NATIONAL ENERGY REGULATOR OF SOUTH AFRICA

In the matter regarding

Revenue Application - Multi Year Price Determination 2013/14 to 2017/18 (MYPD3).

By **ESKOM HOLDINGS SOC LIMITED ('ESKOM')**

THE DECISION

Based on the available information and the analysis performed, on 28 February 2013 the Energy Regulator decided that:

1. The allowed revenues, standard average prices and percentage price increases are approved for the period 1 April 2013 to 31 March 2018 (control period) as detailed in Table 1 below:

Table 1: Allowed revenues, standard average prices and percentage price increases

	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

2. The allowed revenues to be used to recover Eskom's costs, as detailed in Table 2 below:

Table 2: Summary of allowed revenues to Eskom

R'm	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Return	23 477	26 511	26 436	27 657	33 667	137 748
Primary Energy Costs	51 067	54 966	56 779	62 060	68 620	293 492
Independent Power Producers	2 686	5 108	14 826	19 269	23 018	64 907
Depreciation	25 733	27 481	28 564	28 911	29 197	139 886
Integrated Demand Management	1 455	953	819	712	1 244	5 183
Operating costs	45 519	48 565	52 908	57 769	60 576	265 337
Total Allowed Revenues	149 937	163 584	180 332	196 378	216 322	906 553

3. The retail tariff structural adjustments are approved for implementation on 01 April 2013 as follows:

3.1 The residential tariff structures are approved for implementation as per Table 3 below:

Table 3: Approved tariff structures

Tariff Name	NERSA Approved Structure	Details
Homelight 20A	2 Block IBT	Block 1: 0-350kWh Block 2: >350kWh
Homelight 60A	2 Block IBT	Block 1: 0-600kWh Block 2: >600kWh
Homepower	2 Block IBT + Fixed Charge	Block 1: 0-600kWh Block 2: >600kWh
Homepower Bulk	Three Part Tariff	Service Charge + Energy Charge + Demand Charge

3.2 The increase on the Homelight 20A customers consuming up to 350kWh/month will be an increase equivalent to inflation of 5.6%. On Block 2, customers will see an increase of 7.6% (CPI plus two percent). This is applicable per annum over the MYPD3 control period.

3.3 The increase for all other residential customers (Homelight 60A and Homepower) will see the average price increase of 8.0%. This is applicable per annum over the MYPD3 control period.

3.4 Eskom must ensure that:

3.4.1 The time-of-use off-peak to peak demand is adjusted to a ratio of 1:8.

3.4.2 All tariff cross-subsidies (received and paid) must be shown transparently. These subsidies are related to affordability subsidies, low voltage subsidies and historic electrification and network subsidies found in large power urban tariffs.

3.4.3 The use-of-system charges must be based on the cost per voltage level for all large power customers. Where there are low-voltage subsidies, these must be transparently shown as a low-voltage subsidy charge.

3.4.4 The reliability and service charge covering the cost of providing ancillary services which is currently embedded in the energy charge must be unbundled (i.e. shown separately) for the large power tariffs.

3.4.5 The environmental levy charge must be included into the energy charge component of the tariff and not shown separately.

3.5 Eskom must ensure that alternate tariff options (other than Time-of-Use tariffs) are available to municipalities with a predominantly residential load mix.

End.

Abbreviations and Acronyms

A	Ampere/Amp
c/kWh	Cent per kilowatt hour
Capex	Capital expenditure
CAPM	Capital Asset Pricing Model
COD	Commercial Operation Date
COS	Cost of Supply
CPI	Consumer Price Index
CSP	Concentrated Solar Power
DMP	Demand Market Participation
DoE	Department of Energy
DRC	Depreciated Replacement Cost
Dx	Distribution
EBITDA	Earnings Before Interest Depreciation Tax & Amortisation
EIA	United States Energy Information Agency
EPP	Electricity Pricing Policy
ERTSA	Eskomôs Retail Tariff Structural Adjustments
FBE	Free Basic Electricity
GDP	Gross Domestic Product
GWh	Gigawatt hour
Gx	Generation
HVAC	Heating, Ventilation and Air Conditioning
IBT	Inclining Block Tariff
IDC	Interest during construction
IDM	Integrated Demand Management
IPP	Independent Power Producer
IRP	Integrated Resource Plan
km	Kilometre
kWh	Kilowatt hour
L/USO	Litres per unit sent out

LED	Light-emitting diode
M&V	Measurement and Verification
MKI	Medupi, Kusile and Ingula
MTPPP	Medium Term Power Purchase Programme
MW	Megawatt
MWh	Megawatt hour
MYPD	Multi-Year Price Determination
NERSA	National Energy Regulator of South Africa
O&M	Operations and Maintenance
OCGT	Open Cycle Gas Turbine
ODC	Ownerôs Development Cost
Opex	Operating expenditure
PAJA	Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000)
PE	Primary Energy
PPA	Power Purchase Agreement
PPI	Producer Price Index
R&D	Research and Development
R/day	Rand per day
R/km	Rand per kilometre
R/kVA	Rand per kilovolt ampere
R/kWh	Rand per kilowatt hour
R/MW	Rand per Megawatt
Rôm	Rand million
RAB	Regulatory Asset Base
RCA	Regulatory Clearing Account
RCN	Replacement Cost New
RTS	Return-to-service
SADC	South African Development Community
SAIDI	System Average Interruption Duration Index
SBP	Single Buyer Procurement
SM	System Minutes

SQI	Service Quality Incentive
STPPP	Short Term Power Purchase Programme
SWH	Solar Water Heaters
TCTA	Trans Caledon Tunnel Authority
TOU	Time-of-Use
Tx	Transmission
UOS	Use-of-System
VAT	Value Added Tax
WACC	Weighted average cost of capital
WUC	Work under construction

REASONS FOR THE DECISION

BACKGROUND AND INTRODUCTION

1. The first Multi-Year Price Determination (MYPD1) for Eskom Holdings SOC Limited (Eskom) was implemented from 01 April 2006 to 31 March 2009. The price increases allowed for MYPD1 were 5.1%, 5.9% and 6.2% for the 2006/07, 2007/08 and 2008/09 financial years respectively.

2. On 18 July 2007, Eskom applied for a revision of the 2008/09 price increase to 18.7% due to increased costs in primary energy and capital expenditure. The Energy Regulator approved a 14.2% price increase.

3. On 17 March 2008, Eskom applied for a further revision of the 14.2% increase to 60.0% and in June 2008 the National Energy Regulator of South Africa ("the Energy Regulator") granted Eskom a further 13.3% increase resulting in a total average percentage price increase of 27.5% for the 2008/09 financial year.

4. In May 2009, Eskom applied for an interim price increase of 34% for the 2009/10 financial year as an interim measure whilst finalising the funding model. The Energy Regulator approved an average price increase of 31.3% for implementation on 1 July 2009.

5. On 30 November 2009, Eskom applied for an average price increase of 35% per annum over the MYPD2 control period. On 24 February 2010, the Energy Regulator approved the following revenues, standard average prices and percentage price increases for the MYPD2 control period of 01 April 2010 to 31 March 2013:

Table 4: The MYPD2 decision

Details	2010/11	2011/12	2012/13
Allowed Revenue from tariff based sales (R'm)	85 180	109 948	141 411
Forecast sales to tariff customers (GWh)	204 551	210 219	214 737
Standard average price (c/kWh)	41.57	52.30	65.85
Percentage Price Increase (%)	**24.8%**	**25.8%**	**25.9%**
Total expected revenue from all customers (R'm)	90 927	116 152	148 378

6. On 02 March 2012, Eskom requested a review of the 2012/13 approved price increase of 25.9% downwards to 16.0%.

7. On 09 March 2012, the Energy Regulator approved that the price increase be adjusted from 25.9% to 16.0%. The adjustments for the reduction of the revenues were made up as follows:

Table 5: Adjustments made to reduce the 2012/13 MYPD2 allowed revenues

ADJUSTMENTS MADE TO THE REVENUES	R'm
Re-phased equity returns of the shareholder	8 105
Portion of the balance required from the Regulatory Clearing Account (RCA)	3 048
	11 153

8. This resulted in the following allowed revenues, standard average price and average price increase applicable for the 2012/13 financial year:

Table 6: 2012/13 Revised Decision

Details	2012/13 Revised Price Increase
Allowed Revenue from tariff based sales (R'm)	130 258
Forecast sales to tariff customers (GWh)	214 737
Standard average price (c/kWh)	60.66
Percentage Price Increase (%)	**16.0%**

THE APPLICATION

9. On 18 October 2012, the Energy Regulator received Eskomôs Revenue Application: Multi-Year Price Determination 3 (ñMYPD3ò) and Eskomôs Retail Tariff Structural Adjustments (ñERTSAò). The application covers a five year period from 01 April 2013 to 31 March 2018.

10. Eskom applied for annual price increases of 16% per annum over the MYPD3 control period. The requested price increase translates into required revenues of over R1 trillion over the MYPD3 control period. The breakdown of the revenue requirement as presented in the application is given in Table 7 below:

Table 7: Eskom's MYPD3 Revenue Requirement

Details	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3
Return	7 271	14 643	31 187	51 878	81 885	186 864
Eskom Primary Energy	62 328	65 368	69 657	75 330	82 266	354 949
Independent Power Producers - Primary Energy	5 189	13 302	18 043	20 143	21 042	77 719
Depreciation	30 792	34 631	37 076	39 669	43 218	185 385
Integrated Demand Management	2 941	2 709	1 862	1 966	3 612	13 090
Operating Costs	44 857	48 952	54 934	59 346	61 478	269 568
Eskom Revenue Requirement	**153 378**	**179 604**	**212 758**	**248 332**	**293 501**	**1 087 574**

Source: Eskom MYPD3 Application

11. The MYPD3 application also includes Eskomôs proposals to restructure its retail tariffs. The retail tariffs are the tariff rates applicable to the various customer categories i.e. urban, rural, residential and local authorities.

12. The following is a summary of the key retail tariff structural adjustments included in the application :

    12.1. Restructuring of the residential tariffs to simplify the tariffs whilst still optimizing protection of the poor;
    12.2. Recalculation of the tariff charges based on an updated cost to serve study;
    12.3. Unbundling of the tariff components to make cross-subsidies more transparent;
    12.4. Revision of the Time-of-Use (TOU) tariff to reduce the peak high-demand (winter) energy price.

THE APPLICANT

13. 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 (Act No 1 of 1999), wholly owned by the South African Government. Eskom Holdings is regulated under licenses granted by the Energy Regulator to generate, transmit and distribute electricity in terms of the Electricity Regulation Act (Act No 4 of 2006).

14. 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 (ñSADCò).

15. 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 power grid.

THE DECISION MAKING PROCESS

16. On 22 October 2012, the Energy Regulator published Eskomôs MYPD3 application on the Energy Regulator website with an invitation to stakeholders to submit written comments. The closing date for comments was 20 November 2012.

17. The Energy Regulator conducted public hearings in all provinces of South Africa from 15 January to 08 February 2013 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:

17.1. Cape Town: 15 January 2013

17.2. Port Elizabeth: 16 January 2013

17.3. Durban: 17 January 2013

17.4. Bloemfontein: 21 January 2013

17.5. Kimberley: 22 January 2013

17.6. Potchefstroom: 23 January 2013

17.7. Nelspruit: 25 January 2013

17.8. Polokwane: 29 January 2013

17.9. Gauteng: 30 January ï 01 February 2013

17.10. Port Elizabeth: 05 February 2013

17.11. Cape Town: 08 February 2013

18. The Energy Regulator made its determination on Eskomôs MYPD3 application on 28 February 2013.

19. The Energy Regulator has in the public interest considered the inputs received from various stakeholders.

20. The Energy Regulator appreciates the stakeholder participation in the MYPD3 decision making process and would like to thank the individuals and organisations for their valuable comments and inputs.

THE OBJECTORS AND OTHER INTERVENING PARTIES

21. On 22 October 2012 the Energy Regulator published Eskomôs MYPD3 application on the Energy Regulator website for written stakeholder comments.

22. More than 200 written comments have been received from stakeholders. These were made up of comments from private individuals, small users, intensive users, government departments, trade unions and other stakeholders.

23. Stakeholder comments were received on the following issues:

23.1. Weighted Average Cost of Capital;

23.2. Regulatory Asset Base;

23.3. Primary Energy;

23.4. Operating Expenditure;

23.5. Purchases from Independent Power Producers;

23.6. Integrated Demand Management;

23.7. Economic Impact; and

23.8. Tariff Restructuring.

24. The key comments received have been summarised in **Annexure 1.**

APPLICABLE LAW

25. The legal basis for the Energy Regulator to approve electricity prices is derived from the Electricity Regulation Act (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").

ANALYSIS OF THE APPLICATION

26. In addition to basing its decision on applicable law, the Energy Regulator has analysed Eskom's revenue application taking into consideration published Government policy and the approved MYPD methodology.

27. The following is an analysis of the key elements of Eskom's Revenue Application: Multi-Year Price Determination 3 (MYPD3). The analysis of the Eskom revenue application is divided into the following sections:

27.1. Weighted Average Cost of Capital;

27.2. Regulatory Asset Base;

27.3. Primary Energy;

27.4. Purchases from Independent Power Producers;

27.5. Depreciation;

27.6. Integrated Demand Management;

27.7. Operating Expenditure;

27.8. Research & Development;

27.9. Taxes & Levies;

27.10. Sales Volumes;

27.11. Service Quality Incentives;

27.12. Eskom's Retail Tariff Structural Adjustments;

27.13. Economic Impact;

27.14. Regulatory Clearing Account; and

27.15. Policy Issues.

WEIGHTED AVERAGE COST OF CAPITAL (WACC)

28. The summary of the calculated Weighted Average Cost of Capital (ñWACCò) applicable to Eskom is provided in Table 8 below:

Table 8: Weighted Average Cost of Capital

WACC Parameters	NERSA Calculation	
Capital Asset Pricing Model (CAPM)	**12 months**	**25 years**
Risk free rate	8.39%	12.69%
CPI	5.96%	7.82%
Real Risk free rate	2.29%	4.51%
Beta	0.84	0.84
Market Risk Premium	5.30%	5.30%
Real Cost of equity	**6.75%**	**8.96%**
Debt premium	0.60%	0.60%
Nominal Cost of debt	8.99%	13.29%
Real cost of debt	**2.86%**	**5.07%**
Gearing	65%	65%
Tax rate	28%	28%
Pre-tax real WACC	**5.14%**	**7.65%**
Post-tax real WACC	**3.70%**	**5.51%**

29. The WACC parameters used in the calculation of the 25 years WACC is in accordance with the approved MYPD methodology. The 12 months WACC is only provided for comparison purposes.

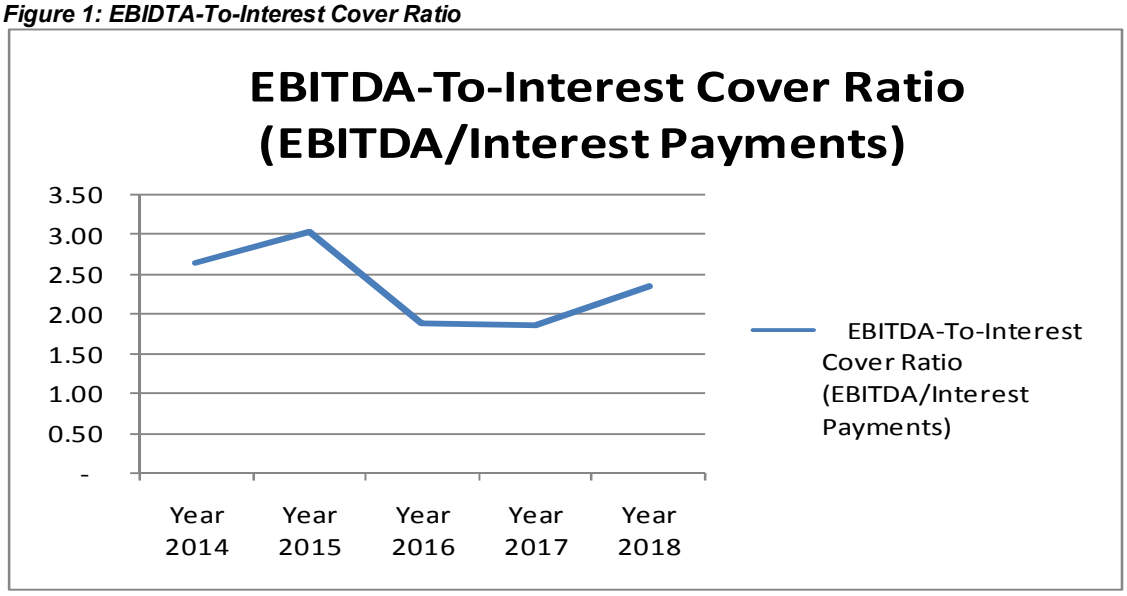
30. In calculating Eskomôs allowed revenues, the Energy Regulator used the WACC as shown in the Table 9 below for each year of the MYPD3 control period.

Table 9: Weighted Average Cost of Capital used

	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Real Pre-tax WACC (%)	3.4%	3.8%	3.7%	3.9%	4.7%	
Return (R'm)	23 477	26 511	26 436	27 657	33 667	137 748

31. The allowed returns will enable Eskom to meet its debt obligations. The figure below illustrate that Eskomôs Earnings Before Interest Depreciation Tax & Amortisation (EBITDA)-To-Interest cover ratio is more than 2 times at the end of MYPD3 control period.

Figure 1: EBIDTA-To-Interest Cover Ratio



REGULATORY ASSET BASE (RAB)

32. In terms of the MYPD2 decision the balance of the Regulatory Asset Base (ñRABò) as at the end of 2012/13 was R911 686m which was to be phased in over five years. The full cost reflective RAB as at the end of 2012/13 was R911 686m which was adjusted to R789 591m due to the decision to phase in the revaluation. The revaluation of the Eskom RAB has however since been completed, such that the closing balance of the RAB as at end of 2012/13 is R709 145m. It is therefore not necessary to phase in the RAB as the revaluation result is similar to the NERSA adjusted value as at the end of 2012/13. Eskom is therefore for the purposes of the MYPD3 allowed to earn a return on the full allowed RAB as determined in line with the provisions of the MYPD methodology.

33. Table 10 below is a summary of the RAB as applied for together with NERSAôs adjustments and approved RAB for each of the respective years of the MYPD3 control period.

Table 10: Summary of Approved Regulatory Asset Base

R'm	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
RAB Applied for	**911 686**	779 203	852 265	919 662	981 853	1 043 100
RAB Adjustments	**(122 095)**	(79 594)	(145 874)	(209 712)	(269 073)	(325 587)
RAB Approved	**789 591**	**699 609**	**706 391**	**709 950**	**712 780**	**717 513**

34. The approved RAB and depreciation are designed to ensure that Eskom acquires reasonably priced funding for its capital expenditure as well as to sustain its activities.

35. The approved RAB consists of the following four categories:
    35.1. The used property and plant which is valued on the depreciated replacement valuation method. The RAB is depreciated over the economic useful life of the respective underlying assets. The annual inflation adjustment to used property and plant is disallowed as the RAB is subject to periodic revaluation. The total disallowed inflation adjustment over the MYPD3 control period is R222 067m.

    35.2. Work under construction (ñWUCò) is included in the RAB to ensure a gradual increase and to avoid large step changes in the RAB. The WUC however excludes Interest During Construction (ñIDCò) to avoid any form of double counting as the utility will earn a return on its assets sufficient to cover its debt servicing obligations. The annual inflation adjustment to WUC of R45 471m is disallowed as the RAB is subject to periodic revaluation.

    35.3. Vehicles and equipment are included in the RAB at depreciated historic cost rather than at their depreciated replacement value due to the short useful lives of such assets. The opening balance of vehicles and equipment in 2013/14 is adjusted downwards by R3 662m after reconciliation to the actual closing balance as per the annual financial statement for 2011/12.

    35.4. Net working capital is included in the RAB to afford Eskom the ability to finance its prudently determined working capital requirements. Debtors are included in the working capital to the extent that Eskom does not earn interest on such debtors to avoid any form of double counting where the customer is paying interest on the debt.

Capital Expenditure (Capex)

36. Table 10 below summarises Eskomôs capital expenditure (capex) application, the capex disallowed by the Energy Regulator and approved capex for the MYPD3 control period.

Table 11: Approved capital expenditure for MYPD3

R'm	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Capex Applied for	**103 991**	71 968	67 941	64 835	66 626	65 000	336 370
Capex Adjustments	**(32 931)**	(21 195)	(22 828)	(22 770)	(19 971)	(19 593)	(106 357)
Capex Approved	**71 060**	**50 772**	**45 113**	**42 064**	**46 655**	**45 407**	**230 012**

37. The total capex of R336 370m is considered in two separate sections referred to as RAB capex and all other capex.

Capex for Capacity Expansion (RAB Capex)

38. Table 12 below summarises Eskomôs proposed capex to expand the capacity of the respective operations (RAB capex), the Energy Regulator adjustments and approved RAB capex for the MYPD3 control period.

Table 12: Approved capex to be included in the RAB

RAB capex (R'm)	Eskom RAB Capex
Generation	103 941
Transmission	64 082
Distribution	34 564
Total RAB Capex	**202 587**

39. The reduction in the distribution RAB capex was achieved by adjusting the Eskom proposed average unit cost of R2.18m/km to an average of R1.74m/km over the MYPD3 control period. The adjusted costs align with the historic costs of Eskom. The projects have not been altered.

40. An analysis of the detailed scope of works from Eskomôs approved Transmission Development Plan for 2012 to 2021 was undertaken to ensure costs incurred are for capital expenditure as well as to avoid duplication across major scheme projects. The Replacement Cost New (ñRCNò) values used in the revaluation of respective categories of existing transmission assets were also used to determine the project costs. The reductions in the capex did not exclude any of the projects that Transmission intends to implement.

41. Tables 13 and 14 show the total generation RAB capex as applied for by Eskom together with the NERSA adjustments and approved capex. The generation RAB capex is further subdivided into Medupi, Kusile and Ingula (òMKIò) generation RAB capex and other generation RAB capex.

42. As outlined in Table 13 below, Eskom applied for R78 389m to continue its MKI build program. The Energy Regulator is disallowing a total of R29 469m for reasons as outlined below.

Table 13: MKI Generation RAB Capex Application and adjustments

MKI Projects (R'm)	2012/13	[redacted]	MYPD3 Total
Basic cost	20 447		31 303
Escalation/CPA	4 368		13 170
Unplaced conract cost			
Basic cost	**374**		2 465
Escalation/CPA	**78**		940
Owners Development cost (ODC)	**3 217**		8 561
Contingency	**4 911**		21 590
Total MKI	**33 395**		78 389
Owners Development cost (ODC)%	**13%**		
Contingency %	**20%**		
Adjustments			
Unplaced contract cost			(3 049)
Owners Development cost (ODC)			(8 561)
Contingency			(17 503)
Total Ajustments			(29 469)
Total Approved	**33 395**		**48 920**

43. The unplaced contract cost which together with the associated escalation amounts to R3 405m is disallowed. The unplaced contract amount is included in the contingency allowance.

44. The Ownerôs Development Cost (ñODCò) refers to Eskomôs own project management, project engineering and other resources used in managing the contractors responsible for the build program. The capitalisation of ODC is disallowed as Eskom has not provided its deduction from the forecast operating expenditure. Capitalising ODC while not reducing operating expenditure by the same amount will result in double counting.

45. The contingency provision applied for by Eskom ranges from 19% to 397% of the indexed basic contracted amounts for each of the respective years. The contingency provision has been limited to 10% of the contracted cost as indexed.

Other Generation RAB Capex

46. Apart from the new build MKI projects, Eskom applied for other RAB capex for generation capacity expansion projects with a total value of R25 802m shown in Table 14 below, of which R4 770m is disallowed by NERSA.

Table 14: Other RAB Capex

Other RAB Capex (R'm)	Eskom Other RAB Capex	Adjustments	Approved Other RAB Capex
Sere Wind farm	2 060	-	2 060
Return to Service	743	(743)	-
Mpumalanga Projects	8 872	(3 970)	4 902
Concentrated Solar Power	4 997	(57)	4 940
Medupi FDG	9 045	-	9 045
Land Right -Kusile Ash Dump	85	-	85
Total Other RAB Capex	**25 802**	**(4 770)**	**21 032**

47. The return-to-service (ñRTSò) projects which relate to completing the Grootvlei and Komati power stations is disallowed as capital expenditure as they already form part of the RAB. Some of the Mpumalanga Projects have also been disallowed as they would not contribute to the creation of additional generation capacity. Concentrated Solar Power (ñCSPò) is approved by the Energy Regulator except that the cash-flow forecast is shifted out by one year as the probability of Eskom commencing with the construction of the CSP in the 2013/14 financial year is low. The R57m forecasted expenditure in the final year therefore falls outside the MYPD3 control period.

All Other Capex

48. Table 15 shows the total of all other capex applied for by Eskom is an amount of R124 448m as capital expenditure on existing generation, transmission and distribution infrastructure.

Table 15: All Other Capex

R'm	Eskom Other Capex	Adjustments	NERSA Approved other Capex
Generation	92 417	(34 285)	58 131
Transmission	11 594	(1 396)	10 198
Distribution	20 437	(6 483)	13 954
Total Other Capex	124 448	(42 164)	82 283

49. The reduction was as a result of by adjusting other generation capex by R34 285m based on an extrapolation of historic cost.

50. The amount of R1 396m for transmission production equipment is disallowed based on the revised forecast.

51. The amount of R6 4 83m for reliability capex has already been included in the refurbishment capex, hence it is disallowed.

PRIMARY ENERGY (PE)

52. Eskom has applied for total primary energy costs amounting to R416 987m for the MYPD3 control period as highlighted in Table 16 below.

Table 16: Eskom's MYPD3 Primary Energy Application

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Coal	**31 151**	37 010	41 561	46 572	51 392	56 642	233 177
Water	**2 260**	2 082	2 414	2 615	2 750	2 955	12 816
Start-up Gas & Oil	**1 400**	1 511	1 636	1 721	1 813	2 018	8 699
Coal Handling	**728**	1 087	1 163	1 246	1 356	1 510	6 362
Water Treatment	**246**	327	370	396	428	477	1 998
Nuclear	**905**	471	471	678	767	856	3 243
OCGT	**657**	3 592	3 258	1 788	1 898	2 056	12 592
Fuel Procurement	**660**	435	435	443	452	485	2 250
Sorbent	**0**	0	10	56	139	251	456
Road Maintenance	**0**	53	0	0	0	0	53
External Electricity Purchases	**0**	23	24	26	27	27	127
Environmental Levy	**5 224**	8 842	9 037	9 324	9 490	9 746	46 439
Generation Primary Energy	43 231	**55433**	**60379**	**64865**	**70512**	**77023**	**328 212**
MTPPP	**5 819**	1 523	618	546	550	579	3 816
Renewable IPPs(3725MW)		1 428	8 987	13 879	16 249	17 353	57 896
DOE Peaking IPP		1 001	2 841	3 147	3 160	3 191	13 340
Short Term IPPs		1 022	503	0	0	0	1 525
SBP Procurement Costs	**0**	74	79	83	88	94	418
Tx Ancillieries Costs	**0**	141	273	388	97	(175)	724
DMP and Power Buy-Back	**651**	3 275	1 973	1 972	1 835	2 001	11 056
Total Primary Energy(Gx)	**49 701**	**63897**	**75653**	**84880**	**92491**	**100066**	**416 987**
Net Imports(Dx)		611	380	93	399	470	1 953
Total Primary Energy		**64 508**	**76 033**	**84 973**	**92 890**	**100 536**	**418 940**

53. Table 17 below is a summary of the NERSA approved primary energy and IPP costs. These are explained in more detail in the paragraphs that follow:

Table 17: Approved Primary Energy and IPP Costs

R'm	2012/13 Approved Expenditure	2013/14		2014/15		2015/16		2016/17		2017/18		MYPD3 Total	
		Applied for	Approved	Applied for	Approved	Applied for	Approved	Applied for	Approved	Applied for	Approved	Applied for	Approved
Coal	31 151	37 010	32 702	41 561	36 617	46 572	39 838	51 392	44 245	56 642	49914	233 177	203 316
Water	2 260	2 082	1 746	2 414	1 957	2 615	2 101	2 750	2 188	2 955	2319	12 816	10 311
Start-up Gas & Oil	1 400	1 511	1 511	1 636	1 570	1 721	1 631	1 813	1 695	2 018	1761	8 699	8 168
Coal Handling	728	1 087	1 056	1 163	1 119	1 246	1 186	1 356	1 257	1 510	1333	6 362	5 951
Water Treatment	246	327	250	370	265	396	281	428	298	477	316	1 998	1 410
Nuclear	905	471	387	471	352	678	498	767	446	856	466	3 243	2 149
OCGT	657	3 592	2 537	3 258	2 710	1 788	1 508	1 898	1 599	2 056	1724	12 592	10 078
Fuel Procurement	660	435	258	435	272	443	287	452	304	485	321	2 250	1 442
Sorbent	0	0	0	10	0	56	56	139	139	251	250	456	445
Road Maintenance	0	53	0	0	0	0	0	0	0	0	0	53	0
External Electricity Purchases	0	23	0	24	0	26	0	27	0	27	0	127	0
Environmetal levy	5 224	8 842	8 842	9 037	9 036	9 324	9 300	9 490	9 490	9 746	9 746	46 439	46 414
Generation Primary Energy	**43 231**	**55433**	**40 447**	**60379**	**53 898**	**64865**	**56 686**	**70512**	**61 661**	**77023**	**68150**	**328 212**	**289 684**
MTPPP	5 819	1 523	1 523	618	92	546	0	550	0	579	0	3 816	1 615
Renewable IPPs(3725MW)		1 428	0	8 987	4 240	13 879	13 243	16 249	16 386	17 353	19689	57 896	53 558
DOE Peaking IPP		1 001	0	2 841	0	3 147	1 195	3 160	2 786	3 191	3504	13 340	7 485
Short Term IPPs		1 022	1 022	503	503	0	0	0	0	0	0	1 525	1 525
SBP Procurement Costs	0	74	0	79	0	83	0	88	0	94	0	418	0
Tx Ancillieries Costs	0	141	141	273	273	388	388	97	97	(175)	(175)	724	724
DMP and Power Buy-Back	651	3 275	1 167	1 973	688	1 972	0	1 835	0	2 001	0	11 056	1 855
Total Primary Energy(Gx)	**49 701**	**63 897**	**44 300**	**75 653**	**59 694**	**84 880**	**71 512**	**92 491**	**80 930**	**100 066**	**91 168**	**416 987**	**356 446**
Net Imports(Dx)		611	611	380	380	93	93	399	399	470	470	1 953	1 953
Total Primary Energy	**49 701**	**64 508**	**44 911**	**76 033**	**60 074**	**84 973**	**71 605**	**92 890**	**81 329**	**100 536**	**91 638**	**418 940**	**358 399**

Coal

Table 18: Approved Coal Burn Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Coal Burn Applied For		37 010	41 561	46 572	51 392	56 642	**233 177**
Coal Burn Adjustments		(4 308)	(4 944)	(6 734)	(7 147)	(6 728)	**(29 861)**
Approved Coal Burn Costs	**31 151**	**32 702**	**36 617**	**39 838**	**44 245**	**49 914**	**203 316**

54. The reasons for adjustments in coal burn costs are due to the reduction in the burn rate from 0.57 to 0.56 tons per MWh. It is expected that Eskom target a burn rate of 0.56 tons per MWh which represents a normal deterioration in station efficiency from the current 0.55 tons/MWh due to ageing infrastructure. The rand per ton amount that was approved in MYPD2 has been adjusted by 10% p.a. after considering the historic mining inflation experienced by Eskom together with specific input from the mining industry, for the first year of MYPD3.

Water

Table 19: Approved Water Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Water Costs Applied For		2 082	2 414	2 615	2 750	2 955	**12 816**
Water Costs Adjustments		(336)	(457)	(514)	(562)	(638)	**(2 507)**
Approved Water Costs	**2 260**	**1 746**	**272**	**2 101**	**2 188**	**2 317**	**10 309**

55. Water costs adjustments were achieved by adjusting the water consumption volumes to reflect the 1.34 litres per unit sent out (L/USO) in line with Eskomôs 2011/12 annual report. The water consumption volumes were further adjusted to reflect a gradual decrease to 1.20 L/USO as power generation shifts from the older wet cooled power stations to the more water efficient dry cooled Medupi and Kusile power stations.

56. Further adjustments were based on an indexation of all water cost components (except the Capital Unit Charge component) by the forecast inflation rate. The Capital Unit Charge component was escalated as forecast by Eskom due to its forecast being in line with information sourced by NERSA from the Trans Caledon Tunnel Authority (TCTA), a state owned entity responsible for the determination of the Capital Unit Charge to finance and implement bulk raw water infrastructure.

Start-up Gas and Oil

Table 20: Approved Start-up Gas and Oil Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Start-up Gas& Oil Applied For		1 511	1 636	1 721	1 813	2 018	**8 699**
Start-up Gas & Oil Adjustments		(0)	(40)	(39)	(34)	(137)	**(250)**
Approved Start-up Gas & Oil	**1 400**	**1 511**	**272**	**1 682**	**1 779**	**1 881**	**8 449**

57. The Start-up Gas and Oil costs were adjusted based on the information from The United States Energy Information Agency (EIA) and the World Bank that gas and oil prices are forecast to remain stable over the MYPD3 period. As a result of this, the escalation of the costs was limited to the forecast inflation rate.

Coal Handling

Table 21: Approved Coal Handling Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Coal Handling Costs Applied For		1 087	1 163	1 246	1 356	1 510	**6 362**
Coal Handling Costs Adjustments		(31)	(44)	(60)	(99)	(177)	**(411)**
Approved Coal Handling Costs	**728**	**1 056**	**272**	**1 186**	**1 257**	**1 333**	**5 951**

58. The coal handling adjustments are based on Eskomôs previous performance and as a result the annual escalation of the costs was limited to the forecast inflation rate.

Water Treatment

Table 22: Approved Water Treatment Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD 3 Total
Water Treatment Costs Applied For		327	370	396	428	477	**1 998**
Water Treatment Costs Adjustments		(77)	(105)	(115)	(130)	(161)	**(588)**
Approved Water Treatment Costs	**246**	**250**	**272**	**281**	**298**	**316**	**1 410**

59. The water treatment was adjusted based on Eskomôs previous performance and as a result the annual escalation of the costs was limited to the inflation rate.

Nuclear

Table 23: Approved Nuclear Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD 3 Total
Nuclear Costs Applied For		471	471	678	767	856	**3 243**
Nuclear Costs Adjustments		(84)	(119)	(180)	(321)	(390)	**(1 094)**
Approved Nuclear Costs	**905**	**387**	**272**	**498**	**446**	**466**	**2 149**

60. The fuel used at Koeberg is wholly imported. Consequently international benchmarks (Rand per kilogram) were used to determine the approved price.

Open Cycle Gas Turbines (OCGTs)

Table 24: Approved OCGT Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD 3 Total
OCGT Costs Applied For		3 592	3 258	1 788	1 898	2 056	**12 592**
OCGT Costs Adjustments		(1 055)	(548)	(280)	(299)	(332)	**(2 514)**
Approved OCGT Costs	**657**	**2 537**	**2 710**	**1 508**	**1 599**	**1 724**	**10 078**

61. Due to the high OCGT operating costs, the inefficient usage of OCGTs is discouraged. Although the energy volumes have been limited to a maximum of 5% load factor, a prudency test would have to be conducted on energy volumes in excess of a 3% load factor. This does not prevent Eskom from using the OCGTs as a last resort (i.e. before load shedding).

62. Furthermore, Eskom must strive for a thermal efficiency of at least 35% as these units are designed to operate at thermal efficiency levels of between 34% and 36%.

63. The annual increases in diesel and kerosene fuel prices are limited to the forecast inflation rate as diesel fuel will be used as the basis for deciding on the price variance to be allowed in the OCGT primary energy cost pass-through mechanism.

Fuel Procurement

Table 25: Approved Fuel Procurement Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Fuel Procurement Costs Applied For		435	435	443	452	485	**2 250**
Fuel Procurement Costs Adjustments		(177)	(163)	(156)	(148)	(164)	**(808)**
Approved Fuel Procurement Costs	**660**	**258**	**272**	**287**	**304**	**321**	**1 442**

64. The fuel procurement costs were adjusted based on Eskomôs previous performance and as a result the annual escalation of the costs was limited to the forecast inflation rate.

Sorbent

Table 26: Approved Sorbent Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Sorbent Applied For	-	-	10	56	139	251	**456**
Sorbent Adjustments		-	(10)	(0)	(0)	(1)	**(11)**
Approved Sorbent	**-**	**-**	**-**	**56**	**139**	**250**	**445**

65. It is unlikely that the first unit at Kusile will come online in 2014/15 and the sorbent costs have therefore been adjusted by R11m.

Road Maintenance

Table 27: Approved Road Maintenance Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Road Maintenance Applied For		53	-	-	-	-	**53**
Road Maintenance Adjustments		(53)	-	-	-	-	**(53)**
Approved Road Maintenance	**-**	**-**	**-**	**-**	**-**	**-**	**-**

66. In MYPD2, Eskom was allowed R950m. According to Eskom, it will have used R786m by the end of the MYPD2 control period, leaving Eskom with an unspent balance of R164m. The R53m applied for in MYPD3 must be used from the R164m remaining from MYPD2. The remaining MYPD2 balance of R111m will be considered in the Regulatory Clearing Account (RCA).

External Energy Purchases

Table 28: Approved External Electricity Purchases for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
External Electricity Purchases Applied For		23	24	26	27	27	**127**
External Electricity Purchases Adjustments		(23)	(24)	(26)	(27)	(27)	**(127)**
Approved External Electricity Purchases	-	-	-	-	-	-	-

67. The external energy purchases are disallowed as these costs have been included under the ñOperations and Maintenanceò costs and therefore represents double counting.

ENVIRONMENTAL LEVY

Table 29: Environmental Levy Costs

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Environmental levy Applied For	5 255	8 842	9 037	9 324	9 490	9 746	**46 439**
Environmental levy Adjustments	31	(0)	(1)	(24)	(0)	(0)	**(25)**
Approved Environmental Levy	**5 224**	**8 842**	**9 036**	**9 300**	**9 490**	**9 746**	**46 414**

68. The production plan gives the energy sent-out volume which has to be increased by the system auxiliary consumption of the power stations before the levy is applied. Fluctuation of the system average auxiliary percentage is based on the different mix between power stations from year on year.

69. The environmental levy was adjusted by limiting coal and OCGT volumes because of the adjustment in the volumes on the coal burn and OCGT to be generated. The total adjustments are then R25m for the MYPD3 control period.

PURCHASES FROM INDEPENDENT POWER PRODUCERS (IPPs)

Medium Term Power Purchase Programme (MTPPP)[1]

Table 30: Approved MTPP Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
MTPPP Applied For		1 523	618	546	550	579	**3 816**
MTPPP Adjustments		(0)	(526)	(546)	(550)	(579)	**(2 201)**
Approved MTPPP	**5 819**	**1 523**	**92**	-	-	-	**1 615**

70. The MTPPP costs were adjusted based on the signed contracts and terms of the Power Purchase Agreements (PPAs).

[1] The amount of R5819m for 2012/13 includes all the IPPs

Renewable Energy IPPs[2]

Table 31: Approved Renewable Energy Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Renewable Applied For		1 428	8 987	13 879	16 249	17 353	**57 896**
Renewable Adjustments		(1 428)	(4 747)	(636)	137	2 336	**4 338**
Approved Renewable	-	-	**4 240**	**13 243**	**16 386**	**19 689**	**53 558**

71. The revised Commercial Operation Dates (CODs) for the first round IPPs and the second round IPPs were used to calculate the costs. Also included are the third round of the procurement programme as determined by the Minister of Energy IPP renewable energy procurement programme.

DoE Peaking OCGTS

Table 32: Approved DoE Costs Peaking for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
DoE Peaking Applied For		1 001	2 841	3 147	3 160	3 191	**13 340**
DoE Peaking Adjustments		(1 001)	(2 841)	(1 952)	(374)	313	**(5 855)**
Approved DoE Peaking	-	-	-	**1 195**	**2 786**	**3 504**	**7 485**

72. In calculating the allowable costs for this project, the delayed financial close for the Avon and Dedisa plants together with the construction periods required for these plants before they come on line were considered.

Short Term Power Purchases Programme (STPPP)

Table 33: Approved Short Term Purchases

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Short Term Applied For		1 022	503	-	-	-	**1 525**
Short Term Adjustments		(0)	(0)	-	-	-	**(0)**
Approved Short Term	-	**1 022**	**503**	-	-	-	**1 525**

73. The existing Power Purchase Agreements (PPAs) were considered together with the potential of other IPPs that are in MTPPP (after expiration of the agreement) joining the STPPP.

Single Buyer Procurement (SBP)

Table 34: Approved SBP Costs for MYPD3

[2] The total approved Renewable Energy IPPs revenue for MYPD3 is R53 558 m plus R4 602 m under spend from MYPD2. Eskom therefore, has R58 161 m for Renewable Energy in MYPD3.

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
SBP Procurement Applied For		74	79	83	88	94	**418**
SBP Procurement Adjustments		(74)	(79)	(83)	(88)	(94)	**(418)**
Approved SBP Procurement	-	-	-	-	-	-	-

74. These are contingency costs, in case the procurement responsibilities are transferred from the Department of Energy (DoE) to the Eskom Single Buyer office and are therefore disallowed.

Transmission (Tx) Ancilliaries Costs

Table 35: Approved Tx Ancillaries Costs for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Tx Ancilliaries Applied For		141	273	388	97	(175)	**724**
Tx Ancilliaries Adjustments		(0)	(0)	(0)	(0)	(0)	**(0)**
Approved Tx Ancillieries	-	**141**	**273**	**388**	**97**	**(175)**	**724**

75. These costs are allowed since they are IPP ancillaries service costs which are full pass through costs in accordance with the ñRegulatory Rules for Third Party Transportation of Energyò

Demand Market Participation and Buy-Back

76. The approved costs of the Demand Market Participation (DMP) and power buy-back costs are indicated in Table 36 below.

Table 36: Approved Demand Market Participation (DMP) Expenditure for MYPD3

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD Total
DMP and Power buy-back Applied for							
Funding	726	3 275	1 973	1 972	1 835	2 001	11 056
Demand Savings(MW)		3 205	3 355	3 355	3 855	3 855	17 625
R/MW		1.02	0.59	0.59	0.48	0.52	0.63
DMP and Power buy-back Adjustments							
Funding	(75)	(2 108)	(1 285)	(1 972)	(1 835)	(2 001)	(9 201)
Demand Savings(MW)		(97)	(1 618)	(3 355)	(3 855)	(3 855)	(12 781)
R/MW		(0.65)	(0.19)	(0.59)	(0.48)	(0.52)	(0.24)
Approved DMP							
Funding	**651**	**1 167**	**688**	**-**	**-**	**-**	**1 855**
Demand Savings(MW)		**3 108**	**1 737**	**-**	**-**	**-**	**4 844**
R/MW		**0.38**	**0.40**	**0.00**	**0.00**	**0.00**	**0.38**

77. According to the IRP 2010, beyond 2015/16 there will be enough capacity due to the introduction of Medupi and Kusile power stations on the national

grid. Therefore it was necessary to adjust the DMP and power buy-back programmes accordingly. It should be noted that the power buy-backs programme is disallowed as the initiative is covered by the DMP.

Conclusion on Primary Energy & IPPs:

78. Table 37 below provides a summary of the primary energy and IPP costs as applied for by Eskom together with the adjustments made and approved costs.

Table 37: Total Approved Primary Energy and IPP Costs

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Total Applied For		64 508	76 033	84 973	92 890	100 536	**418 940**
Total Adjustments		(10 755)	(15 959)	(13 368)	(11 561)	(8 898)	**(60 541)**
Total Approved	**49 701**	**53 753**	**60 074**	**71 605**	**81 329**	**91 638**	**358 399**

DEPRECIATION

79. Table 38 below outlines the regulatory depreciation applied for by Eskom together with the Energy Regulatorś adjustments and approved regulatory depreciation.

Table 38: Regulatory Depreciation

R'm	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Depreciation Applied	37 220	30 792	34 848	38 447	40 846	44 271	189 204
Depreciation disallowed	(19 340)	(5 059)	(7 366)	(9 883)	(11 934)	(15 073)	(49 316)
Depreciation Allowed	**17 880**	**25 733**	**27 482**	**28 564**	**28 912**	**29 198**	**139 888**

80. The approved annual depreciation of 4% on Depreciated Replacement Cost (DRC) is premised on depreciating the allowed RAB over the remaining useful lives of the respective underlying assets in line with the provisions of the Electricity Pricing Policy[3].

INTEGRATED DEMAND MANAGEMENT (IDM)

[3] The South African Electricity Supply Industry: Electricity Pricing Policy GN 1398 of 19 December 2008.

81. Table 39 shows the Integrated Demand Management (IDM) costs as applied for by Eskom together with the NERSA adjustments and approved costs for the MYPD3 control period.

Table 39: Summary of Approved IDM Costs

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
IDM Applied for		2 941	2 709	1 862	1 966	3 612	**13 090**
IDM Adjustments		(1 486)	(1 756)	(1 042)	(1 254)	(2 368)	**(7 906)**
Approved IDM	**2 351**	**1 455**	**953**	**819**	**712**	**1 244**	**5 183**

82. Table 40 shows the detailed IDM expenditure including projects and operation costs. The IDM costs are adjusted by CPI and based on historical performance.

Table 40: Detailed Approved IDM Costs for MYPD3

`	2012/13 Approved Expenditure	2013/14		2014/15		2015/16		2016/17		2017/18		MYPD3 Total	
		Applied for	Approved	Applied for	Approved	Applied for	Approved	Applied for	Approved	Applied for	Approved	Applied for	Approved
Funding	**2 351**	**2 941**	**1 455**	**2 709**	**953**	**1 862**	**819**	**1 966**	**712**	**3 612**	**1 244**	**13 090**	**5 183**
Programmes - Peak Demand Savings(MW)	**447**	458	379	358	294	221	187	232	196	461	415	1 730	1 471
Programmes - Annualised Energy Savings(GWh)	**1 815**	2 245	1 853	1 361	1 204	826	763	1 016	939	2 283	2 132	7 731	6 891
Programme Costs	-	2 660	1 107	2 419	612	1 581	468	1 652	348	3 033	834	11 345	3 369
Operating Costs including Depreciation	-	464	348	481	341	485	351	519	365	581	410	2 530	1 815
Other costs	-	(183)	-	(191)	-	(204)	-	(205)	-	(2)	-	(785)	-
R/MW	**5.26**	6.42	3.84	7.57	3.24	8.42	4.38	8.48	3.64	7.83	3.00	7.74	3.52
R/kWh	**1.30**	1.31	0.79	1.99	0.79	2.25	1.07	1.94	0.76	1.58	0.58	1.81	0.75

83. Table 41 shows the breakdown of the IDM programme costs excluding operation and Measurement and Verification (M&V) which is considered under overheads.

Table 41: Allowed IDM programmes costs excluding operation and Measurement and Verification (M&V) costs

R'm	IDM Applied for	IDM Adjustments	Approved IDM
Lighting & Heating, Ventilation, and Air Conditioning HVAC (Industrial & Commercial)	1 800	(621)	**1 179**
Lighting (LED - Residential)	886	(52)	**834**
Process Optimisation	1 350	(1 219)	**131**
Compressed Air	696	(496)	**200**
Heat Pumps	619	(619)	**-**
Demand Reduction	2 031	(1 828)	**203**
Shower Heads	159	(151)	**8**
Solar Water Heaters (SWH)	2 410	(2 410)	**-**
Sustainability Programmes	339	(323)	**16**
Greenfields & Renewables	1 057	(533)	**524**
Power Alert	390	(117)	**273**
Total	**11 737**	**(8 369)**	**3 368**

84. The small scale renewable power generation project is approved as a pilot programme because the allowed programme cost of R0.72/kWh is less than the average cost of new base load generation plant.

85. Waste Heat Recovery for own use generation falling under process optimisation is disallowed as the programme is targeted at a few Eskom large industrial customers who can economically harness waste heat from their industrial processes.

86. Measurement and Verification (M&V) costs are limited to 5% of programme costs based on international best practice and MYPD2 historical performance.

87. Solar Water Heaters (SWH) and Heat pumps are disallowed as the MYPD2 M&V history proved that these programmes achieve little demand savings at a high cost. Going forward all SWH shall be funded by DoE through the fiscus.

88. The long term view of the Energy Regulator is that all IDM programmes with the exception of system operator tools (such as DMP) should be implemented by a suitable agency. The management of IDM funds by Eskom creates a conflict of interest as Eskom is then required to encourage

its customers not to purchase its generated electricity. IDM funds shall therefore be ring-fenced within Eskom to enable transfer of the funds to a suitable agency.

89. In case of non performance the penalty will be calculated as follows:

Penalty(R/MW) = total allowed revenue ÷ proposed MW

=R/MW x MW (unsaved MW)

OPERATING EXPENDITURE (OPEX)

90. Operating expenditure includes all costs involved in the day-to-day running of the business, including manpower costs, repairs and maintenance costs, cost of cover, arrear debt, corporate overheads, Integrated demand management (ñIDMò) and other costs such as insurance, training, travel and accommodation. IDM was discussed above.

91. Eskom has applied for a total of R310 596m to cover for its operating costs over the five years of the MYPD3 control period. The breakdown of the operating costs is shown in Table 42:

Table 42: Summary of Eskom's Operating Costs application

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Manpower Costs	14 418	17 056	19 103	20 984	23 345	24 977	**105 465**
Maintenance	10 824	11 856	13 119	15 674	17 941	16 665	**75 255**
Cost of cover	1 609	2 159	1 829	1 679	1 026	485	**7 178**
Arrear debt	867	927	1 051	1 215	1 388	1 511	**6 092**
Other incl insurance	4 813	13 409	14 868	16 632	16 130	17 777	**78 816**
Corporate Overheads	4 316	7 594	7 557	7 194	7 569	7 876	**37 790**
Total	**36 847**	**53 001**	**57 527**	**63 378**	**67 399**	**69 291**	**310 596**

Manpower costs

92. Table 43 shows the Manpower costs as applied for by Eskom together with the adjustment made by NERSA and the approved costs.

Table 43: Approved Distribution, Transmission and Generation manpower costs

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	Total
Manpower Applied For	15 832	17 056	19 103	20 984	23 345	24 977	**105 465**
Manpower Adjustments	(1 414)	(1 684)	(2 646)	(3 398)	(4 470)	(4 752)	**(16 950)**
Approved Manpower	**14 418**	**15 372**	**16 457**	**17 586**	**18 875**	**20 225**	**88 515**

93. Eskom applied for a total amount of R105 465m for manpower costs over the MYPD3 control period. This amount includes the three regulated businesses, Generation, Transmission and Distribution. The figure is made up of R46 765m for Generation, R6 566m for Transmission, R52 134m Distribution over the MYPD3 control period.

94. Manpower costs in the application increase at an average rate of 9.30% which is above Eskom's manpower inflation assumption of 7.1% and NERSAÕs average inflation forecast of 5.60% over the MYPD3 control period.

95. The Energy Regulator approves an increase of 5.60% plus 1.46% which takes into account the average growth in the headcount over the MYOD3 control period.

96. EskomÕs existing employee headcount is 35 834 and is expected to grow by 2 165 to 37 999. This translates to growth of 1.1% in the headcount over the MYPD3 control period. The headcount growth is considered reasonable and compares well with the international benchmark ratio of 1:1.2 (employee per megawatt) as determined by VGB PowerTech. The Eskom average ratio over the MYPD3 control period is 1:1.24.

97. According to EskomÕs forecast the manpower cost will increase by 17.5% compared to the 5.7% approved in MYPD2. Eskom cited growth and restructuring prospects as the main contributors to the higher increase in 2012/13. NERSA has used the approved MYPD2 figures as the base and increased the Manpower costs by 7.06% for the MYPD3 control period.

Repairs and Maintenance

Table 44: Approved Maintenance Costs - all divisions

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Maintenance Applied For	10 824	11 856	13 119	15 674	17 941	16664	**75 254**
Maintenance Adjustments	-	(553)	(1 246)	(2 175)	(3 226)	(1 852)	**(9 052)**
Approved Maintenance	**10 824**	**11 303**	**11 873**	**13 499**	**14 715**	**14 812**	**66 202**

98. Eskom applied for an overall amount of R75 255m for repairs and maintenance costs over the MYPD3 control period. The divisional amounts applied for over the MYPD3 control period are R34 318m for Generation, R2 605m for Transmission and R38 332m for Distribution.

99. The average annual increase is 6.75%. There is a high increase of 24% in year 2015/16 and 19% in year 2016/17. The increased amounts in 2015/16 and 2016/17 are aimed at rectifying the maintenance backlog when the new Generation capacity is added.

100. Table 45 shows the Generation division maintenance program requirements and adjustments made by NERSA. The latest updates on the build programme indicate that the capital build programme will be delayed by at least one year. Therefore the planned maintenance of R1 871m which is linked to the eradication of the maintenance backlog has been disallowed.

Table 45: Approved Maintenance Costs -Generation Division

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Gx Maintenance Applied For	5 157	5 783	5 844	7 238	8 644	6 809	**34 318**
Gx Maintenance Adjustments	-	(0)	(0)	(412)	(1 459)	(0)	**(1 871)**
Approved Gx Maintenance	**5 157**	**5 783**	**5 844**	**6 826**	**7 185**	**6 809**	**32 447**

101. The Transmission division maintenance programme shown in Table 46 accounts for 3.4% of the total repairs and maintenance costs. The average annual increase is 4.63% over the five-year MYPD3 control period. The costs are consistent with the MYPD2 control period and are therefore allowed.

Table 46: Approved Maintenance Costs - Transmission Division

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Tx Maintenance Applied For	325	461	478	505	564	597	**2 605**
Tx Maintenance Adjustments	-	(0)	(0)	(0)	(0)	(0)	**(0)**
Approved Tx Maintenance	**325**	**461**	**478**	**505**	**564**	**597**	**2 605**

102. Eskomôs maintenance requirement for the Distribution division shown in Table 47 amounts to 50.9% of the overall maintenance costs. The average annual increase is 15.42% over the five-year MYPD3 control period. The total disallowed costs for Distribution amounts to R7 181m. The following line item costs were disallowed from the application as they were regarded as double-counting: Electrification ï new connections; Electrification ï current base; reduce restoration time to improve SAIDI performance; reduce restoration time to meet regulatory requirements and Implement asset management requirements. The above line items have already been included in reliability improvements, vegetation management, major maintenance and other maintenance costs.

Table 47: Approved Maintenance Costs - Distribution Division

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Dx Maintenance Applied For	5 342	5 612	6 797	7 931	8 733	9 259	**38 332**
Dx Maintenance Adjustments	-	(553)	(1 246)	(1 763)	(1 767)	(1 852)	**(7 181)**
Approved Dx Maintenance	**5 342**	**5 059**	**5 551**	**6 168**	**6 966**	**7 407**	**31 151**

Cost of cover

103. Eskom hedges all foreign currency or commodity exposures, imports and exports and foreign loan draw downs exceeding R50 000. Cost of cover is the premium or interest differential paid to financial institutions that provide the hedge to obtain and roll over forward cover on the foreign currency exposure. The major contributors to cost of cover are the new build programmes, nuclear costs, including future fuel, exchange rate between the Rand and the currencies of those countries from which Eskom sources capital assets and the interest rate differential between South Africa and those countries.

104. Table 48 shows the cost of cover as applied for by Eskom which the Energy Regulator approves. Eskom will report any gains or losses made at the end of each year of the control period.

Table 48: Approved Cost of cover

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Cost of Cover Applied For	1 609	2 159	1 829	1 679	1 026	485	**7 178**
Cost of Cover Adjustments	-	(0)	(0)	(0)	(0)	(0)	**(0)**
Approved Cost of Cover	**1 609**	**2 159**	**1 829**	**1 679**	**1 026**	**485**	**7 178**

Arrear debt

105. Eskom forecasts cumulative arrear debt of R6 092m for the five year MYPD3 control period is based on projected payment levels and tariff increases and is shown in Table 49. This results in an arrear debt/distribution revenue ratio of 0.6% which is higher than the approved 0.5% in the MYPD methodology.

106. The Energy Regulator approves the 0.5% debt/ as a percentage of Distribution revenue ratio as appropriate since the approved average price increase is below the applied for average increase. The reduction will result in a R780m adjustment.

Table 49: Arrear debt provision

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Arrear Debt Applied For	1 440	927	1 051	1 215	1 388	1511	**6 092**
Arrear Debt Adjustments	(573)	(178)	(180)	(184)	(169)	(69)	**(780)**
Approved Arrear Debt	**867**	**749**	**871**	**1 031**	**1 219**	**1 442**	**5 312**

Other costs

107. Other costs shown in Table 50 consist of various expenses incurred in the day-to-day operating of the licensee. These costs include information management systems, insurance, consultantsô costs, engineering costs, administration costs, telecommunication, customer service, audit fees, travel and other general costs.

108. The overall costs increase by 178.60% from the last year of MYPD2 (2012/13) to the first year of MYPD3 (2013/14). Some of the reasons provided were the increase in insurance costs due to the expanded asset base, funding of electrification new connections and an increase in customer service costs to improve revenue collection in Soweto.

109. In the absence of proper justification for the increases and project list, NERSA limits the increases to (CPI/PPI) inflation related increases and expected capacity expansion for the MYPD3 control period, resulting in a R47 586m adjustment.

Table 50: Approved Other costs

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Other costs Applied For	5 602	13 409	14 868	16 632	16 130	17777	**78 816**
Other costs Adjustments	(795)	(8 345)	(9 205)	(10 393)	(9 312)	(10 331)	**(47 586)**
Approved Other costs	**4 813**	**5 064**	**5 663**	**6 239**	**6 818**	**7 446**	**31 230**

Corporate Overheads

110. The Corporate Division costs shown in Table 51 include corporate manpower costs and exclude IDM, which is dealt with separately in this document. The costs in this division are driven mainly by the Manpower costs and depreciation.

111. Eskomôs corporate manpower base (2012/13) is increasing by 71% from what was approved in the last year of the MYPD2 control period. Eskomôs reason for the higher increase was due to restructuring and centralisation of its business functions. The restructuring included movement of Manpower from certain divisions to the Corporate Division and therefore would have required movement with budgets from the divisions. The decision is to limit the annual increases of corporate manpower to inflation of 5.6% plus a 1.46% margin to accommodate any above-inflation wage settlements. This increase is based

on the MYPD2 approved figures. Therefore the amount disallowed for manpower is R9 820m which is included in the corporate overheads adjustments in Table 51.

112. Eskom has applied for depreciation of R13 255m as part of its corporate expenses. However, the value of the applicable capex as applied for by Eskom is only R4 813m, to be depreciated over 5 years. Therefore the allowed deprecation is limited to R3 902m over the MYPD3 control period. Therefore the amount disallowed for depreciation is R9 353m which is included in the corporate overheads adjustments in Table 51.

Table 51: Approved Corporate Overheads

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Corporate overheads Applied For	4 533	7 594	7 557	7 194	7 569	7876	**37 790**
Corporate overheads Adjustments	(217)	(4 023)	(4 155)	(4 006)	(3 235)	(3 754)	**(19 173)**
Approved Corporate overheads	**4 316**	**3 571**	**3 402**	**3 188**	**4 334**	**4 122**	**18 617**

Conclusion on OPEX

113. Table 52 below shows the total from operating expenditure comparing what Eskom has applied for as part of its revenue requirement, adjustments made and what has been allowed.

Table 52: Total approved OPEX

R'm	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Total Applied For	53 001	57 527	63 378	67 399	69291	**310 596**
Total Adjustments	(14 783)	(17 432)	(20 156)	(20 412)	(20 758)	**(93 541)**
Total Approved excl Ancillary charges	**38 218**	**40 095**	**43 222**	**46 987**	**48 533**	**217 055**
Transmission Loss & Ancillary charges	7 301	8 470	9 686	10 782	12 043	**48 282**
Total Approved	**45 519**	**48 565**	**52 908**	**57 769**	**60 576**	**265 337**

RESEARCH AND DEVELOPMENT

114. Eskomôs application includes the Research and Development (ñR&Dò) costs. The identified R&D projects were found to be sound, and in line with the requirements of the R&D rules as indicated in the MYPD methodology.

115. The total revenue approved on the MYPD2 control period was R774m, and Eskom spent R623m indicating an under spending of 19.5%, (i.e. R151m). Therefore in order to obtain the base for the first year of the MYPD3 control period, the average of the revenue spent in the first year of the MYPD2 control period was taken as the basis for the 2013/14 financial year. In determining the projections for the following years the revenues were inflated by CPI. The approved R&D revenues will still enable Eskom to undertake the identified projects.

116. The Energy Regulator adjustments are indicated in Table 53 below.

Table 53: Approved Research and Development Costs

R'm	2012/13 Approved Expenditure	2013/14	2014/15	2015/16	2016/17	2017/18	Total
R & D Applied For	280	456	385	367	354	274	**1 836**
R & D Adjustments	-	(248)	(166)	(137)	(111)	(17)	**(679)**
Approved R & D	**280**	**208**	**219**	**230**	**243**	**257**	**1 157**

SALES VOLUMES

117. The sales forecast of the MYPD3 application is given in Table 54 below:

Table 54: Approved sales volumes forecast

GWh	2012/13 Approved	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Standard tariff sales	214 737	206 587	208 441	213 544	218 193	223 217	**1 069 982**
Negotiated pricing agreement	11 312	11 303	11 303	11 333	11 302	11 302	**56 543**
Exports	11 846	9 513	9 769	10 761	9 618	9 507	**49 168**
Approved sales forecasts	**237 895**	**227 403**	**229 513**	**235 638**	**239 113**	**244 026**	**1 175 693**
GDP		2.6	3.6	3.6	3.9	4.0	

118. The forecasted volumes are based on the individual customers and their expected demand for the next 5 years. The projected sales volumes are dependent on the achievement of the IDM and energy efficiency targets. Sales forecasts are much lower than assumed at the time of the MYPD2 control period as large customers switch off furnaces in winter and are using more energy efficient furnaces. Eskom indicated that some municipalities will be generating their own electricity in the MYPD3 control period and that there will be a reduction in exports in the latter years of the MYPD3 due to an increase in the importing countryÕs generation capacity.

119. There is a correlation between the GDP and the sales volumes. The overall percentage sales volume increases over the MYPD3 control period are 2.4%, 0.9%, 2.7%, 1.5% and 2.1% p.a. The Energy Regulator accepts these forecast figures as being reasonable.

SERVICE QUALITY INCENTIVES (SQI)

120. Three measures were used for SQIÕs on Transmission during the MYPD2 control period. The three measures used are System Minutes (SM) <1, SMÓ1 and line faults/100km. Transmission earned a cumulative reward of R18.49m for the first two years of the MYPD2 control period.

121. System Average Interruption Duration Index (SAIDI) is the measure that is used in the SQI scheme for Eskom Distribution. Distribution has earned a

total cumulative reward of R2.16m for the first two years of the MYPD2 control period.

122. The SQI scheme for the MYPD3 control period will involve an introduction of the scheme for Generation business. Transmission and Distribution will continue to use the same measures as has been applicable in the MYPD2 control period. The value of the scheme will be set at one percent of allowable revenue during the MYPD3 control period.

ESKOM'S RETAIL TARIFF STRUCTURAL ADJUSMENTS (ERTSA)

123. **Residential Tariffs**: Eskomôs residential customers are currently on the inclining block structure. Eskom proposes that its residential tariffs be restructured as follows:

Table 55: Eskom's Proposed Residential Tariff Structures

Tariff Name	Current Tariff Structure	Eskom Proposed Structure
Homelight 20A	4 Block IBT	Single Energy Rate
Homelight 60A	4 Block IBT	Revised 2 Block IBT
Homepower	4 Block IBT	Three Part Tariff: Service Charge + Energy Charge + Demand Charge
Homepower Bulk	4 Block IBT	Three Part Tariff: Service Charge + Energy Charge + Demand Charge

124. The residential tariff structures proposed by Eskom shift the residential tariffs further away from cost reflective levels. For example, the cost reflective price for Homelight 20A is 188.46c/kWh. In 2012/13 the average tariff applicable to Homelight20A customers was 76.15c/kWh and for the 2013/14 financial year, Eskom proposes a tariff of 75.58c/kWh. The decrease in the tariff is due to restructuring the tariff from a four block IBT to a flat rate tariff.

125. One of the principles that emanate from the restructuring proposal is ñthe more you use the less you payò Table 56 below highlights what a Homepower 3 (high consumption) customer will pay versus a Homepower 4 customer (low consumption). Although the consumption levels of these two tariff categories differ considerably, the average tariffs are fairly similar and go against the principles of the Electricity Pricing Policy (EPP) which states that ñ*the amount individual users pay for services should generally be in proportion to their use of that service.*"

Table 56: Comparison of Homepower tariffs

Home Power Stanard-(NLA)	Homepower 3		HP3
Assumed usage			5244
Size / Usage	Rate	unit	
Service Charge (R/day)	0	30.00	-
Network charge (R/day)	15.15	30.00	454.50
Energy Charge (c/kwh)	112.57		5 903.17
Sub-total			6 357.67
DSM Levy		3.5	-
Total Charge for the Month			6 357.67
Average Tariff (c/kWh)			121.24

Home Power Stanard-(NLA)	Homepower 4		HP4
Assumed usage			793
Size / Usage	Rate	unit	
Service Charge (R/day)	0	30.00	-
Network charge (R/day)	2.39	30.00	71.70
Energy Charge (c/kwh)	112.57		892.68
Sub-total			964.38
Total Charge for the Month			964.38
Average Tariff (c/kWh)			121.61

126. Eskomôs proposed changes to the residential tariffs from the four block IBT structure to the aforementioned tariff structures by Eskom also leads to higher growth levels in the required affordability cross-subsidies. Table 57 below highlights the difference in the subsidy levels required and demonstrates that the restructured tariffs require additional cross-subsidies.

Table 57: Restructure subsidies vs. IBT subsidies

R'm	2013/14	2014/15	2015/16	2016/17	2017/18	MYPD3 Total
Total Subsidy based on proposed structure	(5 988)	(7 296)	(8 621)	(10 328)	(12 141)	(44 374)
Total Subsidy based on IBT Structure	(5 927)	(7 070)	(8 231)	(9 617)	(10 999)	(41 844)
Difference in subsidy	**(61)**	**(226)**	**(390)**	**(711)**	**(1 142)**	**(2 530)**

127. The Homepower Bulk tariff is applicable to group housing schemes. With the current IBT structure, the majority of the consumption bought by the bulk point was at the Block 4 rate. This makes it difficult for sectional title developments to pass on the benefit of the IBT structure to its customers. The Homepower Bulk tariff is therefore approved as proposed by Eskom.

128. Due to the aforementioned reasons, the following residential tariff structures are approved for implementation:

Table 58: NERSA approved residential tariff structures

Tariff Name	NERSA Approved Structure	Details
Homelight 20A	2 Block IBT	Block 1: 0-350kWh Block 2: >350kWh
Homelight 60A	2 Block IBT	Block 1: 0-600kWh Block 2: >600kWh
Homepower	2 Block IBT + Fixed Charge	Block 1: 0-600kWh Block 2: >600kWh
Homepower Bulk	Three Part Tariff	Service Charge + Energy Charge + Demand Charge

129. The Homelight 20A customers consuming up to 350kWh/month will see an increase equivalent to inflation of 5.6%. On Block 2, customers will see an

increase of 7.6% (CPI plus two percent). This is applicable per annum over the MYPD3 control period.

130. All other residential customers (Homelight 60A and Homepower) will see the average price increase of 8%. This is applicable per annum over the MYPD3 control period.

131. **Improved Cost reflectivity**: Eskom proposes the implementation of its updated Cost of Supply (COS) study which leads to the following structural adjustments:

    131.1. Rates will be updated based on their respective cost and increases per licensee. This will result in changes to the current energy, network and service related charges that are not the same as the average price increases.

    131.2. All tariff cross-subsidies (received and paid) will be shown transparently. These subsidies are related to affordability subsidies, historic electrification and network subsidies and low-voltage subsidies found in large power urban tariffs. .

    131.3. Use-of-system charges will be based on the cost per voltage for all large power customers. Where there are low-voltage subsidies, these will be transparently shown as a low-voltage subsidy charge.

    131.4. The reliability and service charge covering the cost of providing ancillary services, which are costs incurred by the system operator to keep the national grid in balance, will be unbundled for the large power tariffs from the energy rates.

132. The impact of the rates based on their respective costs is highlighted in Table 59 below. As illustrated, the impact is predominantly on the demand charge component of the tariff. The proposed restructuring of the tariff could lead to higher demand charges for customers specifically municipalities. This in turn could result in municipalities passing on the higher demand charge to its customers. Due to the above, it is decided that the impact of the rates based on their respective cost and increases per licensee be phased in over the five year period with implementation with effect from 2014/15.

Table 59: Rates Updated Based on Respective Costs

Details	2013/14	2014/15	2015/16	2016/17	2017/18
Eskom Total	16.20%	15.90%	16.00%	16.00%	16.00%
Energy (c/kWh)	15.10%	16.30%	16.00%	15.70%	15.70%
Transmission (R/kVA)	69.50%	11.20%	22.20%	26.90%	34.80%
Distribution wires (R/kVA)	19.90%	15.10%	15.80%	17.10%	15.10%
Distribution retail (c/kWh)	-4.50%	16.00%	12.40%	8.30%	5.40%

133. The unbundling of subsidies to be shown transparently together with the unbundling of the reliability service charge are in line with the approved

ñRegulatory rules for third party transportation of energyò and is therefore approved as proposed by Eskom.

134. The use of system charges to be based on the cost per voltage for all large power customers is also aligned to the ñRegulatory rules for third party transportation of energyòand is therefore approved as proposed by Eskom.

135. **Revision of Time-of-Use (TOU) structures**: The current generation ratio of the summer off-peak to the winter peak is 1:9. In the application, Eskom proposes adjusting this ratio to 1:8. Eskom states that there is a need to be cautious in how customers will react to the change and what the impact on the system and Eskom generation would be.

136. As that it is not known to what the extent that customers will respond to the changes in the tariff ratios, the risk of unanticipated shifts could have potentially severe implications for Eskom in the short to medium term. The adjustment of the TOU ratio from 1: 9 to 1: 8 is therefore approved as requested by Eskom. Eskom must however, in the next two years undertake detailed studies on the cost of supply, load shape profiles, customer requirements, customer responses and the status of the system to enable a further roll-out proposal to be formulated to move to a cost reflective tariff structure.

137. **Reactive energy charge:** The reactive energy charge is a price signal on the TOU tariffs for low power factor and is currently applied during peak and standard periods in high demand season (winter). Eskom proposes the introduction of a reactive energy charge throughout the year due to customers not managing their power factor in the low demand season (summer).

138. The reactive energy charge is a signal or penalty for low power factors such that customers who improve their power factors can avoid the penalty. The revenues associated with the reactive energy charge fall outside the revenue requirement, with the estimated revenues associated with this charge being approximately R875m. Due to the materiality of the revenues associated with this charge, Eskom must provide a detailed cost benefit analysis. The introduction of the reactive energy charge all year round is therefore not approved.

139. **Incorporation of the environmental levy charge in the energy charges:** When the environmental levy was introduced**,** it was shown as an explicit tariff charge to allow for transparency. The rationale for including the environmental levy as a separate charge was to indicate to customers a cost that was not attributable to costs within Eskomôs control. Eskom proposes to no longer have a separate charge to signal the cost of the levy but to recover the costs as part of the energy charges.

140. There are complexities in applying the environmental levy in conjunction with the other tariff increases as the levy does not increase at the same rate as the tariff rates. The levy is excluded when calculating the increase to be

applied to the tariff rates, resulting in a different increase to the tariff rates than the average increase. For this reason and to avoid confusion around separating the cost of the levy when calculating the tariff increase, the embedding of the environmental levy into the energy rates is approved.

141. **Alternate Tariff Options**: An issue not addressed in the current application is the need to have an appropriate tariff structure for those municipalities (predominantly with a residential load mix) that are unable to shift load but are forced to purchase on a TOU tariff. This results in cash-flow issues for the municipalities. Eskom must ensure that alternate tariff options are made available to ensure that sufficient relief is provided to these municipalities.

ECONOMIC IMPACT

142. There is no doubt that due to high electricity intensity of the South African economy, the electricity price increase proposed by Eskom will have a serious negative economic impact. The Energy Regulator did an economic impact assessment of Eskom's proposal. The focus of the assessment was on inflation, gross domestic product, employment, industry competitiveness and the poor. The Energy Regulator looked at three scenarios:

    142.1. A series of five 6% increases

    142.2. A series of five 9% increases

    142.3. A series of five 16% increases

Inflation

143. Inflation impact of the price increases was done in terms of consumer, producer and export prices. Consumer inflation (CPI) was further looked at in terms of overall CPI and CPI for different income groups (Low and High).

144. Table 60 below shows the impact of the three scenarios on different inflation measures.

Table 60: Real Price impact in percentage point terms due to a sequence of tariff increases over 5 years

Details	6%	9%	16%
CPI: Total	0.48%	0.72%	4.56%
CPI: Low Income Group	0.59%	0.88%	5.59%
CPI: High Income Group	0.47%	0.70%	4.46%
PPI	0.50%	0.75%	4.73%
Exports	0.47%	0.70%	4.46%

145. A series of 16% increases will push total CPI up by 4.56% compared to 0.48% and 0.72% in the cases 6% and 9% tariff increases, respectively. The 4.56% associated with 16% tariff increase translates into 0.36 percentage points per annum. This means that if we assume an inflation

rate of 6%, a tariff increase of 16% will push CPI to 6.4%. If Eskom's proposal is approved as requested Producer Price Index (PPI) will be pushed up by 4.73% compared to 0.50% and 0.75% in the cases of 6% and 9% increase. Low income households will experience 0.70% increase in their CPI compared to high income households who will experience an increase in CPI of 5.59% if 16% increase is assumed. The low impact for low income group is due to the fact that they will experience 9% increase only instead of 16%. It is worth noting that this CPI impacts might be on the low side taking into account that CPI for electricity will have a higher weight after the composition of the CPI basket has been revised. The weight of electricity is in the CPI basket is likely to be revised upwards.

146. Through PPI, exports prices will be pushed up by 4.46% in the case of 16% increase, 0.47% in the case of 6% increase and 0.70% in the case of 9% increase. The increase in export prices will negatively affect competiveness of South African exporters as they struggle to pass on high input costs to their customers.

Gross Domestic Product

147. Electricity price increase will negatively affect South African GDP regardless of the rate of the increase. The only difference will be the significance of the impact. This is mainly because the South African economy is highly electricity intensive. A series of five 16% increases has the potential to cut 8.1% off GDP growth. This means that if we assume a GDP growth of 3.7%, a 16% increase will push GDP down to 3.4% (see Table 61 below). This means a cut of 0.30 percentage points. If a 6% tariff increase is granted, GDP growth gets cut by 0.1 percentage points.

Table 61: Impact on Economic Growth and Employment

Details	6%	9%	16%
Economic Growth (percentage per annum)	0.10%	0.20%	0.30%
Impact on Employment Level at 2025 (Numbers; 2009 = 9 603 597)	146 449	402 553	652 654

Employment

148. The reduction in GDP growth associated with electricity price increases will result in a number of jobs being compromised. A series of five 16% increases will compromise about 652 654 jobs (see Table 61 above). The impact is better when a 6% increase is assumed. An inflation linked increase has the potential of compromising about 146 449 jobs compared to about 652 654 jobs associated with 16% increase.

REGULATORY CLEARING ACCOUNT (RCA)

149. The assessment of the RCA for the MYPD2 control period will be performed on receipt of Eskomûs audited financial statements for the 2012/13 financial year.

150. Any adjustments to be made will be approved by Energy Regulator in terms of the MYPD methodology and will be effected in Year 2 (2014/15) of the MYPD3 control period.

POLICY ISSUES

151. During the MYPD3 process, a number of policy issues requiring consideration have been raised. Amongst others, the following issues have been raised:

    151.1. A funding model is needed to ensure municipalities do not have to depend on electricity revenues for their finances.

    151.2. The Free Basic Electricity (FBE) allocation provided should be increased from 50kWh/month.

    151.3. Electricity should be Value Added Tax (VAT) exempt.

    151.4. Subsidies tend to distort the electricity price thus South Africa has to develop a National Subsidy Framework so that subsidies are excluded from the price.

    151.5. The environmental levy should be used to fund IPP development instead of imposing an additional 3% on the electricity price increase.

    151.6. Taxes/fiscus should fund the build programme rather than the electricity tariff.

    151.7. A clear statement on the dividend policy by the shareholder is required.

    151.8. The Integrated Resource Plan (IRP2010) needs to be reviewed as it is outdated.

    151.9. A funding model for state led infrastructure development is required

    151.10. Social policy needs to be reconsidered in light of the end of an era in which cheap electricity contributed to the social wage.

152. These policy issues will be channelled to the relevant Government departments to ensure further deliberation where appropriate.

CONCLUSION

153. On the conspectus of the facts and evidence presented to the Energy Regulator, it is appropriate to approve the allowed revenues, standard average prices and percentage price increases as set out above for the MYPD3 control period (2013/14 to 2017/18).

End.