
NATIONAL ENERGY REGULATOR

In the matter regarding

Eskom's Regulatory Clearing Account (RCA) Application – Third Multi-Year Price Determination (MYPD3) Year 1 (2013/14)

By

ESKOM HOLDINGS SOC LIMITED ('ESKOM')

THE DECISION

Based on the available information and the analysis of the Regulatory Clearing Account (RCA) Application for Year 1 (2013/14) of the third Multi-Year Price Determination (MYPD3) the Energy Regulator, at its meeting held on 01 March 2016 decided that:

1. the RCA balance of R11 241m be recoverable from the standard tariff customers, local SPAs and international customers in the financial year 2016/17;
2. the amount of R10 257m be recoverable from standard tariff customers for the 2016/17 financial year only;
3. the average tariff for standard tariff customers be increased by 9.4% for the 2016/17 financial year only;
4. the amount of R983m be recoverable from Eskom's local SPA customers and international customers for the 2016/17 financial year only; and
5. Eskom must submit a new MYPD application, within three months, based on revised assumptions and forecasts that reflect the recent circumstances.

ABBREVIATIONS AND ACRONYMS

AFS	Annual Financial Statements
AGC	Automatic Generation Control
c/kWh	Cents per kilowatt hour
Capex	Capital expenditure
CECA	Capital Expenditure Clearing Account
CPI	Consumer Price Index
DMP	Demand Market Participation
DSCR	Debt Service Coverage Ratio
DSLI	Demand Supply Loss Index
DSM	Demand Side Management
EAF	Energy Availability Factor
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortisation
EEDSM	Energy Efficiency and Demand Side Management
ERTSA	Eskom's Retail Tariff Structural Adjustments
GDP	Gross Domestic Product
GWh	Gigawatt hour
HCB	Hydro Cahora Bassa
IDM	Integrated Demand Management
IPP	Independent Power Producer
IRP	Integrated Resources Plan
km	Kilometre
kWh	Kilowatt hour
LOP	Life of Plant
MT	Medium Term
MTPPP	Medium-Term Power Purchase Programme
MTRMS	Medium-Term Risk Mitigation Strategy
MW	Megawatt
MWh	Megawatt hour
MYPD	Multi-Year Price Determination
NERSA	National Energy Regulator of South Africa
OCGT	Open Cycle Gas Turbine
Opex	Operating expenditure
PAJA	Promotion of Administrative Justice Act
PCLF	Planned Capacity Load Factor
PPA	Power Purchase Agreement
PPI	Producer Price Index
RAB	Regulatory Asset Base
RCA	Regulatory Clearing Account

REIPP	Renewable Energy Independent Power Producer
SADC	Southern African Development Community
SAE	Southern African Energy
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SALGA	South African Local Government Association
SAPP	Southern African Power Pool
SM	System Minutes
SOC	State Owned Company
SPA	Special Pricing Agreement
SQI	Service Quality Incentive
ST	Short Term
STPPP	Short-Term Power Purchase Programme
UCLF	Unplanned Capacity Load Factor

BACKGROUND AND INTRODUCTION

1. On 18 October 2012, the National Energy Regulator of South Africa (NERSA) received Eskom's Revenue Application: third Multi-Year Price Determination (MYPD3). The application covered a five-year period from 01 April 2013 to 31 March 2018.
2. On 28 February 2013, the Energy Regulator approved Eskom's MYPD3 Revenue Requirement for the control period 2013/14 to 2017/18 as follows.

Table 1: MYPD3 decision of 28 February 2013

	2013/14	2014/15	2015/16	2016/17	2017/18
Allowed revenues from tariffs based sales (R'm)	142 746	155 477	171 838	189 396	209 025
Forecast sales to tariff customers (GWh)	217 890	219 744	224 877	229 495	234 519
Standard average price (c/kWh)	65.51	70.75	76.41	82.53	89.13
Percentage price increase (%)	8.0%	8.0%	8.0%	8.0%	8.0%
Total expected revenue from all customers (R'm)	149 937	163 584	180 332	196 378	216 322

3. The Energy Regulator, at its meeting held on 30 September 2014, reconciled the original MYPD3 decision of 28 February 2014 (Table 1) with the revised decision as per Table 2 below. The purpose of the reconciliation was to adjust for the exclusion of the ancillary charges and to adjust the forecasted sales volume for standard tariff customers.

Table 2: The reconciled MYPD3 decision before MYPD2 RCA

	2013/14	2014/15	2015/16	2016/17	2017/18
Allowed revenue from tariff based sales (R'm)	135 226	147 481	163 179	180 070	198 954
Forecast sales to tariff customers (GWh)	206 412	208 442	213 545	218 194	223 219
Standard Average Price (c/kWh)	65.51	70.75	76.41	82.53	89.13
Percentage price increase (%)	8.0%	8.0%	8.0%	8.0%	8.0%
Total expected revenue from all customers (R'm)	143 101	156 057	171 769	186 794	205 214

4. At the same meeting of 30 September 2014, the Electricity Regulator approved the implementation of the MYPD2 Regulatory Clearing Account (RCA) balance of R7 818m in favour of Eskom. The MYPD2 RCA balance, which resulted in a 12.69% increase, was implemented on 01 April 2015.

Table 3: Reconciliation of MYPD3 Allowed Revenue

	2013/14	2014/15	2015/16	2016/17	2017/18
Allowed revenue tariff based sales before RCA (R'm)	135 226	147 481	163 179	180 070	198 954
Allowed revenue tariff based sales RCA (R'm)			7 085		
Total allowed revenue tariff based sales after RCA (R'm)	135 226	147 481	170 264	180 070	198 954
Forecasted sales to tariff customers (GWh)	206 412	208 442	213 545	218 194	223 219
Standard average price after RCA (c/kWh)	65.51	70.75	79.73	82.53	89.13
Increase in average tariff based tariff increase after RCA (%)	8.0%	8.0%	12.69%	3.5%	8.0%

5. Table 3 shows that the allowed revenue for the 2015/16 financial year was R170 264m after the implementation of the MYPD2 RCA. The standard tariff customer allowed revenue for 2016/17 was R180 070m. Having factored in the forecasted growth in volumes in line with the MYPD3 decision, the required average increase for 2016/17 would have been 3.51% and 8% for 2017/18.

THE APPLICANT

6. Eskom Holdings SOC Limited, registration number 2002/015527/06, is a Schedule 2 South African state-owned enterprise in terms of the Public Finance Management Act, 1999 (Act No. 1 of 1999), wholly owned by the South African Government. Eskom Holdings is regulated under licences granted by the Energy Regulator to generate, transmit and distribute electricity (three licences) in terms of the Electricity Regulation Act, 2006 (Act No. 4 of 2006).
7. Eskom generates, transmits and distributes electricity to industrial, mining, commercial, agricultural and residential customers and other distributors. It also buys electricity from and sells electricity to the countries of the Southern African Development Community (SADC).
8. Through its subsidiary Eskom Enterprises (Pty) Limited, Eskom is also active in local unregulated markets and various African countries. These activities include the provision of electricity-related services to countries connected to the South African grid.

THE DECISION-MAKING PROCESS

9. On 10 November 2015, Eskom applied for an MYPD3 Year 1 RCA balance of R22 789m in its favour.

10. On 13 November 2015, NERSA published Eskom's MYPD3 RCA application on its website with an invitation to stakeholders to submit written comments. The closing date for comments was 14 December 2015.
11. The Energy Regulator conducted public hearings in six provinces of South Africa from 18 January 2016 to 05 February 2016 to afford interested and affected stakeholders an opportunity to submit their views, facts and evidence. The following is a list of all public hearings held:
 - 11.1. Western Cape, Cape Town: 18 – 19 January 2016
 - 11.2. Eastern Cape, Port Elizabeth: 20 January 2016
 - 11.3. KwaZulu-Natal, Durban: 21 – 22 January 2016
 - 11.4. North West, Mahikeng: 25 January 2016
 - 11.5. Northern Cape, Kimberley: 27 January 2016
 - 11.6. Gauteng, Johannesburg: 04 – 05 February 2016
12. Public hearings in other provinces (Mpumalanga, Free State and Limpopo) were consolidated with the Gauteng and Northern Cape public hearings due to the low number of responses received from affected stakeholders.
13. The Energy Regulator made its determination on Eskom's MYPD3 RCA Year 1 application on 01 March 2016.

THE OBJECTORS AND OTHER INTERVENING PARTIES

14. NERSA received more than 18 written comments from stakeholders. These were made up of comments from private individuals, small users, intensive users, government departments, trade unions and other stakeholders.
15. A summary of written stakeholder comments is attached as Annexure 1.
16. Public hearings were held in six provinces and 42 oral presentations were made.
17. The key comments received have been analysed as part of this report.

APPLICABLE LAW

18. The legal basis for the decision of the Energy Regulator to approve electricity prices is derived from the Electricity Regulation Act, 2006 (Act No. 4 of 2006) ('the Act') and the National Energy Regulator Act, 2004 (Act No. 40 of 2004) ('the Energy Regulator Act'). The procedure to be followed in deciding the price is

derived from the Promotion of Administrative Justice Act, 2000 (Act No.3 of 2000) ('PAJA').

19. The Act places an obligation on the Energy Regulator to consider an application that has been brought in terms of section 15, read with the MYPD methodology.

THE APPLICATION

20. On 10 November 2015, the Energy Regulator received Eskom's application for its RCA for the first year (2013/14) of the MYPD3.

21. In its application, Eskom states that:

Eskom's 2013/14 RCA Submission is driven substantially by revenue under-recovery and higher primary energy costs to meet demand, whilst operating in a constrained electricity system. The determined RCA balance is motivated with evidence for prudent scrutiny by NERSA.

Variances can be linked to two key sources:

- *Increases in costs due to a changing environment and assumptions after the MYPD 3 decision;*
- *Assumptions made for purposes of the MYPD3 revenue decision which did not materialise.*

This document will highlight these factors and explain the reasons which lead to the RCA submission summarised in the table below.

22. Table 4 below outlines the Eskom application.

Table 4: Summary of 2013/14 RCA Submission

RCA submission for FY2014 (Year 1 of MYPD 3)	R' millions
Revenue variance	11 723
Coal burn	2 000
Coal volume	-1 378
Coal price	3 378
Independent Power Producers (IPPs)	580
Regional IPP	1 136
Open cycle gas turbines (OCGTs)	8 024
Other primary energy	2 660
Environmental levy	-312
SAE net position	-1 983
Capital expenditure clearing account (CECA)	9
Operating costs	-
Energy efficiency demand side management (EEDSM)	-316
Demand market participation (DMP) and Power buy backs (PBB)	-905
Inflation adjustments	33
Other income	-198
Service Quality Incentives (SQI)	339
RCA Balance	22 789

ANALYSIS OF THE APPLICATION

23. Table 5 below is a summary of NERSA’s RCA assessment, which results in an RCA balance of R11 241m in favour of Eskom.

Table 5: NERSA 2013/14 RCA Balance

	Eskom RCA Balance (R'm)	NERSA RCA Balance (R'm)	NERSA Adjustment (R'm)
(YEAR) REVENUE VARIANCE	11 723	6 175	(5 548)
Coal burn	2 000	2 000	-
Coal burn price	3 378	3 378	-
Coal burn volume	(1 378)	(1 378)	-
IPP & co-generation	580	580	-
Regional IPP	1 136	1 136	-
OCGT	8 024	1 252	(6 772)
OTHER PE VARIANCES	2 660	155	(2 505)
Water cost	(295)	(295)	-
Coal handling	377	-	(377)
Water treatment	55	27	(28)
Start-up gas & oil	1 549	365	(1 184)
Fuel Procurement	(79)	(79)	-
Nuclear	884	137	(747)
Road Maintenance	169	-	(169)
Environmental Levy	(312)	(312)	-
SAE/Imports	(1 983)	1 564	3 547
Capital expenditure clearing account (CECA)	9	9	
Energy efficiency demand side management (EEDSM)	(316)	(432)	(116)
Demand Market Participation (DMP)	(905)	(905)	-
Inflation Adjustments	33	33	-
Other Revenue	(198)	(353)	(155)
Service Quality Incentives	339	339	-
RCA Balance as at 31 March 2014	22 789	11 241	(11 549)

Revenue Variance

24. The MYPD methodology is premised on the principle that total allowed revenue has to cover all the allowed costs plus a reasonable return.
25. The total allowed revenue in the MYPD3 for 2013/14 was R143 101m (i.e. from 227 404GWh electricity sales), which included revenue from the three Eskom

customer categories, namely standard tariff customers, local Special Pricing Agreement (SPA) customers and international customers (exports).

Table 6: NERSA Revenue and Sales Volume Variances

	MYPD3 Allowed Revenue (R'm)	NERSA Actual Revenue (R'm)	Variance (R'm)
Standard Tariff Customers	135 226	127 547	7 679
Revenue from all other customers	7 875	9 322	(1 447)
Total	143 101	136 869	6 231
	MYPD3 Allowed Volume (GWh)	NERSA Actual (GWh)	Variance (GWh)
Standard Tariff Customers	206 412	193 602	12 810
Sales to all other customers	20 992	24 301	(3 309)
Total	227 404	217 903	9 501

26. The allowed revenue for 2013/14 consisted of R135 226m (i.e. from 206 412GWh electricity sales) from standard tariff customers, [REDACTED] from local SPAs and [REDACTED] from exports as shown in Table 6 above.
27. The actual revenue from standard tariff customers was R127 547m (i.e. from 193 602GWh electricity sales) and sales to other customers was R9 322m (i.e. from 24 301GWh electricity sales) resulting in a total revenue of R136 869m.
28. The revenue variance from standard tariff customers was R7 679m in favour of Eskom (i.e. from 12 810GWh drop in electricity sales) and R1 447m in favour of the customers (i.e. from 3 309GWh increase in sales).
29. The difference of R416m (in favour of Eskom) between Eskom's standard tariff customers revenue variance (R7 263m) and NERSA's standard tariff customers revenue variance (R7 679m) in Table 7 below is a result of the exclusion of internal sales (i.e. intra-Eskom sales) in the NERSA actual standard tariff customers revenue.

Table 7: NERSA Revenue Variance

	MYPD3 Allowed Revenue (R'm)	Eskom Variance (R'm)	NERSA Variance (R'm)	NERSA Adjustment (R'm)
Standard Tariff Customers	135 226	7 263	7 679	416
Sales to all other customers	7 875	4 484	(1 447)	(5 931)
Total before load shedding & curtailment	143 101	11 747	6 232	(5 515)
Load shedding & curtailment	-	(24)	(57)	(33)
Total	143 101	11 723	6 175	(5 548)

30. The difference of R5 931m (in favour of the customer) between Eskom's other customers revenue variance (R4 484m in favour of Eskom) and NERSA's other customers revenue variance (R1 447m in favour of the customer) in Table 7 above results from Eskom's misinterpretation of the MYPD3 decision with respect to revenue from other tariff customers (this is further explained in the Southern African Energy (SAE) section in paragraphs 74 to 89).
31. The difference between Eskom's revenue variance reduction due to load shedding (R24m) and the NERSA adjustment (R57m) is due to:
- 31.1. NERSA including load curtailment in the reduction calculation resulting in R22m from 32GWh; and
- 31.2. NERSA using the standard tariff to calculate the reduction resulting in R35m from 54GWh.
32. The energy volumes were as submitted to NERSA by Eskom.

Total Primary Energy Variances

Primary Energy

33. Section 35 (2) (c) of the Act provides for NERSA to set performance targets for the licensees.
34. Table 8 below lists some of the targets that were set for Eskom for the 2013/14 year.

Table 8: Eskom generation fleet performance

Generation Fleet Plant Performance	MYPD3 Decision 2013/14	Eskom Actuals
EAF	81,5%	75,1%
PCLF	11,6%	10,5%
UCLF	6,9%	14,4%

35. From the table it is evident that Eskom could only achieve an Energy Availability Factor (EAF) of 75.1% against a target of 81.5%.
36. This can be attributed to the fact that the Unplanned Capacity Load Factor (UCLF) target almost doubled from 6.9% to 14.4%.
37. The Planned Capacity Load Factor (PCLF) target was largely achieved, indicating that Eskom executed its planned maintenance as shown in Table 8 above. However, there is no visible improvement in the UCLF and the EAF.
38. To align the performance with the targets set, the maintenance strategy and implementation thereof must be revised by Eskom and submitted to NERSA.

Open Cycle Gas Turbines (OCGTs)

39. Eskom generated an additional 2 564GWh¹ from Open Cycle Gas Turbines (OCGTs) over and above the MYPD3 allowed volumes. This was not the least cost option, as nuclear is the least cost generation option in Eskom’s generation fleet.
40. However, nuclear was not available as it was operated at the maximum planned load factor. Thus the next available least cost option was coal-fired power stations at 26.3c/kWh as confirmed by Eskom.
41. Therefore, what is allowed for the additional 2 564GWh is R674m in favour of Eskom.
42. The methodology allows Eskom to pass-through all variances due to fuel price up to allowed fuel volumes. The allowed fuel volume was 339ML at a price of 7.49R/L. The variance on OCGT fuel price is allowed, however it is limited to the approved volumes.

¹ As per Eskom’s application = 2 565GWh. The difference is due to rounding off.

43. The actual average price was 9.19R/L and therefore higher than the allowed average unit price of 7.49R/L. Eskom is therefore allowed a fuel price variance of R578m.
44. Eskom is therefore allowed a total of R1 252m for OCGTs made up of R674m for OCGT generation compensation and R578m for fuel price variance against the R8 024m that is applied for by Eskom.

Coal Burn

45. The MYPD methodology allows coal to be treated as a single cost centre without differentiating between the various coal sources (contract types).
46. The methodology did not anticipate scenarios where the coal variances will result in higher average coal costs due to purchasing of coal from different suppliers.
47. In light of the above, the methodology must be reviewed.
48. The R2 000m coal burn cost is allowed in favour of Eskom.

Independent Power Producers (IPPs)

49. The Independent Power Producer (IPP) costs were based on approved Power Purchase Agreement (PPA) contracts submitted by Eskom.
50. Therefore Eskom is allowed the variance of R580m with regard to IPP costs in its favour.

Regional Independent Power Producer

51. The purchase of power from the regional IPP was approved by the Energy Regulator when generation performance deteriorated as a cheaper option.
52. Therefore Eskom is allowed the variance of R1 136m with regard to regional IPP costs in its favour.

Other Primary Energy

53. The analysis of other primary energy costs is summarised in Table 9.

Table 9: NERSA other primary energy

	MYPD3 Decision 2013/14 (R'm)	Eskom Variance (R'm)	NERSA Variance (R'm)	NERSA Adjustments (R'm)
Water costs	1 746	(295)	(295)	-
Start-up gas & oil	1 511	1 549	365	(1 184)
Coal handling	1 056	377	-	(377)
Water treatment	250	55	27	(28)
Nuclear	387	884	137	(747)
Fuel Procurement	258	(79)	(79)	-
Road Maintenance		169	-	(169)
Total other Primary Energy	5 208	2 660	155	(2 505)

Water Costs

54. The Eskom variance application with respect to water cost (R295m) is in favour of the customer. The under-expenditure on water cost was because the actual cost of supplying water to Eskom was lower than planned.

Start-up Gas and Oil

55. Eskom's start-up oil and gas variance (R1 549m in its favour) is adjusted by R1 184m to R365m as shown in Table 9 above. The adjustment is because the costs were inefficiently incurred as they relate to issues that were within management control (e.g. maintenance related).
56. Eskom is allowed R365m due to the unfavourable fluctuation in the Rand/Dollar exchange rate and issues that were outside management control (e.g. torrential rainfall).

Coal Handling

57. The additional costs resulted from the misaligned performance of the generation fleet compared to what was anticipated in the MYPD3 (EAF of 75.1% as opposed to the approved 81.5% in Table 8).
58. As a result, Eskom's application for the variance of R377m for coal handling is disallowed.

Water Treatment

59. The Eskom application for R55m water treatment variance is with respect to poor water quality and an increase in the volume of water processed. Part of the variance (R27m) was with respect to poor water quality and the rest (R28m) was because of an increase in the volume of water processed.
60. The additional water treatment cost of R27m is allowed because of water quality issues, which are outside Eskom's direct control.
61. However, the increase in the volume of water processed and the associated costs of R28m is considered to be within management control as it deals with issues such as boiler tube leaks due to poor maintenance and is therefore disallowed.

Nuclear

62. NERSA received the engineering study² (approved by Eskom on 05 February 2014) and accepts that additional storage will be required as the wet spent fuel pools run out of storage capacity.
63. According to Eskom's Reference Technical Plan, the decommissioning provision is based on the 40-year life of plant (LOP), of which the remaining useful life is 10 years.
64. The Eskom variance on nuclear of R884m (Table 9) included an amount of R830m as additional provision of spent fuel decommissioning costs recommended by the study.
65. The additional provision is allowed, however since there is still a remaining useful life of 10 years, the recovery of the R830m should be spread over this remaining life as it is not actual cost incurred. Eskom is therefore allowed to recover an amount of R83m for this RCA.
66. The R54m requested for operational expenses is allowed.
67. Eskom is allowed to recover a total of R137m for 2013/14 for nuclear primary energy and the annual decommissioning provision.

². (2010). A conceptual study of possible options for maximising capacity of interim storage of spent nuclear fuel generated by Koeberg power station.

Fuel Procurement

68. Eskom has applied for a fuel procurement cost variance of R79m in favour of the customer. This is essentially attributable to lower expenditure on consultants planned for studies on Eskom's Waterberg strategy and new coal sources. This is allowed as it was not spent.

Road Maintenance

69. The Eskom application for road maintenance is disallowed because it was not part of the MYPD3 allowed costs.
70. In 2011, the environmental levy was increased from 2c/kWh to 2.5c/kWh to provide funding to the National Department of Transport for maintenance of the coal haulage road network.
71. The road maintenance variance of R169m is disallowed as the customer has already paid for it.

Environmental Levy

72. The variance of R312m in favour of the customer is allowed as the lower production from the non-renewable energy sources was due to the lower demand and lower available supply.

SAE Net Position

73. Table 10 below shows that in 2013/14, Eskom's actual net exports of R1 372m were in favour of the customer. The net export position implies that Eskom exported more electricity than it imported.
74. The actual net export cost is the difference between the Eskom actual revenue from exports excluding wheeling of R3 689m and the actual export cost of R5 060m, also excluding wheeling.
75. The inclusion of actual revenue from export of R3 689m as part of net exports is disallowed as it is already included in Eskom's total actual revenue from sale of electricity.

Table 10: Eskom SAE position

	Eskom SAE Position (R'm)
Export (Revenue) excl wheeling (R'm)	3 689
Exports (Cost) excl wheeling	5 060
Nett Import/(Export) Cost	(1 372)

76. The export cost excluding wheeling is with respect to electricity purchased from Hydro Cahora Bassa (HCB) and electricity generated in South Africa for export.
77. The inclusion of actual cost of electricity generated in South Africa as part of net export is disallowed as it is already accounted for in the total primary energy variances.
78. The only element of the actual net import cost that is not already accounted for in this RCA is the actual cost of importing electricity from HCB of R2 175m (included in the R5 060m in Table 10 above).
79. As shown in Table 11 below, the Eskom actual net export of R1 372m when considered together with the allowed net import cost of R611m would have resulted in a variance of R1 983m in favour of the customer.
80. The Eskom SAE variance of R1 983m in favour of the customer, as shown in Table 11 below, is as a result of Eskom's misinterpretation of the MYPD3 decision with respect to revenue from other tariff customers. The Eskom variance is therefore disallowed to avoid double counting.

Table 11: Eskom Net Export Variance

	MYPD3 Decision 2013/14 (R'm)	Eskom Actuals (R'm)	Variance (R'm)
Net Import/(Net Export)	611	(1 372)	(1 983)

81. Eskom is instead allowed a variance on import cost of R1 564m in its favour as illustrated in Table 12 below. This is because the MYPD3 effectively allowed Eskom only R611m import cost, whereas the actual cost of purchasing electricity from HCB was R2 175m.

Table 12: The NERSA import cost variance

	MYPD3 Decision 2013/14 (R'm)	Actuals (R'm)	Variance (R'm)
Imports	611	2 175	1 564

82. The difference of R3 547m (in favour of Eskom) between Eskom's SAE net imports (R1 983m in favour of the customer) and NERSA's import cost variance (R1 564m in favour of Eskom) as shown in Table 13 below was as a result of Eskom's misinterpretation of the MYPD3 decision with respect to cost of imports and net import costs.
83. Therefore Eskom's variance was R1 983m in favour of the customer, whereas the NERSA variance of R1 564m is in favour of Eskom as shown in Table 13 below.

Table 13: The NERSA import cost adjustment

	MYPD3 Decision 2013/14 (R'm)	Eskom Variance (R'm)	NERSA Variance (R'm)	NERSA Adjustments (R'm)
Net Import/(Net Export)	611	(1 983)	1 564	3 547

84. As illustrated in Table 14 below, Eskom's actual total export revenue was R5 931m. The total actual revenue from exports consisted of metering adjustments of R146m, revenue from wheeling of electricity of R2 095m and revenue from sale of electricity (exports) excluding wheeling of R3 689m.
85. Metering adjustments of R146m is allowed because it was revenue from the sale of electricity. The revenue was as a result of the correction of metering errors on the prior's year electricity sales.

Table 14: Actual Revenue from Exports

	Actual Export Revenue (R'm)
Metering adjustment (Prior year)	146
Export Revenue from wheeling	2 095
Revenue from exports (excluding wheeling)	3 689
Total Actual Export Revenue	5 931

86. The actual revenue of R2 095m from wheeling of electricity is allowed, because it was a charge for the use of the transmission system, which amounts to sale of electricity. The MYPD3 allowed revenue included revenue for the use of the transmission system, but did not take revenue from wheeling into account.
87. The rest of the actual revenue from exports of R3 689m was for the sale of electricity and is therefore allowed.
88. The total actual revenue from export sale of electricity of R5 931m is therefore part of Eskom's total actual revenue of R136 869m (Table 6).

Capital Expenditure Clearing Account (CECA)

89. Eskom generated actual revenue of R1 444m from connection fees and upfront payments. The amount generated was used to reduce the actual qualifying Regulatory Asset Base (RAB) before determining the Capital Expenditure Clearing Account (CECA) variance.
90. Reducing the actual qualifying RAB by R1 444m is allowed because it was customer contribution to the financing of new assets.
91. CECA is the return applied on the difference between allowed qualifying RAB and the actual qualifying RAB as adjusted for customer contribution and upfront payment.
92. The variance of R9m in favour of Eskom is allowed in accordance with the methodology.

Energy Efficiency Demand Side Management (EEDSM) and Demand Market Participation (DMP)

93. Table 15 below shows Energy Efficiency Demand Side Management (EEDSM) targets and MYPD3 RCA variances for 2013/14 financial year.

Table 15: EEDSM targets and variances for FY2013/14

	Units	MYPD3 Decision	Eskoms' RCA Application	NERSA RCA	NERSA Variances
Funding	Rm	1 455	1 255	1 139	(116)
Penalty	Rm		316	316	0
Demand Savings	MW	379	296.7	379.0	(82)
Energy Savings	GWh	1 853	1 007	1 853	(846)
Unit Cost	Rm/MW	3.839	4.230	3.839	0.391
Unit Cost	R/kWh	0.785	1.347	0.785	0.562

94. As illustrated in Table 15 above, the MYPD3 demand and energy targets of EEDSM have not been met by Eskom.
95. Eskom has not met the target demand saving of 379MW and only achieved 296.7MW demand savings. In terms of the MYPD3 rules, not achieving the MYPD3 demand savings of 379MWs and achieving only 296.7MW as illustrated in Table 15 above results in a penalty of R316m (the product of the demand savings shortage and the unit cost of MW saved of R3.839/kW).
96. The achieved demand savings of 296.7MW shown in Table 15 above have been realised at a unit cost of R4.23m/MW, which is higher than the allowed cost of R3.839m/MW by R0.391m/MW. This results in overspending against the achieved demand savings of R116m (the product of R0.391m/MW and the achieved demand saving of 296.7MW), which is disallowed.
97. Table 16 below shows Demand Market Participation (DMP) targets and variances for the 2013/14 financial year

Table 16: DMP targets and variances for 2013/14

	Units	MYPD3 Decision	Eskoms' RCA Application	NERSA RCA	NERSA Variances
Funding	Rm	1 167	262	1 167	905
Demand Savings	MW	3 108	1 361	3 108	1 747
Unit Cost	Rm/MW	0.375	0.193	0.375	0.182

98. Eskom did not achieve the target demand savings under the DMP programmes by 1 747MW as illustrated in Table 16 above, which in turn resulted in greater utilisation of the OCGTs.

99. In terms of the MYPD3 rules, the penalty for not achieving the MYPD3 demand savings of 3 108MW and achieving only 1 361MW as illustrated in Table 16 above results in an amount of R905m (the product of the demand savings shortage and the unit cost of MW saved of R0.375m/MW) in favour of the customer.

Inflation Adjustments

100. The inflation adjustment variance is allowed as it reflects the difference between the inflation rate of 5.6% as assumed by NERSA for purposes of the revenue determination, and the actual inflation rate of 5.7%.

Other Income

101. In the course of its operations in 2013/14, Eskom also generated total other income of R1 873m as summarised in Table 17 below.
102. Though Eskom could not have reasonably estimated such additional revenue at the time of the MYPD3, it acknowledges that it did indeed realise additional revenue, some of which may be relevant for the purposes of the RCA.
103. As shown in Table 17 below, Eskom did not apply for the inclusion of other income from insurance proceeds (R384m), management fee income (R751m), operating lease income (R175m) and dividend income (R21m). This is allowed because it relates to operating expenditure that does not form part of the RCA.

Table 17: Eskom Actual Other Revenue

	Actuals 2013/14 (R'm)	Eskom applied (R'm)	NERSA Allowed (R'm)	NERSA Adjustment (R'm)
Insurance proceeds	384	-	-	-
Management fee Income	751	-	-	-
Operating lease income	175	-	-	-
Dividend income	21	-	-	-
Sale of scrap	199	199	199	-
Other income	343	-	154	154
Other Income	1 873	199	353	154

104. Income from sale of scrap of R199m is allowed in favour of the customer as it was generated through costs allowed in the MYPD.

105. Eskom had a sundry other income of R343m, of which R154m is included in the RCA. This is because it relates to items included in the MYPD Methodology for the purpose of computing the RCA. The sundry income included in the RCA is essentially with respect to the sale of ash, sale of scrap and unclaimed monies as in Table 17 above.

Service Quality Incentives (SQIs)

106. Table 18 below presents the performance results achieved by Eskom on all the measures used in the Service Quality Incentive (SQI) scheme for the first year of the MYPD3 control period.

Table 18: SQI performance results for Eskom

Measure	Incentive/Penalty (R'm)		
	Eskom RCA Application	NERSA RCA	Variance
SAIDI	146	146	-
SAIFI	117	117	-
DSLI	0	0	-
SM<1	0	0	-
Major Events	40	40	-
Line faults/100km	36	36	-
Total SQI	339	339	-

107. Eskom Distribution earned a reward of R263m for its performance results on System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI) and Distribution Supply Loss Index (DSLI).

108. Eskom Transmission earned a reward of R76m for its performance results on System Minutes (SM)<1, Major events and line faults/100km.

109. The total amount that Eskom has earned for the first year of the MYPD3 on SQI is R339m.

Application for Another Determination

110. The objectives of the Multi-Year Price Determination are:

110.1. to ensure Eskom's sustainability and limit the risk of excess or inadequate returns while providing incentives for new investments;

110.2. to ensure reasonable tariff stability and smooth changes over time consistent with the socio-economic objectives of Government;

- 110.3. to appropriately allocate commercial risk between Eskom and its customers;
 - 110.4. to provide efficiency incentives without leading to unintended consequences of regulation on performance;
 - 110.5. to provide a systematic basis for revenue/tariff setting; and
 - 110.6. to ensure consistency between price control periods.
111. The RCA, which records the variances between the MYPD allowed costs and the actual incurred costs, is used to achieve the abovementioned objectives.
112. The RCA balance as submitted by Eskom was greater than 10% of the allowed revenue, hence the mandatory (as required by the MYPD Methodology) stakeholder consultation process was undertaken before decided on the pass-through to be allowed.
113. The changes in the main and critical assumptions that contribute to the allowed revenue, costs and average electricity price increase, such as electricity sales volumes and growth, energy availability factor of the electricity generation fleet, commissioning dates of new generation capacity and primary energy costs, are significant and supported by the RCA balance that is greater than 10% in the first year of the MYPD3.
114. In the second year of the MYPD3 (i.e. 2014/15) there is further divergence of the forecasted parameters (i.e. sales volumes, electricity growth, energy availability factor, commissioning dates of the new generation capacity and costs of the new generation capacity) from the approved and allowed revenue and costs.
115. Based on reports received from Eskom, the preliminary indications are that the 2014/15 RCA application will be for approximately R25 000m.
116. The divergences from the allowed revenue and costs in the first three years of the MYPD3 are unlikely to be corrected by further submissions of RCA applications by Eskom. Thus the objectives of the MYPD methodology Furthermore, they do not achieve the abovementioned objectives of the MYPD.
117. There is a need to revisit and revise the assumptions for further electricity price increases in view of the current circumstances (i.e. low commodity prices, economic downturn, generation fleet performance, maintenance strategy and implementation).

Financial Impact

118. The following metrics of ratios were considered in analysing the RCA financial impact to Eskom and its financial risk:

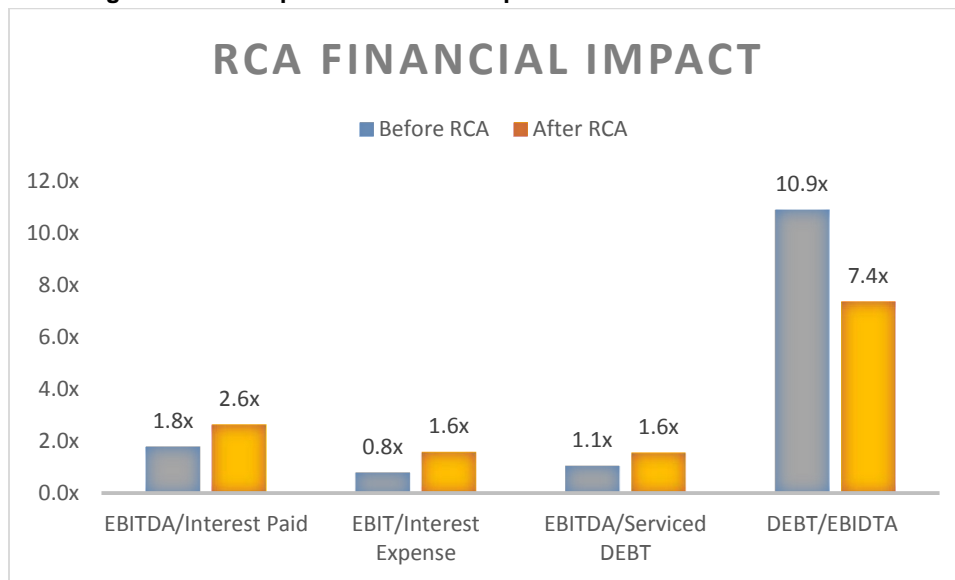
118.1. cash and earnings based interest coverage ratio;

118.2. debt service coverage ratio (DSCR); and

118.3. debt to Earnings Before Interest, Tax, Depreciation and Amortisation (EBITDA) ratio.

119. The graph below shows the RCA's expected impact on the ratio metrics.

Figure 1: RCA Expected Financial Impact



120. The EBITDA/interest paid cover ratio was used to determine the expected impact on Eskom's ability to honour its interest obligations. Post RCA, the cash coverage ratio increases to 2.6x while the earnings coverage doubles to 1.6x, increasing the margin of safety. These improvements increase Eskom's ability to meet its short-term interest obligations.

121. To determine the impact of cash flow available to pay current debt obligations, the debt service coverage ratio was included in the metric. Eskom's DSCR increases to 1.6x, improving its capacity to produce sufficient cash to cover its debt payments.

122. Given Eskom's business risk, the RCA will improve the debt to EBITDA ratio to 7.4x, which will advance Eskom's ability to pay off its incurred debt, while reducing potential financial distress risks.

123. After the implementation of this RCA balance, Eskom’s profitability and leverage improves.

Economic Impact

124. The electricity industry plays a significant role in enabling economic activity and growth within the South African economy. It is evident that an increase in electricity tariffs will have a negative economic impact. The Energy Regulator conducted a macroeconomic impact assessment of a 9.4% electricity price increase on the economy.

125. The main focus of this assessment was on Consumer Price Increase (CPI), Producer Price Index (PPI), Gross Domestic Product (GDP), export and the impact on low-income households.

Inflation

126. The Inflation impact of the price increases was done in terms of CPI, PPI and export prices. CPI was further assessed in terms of overall CPI and CPI for different income groups (Low and High). Table 19 below shows the impact on different inflation measures.

Table 19: Impact of real electricity tariff increase on inflation

Macro-economic Indicators	Indices
Eskom Tariff increase	9.40%
Total CPI	0.86%
CPI (Low Income households)	1.03%
CPI (High Income household)	0.84%
PPI	0.77%
Export prices	0.87%

127. The approved 9.4% increase in electricity tariffs will increase the CPI by 0.86% over a three-year period. Furthermore, the approved increase will increase PPI by 0.77%.

128. The low income household group will be the most vulnerable to the increase in electricity prices. With a 9.4% increase, low income households will experience a CPI increase of 1.03% compared to the high income household group’s 0.84%

increase. The main reason for this is the relatively high proportion of electricity costs in the low income households' total budget expenditure.

129. The approved increase will increase South Africa's export prices by 0.87% if the increase in electricity costs is fully passed on. There is no doubt that such an increase will impact negatively on South Africa's competitive advantage relative to its main trading partners.

Gross Domestic Product

Table 20: Impacts on various macro-economic variables

Macro-economic Variables	Indices
Eskom Tariff increase	9.40%
Impact on Gross Domestic Product (R'm)	(1 441)
Total impact on employment (job opportunities)	(5 172)
Skilled impact on employment	(1 146)
Semi-skilled impact on employment	(2 900)
Unskilled impact on employment	(1 126)
Impact on Households (R'm)	(948)
Low Income Households (R'm)	(163)
Medium Income Households (R'm)	(197)
High Income Households (R'm)	(588)

130. The electricity price increase will negatively affect the national GDP regardless of the quantum of the tariff increase. The only difference will be the level of impact. This is because of the intensity of electricity usage in the country. The approved tariff increase of 9.4% will result in a loss of R1 441m to the economy (see Table 20 above). From a macroeconomic perspective, this is not major when compared to the total national GDP, but it cannot be ignored.

Employment

131. The reduction in GDP growth further translates to the loss of approximately 5 172 jobs. In terms of the impact on low income households, an estimated R163m could be lost as a result of the 9.4% increase.

Conclusion on Financial and Economic Impact

132. After due consideration, the Energy Regulator has endeavoured to strike a balance between Eskom's financial sustainability and the impact on the South African economy.

133. The Energy Regulator is of the view that the approved RCA balance puts Eskom in a favourable financial position. The impact the increase will have on key macroeconomic indicators and low-income households is noted given the current state of the economy.

MYPD3 Year 1 RCA Balance

134. Table 21 below shows that the MYPD3 Year 1 RCA balance is R11 241m in favour of Eskom. The RCA balance is recovered from all Eskom's customers.

135. The balance recovered from standard tariff customers is R10 257m.

Table 21: The NERSA MYPD3 Year 1 RCA balance

	2015/16 (R'm)	NERSA RCA Implementation (2016/17) (R'm)	2017/18 (R'm)
Forecast Revenue from tariff customers (R'm)	163 179	180 070	198 954
MYPD RCA Balance	7 818	11 241	
Contribution by Standard customers to RCA Balance (R'm)	7 085	10 257	
Contribution by all other customers to RCA Balance (R'm)	733	983	
Forecast Revenue from tariff customers after RCA adjustment (R'm)	170 264	190 327	198 954
Increase in average Standard Tariff (c/kWh)	3.32	4.70	
Standard Average price after RCA adjustment (c/kWh)	79.73	87.23	89.13
Increase in average Standard Tariff (%)	12.69%	9.4%	2.2%

CONFIDENTIALITY

136. To be finalised after consultation with Eskom.

CONCLUSION AND RECOMMENDATION

137. On the conspectus of the facts and evidence presented to the Energy Regulator, it is appropriate to approve the allowed revenues, standard averages prices and percentage price increases as set out above for Eskom's Regulatory Clearing Account application for Year 1 (2013/14) of the third Multi-Year Price Determination for 2016/17.

End.