011
Mpumalanga	Nooitgedact Pumping Station	Carolina	11 January 2011
Mpumalanga	Matimba Power Station	Lephalele	26 September 1988
Western Cape	Acasia Transmission Station	Cape Town	10 February 1982
Western Cape	Droërivers Transmission Station	Beaufort West	10 February 1982
Western Cape	Koeberg Nuclear Power Station	Melkbosstrand	10 February 1982
Western Cape	Gourikwa Power Station	Mosselbay	24 November 2009
Western Cape	Ankerlig Power Station	Cape Town Atlantis	24 November 2009
Western Cape	Muldersvlei Transmission Station	Klapmuts	15 June 1987
Eastern Cape	Grassridge	Swartkops	01 March 1980

**Overview of Security Issues**

**1. Introduction**

- 1.1. This Appendix sets out key points regarding security issues at the NKPs.
- 1.2. This information has not been tested and verified at this point in the Investigation.

**2. Security Issues**

- 2.1. There is a Security Recovery Program underway at Eskom.

█ [REDACTED]

█ [REDACTED]

[REDACTED]

**2.4. Theft Of Data Equipment**

[REDACTED]

[Redacted]

2.5. Lack of Security Technology Equipment

[Redacted]

[Redacted]

2.6. Vetting Process

[Redacted]

2.7. Reporting Security Incidents

[Redacted]

[Redacted]

2.8. Security at Point of Entry

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

2.10. Vetting of Contractors

[Redacted]

[Redacted]









[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

2.18. Risk and Resilience Reports

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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4. **Assessment of Eskom's Management of Security Breaches**

█ [REDACTED]  
█ [REDACTED]  
█ [REDACTED]

5. **The Vetting Process**

█ [REDACTED]  
█ [REDACTED]

█ [REDACTED]  
█ [REDACTED]

█ [REDACTED]  
█ [REDACTED]

6. **Confidentiality within the Organisation**

█ [REDACTED]  
█ [REDACTED]  
█ [REDACTED]

█ [REDACTED]  
█ [REDACTED]

7. **The Appointment of Security Guards**

█ [REDACTED]  
█ [REDACTED]

█ [REDACTED]  
█ [REDACTED]  
█ [REDACTED]

█ [REDACTED]  
█ [REDACTED]

█ [REDACTED]  
█ [REDACTED]  
█ [REDACTED]  
█ [REDACTED]

8. **Training of Security Guards**

█ [REDACTED]  
█ [REDACTED]  
█ [REDACTED]  
█ [REDACTED]

█ [REDACTED]  
█ [REDACTED]

█ [REDACTED]

9. Criminal Conduct by Security Guards

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

10. The Security Inspectorate ("Inspectorate")

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

11. Firearm Related Incidents

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

12. The Bugging Incident

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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### Terms of Reference

This schedule contains the terms of reference that formed part of Eskom's RFP.

#### **TERMS OF REFERENCE FOR A FORENSIC FACT FINDING ENQUIRY COMMISSIONED BY ESKOM HOLDINGS (SOC) LTD (hereinafter referred to as "Eskom")**

#### **TERMS OF REFERENCE**

A Forensic Fact Finding Enquiry ("the enquiry") into the status of the business and challenges experienced by Eskom is hereby instituted in terms of an Eskom Holdings (SOC) Ltd Board ("the Board") resolution taken in a properly constituted meeting of 11 March 2015 held at Megawatt Park where It is envisaged that upon completion, this enquiry will provide the Board with an independent view of reasons for the following

- The poor performance of Eskom's generation plant
- Delays in bringing the new generation plant on-stream
- High costs of primary energy
- Eskom's financial challenges
- Integrity of the procurement processes and compliance with legislation as well as Eskom's procurement policies
- Contract management, in particular cost escalations, frequent modifications, penalty costs and Eskom's capacity to manage contracts in general.
- Security failures and accountability at Eskom as a Key National Point.

#### **1. PROBLEM STATEMENT**

The Board seeks to obtain an independent and unfettered view regarding the credibility and the correctness of information that Eskom's Executive Management ("EXCO") provides in their reports relating to:

- The poor performance of generation plant
- Delays in bringing the new generation plant on-stream
- High costs of primary energy
- Eskom's financial challenges

- Integrity of the procurement processes and compliance with legislation as well as Eskom's procurement policies
- Contract management, in particular cost escalations, frequent modifications, penalty costs and Eskom's capacity to manage contracts in general.

The Board has indicated that it is important for the information to be tested by an independent party without EXCO's involvement ("particularly those members of EXCO, whose areas would be directly impacted by the enquiry") so as to lend credence to the reports that the independent party would produce.

## 2. PREAMBLE AND CHALLENGES FACING ESKOM

The Board recognises and is alive to the fact that it is uncommon for the Board to undertake such an enquiry and at the same time, allow senior Management to go on special leave because these enquiries are normally within the purview of senior management. Be that as it may, the following issues weighed heavily in favour of the decision taken by the Board.

- 2.1 For the past 2 (two) years, the Office of the Chairman and the Board (both the new and the old Boards) have been inundated with complaints and concerns raised by various sources internal and external to Eskom with regard to the unreliable power supply, escalating build project costs, escalating maintenance costs, high costs of primary energy and the inordinately high costs of the borrowing programme that Eskom has participated in recently.
- 2.2 In addition to the above, in the last few months, countrywide load shedding has become the order of the day and thus leading to an increased outcry about the economic impact of the uncertainty brought about by load shedding. This matter has escalated to a national power challenge which has also attracted the anger and concern of ordinary citizens, (private and corporates), Cabinet, Parliament and its oversight bodies, rating agencies and investors alike. This is so particularly because Eskom continues to make commitments that it is unable to meet.
- 2.3 To this end, the Board resolved to institute an enquiry into all of these concerns. Having so resolved, the Board delegated the authority to institute this enquiry to the ARC, with assistance from other Board committees where necessary. ("ARC"). Included in the authority to institute this enquiry, is also the authority to:
  - Appoint a Service provider/s;
  - Manage the costs of executing the enquiry; and

- Ensure that the Service provider/s delivers on its mandate within the prescribed time lines and within budget.

### **3. PROCESS TO BE FOLLOWED FOR THE APPOINTMENT OF AN INDEPENDENT SERVICE PROVIDER/ERS**

- 3.1. The Board has delegated the ARC full responsibility to appoint a Service provider/s that will assist Eskom with the enquiry and to manage the Service provider/s during the execution of the enquiry.
- 3.2 The Service provider/s will report to the ARC who will in turn report to the Board.
- 3.3 The procurement of the Service provider/s will follow normal Eskom procurement policies and procedures, namely a close tender process or the use of a sole source process should it be necessary, given the time constraints.
- 3.4 Once a Service provider/s has been appointed, and the terms and conditions of performing the enquiry are agreed upon, the information set out below will be completed

Name of the entity/ties:

Estimated costs:

Estimated time to complete the enquiry:

### **4. SCOPE OF THE INVESTIGATION**

The Service provider/s will investigate and report on the following:

#### **4.1 The poor performance of the generation plant in particular:-**

- 4.1.1 confirm the true state of the generation plant and the manner in which the fleet is managed with reference to and in relation to best practice.
- 4.1.2 whether the underlying reasons for the state of the fleet are known and could have been avoided. In particular, the increase in the UCLF ("Unplanned Capability Loss Factor").

- 4.1.3 whether the strategies, tactics and plans to address the decline in the capacity of the fleet to ensure the security of supply were appropriate in terms of their design and application in practice.
- 4.1.4 whether any load shedding by Eskom in the recent two years was in all instances necessary and appropriate under the circumstances.
- 4.1.5 whether the maintenance philosophy and regime adopted and followed by Eskom in the recent past and any recent enhancements thereto are appropriate to achieve the required UCLF and justifiable under the circumstances.
- 4.1.6 whether the present reports on the state of the generation fleet has been faithfully reported on a consistent basis and that the reports were correct in terms validity, accuracy, completeness and timeliness of information.
- 4.1.7 whether maintenance contractors ("OEM")<sup>262</sup> are giving Eskom value for money and whether there is effective monitoring of their work by Eskom.

**4.2 Delays in bringing the new generation plant on-stream, including cost overruns**

- 4.2.1 confirm the current status of the new generation plant and the quality of the project management practices designed to bring the generation plant into commissioning stage on time and within budget.
- 4.2.2 whether the project, contracts management philosophies, practices adopted and applied by Eskom compare favourably with international best practices
- 4.2.3 whether the lessons learnt from previous delays and costs overruns have been documented, communicated to relevant stakeholders and institutionalized to prevent recurrence.
- 4.2.4 whether the underlying causes for cost overruns and delays in completing new generation plans are understood, adequately disclosed and properly mitigated against to enhance the likelihood that the projects would be delivered in time and within budget.

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<sup>262</sup> Original Equipment Manufacturer

- 4.2.5 whether the organization is likely to deliver all these projects within the current targeted timelines and financial budgets or whether there are significant constraints beyond the control of management which require special intervention.
- 4.2.6 whether the reports from EXCO with regard to the status of the new build are correct and can be relied on.

#### **4.3 High Cost of Primary Energy (Nuclear, Coal, Diesel, Liquid Oils and Water)**

- 4.3.1 confirm the current primary energy costs currently incurred by Eskom and whether they are necessary, unavoidable and are in line with industry practice.
- 4.3.2 whether the underlying causes for increase in primary energy costs are fully understood, adequately reported and that strategies, tactics and plans adopted to ensure the security of supply in the most economical and efficient manner most appropriate in the circumstances.
- 4.3.3 whether the strategies and tactics adopted by Eskom to procure primary energy (Nuclear, Coal, Diesel, Liquid Oils and Water) are the most appropriate to both Eskom and the country as a whole, in particular the use of *ad hoc* Diesel suppliers.
- 4.3.4 whether the forecasting model for the use of diesel is appropriate and in line with best industry practice.
- 4.3.5 whether the primary energy costs paid by Eskom are reasonable and commercially viable.

#### **4.4 Eskom's Financial Challenges**

- 4.4.1 confirm the current cash flow position of Eskom and whether the methodology and models used for cash flow management are in line with best practice.
- 4.4.2 whether the cash flow status of Eskom has been faithfully reported consistently and that the reports are correct in terms of validity, accuracy, completeness and timeliness of information.

- 4.4.3 Confirm the circumstances around the recent high costs incurred with the financial instruments that form the nucleus of the borrowing programme and whether the process that was followed in the circumstances was the most appropriate and efficient (in particular establish the existence of other viable and cost effective financial instruments that could have been pursued as alternatives).
- 4.4.4 Establish whether the interest rates offered to Eskom in the financial instruments that form the nucleus of the borrowing programme are normal under the circumstances.

**4.5 Integrity of the procurement processes and compliance with legislation as well as Eskom's procurement policies**

- 4.5.1 Confirm that the integrity of the procurement policy, processes and procedures designed by Eskom and their compliance with the Constitution of the Country, other relevant key legislation and key governance protocols, including best industry practice.
- 4.5.2 whether the procurement policy and related Eskom policies including but not limited to conflict of interest, are consistently adhered to and there are adequate processes to deal with noncompliance. Also, establish whether in instances where transgressions are identified, appropriate sanctions are applied.
- 4.5.3 whether the procurement processes are effective to ensure that Eskom obtains the best quality products and services at the best price.

**4.6 Contract management, in particular high costs escalation, frequent modifications, penalty costs including capacity within Eskom to manage contracts generally**

- 4.6.1 Confirm that the organization has an appropriate contract management policy, strategic and procedures and resources that are consistently applied to safeguard the organization from failures to enforce its rights to avoid incidents that give raise to third party obligation.
- 4.6.2 whether the design of the contracts (fit for purpose); is appropriate with regard to contract terms.

4.6.3 whether there is a defined modification approval and monitoring process which is adequate and effective. Further, to also establish reasons as to why contract modifications always result in increased costs and delays.

4.6.4 whether there exists a contract performance monitoring system, particularly in the maintenance of the Generation fleet.

#### **4.7 Security failures and accountability at Eskom as a National Key Point**

4.7.1 Whether the Eskom's strategies/plans with regard to safeguarding of Key National Points are adequate and effective.

4.7.2 Whether there is any reason why the persistent information leaks are not being arrested? If they are or have been dealt with, whether there has been a sanction imposed upon the responsible people.

## **6 PROCESS [SIC]**

The Service provider/s will follow the guidelines below in conducting the enquiry

6.1 Conduct interviews with employees in its investigation.

6.2 In addition to employees, mentioned in terms of clause 6.1 above, the Service provider/s may further conduct interviews with any other party/ies or person/s who may have information regarding this enquiry.

6.3 Obtain and analyse, inter alia, minutes, letters, written reports, e-mails, and also determine the bona fides of the allegations and questions and evidence raised by an employee or any other person interviewed in accordance with 6.1 to 6.2 above.

6.4 At the end of the enquiry, present its Report to the ARC a report which report will contain the following:

6.4.1 Documents relied upon during the investigation;

6.4.2 Details of evidence submitted by the Parties and/ or employees interviewed;

6.4.3 Analysis of the evidence and documentation referred to in 6.3 above as presented by the Parties and/ or employees; and

6.4.4 Conclusions and remarks

- 6.5 Notwithstanding the provisions of clause 6.4 above, the Service provider/s will provide to the ARC a progress report every two weeks and/or at the finalisation of any critical milestone. The first progress report will be due two weeks from the date of the signing of these terms of reference by the Party signing last.
- 6.6 The Service provider/s shall ensure that it establishes a communication mechanism that will allow for effective and efficient communication between the ARC and the Service provider/s, which communication mechanisms shall be approved by ARC.

**7 DURATION OF THE ENQUIRY**

- 7.1 The enquiry will be concluded in a period of three (3) months commencing no later than two (2) days after the signing of these terms of reference by the Party signing last.

**8. THE OUTCOME OF THE ENQUIRY**

- 8.1 The conclusion/s and recommendation/s in the report will be final and will be tabled at the Board and ARC who will in turn recommend the conclusion/s and recommendation/s to the Board.

**9. FEES**

- 9.1 The Parties will negotiate and agree the fees that Eskom will pay to the Service provider/s, which fees will take into account the imperatives of the Business Productivity Programme that Eskom is presently embarking on.

Signed at \_\_\_\_\_ on this the \_\_\_\_\_ day of \_\_\_\_\_ 2015

For and on behalf of Eskom

Signature

\_\_\_\_\_  
Name of Signatory

\_\_\_\_\_  
Designation of Signatory

For and on behalf of  
Service provider/s

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Signatory

\_\_\_\_\_  
Designation of Signatory

### Task Order 1

#### **TASK ORDER 1 - 4502166423 FORENSIC FACT FINDING ENQUIRY COMMISSIONED BY ESKOM**

##### **1. Introduction**

Eskom appointed Dentons to conduct a Forensic Fact Finding Enquiry (the "Enquiry") into the status of the business and challenges experienced by Eskom in the areas identified by the board (the "Board") of Eskom Holdings (SOC) Ltd. A contract for the execution of the Enquiry was entered into between Dentons and Eskom Holdings (SOC) ("Eskom") on 20 April 2015 (the "Contract"). The Contract defines the key objectives of the Enquiry and the broad areas that are to be considered in the Enquiry. Pursuant to the Contract, task orders are to be agreed between Eskom and Dentons for the execution of the areas identified in the Contract.

This task order defines the details of the scope of work and methodology to be executed by the Dentons team with the associated deliverable and time schedule under this Task Order No 1. The need for additional task orders (which may include specialist studies) may be identified during or after the execution of Task Order No 1 and will be discussed and agreed with Eskom in the form of new task orders to be executed under the broad scope of the Enquiry.

##### **2. Scope of work**

In preparing the scope of work for Task Order 1 (the "Scope of Work"), we have sought to address the Problem Statement and key areas of concern described in Eskom's Terms of Reference. The Problem Statement that the scope of work is intended to address is defined as follows:

*"The Board seeks to obtain an independent and unfettered view regarding the credibility and the correctness of information that Eskom's Executive Management ("EXCO") provides in their reports relating to:*

- *The poor performance of generation plant*
- *Delays in bringing the new generation plant on-stream*
- *High costs of primary energy*
- *Eskom's financial challenges*
- *Integrity of the procurement processes and compliance with legislation as well as Eskom's procurement policies*
- *Contract management, in particular cost escalations, frequent modifications, penalty costs and Eskom's capacity to manage contracts in general.*

*The Board has indicated that it is important for the information to be tested by an independent party without EXCO's involvement ("particularly those members of EXCO,*

*whose areas would be directly impacted by the enquiry”) so as to lend credence to the reports that the independent party would produce.”*

Thus, the principal objective of the Enquiry is to obtain an independent view of the credibility and correctness of information provided to the Board by the EXCO. The forensic fact finding enquiry will comprise an independent review of the credibility and correctness of the information provided to the Board in relation to the following aspects:

## **2.1 The poor performance of the generation plant**

2.1.1 the state of the generation plant and the manner in which the fleet has been managed with reference to and in relation to best practice;

2.1.2 whether the underlying causes for the state of the fleet are known (in particular, the increase in the Unplanned Capability Loss Factor (“UCLF”) and the actions taken by Eskom in response;

2.1.3 the application and impact of the strategies, tactics and plans to address the decline in the capacity of the fleet to ensure the security of supply over past twelve months;

2.1.4 the underlying reasons for load shedding by Eskom over the past two years;

2.1.5 the maintenance philosophy and regime implemented by Eskom over the past six months in its attempts to achieve the required UCLF;

2.1.6 whether the most recent reports on the state of the generation fleet have been prepared on a consistent basis with other reports in the last six months, and that the reports were credible in terms of validity, accuracy, completeness and timeliness of information;

2.1.7 the pricing of maintenance contracts commissioned by Eskom and the monitoring of performance of these contracts by Eskom.

## **2.2 Delays in bringing the new generation plant on-stream, including cost overruns**

2.2.1 the current status of the new generation plant and the project management practices designed to bring the generation plant into commissioning stage on time and within budget;

2.2.2 the project and contract management philosophies and practices implemented by Eskom in relation to best practices;

2.2.3 whether the lessons learnt from previous delays and cost overruns have been documented, communicated to relevant stakeholders and institutionalized to prevent recurrence;

2.2.4 whether the underlying causes for cost overruns and delays in completing the new generation plants are known and have been disclosed, and whether the actions taken in response are likely to enhance the likelihood that the projects would be delivered on time and within budget;

2.2.5 the measures that have been taken to ensure that the organization is likely to deliver these projects within the current targeted timelines and financial budgets, and whether any significant constraints beyond the control of management have been identified which require special intervention; and

2.2.6 whether the reports from EXCO with regard to the status of the new build are consistent with underlying reporting.

### **2.3 High Cost of Primary Energy (Nuclear, Coal, Diesel, Liquid Oils and Water)**

2.3.1 the primary energy costs currently incurred by Eskom and whether they are commercially supportable;

2.3.2 whether the underlying causes for increase in primary energy costs are known and reported;

2.3.3 whether the strategies and tactics adopted by Eskom to procure primary energy (Nuclear, Coal, Diesel, Liquid Oils and Water) are commercially supportable, in particular the use of ad hoc Diesel suppliers; and

2.3.4 the forecasting model for the use of diesel.

### **2.4 Eskom's Financial Challenges**

2.4.1 the current cash flow position of Eskom and the methodology and models used for cash flow management;

2.4.2 whether the cash flow status of Eskom has been reported consistently with available contemporaneous information;

2.4.3 the recent costs incurred as a result of the financial instruments that form the nucleus of the borrowing programme, the process that led to their adoption, the existence of other viable and cost effective financial instruments that could have been pursued as alternatives); and

2.4.4 establish whether the interest rates attached to the financial instruments that form the nucleus of the borrowing programme are commercially supportable under the circumstances.

## **2.5 Integrity of the procurement processes and compliance with legislation as well as Eskom's procurement policies**

2.5.1 the procurement policy, processes and procedures designed by Eskom in relation to the Constitution of the Country, other relevant key legislation and key governance protocols, including best industry practice;

2.5.2 whether the procurement policy and related Eskom policies including but not limited to conflict of interest and the processes to deal with non-compliance, are consistently adhered to. Also, establish whether in instances where transgressions are identified, appropriate sanctions are applied;

2.5.3 whether the procurement processes are effective to ensure that Eskom obtains the best quality products and services at the best price;

## **2.6 Contract management, in particular high costs escalation, frequent modifications, penalty costs including capacity within Eskom to manage contracts generally**

2.6.1 Contract management policy, in relation to its strategic focus, procedures and resources. Are the policies consistently applied to safeguard the organization from failures to enforce its rights and counterparty claims;

2.6.2 whether the design of the contracts (fit for purpose); is appropriate with regard to contract terms;

2.6.3 whether there is a defined modification approval and monitoring process which is adequate and effective. Further, to also establish reasons as to why contract modifications often result in increased costs and delays; and

2.6.4 whether there exists a contract performance monitoring system, in the maintenance of the Generation fleet.

## **2.7 Security failures and accountability at Eskom as a National Key Point**

2.7.1 Eskom's strategies/plans with regard to safeguarding of Key National Points; and

2.7.2 Whether there is any reason why the persistent information leaks are not being arrested? If they are or have been dealt with, whether there has been a sanction imposed upon the responsible people.

## **3. Methodology**

Eskom's Terms of Reference prescribed the following methodology for the Enquiry:

3.1 conducting interviews with employees and any other party/ies or person/s who may have information regarding the Enquiry; and

3.2 obtaining and analysing, inter alia, minutes, letters, written reports, e-mails, and also determine the bona fides of the allegations and questions and evidence raised by employees or any other persons interviewed in accordance with the above.

Shortly following commencement of the Enquiry, the Dentons team will engage with the Audit and Risk Committee ("ARC") to discuss the details of the Scope of Work and methodology and to discuss the logistical arrangements for collection of data, review of documents, points of interface with Eskom, engagement with Eskom staff, reporting, etc. Dentons will thereafter prepare a preliminary list of documents and other data/information as well as a list of meetings/interviews that are required for the Enquiry. It is expected that the data required will comprise, inter alia, minutes of Board and EXCO meetings including supporting information, reports, letters, emails. Interviews will be conducted with Eskom staff and, where deemed necessary for the purposes of the Enquiry, non-Eskom staff. The investigation will be conducted in two phases:

#### **Phase 1: Review of available information**

In this phase, the Dentons team will conduct reviews of the available documentary information and interviews to obtain an understanding of the information that has been provided to the Board on the key issues identified under the Scope of Work. This phase will entail review of a large volume of information, a key intent would be to distil and extract from these documents those aspects that are most pertinent to addressing the Scope of Work and will be used for the more detailed assessment to be conducted in Phase 2.

#### **Phase 2: Detailed Assessment**

In this phase, the Dentons team will conduct assessment of the credibility and completeness of the information that has been provided to the Board on the key issues identified under the Scope of Work. This may require review of additional information such as more detailed reports as well as further interviews to fully address the issues identified under the Scope of Work.

The review of available information and the detailed assessment will be at a level which can be reasonably expected to be conducted within the time frame of Task Order 1. Although, specialist studies will not be conducted under Task Order 1, the verification of certain matters may require additional studies of a specialist nature that may fall outside the methodology set out in Eskom's Terms of Reference. Any such studies will be discussed and agreed between Eskom and Dentons as part of new task orders.

It is recorded that notwithstanding the date of signature of this Task Order, the Dentons team commenced work on 20 April 2015, pending finalisation of this Task Order No 1, and the items listed under the Scope of Work are at various stages of completion as at the signature of this Task Order No 1.

#### **4. Deliverables**

The Dentons team shall submit the following deliverables:

(1) Progress reports to be issued fortnightly. The progress reports will focus on recording the progress that has been made in the execution of the Scope of Work in respect of documents reviewed, people interviewed but will not provide details of findings;

(2) Draft Enquiry Report detailing the independent findings of the Enquiry;

(3) Final Enquiry Report detailing the independent findings after due consideration by the Dentons team of any comments provided by Eskom following Eskom's review of the Draft Enquiry Report; and

(4) Presentations to ARC and the Board as may be required.

## **5. Project Schedule**

Commencement Date: 20 April 2015

Substantial completion of Phase 1: 15 June 2015

Substantial completion of Phase 2: 13 July 2015

Submission of Draft Enquiry Report: 20 July 2015

Receipt of comments from Eskom on Draft Enquiry Report: 24 July 2015

Submission of Final Enquiry Report: 31 July 2015

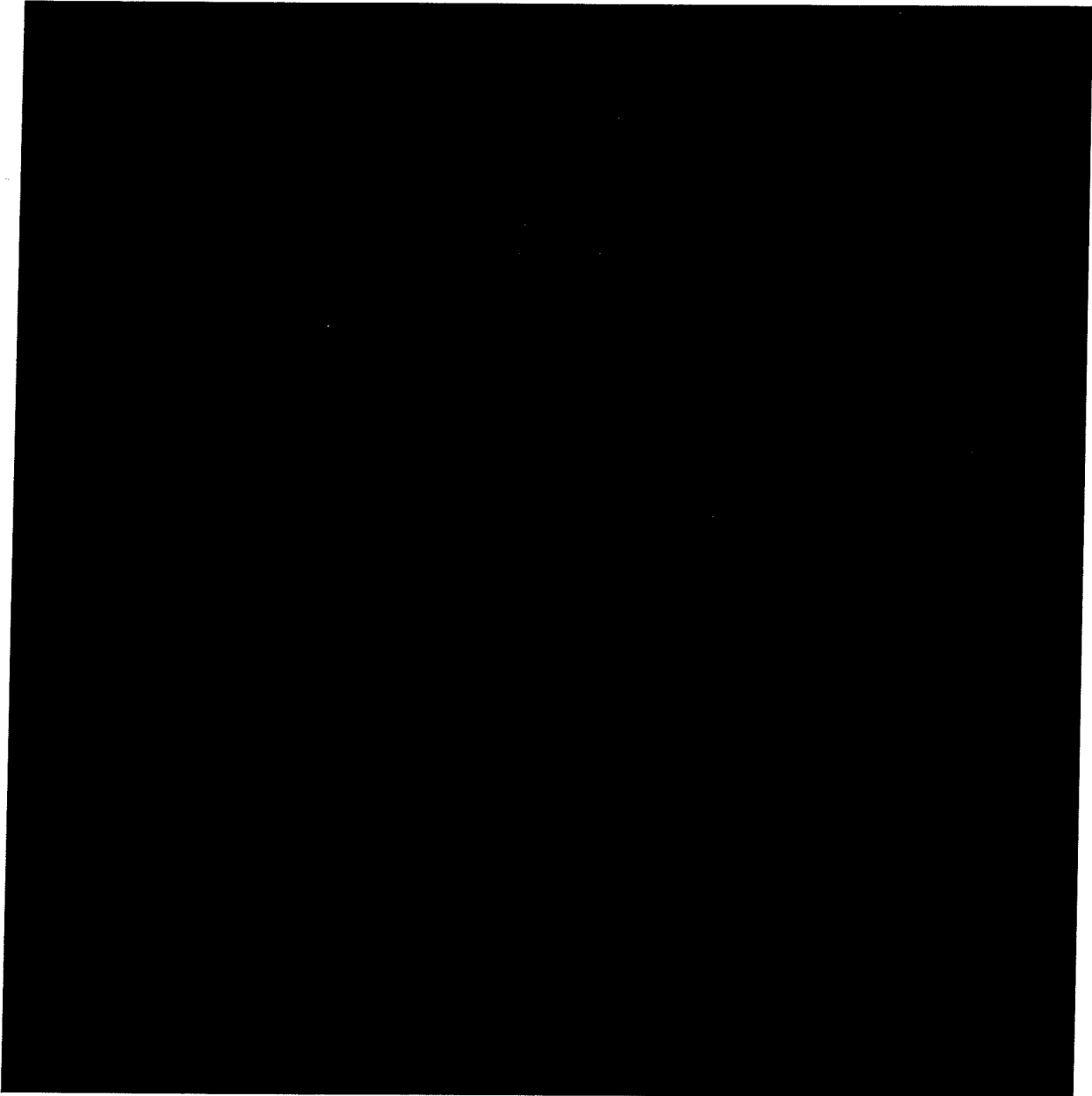
## **6. Remuneration**

Remuneration for the execution of Task Order 1 and reimbursement of expenses and disbursements will be in accordance with the Notification of Acceptance executed by the parties on 20 April 2015, read with the Contract Data executed by Dentons on 7 May 2015 and delivered by Dentons to Eskom on 7 May 2015 and the proposal submitted by Dentons to Eskom.

**Schedule 3**

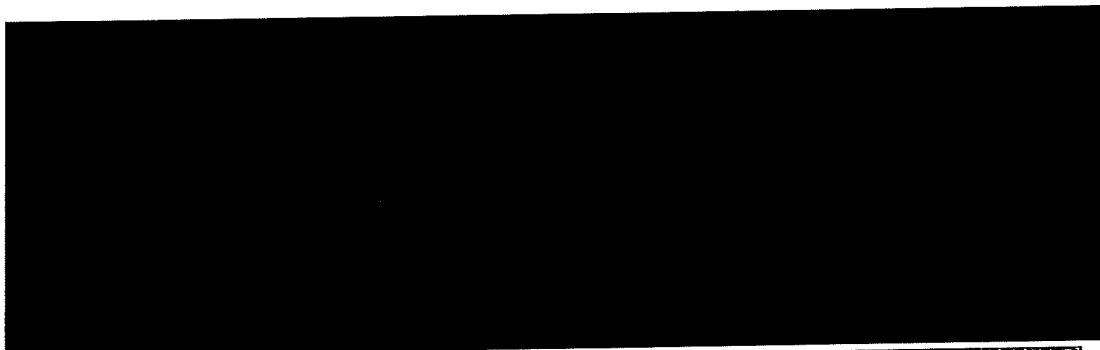
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**BACKGROUND**

Eskom appointed Dentons to conduct a Forensic Fact Finding Enquiry (the "Enquiry") into the status of the business and challenges experienced by Eskom in the areas identified by the board (the "Board") of Eskom Holdings (SOC) Ltd. A contract for the execution of the Enquiry was entered into between Dentons and Eskom Holdings (SOC) ("Eskom") on 17 April 2015 (the "Contract"). The Contract defines the key objectives of the Enquiry and the broad areas that are to be considered in the Enquiry.

**Purpose of obtaining required records**

Eskom's Terms of Reference prescribed a methodology for the Enquiry which included *inter alia*: Obtaining and analysing, inter alia, minutes, letters, written reports, e-mails, and also determine the bona fides of the allegations and questions and evidence raised by employees or any other persons interviewed in accordance with the above.

**TIMING (commencement date, duration and when are the results expected)**

Commencement date 28 May 2005.  
Duration of investigation is 2 months.  
Results to be expected as soon as is practicable

**Use, Confidentiality and Storage**

*The investigator acknowledges that the records requested could contain other unrelated confidential information, and undertakes to respect the employee's privacy, and only focus on information related to the investigation. The records drawn would be saved on an access right controlled Forensic secured drive for review by the requesting investigator. Subsequent to the review, evidence would be printed for filing and continued use to support the investigation, and the investigator would thereafter delete the entire record from the drive.*

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REQUESTED BY (Forensic Investigator)
[REDACTED]

APPROVAL (Response Manager)	
Request approved (mark with x) <input type="checkbox"/>	Request not approved (mark with x) <input type="checkbox"/>
Name: _____	Signed: _____
Capacity: _____	Date: _____

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### Assumptions and Qualifications

The data, documentation and information provided, supplemented by oral interviews with various Eskom employees formed the basis of the factual understanding and our findings are therefore based entirely on this information.

We were not required to evaluate and comment on the technical content of the information provided to us. Generally, time constraints made it impossible to assess the correctness of the technical information.

No attempt has been made to achieve any degree of statistical significance in the course of conducting investigations.

This Report is not intended to investigate, adjudicate, comment on, or resolve, any specific incident, complaint, or point of dispute.

This Report does not constitute a plan of action, implementation programme, or formal, legal or other advice in respect of any of the issues that are raised.

Whilst due care has been taken to ensure accuracy of the contents of this Report, it has in many instances not been possible to test and verify the information provided to us, due amongst others to the period of the Investigation and lack of access to certain information sources.

The opinions, views, findings, recommendations, observations inferences and conclusions set out in this Report are a matter of professional opinion and not a guarantee of result.

We make no representations of any nature in respect of the contents of this Report, which ultimately constitutes no more than the opinion of Dentons South Africa. Any person intending to rely on any part of this Report should take such verification and other steps, and seek such advice, as may be appropriate.

This Report was prepared for the purposes of investigating the matters set out in the TOR in accordance with the prescribed methodology, for the sole and exclusive benefit of Eskom. This Report should not be used or relied upon for any other purpose and any person or entity or body doing so, does so at its own risk. Dentons South Africa accepts no responsibility or liability to any person, entity or body, choosing to rely on any of the contents of this Report for their own purposes.

The observations in this Report are based on certain limited information accessed by Dentons South Africa in the course of the Investigation. The contents of this Report are subject to further testing, verification and corroboration. Dentons South Africa makes no comment and intends no inference, unless expressly set out in this Report.

The contents of this Report are strictly confidential and may not be disclosed, in whole or in part, to any person or entity other than Eskom, without the prior written consent of Dentons South Africa.

## Glossary

AMCU	Association of Mineworkers and Construction Union
AR	As received
ARC	Audit & Risk Committee
BEE	Black Economic Empowerment
BEM	Black owned Emerging Miners
BBL	Barrel of oil
Board	Eskom Board of Directors
C&I	Control and Instrumentation
Capex	Capital expenditure
CAPP	Central Appalachian
CE	Chief Executive
CSA	Coal supply agreement
CV	Calorific value
DPE	Department of Public Enterprises
EAF	Energy Availability Factor
EETT	Eskom emergency task team
EL1	Emergency Generation Level 1
EUF	Energy Utilisation Factor (see EAF)
EXCO	Eskom's Executive Committee
EXCO Indaba	Eskom's Executive Committee Indaba
FD	Financial Director
FGD	Flue – gas desulphurisation
FY	Financial year
GJ	Gigajoule
GW	Gigawatt
GWh	Gigawatt hour
ICAS	Investment and capital sub-committee
IFC	Investment and Finance Committee
IPPs	Independent Power Producers
kA	kilo ampere
kg	kilogramme
kJ	kilojoule

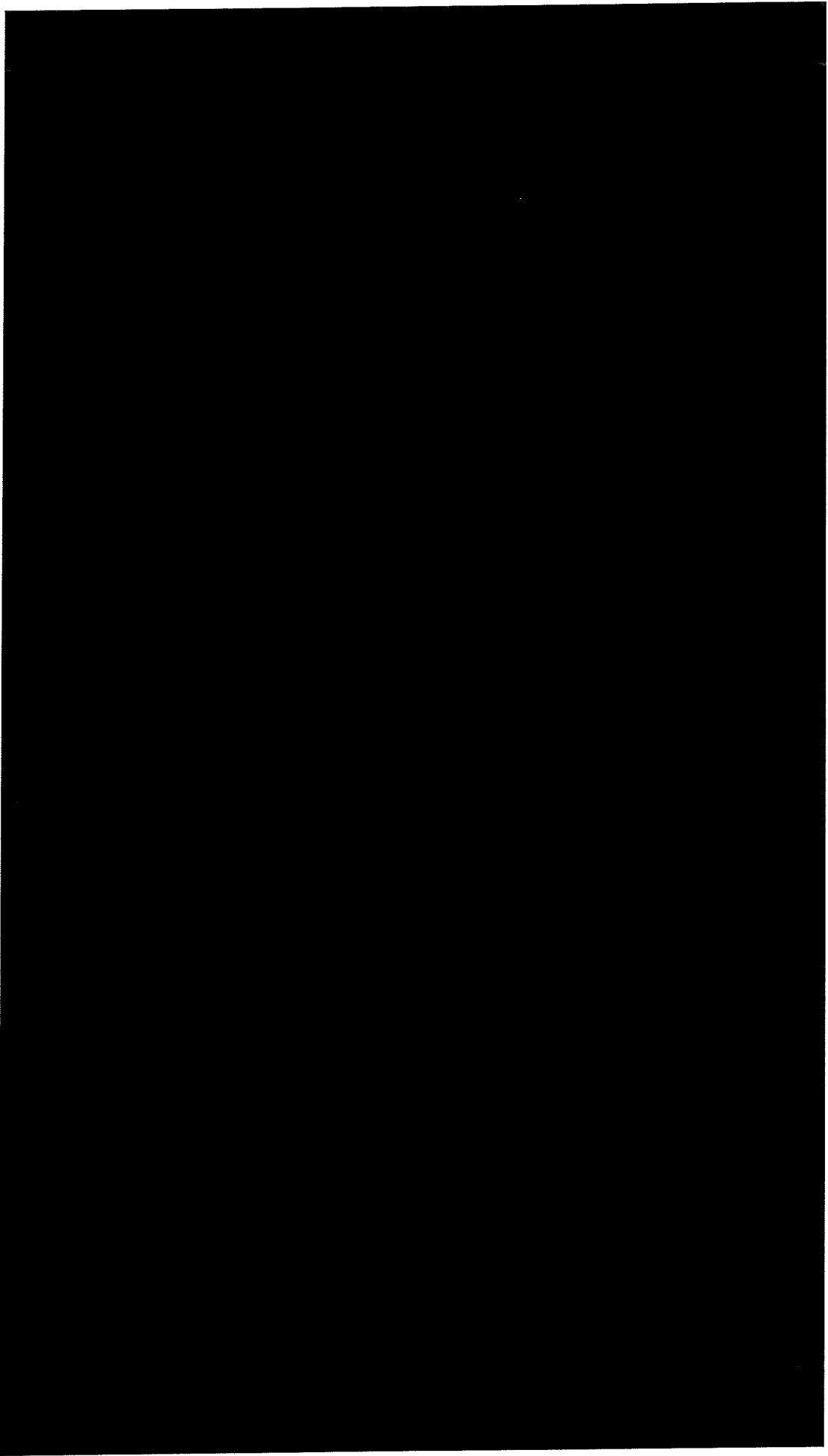
KLO	Keep the Lights on
km	kilometre
kV	kilovolt
kW	kilowatt
kWh	kilowatt hour
LT	Long term
Mancom	Management committee
ms	millisecond
MT	Medium term
MTon	Million ton
MVA	Megavolt ampere
MW	Megawatt
MWh	Megawatt hour
MYPD	Multi-year price determination
NERSA	National Energy Regulator of South Africa
NT	National Treasury
NUMSA	National Union of Metalworkers of South Africa
OCGT	Open Cycle Gas Turbine
OEM	Original Equipment Manufacturer
Opex	Operational expenditure
PE	Primary energy
PCLF	Planned Capability Loss Factor
pu	Per unit
RBCT	Richards Bay coal terminal
RCA	Regulatory Clearing Account
RTS	Return to service
ST	Short term
TGC	Technical Governance Committee
UCLF	Unplanned Capability Loss Factor
VGB	VGB PowerTech is the European technical association for power and heat generation
WC	FIFA World Cup 2010
ZAR	South African Rand

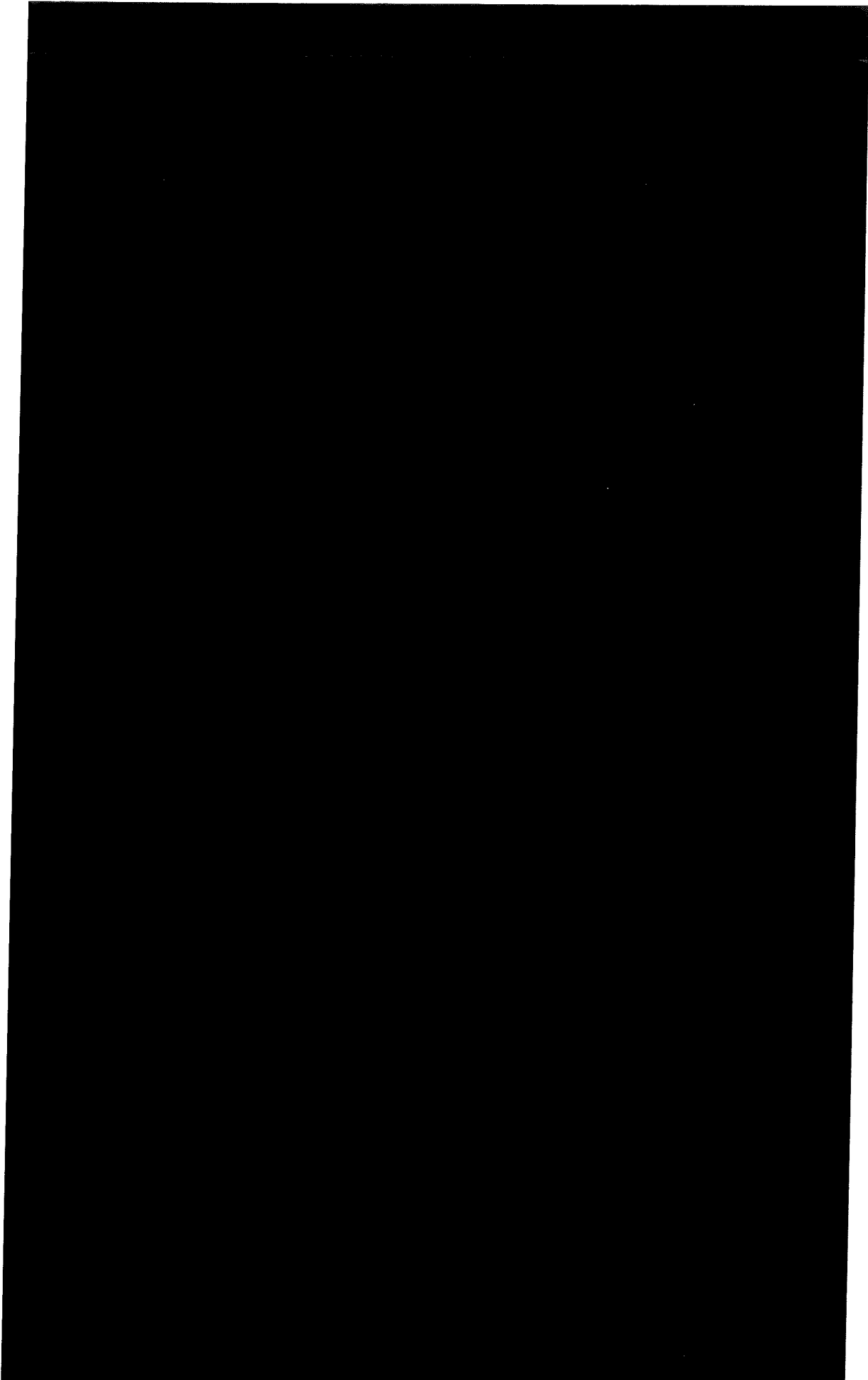
## Schedule 6

### Annexures to Chapter 5 and Chapter 6

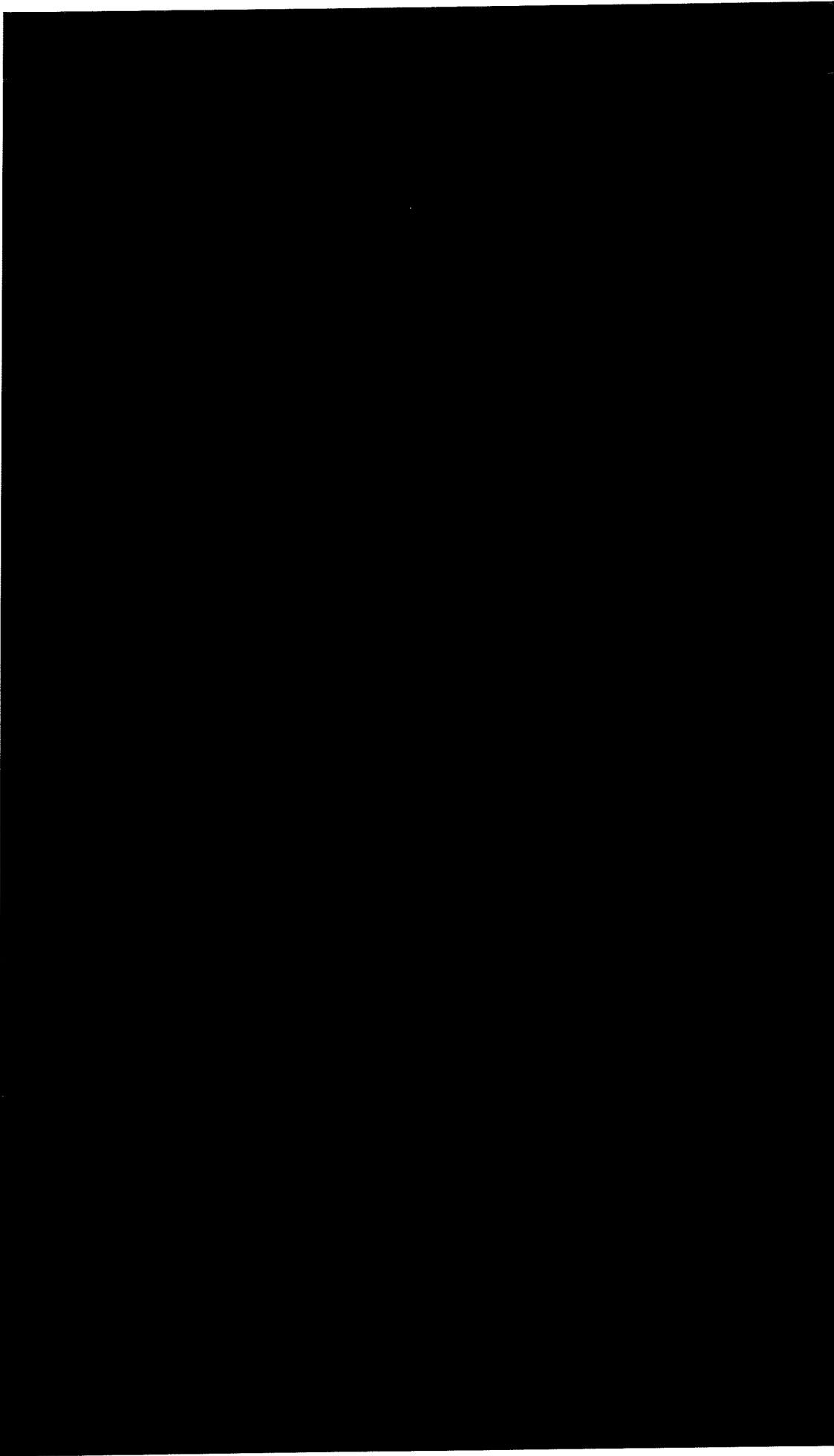
Annexures A to J are attached.

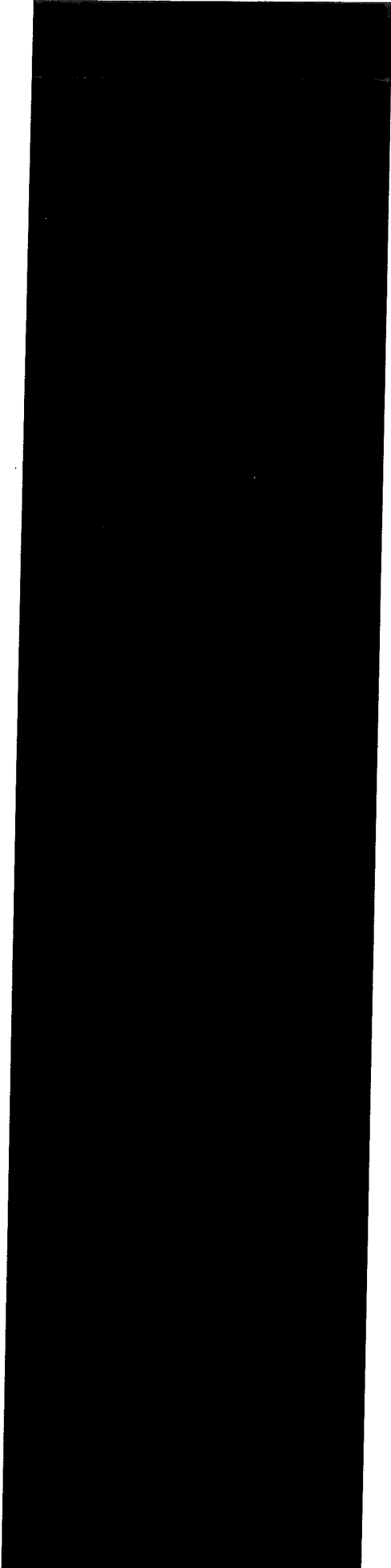
Annexure A





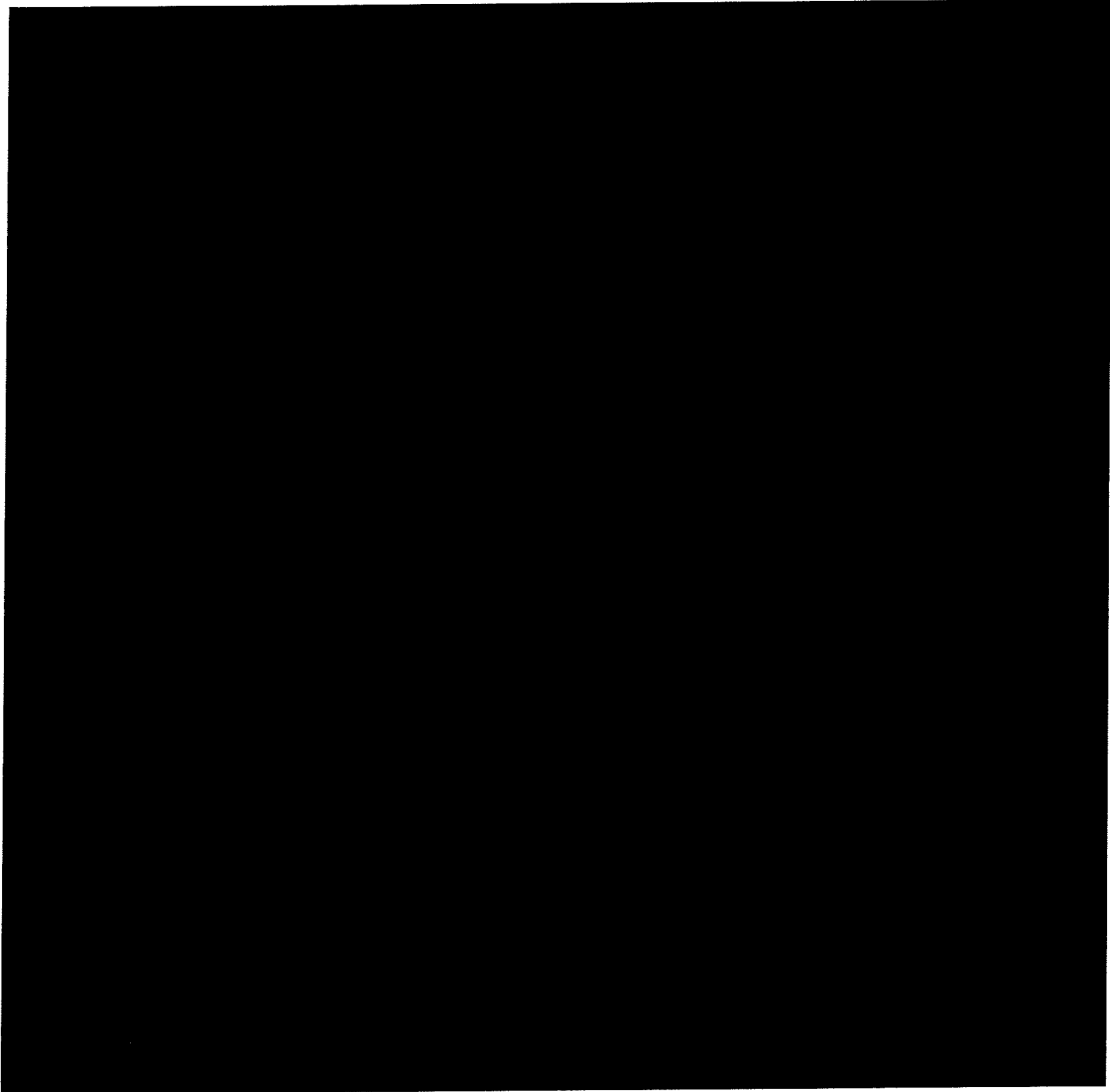
**Annexure B**





**Annexure C**

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**TABLE 2: SUCCESSFUL RFP RESPONDENTS (GEN 3031)**

## Annexure D

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It must be noted that some of the respondents on the RFP are also existing suppliers.

The sourcing team was organised into 6 (six) cross functional teams headed up by Lead Negotiators. Existing suppliers and short listed RFP respondents were invited to negotiations. Prior to negotiations Lead Negotiators prepared negotiation strategies that was approved by the Medium Term Coal Sourcing Team.

### 5. **CONTRACTING PRINCIPLES**

A set of contracting principles were developed that gave clear guidelines and set the standards before the negotiating teams negotiated coal supply agreements with the identified suppliers.

<b>(1) Contract Condition</b>
<b>Legislative Compliance</b>
<p><b>Rationale</b></p> <ul style="list-style-type: none"> <li>• Eskom is responsible corporate citizen</li> <li>• Eskom can attract third party liabilities</li> <li>• Eskom is governed by the PFMA</li> </ul>
<p><b>Contracting Principles</b></p> <ul style="list-style-type: none"> <li>• Eskom will not contract with suppliers who do not operate legally.</li> <li>• Eskom wants to contract with the owners of mining resources of value-adding agents</li> <li>• Suppliers to prove or give warranties and undertakings that there is compliance to relevant legislation - before contracting</li> <li>• Eskom to be entitled to conduct audits to assess compliance</li> <li>• Eskom to receive performance reports to monitor compliance</li> </ul>
<p><b>Standards</b></p> <p>Suppliers' to comply with, but not limited to, the following laws:</p> <ul style="list-style-type: none"> <li>• The National Water Act, 1988</li> <li>• The National Environmental Management Act, 1998</li> <li>• The Environment Conservation Act, 1989</li> <li>• The National Environmental Air Quality Act, 2004</li> <li>• The Water Services Act, 1989</li> <li>• The Hazardous Substances Act, 1973</li> <li>• The National Heritage Resources Act, 1999</li> <li>• The World Heritage Convention Act, 1999</li> <li>• The Mineral and Petroleum Resources Development Act, 2002</li> <li>• Mine Health and Safety Act</li> </ul> <p>all as amended from time to time, all statutory instruments, provincial ordinances and statutes, municipal government by-laws relating to the environment, government notices, circulars, codes of practice, guidelines, decisions, regulations, orders,</p>

Feedback Medium Term Coal Procurement Mandate

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demands, and criteria, injunctions or judgments of any court, administrative or regulatory authorities, central government, provincial government, municipal or any other body with responsibility for the protection of the environment (including but not limited to the health of the public, employees, plants and animals).  
 Suppliers to furnish the following documents:

- Mining Right
- Proof of ownership
- Section 11 with regards to change of ownership (if applicable)
- Tax Clearance certificate
- B-BBEE certificate
- Three year audited Financial Statements
- Employment Equity plan

Eskom is to conduct environmental assessments during the contract term to assess environmental compliance, the engagement rules of which will be agreed with the supplier before the assessment is conducted.

The following documents are to be provided to Eskom as stipulated:

- Environmental Management Programme Performance Assessment Reports (as submitted to the DMR) every two years
- Updated environmental risk register annually
- 3<sup>rd</sup> Party Legal audits and management plans to address the findings thereof annually
- Reports indicating the status of adherence to conditions and commitments as per licences / permits every six months
- Legal Contraventions, including correspondence between mine and authorities detailing management plans to close out legal contraventions, monthly
- Public complaints and action plans to deal with complaints, monthly
- Progress on closing out of legal contraventions and audit findings, monthly
- The supplier must be in a position at all times to assure Eskom that there are processes in place to continually identify compliance with the EMPR.

<b>(2) Contract Condition</b>	
<b>Coal Quantities</b>	
<b>Rationale</b>	<ul style="list-style-type: none"> <li>• Security of Supply is the first priority</li> <li>• Supply of coal quantities to be aligned to demand patterns</li> <li>• Flexibility is required because of the nature of mining processes and the dependence of mining operations on favourable weather conditions.</li> <li>• Eskom requires flexibility because of operational constraints.</li> </ul>
<b>Contracting Principles</b>	<ul style="list-style-type: none"> <li>• Supplier to give warranties that there are sufficient coal reserves to meet contractual quantities</li> <li>• Contract for energy content rather than coal mass</li> <li>• Ensure volume flexibility so that coal quantities can be increased or decreased as demand patterns change however full contractual quantities to be taken off by the end of the contractual period</li> <li>• Volume flexibility should come at no extra cost</li> <li>• Agree on rectification processes that shows new delivery plan and thereafter penalties for under supply or under take off of contracted quantities.</li> <li>• The penalty principle is that the defaulting party must put the other party in the same financial position it otherwise would have been in.</li> </ul>

**Standards**

- The reporting on reserves and resources must be done under the guidelines of the SAMREC Code.
- The base CV to be used to determine the energy quantity is the geologically assessed expected CV for the reserve on an As Received basis
- Allow for up to 15% variability in coal quantity to be supplied on a monthly basis
- Actual coal quantity to be supplied, within the range as described above, to be agreed at the monthly Technical Liaison Meeting, three months rolling, in advance
- Not less than 85% and not more than 115% of the monthly quantity is to be supplied and taken off during each month
- Not less than 90% and not more than 110% of the coal quantity is to be supplied and taken off on an annual basis
- Not less than 95% and not more than 105% of the coal quantity can be supplied and taken off by the end of the contract period while complying with the minimum and maximum quantities for each month, and year as stipulated above
- Once parties have agreed on the three month supply of coal quantity as agreed at the Technical Liaison Meeting, the quantity for the 1<sup>st</sup> month of this period is deemed to be fixed and firm and a Purchase Order (PO) is issued to the Supplier accordingly.

Supply Shortfalls and under delivery

- The Supplier will submit a rectification plan that shows revised delivery schedule for Eskom's consideration within 3 days if it is unable to supply at least 95% of the agreed quantity for the month as agreed at the Technical Liaison Meeting and confirmed by the PO to the Supplier
- An under delivery will occur if the supplier fails to supply a rectification plan with revised delivery schedule that stipulates how the shortfall is to be made up.
- An under delivery will occur if the rectification plan with revised delivery schedule does not meet with Eskom's approval or if it fails to implement such a rectification plan.
- The implementation of the Eskom approved rectification plan should make up the shortfall in the shortest time reasonably possible but before the end of that quarter
- Eskom shall be entitled to claim from the supplier a penalty equal in compensation for costs incurred for direct handling of stockpiles incurred by Eskom occasioned by any shortfall subsequently made up
- In the event of an under delivery Eskom shall be entitled to recover from the Supplier a financial penalty equivalent to costs incurred for replacement coal.

Under Off-Take

- Eskom will submit a rectification plan that shows revised off-take plan for the Suppliers consideration within 3 days if it is unable to take off at least 95% of the agreed quantity for the month as agreed at the Technical Liaison Meeting and confirmed by the PO to the Supplier
- An under Off take will occur if Eskom fails to supply a rectification plan that stipulates how the under off take is to be made up or
- An under off take will occur if the rectification plan does not meet with Suppliers approval or if Eskom fails to implement such a rectification plan

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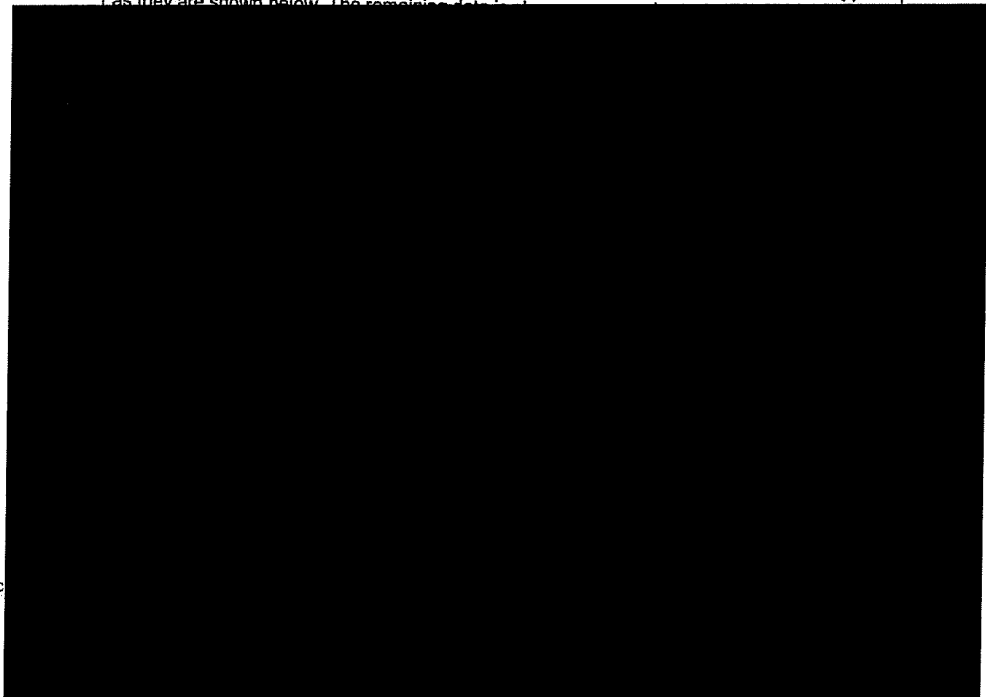
<ul style="list-style-type: none"><li>• The implementation of the approved rectification plan should make up the under off take in the shortest time reasonably possible but before the end of that quarter</li><li>• The Supplier shall be entitled to claim from Eskom a penalty equal in compensation for costs incurred for direct handling of stockpiles incurred by the Supplier occasioned by any under off take subsequently made up provided that the supplier shall notify Eskom in writing before incurring any additional costs and shall seek Eskom's involvement in minimising such additional costs</li><li>• In the event of an under off-take not made up by the end of the quarter Eskom will make payment for the under off take equivalent to the full price of the coal and will be entitled to take off the coal so paid for</li></ul>
<p style="text-align: center;"><b>(3) Contract Condition</b></p> <p style="text-align: center;"><b>Coal Qualities</b></p>
<p><b>Rationale</b></p> <ul style="list-style-type: none"><li>• Eskom has to ensure the optimal performance of coal-fired power stations</li><li>• Out-of-spec coal impacts directly on the performance of power stations and increases maintenance costs.</li><li>• Eskom is committed to its targets to reduce emissions at its power stations.</li><li>• Individual power stations determine the optimal product for maximum performance and suppliers are therefore bound to ensure that coal qualities fall within the pre-determined parameters.</li><li>• The better the quality the lower the burn rate hence the more efficient the plant</li></ul>
<p><b>Contracting Principles</b></p> <ul style="list-style-type: none"><li>• Suppliers are to have pre-certified stockpiles that meet the rejection levels in the contract taking into account that suppliers will be given a reasonable period of time to meet specs and mathematical averaging will be allowed, as an exception</li><li>• Sampling of stockpiles is paramount to ensure that only that coal which falls within the required parameters of a station is purchased.</li><li>• Eskom is entitled to sample and/or audit stockpiles prior to delivery.</li><li>• Eskom is entitled to test compliance in terms of the CQMP (Coal Quality Management Procedure)</li><li>• Eskom will receive performance reports to monitor compliance.</li><li>• When contracting for resources, where there is an opportunity for quality changes to be instituted, should station qualities change, and infrastructure at the mine can facilitate these changes, then the contract should allow for this flexibility.</li><li>• Quality requirements will be linked to the Coal Quality Effects Model and the value-in-use principles where incremental changes in coal quality is linked to economic impact to the power station</li><li>• Eskom will manage power station specs individually</li></ul>
<p><b>Standards</b></p> <ul style="list-style-type: none"><li>• The supplier will provide geological information to PED technical service department relating to their technical information and mine plan.</li><li>• Coal qualities to comply with minimum power stations' signed off specifications.</li><li>• Any deviations from the power station minimum specs will be agreed and signed off by the power station manager</li><li>• Use the Coal Quality Effects Model to determine range of qualities that will not affect stations adversely</li></ul>

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<ul style="list-style-type: none"> <li>• Suppliers to implement Primary Energy's Coal Quality Management Procedure (CQMP)</li> <li>• PED's technical services department to audit CQMP compliance monthly</li> <li>• Coal quality to be measured at the source</li> <li>• Suppliers to build stockpile to pre-certified quality levels, above rejection levels as stipulated in the contract</li> <li>• Stockpiles that don't meet rejection levels will not be taken-off</li> <li>• The analysis of the contractual samples will be done by an Eskom-appointed independent lab at Eskom's cost (transport to the lab and analysis)</li> <li>• After three consecutive samplings if the stock pile still is out of spec then any further sampling is at the total cost of the supplier.</li> <li>• Supplier is not to build any unnecessary stockpiles – refer to CQMP..</li> <li>• Adjustment must be made for abnormal moisture content due to rain, according to the formula determined by the technical services department.</li> <li>• Make provisions to increase quality requirements or decrease quality requirements within reason and within an acceptable time frame if the supplier has the capacity to do this within reason and at no extra cost to Eskom.</li> </ul>
<b>(4) Contract Condition</b>
<b>Price</b>
<b>Rationale</b>
<ul style="list-style-type: none"> <li>• Coal costs are one of the highest cost drivers for Eskom</li> <li>• Coal costs have a direct impact on electricity prices and hence the cost of doing business in the country.</li> <li>• NERSA apply a formula to ensure that coal prices are very competitive by their assertion.</li> <li>• Eskom will not be able to recover costs through the electricity tariff for excessively priced coal.</li> </ul>
<b>Contracting Principles</b>
<ul style="list-style-type: none"> <li>• Prices will be based on efficient costs + a risk adjusted, fair return.</li> <li>• Technical mine information will be input into PEDs technical cost models to determine costs for the type of mining operation</li> <li>• Prices to be based on energy content not mass</li> <li>• Price choices should be made on total cost of ownership (TCO) to the station</li> </ul>
<b>Standards</b>
<ul style="list-style-type: none"> <li>• The supplier will provide geological information to PED technical service department relating to their coal reserves</li> <li>• Technical services will benchmark costs for the type of mining operation and run through their models</li> <li>• The costs from the technical service benchmark will be input into the financial model to determine a range of 'fair returns' to the supplier.</li> <li>• Prices will be based on energy content with the base CV set at the geologically determined expected CV from that operation</li> <li>• The cost of capital incurred by suppliers is determined and used in ROI calculations.</li> <li>• One of a number of methods can be used to determine 'fair returns' is WACC + a benchmarked return</li> <li>• Use the "Value in Use" model to determine trade-offs between price and CV.</li> <li>• Use the "Value in Use model" to do cost benefit analysis for improving CVs</li> <li>• Do not over contract for CV if the Value in Use Model shows no additional benefit to the plant for increased CVs.</li> </ul>

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(5) Contract Condition
Contract Price Adjustments (CPA)
<b>Rationale</b>
<ul style="list-style-type: none"><li>Contract Price Adjustments or Escalation clauses are meant to cater for the movement of cost components over the life of a contract; they eliminate windfall gains and losses. Agreement of appropriate indices and their weightings is critical.</li><li>Also poor escalations could render a supplier unsustainable thus risking security of coal supply to the power stations.</li></ul>
<b>Contracting Principles</b>
<ul style="list-style-type: none"><li>The base price must be clearly stated.</li><li>The base date must be set before contracting</li><li>Use a basket of indices that closely represent the cost drivers of that particular mining operation.</li><li>CPA to be based on recognised nationally/internationally published indices</li><li>At least 10% of the price will be fixed ie free of escalation – this is to build in efficiency gains..</li><li>The profit component of the price will escalate, at the most, by CPI</li><li>CPA should be analysed on an annually basis to determine whether there have been material shifts in cost components..</li></ul>
<b>Standards</b>
<ul style="list-style-type: none"><li>The base date for escalations should be set at least a month before the contract start date so that indices are available for the calculations.</li><li>Prices should be escalated annually except for diesel escalations, upwards or downwards, that are done monthly.</li><li>The annual price adjustment each year is based on the base price and not the price determined by applying the monthly adjustment factor to the most recent price.</li></ul>
<b>Escalation basket to be used</b> – the cost component and % of total cost are to be applied as they are shown below. The remaining...



Feedback

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<b>(6) Contract Condition</b>	
<b>Logistics (Transportation and related issues)</b>	
<b>Rationale</b>	<ul style="list-style-type: none"><li>• Logistics infrastructure is a constraint for the near future.</li><li>• Logistics cost contributes significantly to total cost of ownership of coal to the stations.</li><li>• Sub-Optimal logistics choices have an economic and social impact on the coal delivery system.</li></ul>
<b>Contracting Principles</b>	<ul style="list-style-type: none"><li>• Ensure that conveyor is the preferred logistics solution before rail, which in turn takes preference over road.</li><li>• Ensure contracts are flexible enough to move between rail and road and between delivered and FOT contracts to manage any logistics constraints being experienced.</li><li>• Ensure that Logistics suppliers are aware of legislative requirements regarding transportation.</li><li>• Ensure that the SLAs regarding road and rail rules are contracted with the supplier.</li><li>• Before contracting for coal supply ensure that PED's Logistic's department is involved early on in the coal procurement process so that optimal transportation decisions can be taken.</li></ul>
<b>Standards</b>	<ul style="list-style-type: none"><li>• Contract should have flexibility to move fairly easily within reasonable notification periods between Rail, Road and Delivered and FOT contracts.</li><li>• Suppliers to adhere to Road Transportation Management System Standards which are covered in the Road Rules service level agreement (SLA).</li></ul>

A Standard Coal Supply and Off-Take agreement was developed in support of the contracting principles. The agreement is supplemented by a set of annexes that:

- o Describe the coal quality management procedure
- o The environmental compliance required by Eskom
- o The standard agenda of the Technical Liaison Meeting
- o Examples of escalation formulae
- o Road and Rail Transportation rules
- o Moisture adjustment formulae

A number of process improvements were implemented and were described in detail in the 2<sup>nd</sup> Interim Feedback Report to the BoD-TC of the 10<sup>th</sup> March 2010. A summary of the initiatives is presented below:

## Annexure E

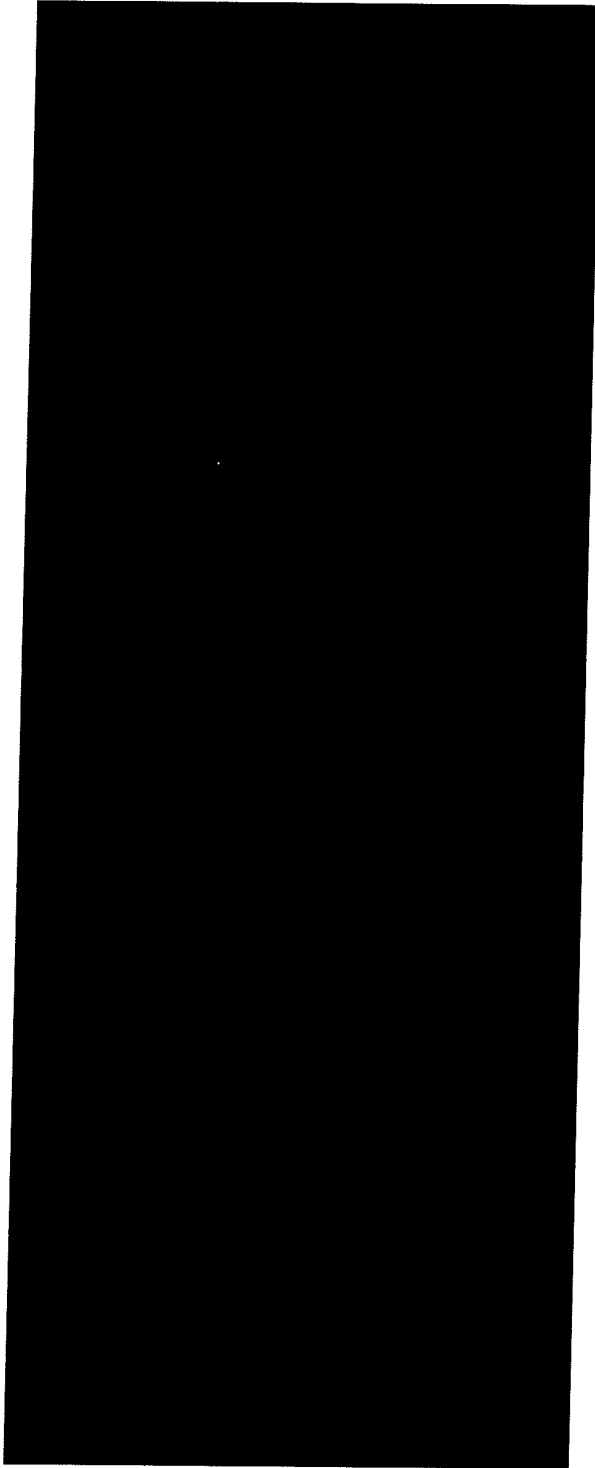
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Process	Weakness identified	Improvements Made
Sourcing	<ul style="list-style-type: none"> <li>• Ad hoc, limited integration between LT,MT, ST and logistics</li> <li>• Crisis management</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated portfolio optimisation process to deliver lowest overall cost plan</li> <li>• RFI/RFP process conducted</li> <li>• Better planning and forecasting across full value chain</li> </ul>
Contracting	<ul style="list-style-type: none"> <li>• Perception of black box</li> <li>• Lack of standardisation;</li> <li>• Contracts concluded in a rush</li> <li>• Some contracts never signed</li> <li>• Transport costs and risks sometimes not covered</li> </ul>	<ul style="list-style-type: none"> <li>• Substantial involvement from all stakeholders</li> <li>• Standard fixed price contracts</li> <li>• Offer and Acceptance letter signed</li> <li>• Formal contracts tracked rigorously</li> <li>• Corporate Finance assistance; better analysis of costs and options, documented</li> </ul>
Contract Management	<ul style="list-style-type: none"> <li>• No proper handover</li> <li>• Lack of skills</li> </ul>	<ul style="list-style-type: none"> <li>• Formal handover workshops</li> <li>• Coal Supply Unit managers (CSMs) involved in developing contract</li> <li>• Ongoing training</li> </ul>
Supporting Systems	<ul style="list-style-type: none"> <li>• Lack of skills</li> <li>• Poor use of systems</li> </ul>	<ul style="list-style-type: none"> <li>• Mining Consultants' assistance</li> <li>• Improved use of SAP and Doc man systems</li> <li>• Systems training</li> </ul>

## Annexure F

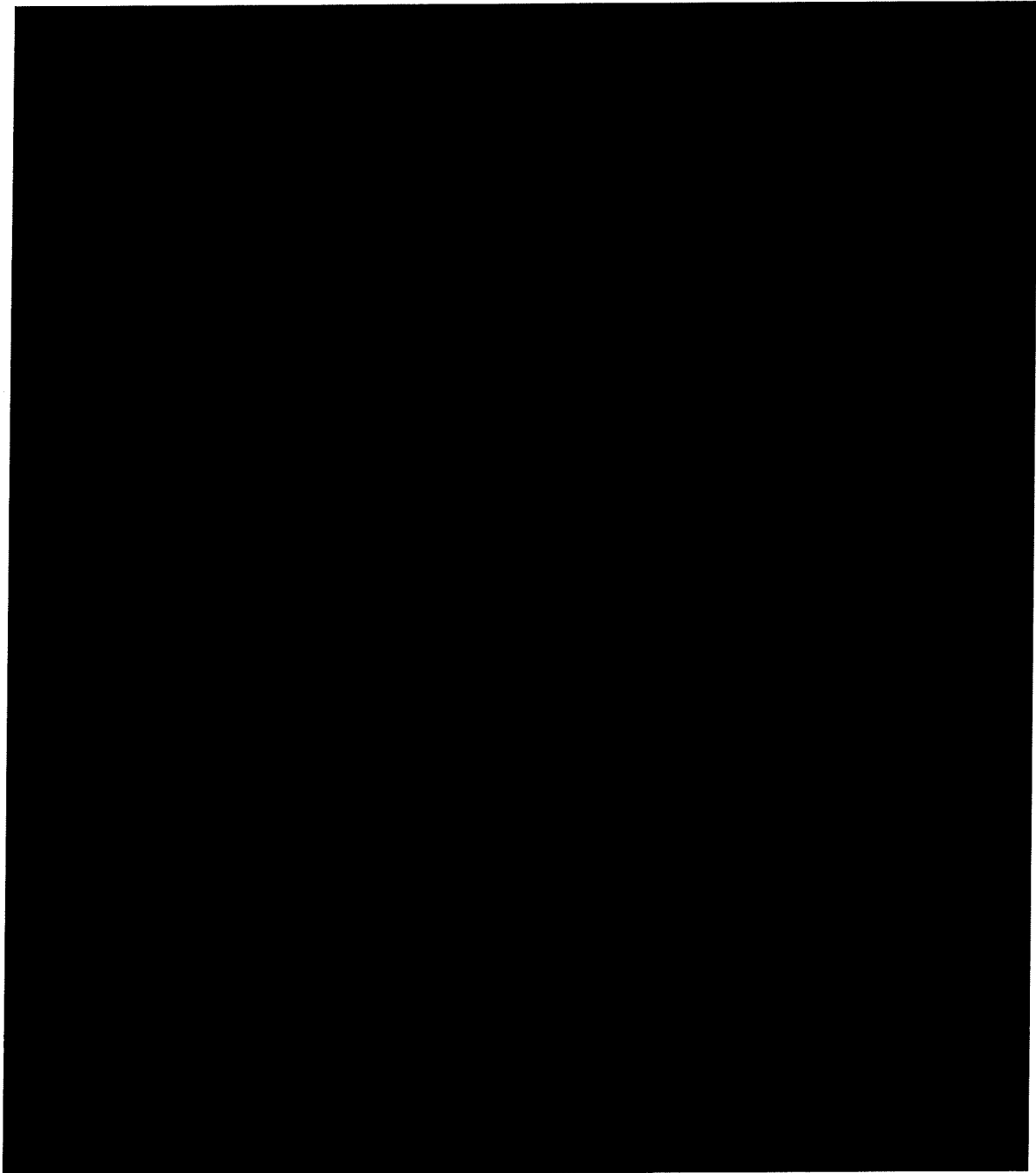
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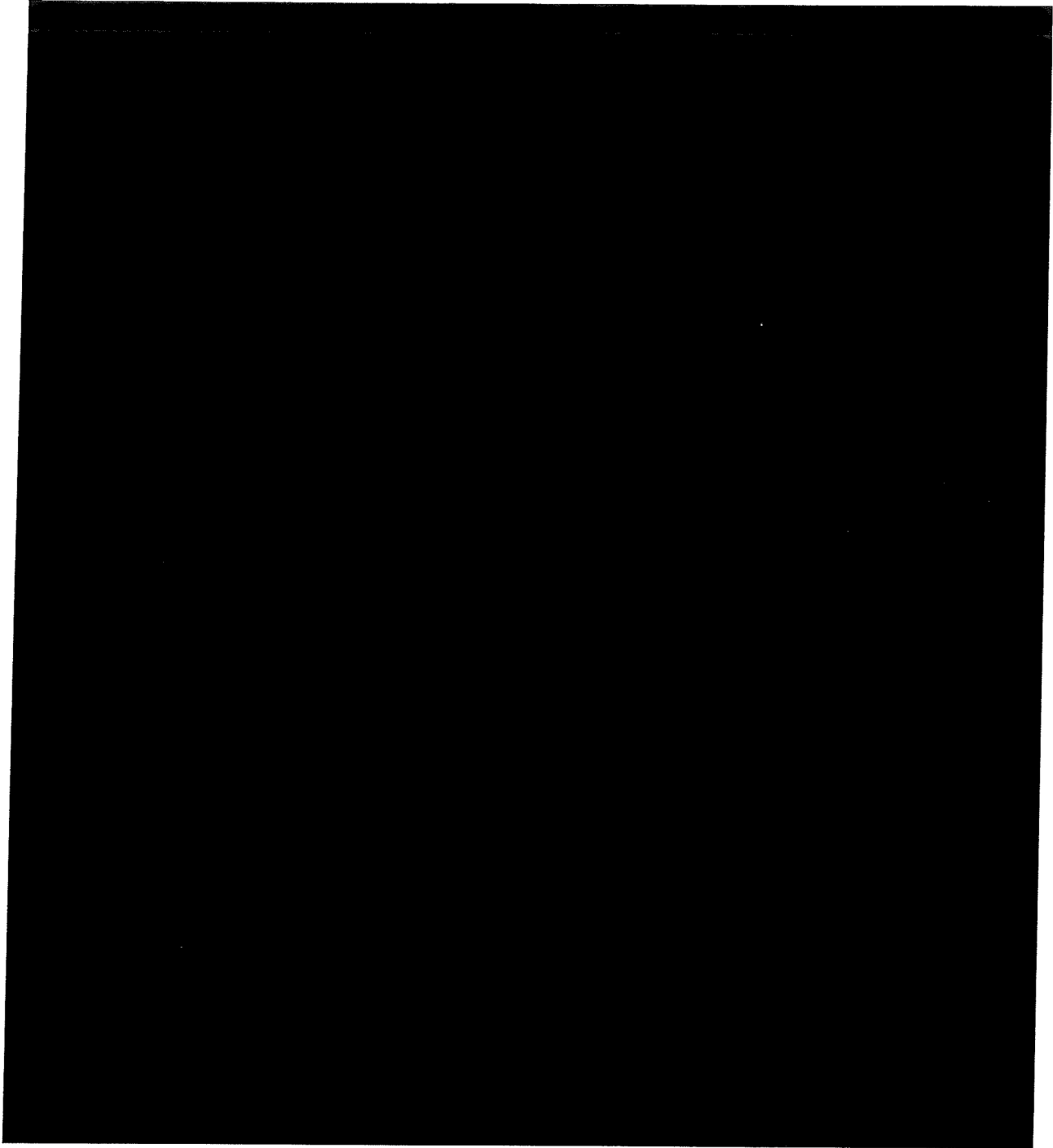
### **6. RESULTS OF NEGOTIATIONS TO DATE**



## Annexure G: Conflicts of Interest

1. Generally, prior to approving a contract modification or award, Eskom appoints consultants to perform probity reviews for the purposes of ensuring that no conflict of interest exists between the relevant suppliers and Eskom's authorising committee members (which includes EXCOPS members, Eskom Board members, Cross Functional Team members and their respective spouses). In the succeeding paragraphs we consider how EXCOPS deals with the results of these probity reports.

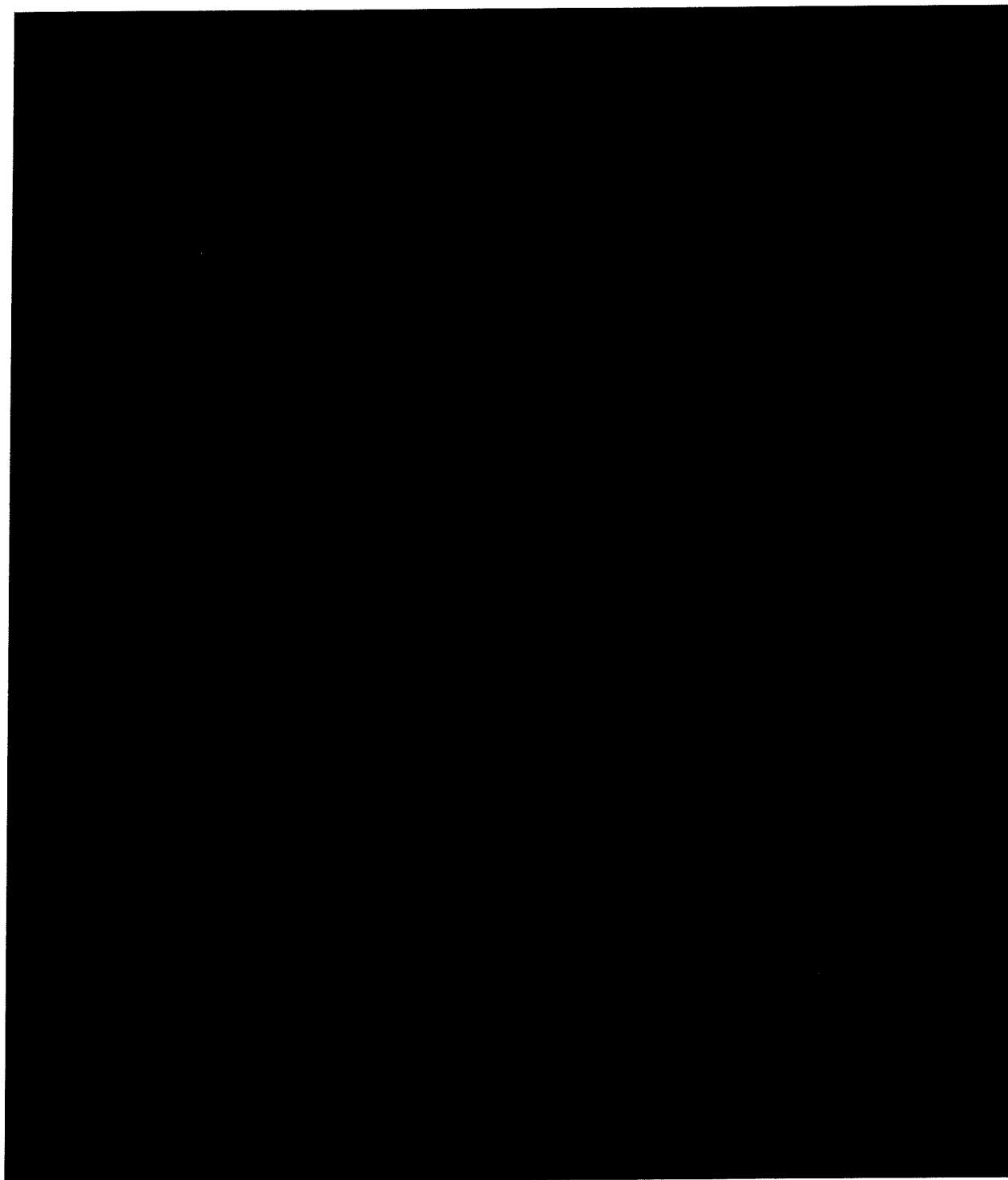


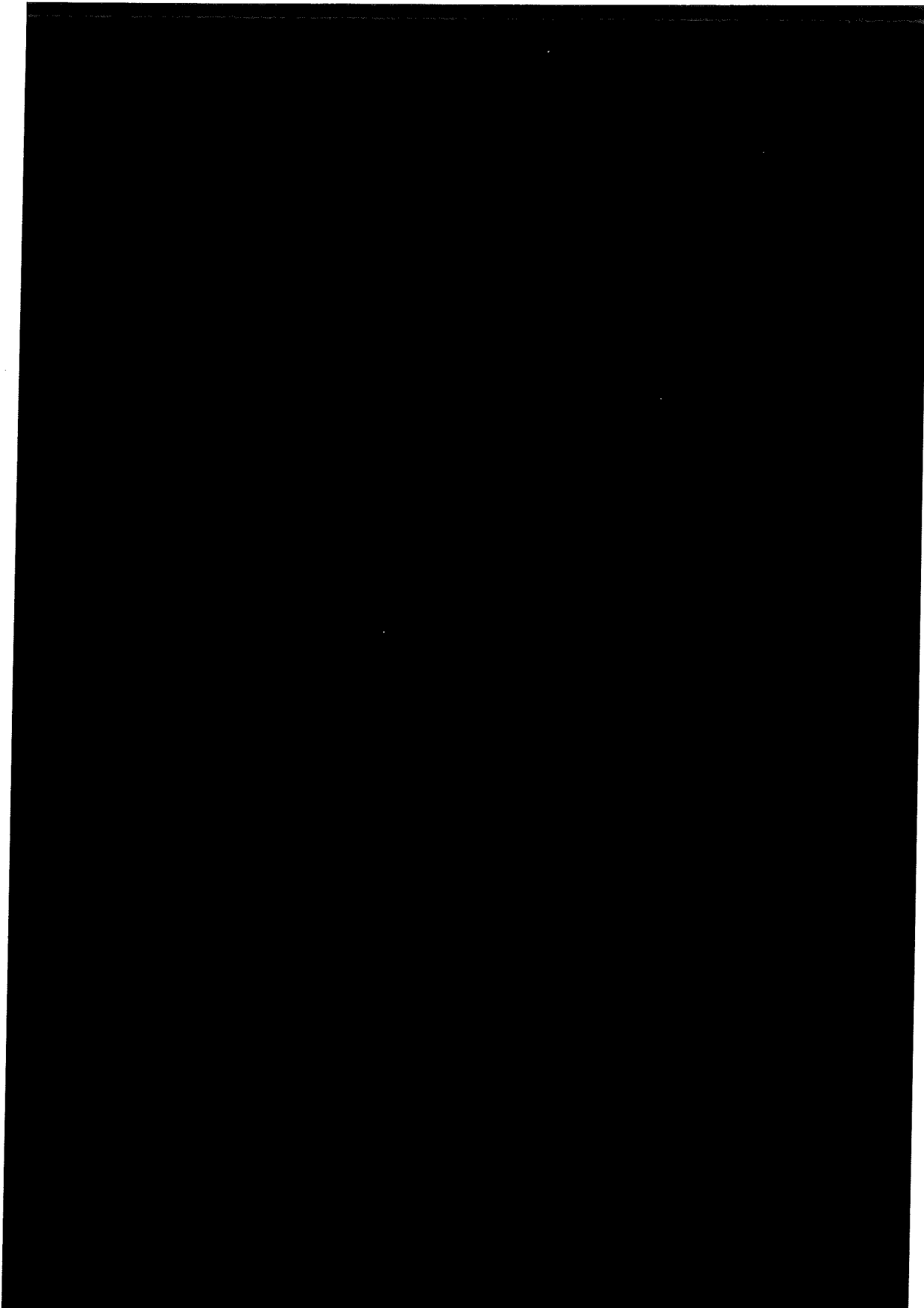


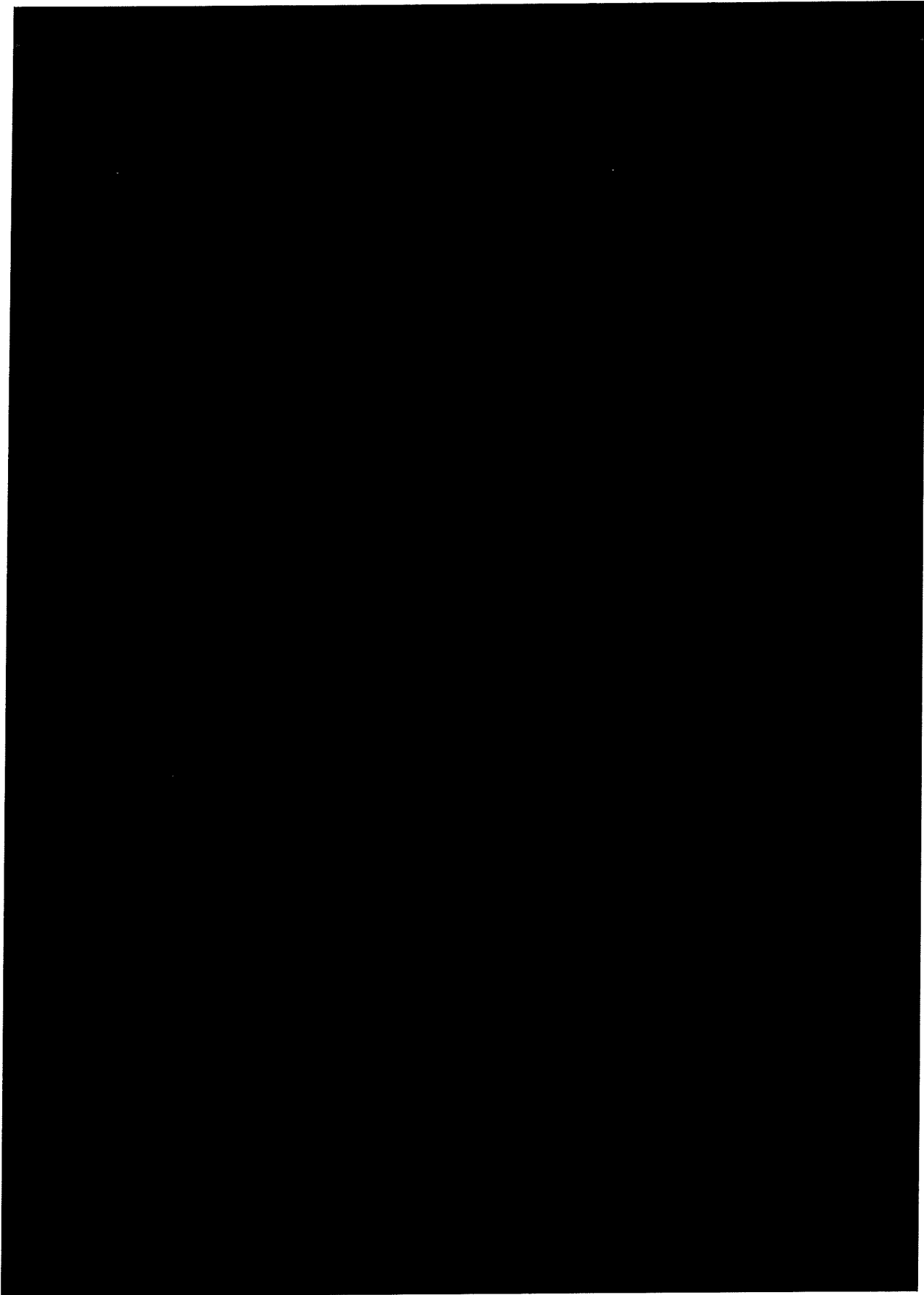
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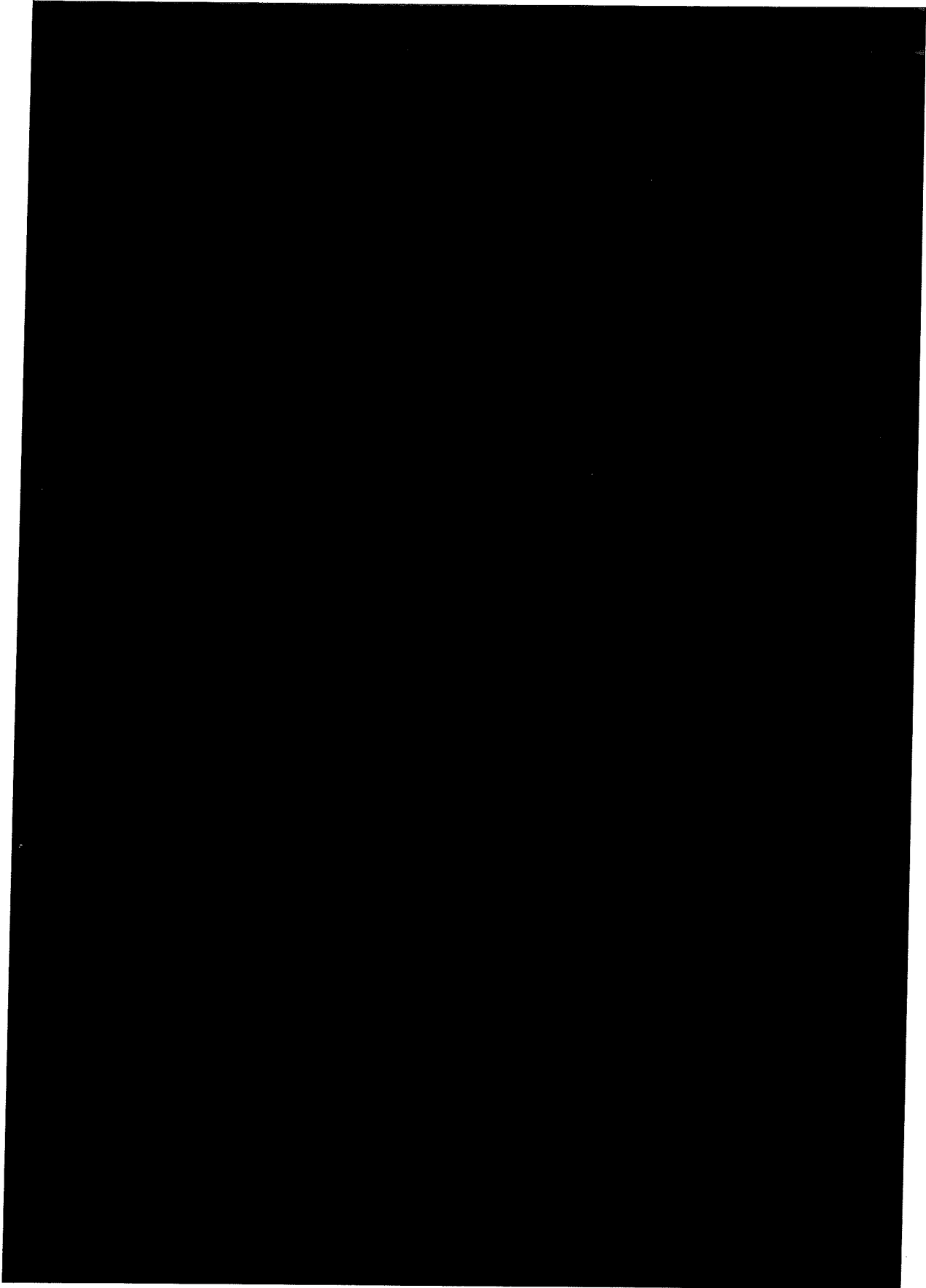
## **Annexure H: Non-Compliance & Transgressions**

In the succeeding paragraphs we deal with instances where non-compliance with the relevant policies and procedures was identified.

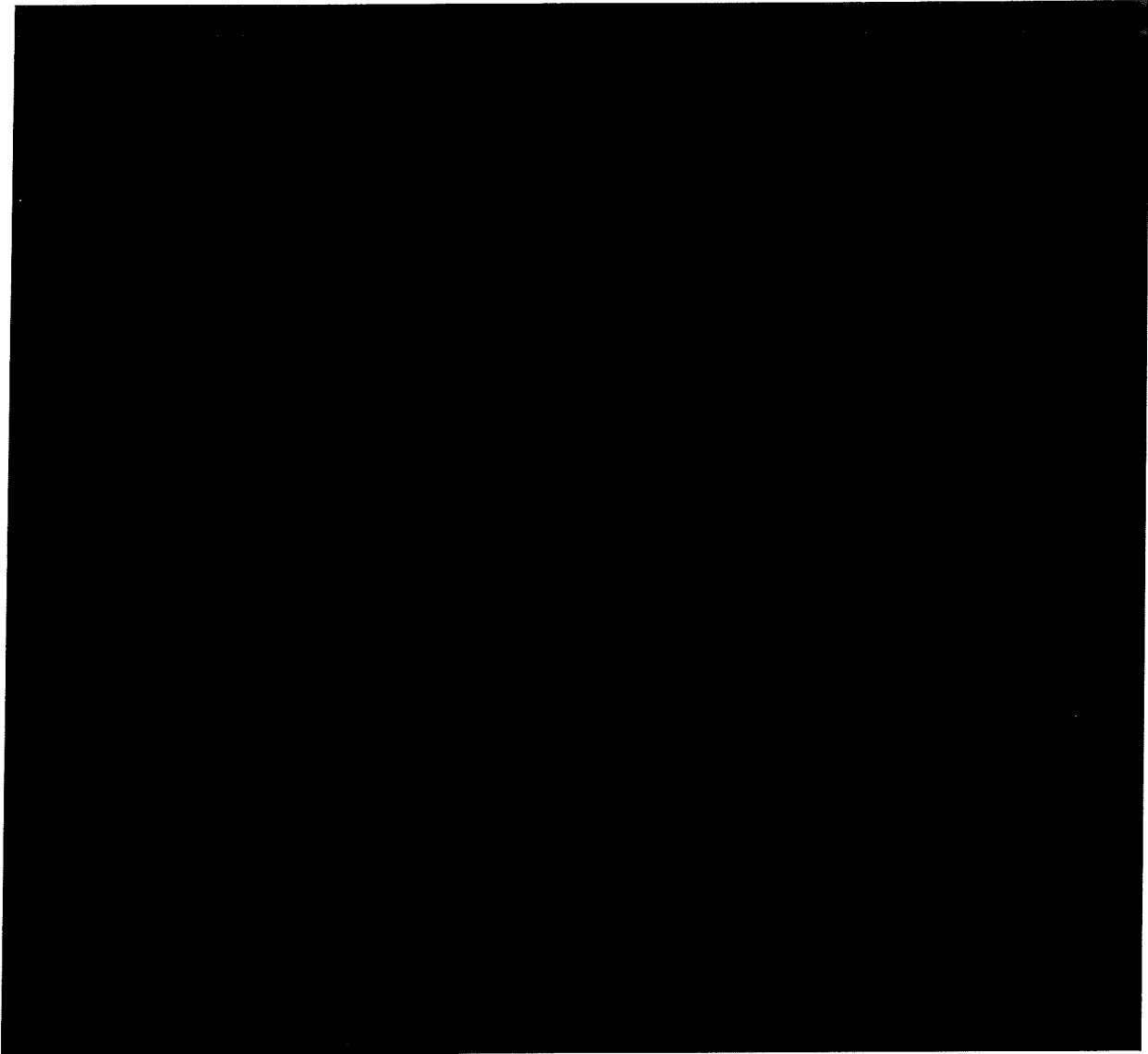




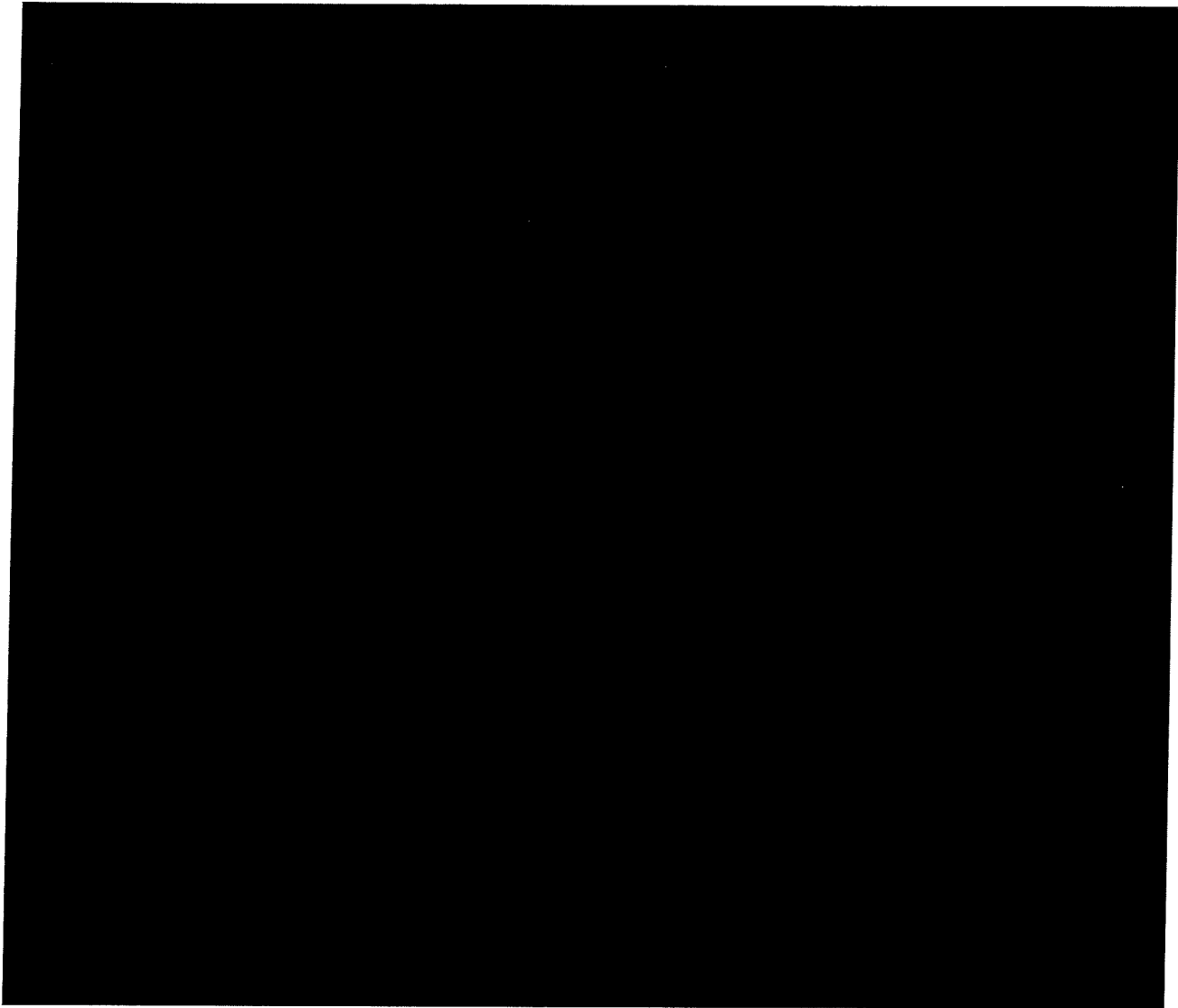




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**Annexure I: Effectiveness of Procurement Processes**



1.5 Based on the above, it appears that it was possible under Eskom's procurement process for more than one contractor to be required to do the same work or for unnecessary items to be included in a contractor's scope of work. There is a risk that individuals can take advantage of this to inflate contract values. It is not clear why EXCOPS did not identify this issue or make further enquiries regarding this issue.

- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

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[REDACTED]

[REDACTED]

[REDACTED]

3 An analysis of the quarterly reports submitted to MANCOM by Eskom Divisions in 2013 shows that the Divisions have been informing MANCOM regarding their business performance problems caused by ineffective procurement processes. For example:

3.1 Distribution Division reported that one of the reasons of electrification delays was ineffective procurement. (Distribution Division Quarterly Report to MANCOM for Q3 of 2012/2013, p. 2-3, 5);

3.2 Operating Units of the Distribution Division reported in 2013 various problems related to procurement, for example:

3.2.1 CAPEX underspending caused inter alia by slow procurement process, delays in appointment, shortage of outsourced capacity (contractors), lack of understanding of the new procurement procedures (Western Cape Operating Unit Report to MANCOM for Q3 of 2012/2013, pp. 3-4; see also, Eastern Cape Operating Unit Report to MANCOM, pp. 1, 3, 5-6; Northern Cape Operating Unit report to MANCOM for Q3 for 2012/2013, p. 5.; KZN Operating Unit Quarterly Report to MANCOM for Q3 2012/2013, p. 6; Eastern Cape Operating Unit Quarterly Report to MANCOM April 2013 – June 2013; 11.4.4(a) Eastern Cape Operating Unit Quarterly Report to MANCOM July 2013 – September 2013, p. 5; KZN Operating Unit Quarterly Report to MANCOM Q2 2013-2014 , page 7);

3.2.2 Non-commercially viable suppliers within the operational unit boundaries resulting in delays in the execution of projects and under expenditure; expiry of contracts, long turnaround time to prepare quality reports for tender boards resulting under-expenditure and delays of projects, respectively.

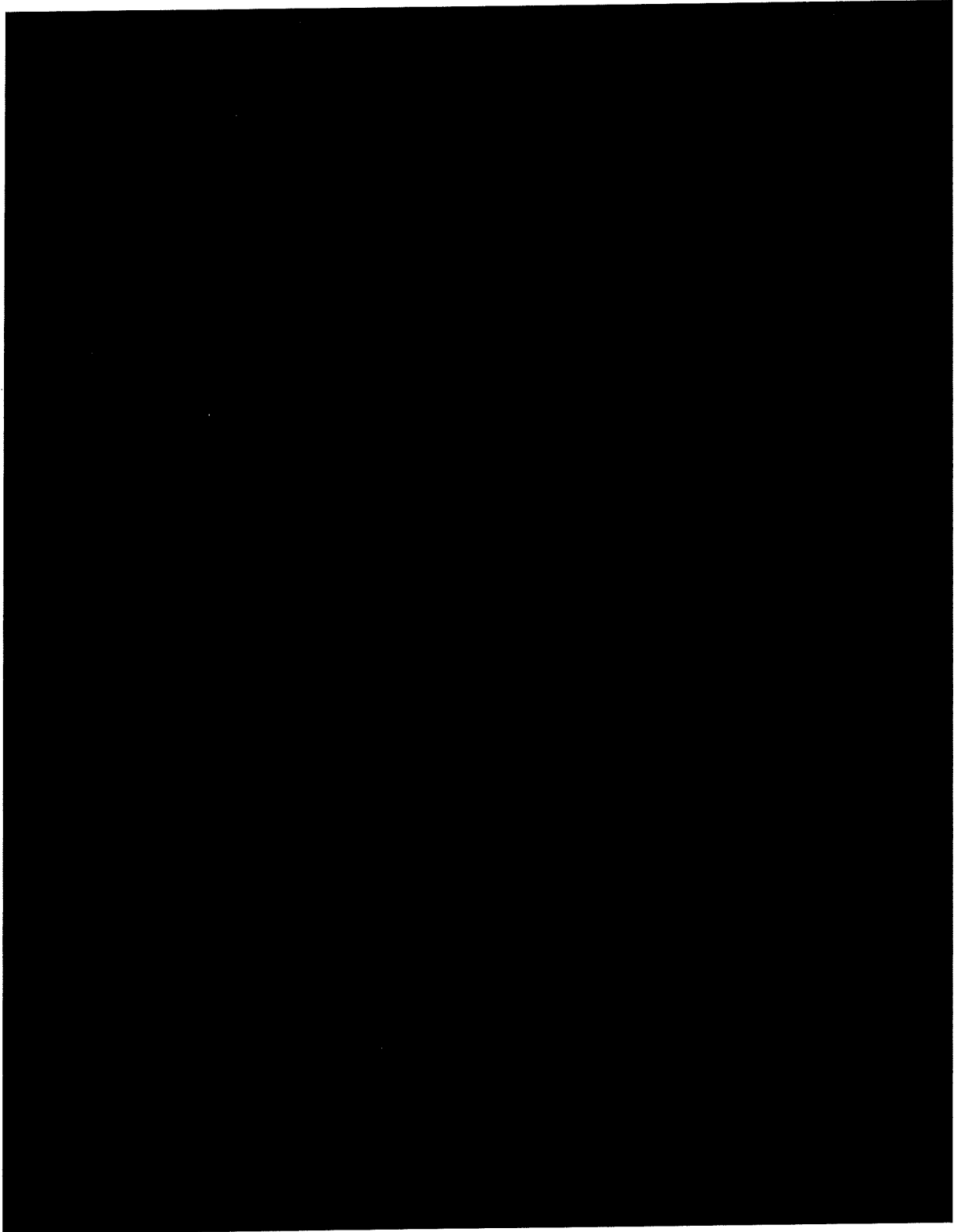
(Free State Operating Unit Quarterly Report to MANCOM for Q3 for 2012/2013, page 6);

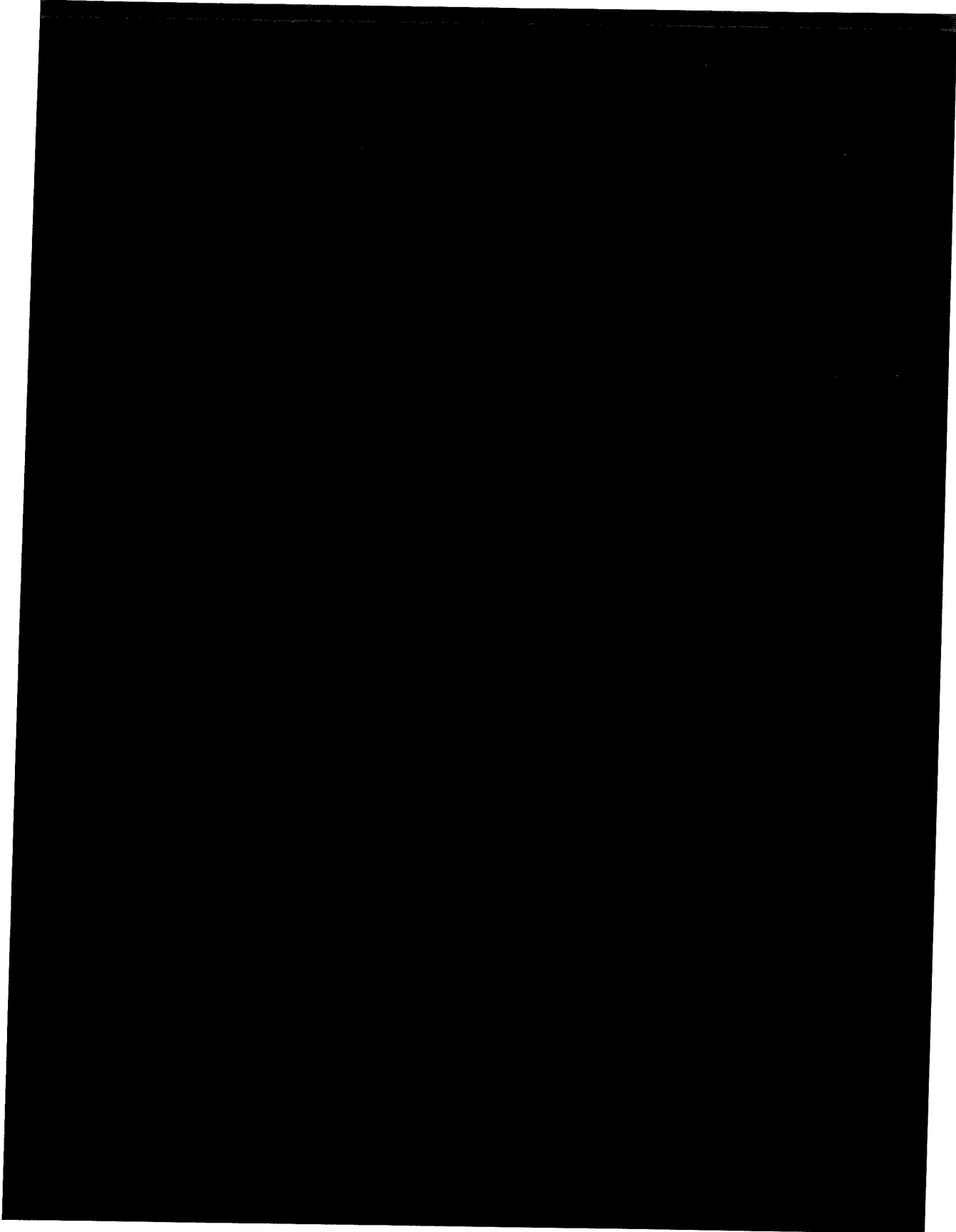
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3.3 Group Commercial also mentioned in its report to MANCOM for Q2 of 2013/2014 that a task team was established to address the delays in the procurement process, steps has been launched in order to create visibility on transactional (Group Commercial Quarterly Report to MANCOM for Q2 of 2013/2014, page 7); and

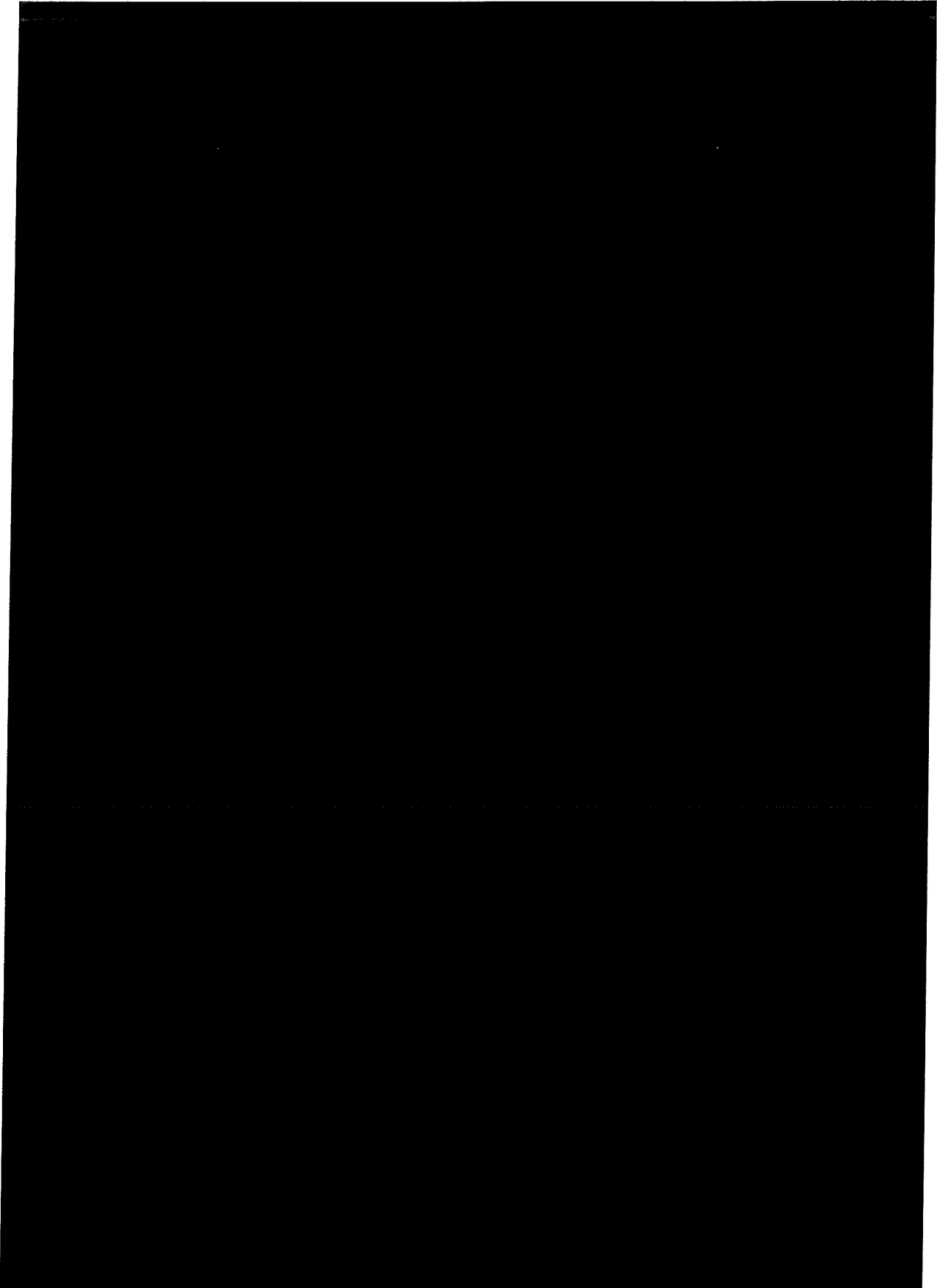
3.4 Corporate Affairs also reported problems related to inefficient procurement process. (Corporate Affairs Quarterly Report to MANCOM for Q2 of 2013/2014, page 7).

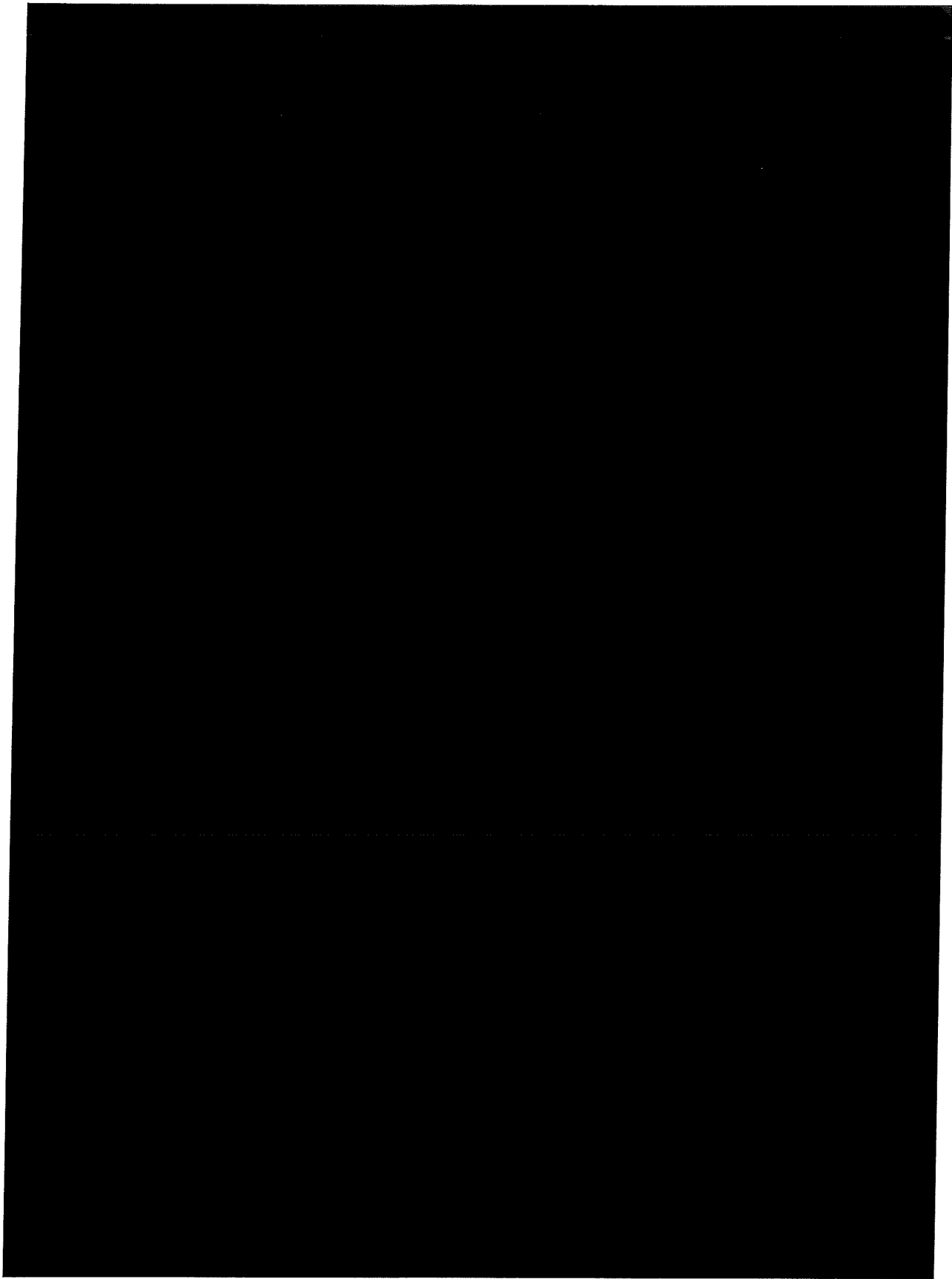
**Annexure J: Adequacy and Effectiveness of the Defined Modification Approval and Monitoring Process**



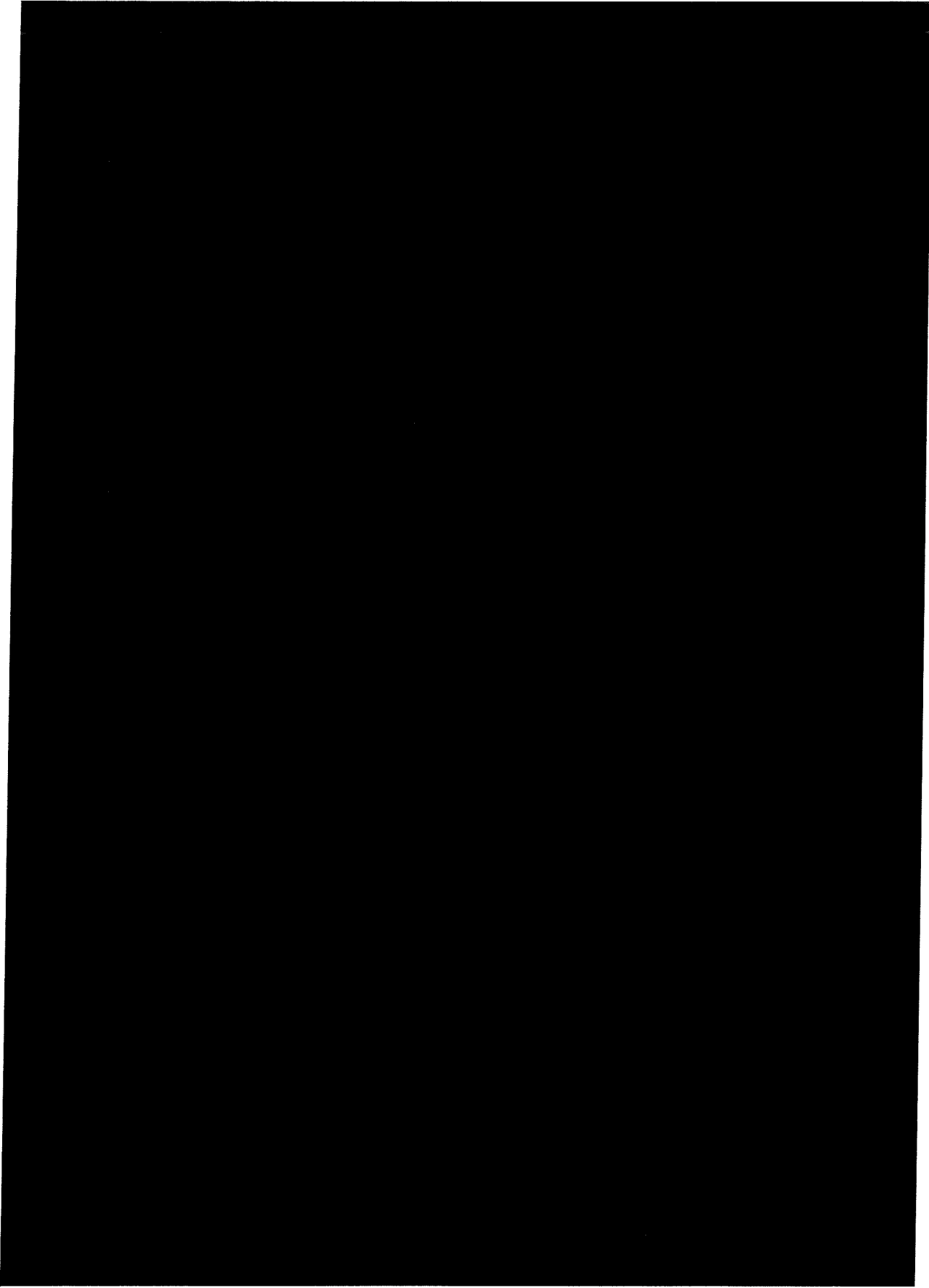


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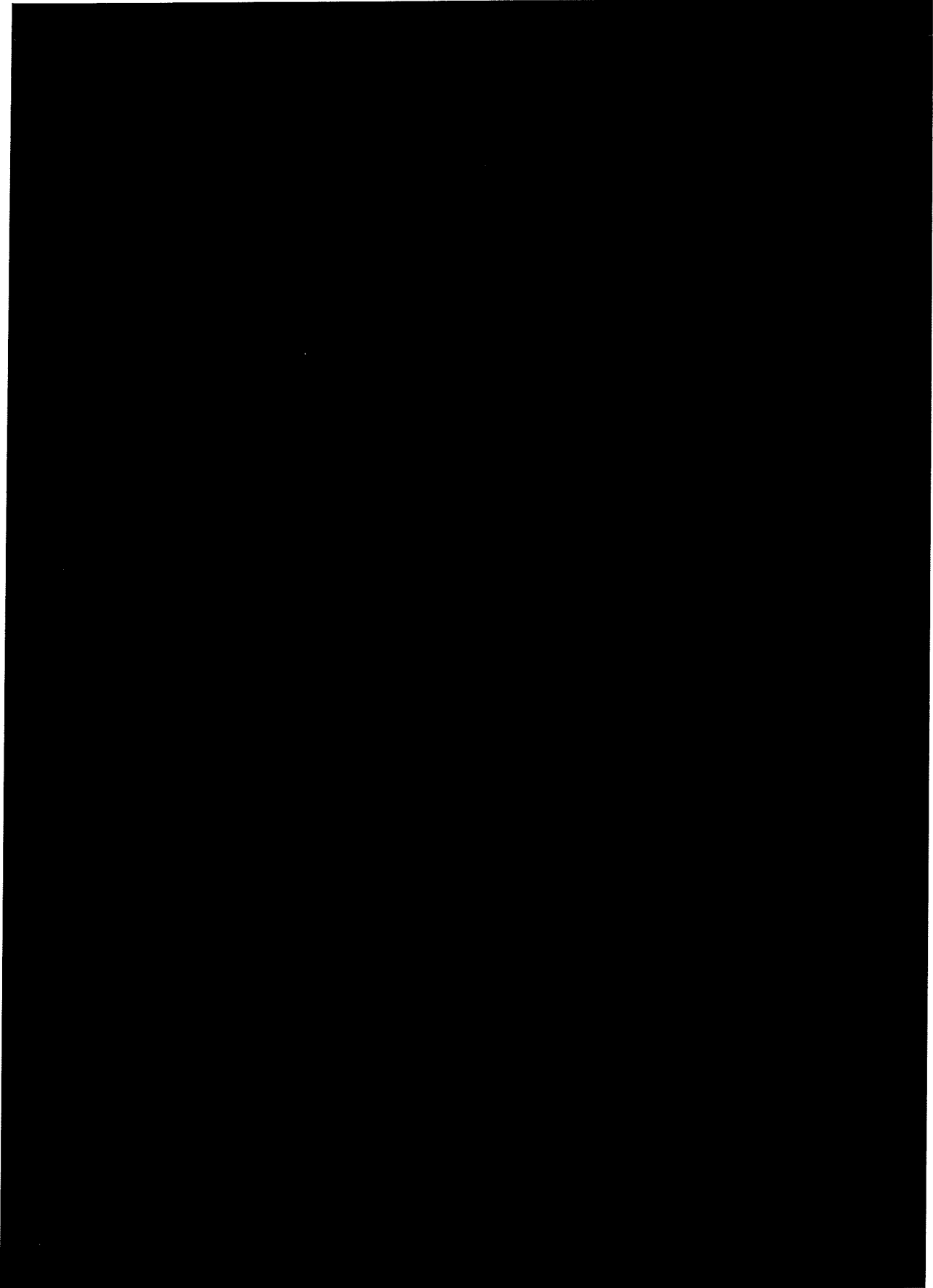


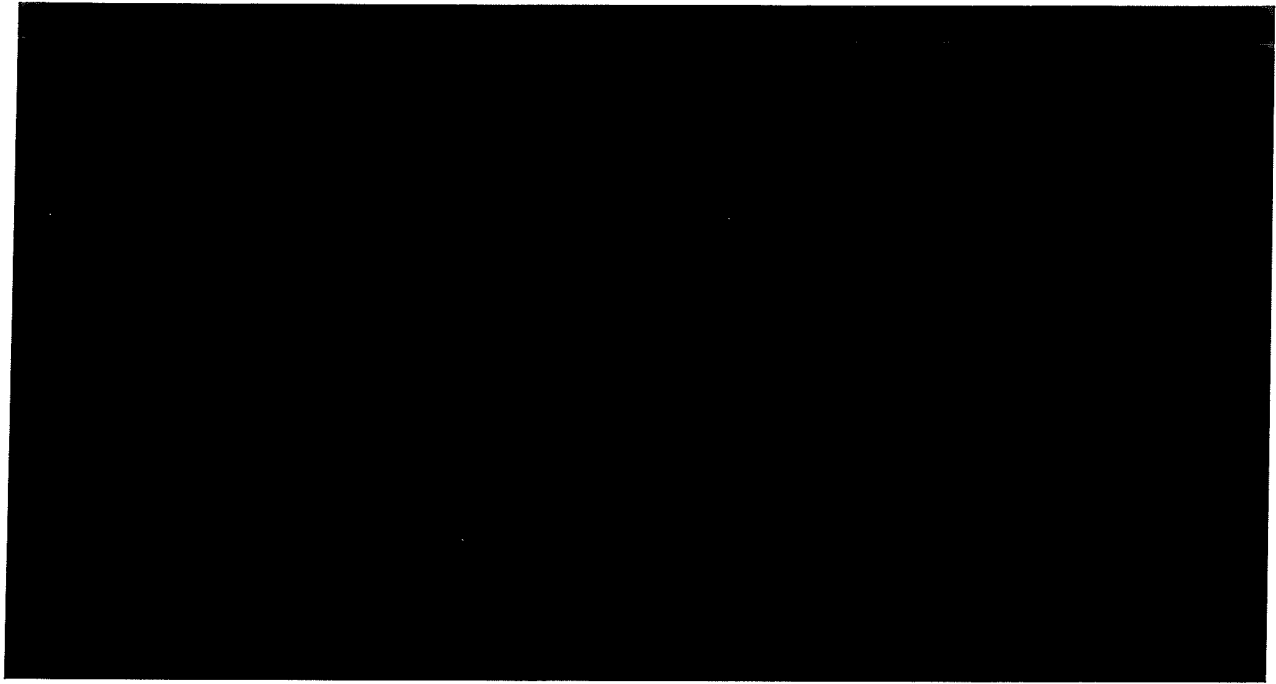
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