

Presentation to the Select Committee on Economic and Business Development

Eskom's revenue application for
2018/19

24 April 2018

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Enabling Legislation

- National Energy Regulator Act, 2004 (Act No. 40 of 2004)
- Electricity Regulation Act, 2006 (Act No. 4 of 2006) ('ERA')
- Key Published Policy
 - Electricity Pricing Policy (EPP) GN1398, 19 December 2008
 - Integrated Resource Plan 2010 GN400, 6 May 2011
- Key Regulations
 - Electricity Regulations on New Generation Capacity GN 399 4 May 2011

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Objects of the ERA

- To achieve efficient, effective, sustainable & orderly development of the ESI in SA.
- To safeguard & meet the interests & requirements of present and future electricity customers & end users.
- To facilitate investments & universal access to electricity.
- To promote the use of diverse energy sources, energy efficiency, competitiveness & customer choice.
- To facilitate a fair balance between the interests of customers, licensees, investors & the public.

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Functions Prescribed in the Electricity Regulation Act

- Licensing of Generation , Transmission, Distribution ,Trading, Import and Export;
- Setting of tariffs and price structures;
- Setting of licence conditions and standards;
- Monitoring and enforcement of compliance;
- Issue rules to implement national government's electricity policy framework, the integrated resource plan and the Act;
- Investigate complaints;
- Mediate or arbitrate in disputes;
- Gather and store industry information
- Register those who need to be registered.

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REGULATION OF ELECTRICITY PRICES/TARIFFS

- **Electricity Regulation Act, 2006 (Act No. 4 of 2006)**
- Section 4(a)(ii) says that **the regulator must regulate prices and tariffs.**
- Section 15 (1) (a) says:- *"must enable an efficient licensee to recover the full cost of its licensed activities, including a reasonable margin or return;"*.
- Section 15(1) (c) and (d) says:- *"must avoid undue discrimination between customer categories" and "may permit the cross-subsidy of tariffs to certain classes of customers"*
- NERSA also has to comply with the Principles in the Electricity Pricing Policy document because Section 4 (a) (iv) says:- *"issue rules designed to implement the national government's electricity policy framework, the integrated resource plan and this Act;"*

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REGULATION OF ELECTRICITY PRICES

For Eskom NERSA uses a Revenue Requirement Methodology based on s15 (1) (a) of the ERA which in turn leads to a rate of return methodology (the Multi-Year Price Determination) – the control period is currently 5 years, 2013/14 – 2017/18

The rate of return formula is as follows:

$$AR = E + (V - d + w) r + RCA$$

Where:

AR = Allowed revenue

E = Expenses

V = value of qualifying property, plant and equipment (Regulatory Asset Base)

d = accumulated depreciation on qualifying property, plant and equipment

w = allowance for working capital

r = rate of return using the weighted average cost of capital (WACC)

RCA = Regulatory Clearing Account

The Average Electricity Price per unit is then determined by dividing this revenue by the forecasted volume of Electricity to be sold.

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MYPD COMPONENTS

MYPD component	Description
Regulatory return	-Determines the return to investors based on the allowed rate of return -Calculated based on the Weighted Average Cost of Capital (WACC)
Plus (+) Primary Energy (Fuel) Costs	-Cost of fuel used in the generation of electricity -Mainly coal, diesel, nuclear fuel etc.
Plus (+) Independent Power Producers (IPPs)	-Electricity purchased by Eskom from other producers (IPPs)
Plus (+) Asset Depreciation	-Asset amortisation of the expected economic life of the asset -May use actual estimation per assets or may use average estimated asset lives
Plus (+) Integrated Demand Management (IDM) costs	-Costs incurred in support of Energy Efficiency, Demand Side Management and similar programmes
Plus (+) Operating Costs	-Operational costs incurred in the production and supply of electricity -Manpower costs, repairs and maintenance, administration costs etc.
Plus (+) Government Taxes / Levies	-Levies and taxes imposed on electricity by Government (treated as past through costs -Currently the levy imposed is the Environmental Levy
Plus/Minus (+/-) Balance in the Regulatory Clearing Account (RCA)	-The account to which all variances between forecasts and actual figures are deposited. -The balance is used at a NET basis – Could be a reduction to Eskom's revenues or addition to calculated revenues
Equals (=) Allowed revenues for each year	Revenues allowed for collection by Eskom from it's customers

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NERSA Decision for 2018/19

	Units	Eskom Application 2018/19	NERSA Adjustment	NERSA Decision 2018/19
Total expected revenues from all customers (A+B)	Rmillion	219 514	-29 166	190 348
Negotiated Pricing Agreements and International customers (A)	Rmillion	13 308	630	13 938
Revenues from tariff based sales (B)	Rmillion	206 206	-29 796	176 410
Forecast sales to tariff customers (C)	GWh	192 953	-4 871	188 082
Standard average price (B ÷ C * 100)	c/kWh	106.87		93.79
% Price increase	%	19.90%		5.23%

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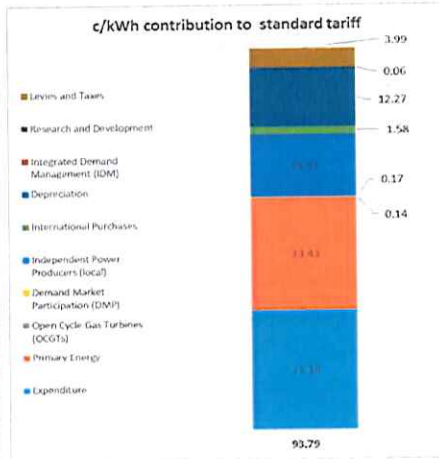
Eskom Allowed Revenue by Cost Element for 2018/19

Cost Element (Rmillion)	Eskom Application 2018/19	NERSA Adjustment	NERSA Decision 2018/19
Return	22 690	5 427	28 117
Expenditure	62 221	-11 099	51 122
Primary Energy	58 331	-10 777	47 554
Open Cycle Gas Turbines (OCGTs)	691	-346	345
Demand Market Participation (DMP)	319	-29	290
Independent Power Producers (local)	34 209	-7 613	26 596
International Purchases	3 216	-	3 216
Depreciation	29 140	-4 237	24 903
Integrated Demand Management (IDM)	511	-511	-
Research and Development	193	-81	112
Levies and Taxes	7 994	99	8 093
Total Allowed Revenues	219 515	-29 167	190 348

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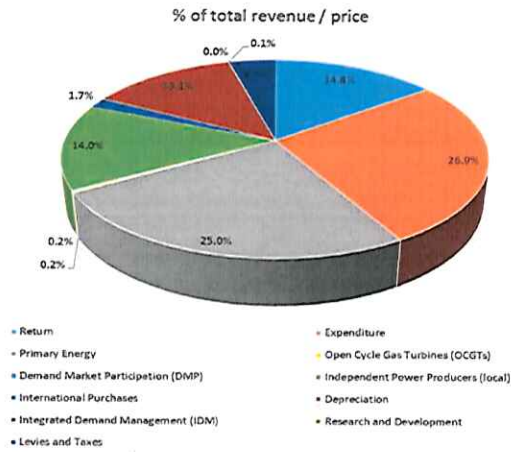
Breakdown of Price

Cost Element (Rmillion)	c/kWh contribution to standard tariff
Return	13.85
Expenditure	25.19
Primary Energy	23.43
Open Cycle Gas Turbines (OCGTs)	0.17
Demand Market Participation (DMP)	0.14
Independent Power Producers (local)	13.11
International Purchases	1.58
Depreciation	12.27
Integrated Demand Management (IDM)	-
Research and Development	0.06
Levies and Taxes	3.99
Total Price	93.79



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Breakdown of Price: Pie Chart



Primary Energy

Primary Energy Category	Eskom Application Rmillions	NERSA Production Amendment Adjustment Rmillions	NERSA Revised Costs Rmillions	NERSA Adjustment Rmillions	NERSA decision Rmillions
Coal usage	48 687	522	49 209	-10 032	39 177
Net coal obligation raised/(reversed)	1 304		1 304	-1 304	0
Coal obligations provisions			0		0
Water usage	2 310	28	2 336	17	2 353
Fuel procurement service	223	3	226	-187	39
Coal handling	1 974	22	1 996	14	2 010
Water treatment	490	6	496	3	499
Sorbent usage	63	1	64		64
Gas and oil (coal fired start-up)	2 405		2 405	-283	2 122
Coal and gas (Gas-fired)	9		9		9
Environmental levy	7 994		7 994	99	8 093
Total Coal	65 459	580	66 039	-11 673	54 366
OCGT fuel cost	691		691	-346	345
Nuclear	865		865	-366	499
Total Eskom Generation	67 015	580	67 595	-12 385	55 210
IPPs	34 209		34 209	-7 613	26 596
International Purchases	3 216		3 216		3 216
DMP	319		319	-29	290
Total Primary Energy	104 759	580	105 339	-20 027	85 312

Expenditure

- The expenditure line item has been adjusted downwards by R11.1bn as shown below

R'm	2018/19		NERSA Proposal
	Eskom Application	Adjust	
Employee Benefit cost	28 212	-3 898	24 314
Maintenance	17 665	-2 465	15 200
Other costs	11 032	-2 738	8 294
Arrear debt	1 099	-2	1 097
Corporate Services	5 665	-1 996	3 669
Other income	(1 452)		
Total Operating costs	62 221	-11 099	51 122

- The major adjustment was made on employee benefit costs
- NERSA is of the view that Eskom needs to control its costs better.

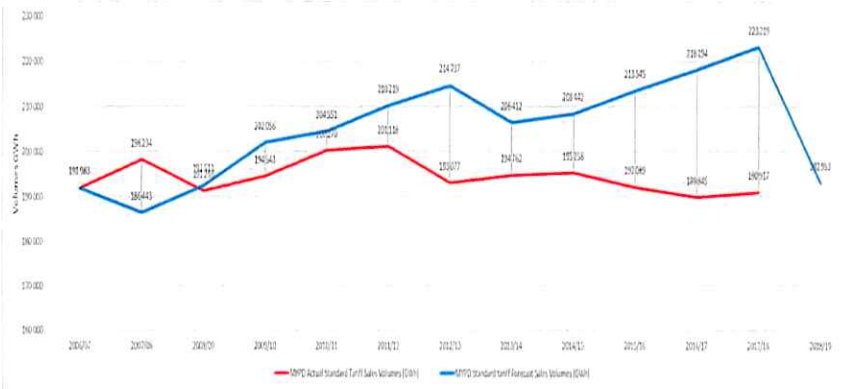
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Depreciation

- Eskom has applied for depreciation of R29 140m, NERSA's decision approved R24 902m.
- Generation depreciation was adjusted downwards to reflect the MYPD3 revaluation values.
- Hendrina and Arnot have been removed from RAB for purposes of earning a return and depreciation.
- Eskom is allowed a return on assets in use.

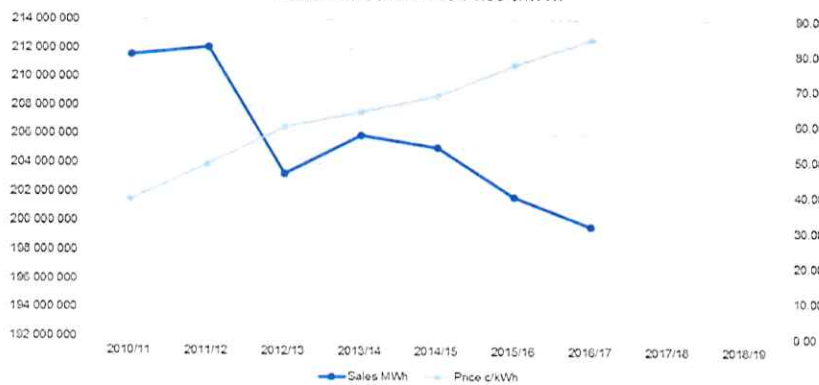
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History Of Eskom Sales Forecasts



History Of Eskom Sales

Eskom Sales MWh vs Price c/kWh



Eskom Revenue Analysis

R'm	2013/14	2014/15	2015/16	2016/17
Approved Revenue by NERSA	149 937	163 584	180 332	196 378
Eskom's actual Revenue collected	138 214	146 267	163 160	175 094
Revenue surplus/(shortage)	(11 723)	(17 317)	(17 172)	(21 284)
surplus/(shortage) as % of Decision	-7.8%	-10.6%	-9.5%	-10.8%

- The table above indicates that over the past four years Eskom has not been able to recover what has been allowed by the Regulator.

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Analysis of Eskom's Major Costs

R'M	2014/15				2015/16			
	Decision	Actuals	Variance	% Var on Dec	Decision	Actuals	Variance	% Var on Dec
Primary Energy	54 966	73 972	19 006	35%	56 779	69 622	12 843	23%
Operating Costs	48 565	44 982	(3 583)	-7%	52 908	55 198	2 290	4%
Capital Expenditures	45 113	54 394	9 281	21%	42 064	56 978	14 914	35%
Total	148 644	173 348	24 704	17%	151 751	181 798	30 047	20%

Although Eskom has been experiencing constraints in revenue collection, their cost have been increasing by an annual average of 16%.

R'M	2016/17			
	Decision	Actuals	Variance	% Var on Dec
Primary Energy	62 060	63 002	942	2%
Operating Costs	57 769	61 211	3 442	6%
Capital Expenditures	46 655	58 924	12 269	26%
Total	166 484	183 137	16 653	10%

Eskom's biggest cost overruns have been on their capital expenditures.

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Conclusions

- Eskom has perpetually failed to collect the allowed revenues whilst its expenditure has also continued to exceed that determined by the Energy Regulator
- Continued increases in tariffs has seen commensurate decreases in consumption, which have been attributed to, amongst others, affordability limits having been reached by its customers in a depressed economic environment and a stagnant economy (vicious cycle)
- In order to break the vicious cycle, Eskom needs to either reduce its costs (including its fixed cost base) and hence its allowable revenue requirement whilst growing its sales volumes, thereby driving its tariffs to their most efficient level. This should result in smaller tariff increases going forward that will attract additional sales volumes that will result in even smaller tariff increases going forward and even higher sales volumes and so on, allowing it to transition to a virtuous cycle, which is the desired future state