Integrated Results Presentation for the year ended 31 March 2012

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#### Agenda and presenters





#### Executive summary



#### Brian Dames Chief Executive

Remember your power



#### Executive summary

- No load shedding since April 2008, despite an extremely tightly balanced energy system
- Safety remains a major concern and continues to be of primary focus
- Three years of good financial performances financial surpluses will be reinvested in the business, helping to fund the capital expansion programme and to service debt
- As at 31 March 2012, secured 77.6% of the funding required for the capital expansion programme
- NERSA approved Eskom's revised tariff increase for the final year of MYPD 2, beginning 1 April 2012, to an average increase of 16% (NERSA had previously approved an increase of 25.9% for 2012/13)
- R72.1bn spent on Broad-based Black Economic Empowerment
- Improved the efficiency of operations completed the first phase of the Back2Basics programme which rolled out a single-instance SAP system on schedule and within budget



#### Executive summary



- Significant progress in the capital expansion programme:
  - Installed 535MW of additional generation capacity, 631km of high-voltage transmission lines and 2 525MVA of new transformer capacity during the year to 31 March 2012
  - Commissioned three Komati power station units, Grootvlei power station unit 5 and increased capacity at Camden unit 6 – this leaves only 3 units at Komati to complete the return to service power stations
  - Since the inception of the capital expansion programme installed 5 756MW of additional generation capacity, 3 899km of high-voltage transmission lines and 20 195MVA of new transformer capacity
  - Hydrostatic pressure test for Medupi Unit 6 planned for June 2012
- Total learner complement of 11 953 learners; 5 715 are engineering, technical and artisan learners, 5 159 are in the youth programme as well as a further 1 079 learners
- In partnership with the Government hosted a highly successful Conference of the Parties (COP17), which took place in Durban in November and December 2011



#### Eskom at a glance



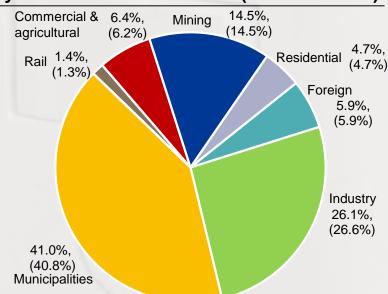
- Strategic 100% state-owned electricity utility, strongly supported by the government
- Supplies approximately 95% of South Africa's electricity and more than 40% of Africa's electricity
- For the year ended 31 March 2012:
  - Electricity sales of 224 785GWh (2011: 224 446GWh) and electricity revenues of R113.0bn (2011: R90.38bn)
- As at 31 March 2012:

In support of

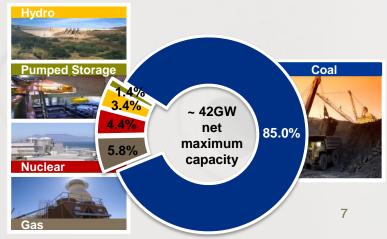
REMEMBER YOUR POWER

- 43 473 (2011: 41 778) employees
- 4.9 million (2011: 4.7 million) customers
- Net maximum generating capacity of 41 647MW (2011: 41 194MW)
- 399 750km (2011: 395 419km) of power lines and cables
- Moody's and S&P ratings: Baa2 and BBB+ with a negative outlook (2011 outlook: stable)
- 17.1GW of new generation capacity by 31 March 2018, of which 5.8GW already commissioned

# Eskom electricity sales by customer for the year ended 31 March 2012 (31 March 2011)



#### Eskom's net capacity mix – 31 March 2012



#### Eskom's strategic pillars support our purpose

#### Our purpose To provide sustainable electricity solutions to grow the economy and improve the quality of life of people in South Africa and in the region Accomplish Eskom's purpose . . Leading and 2. Reducing 5. Pursuing Implementing our carbon future resource coal haulage private sector partnering Execute to keep the footprint and and the participation requirements. strategic road-to-rail lights on pillars pursuing mandate and low-carbon the required migration plan growth enabling opportunities Get foundation right, build capacity Ist building block: 2nd building block: 3rd building block: Setting ourselves up Ensuring our financial Becoming a highfor success performance utility sustainability

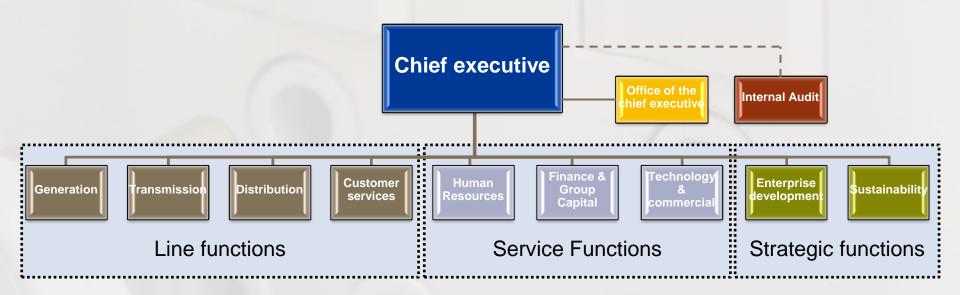
ZIISCE: Zero Harm, Integrity, Innovation, Sinobuntu, Customer Satisfaction, Excellence

Foundation: a focus on long-term nation building, electricity for all, new growth path initiatives, and balance the triple bottom line elements: commercial, environmental and socioeconomic roles



#### Corporate structure

- Eskom
- New organisational structure created to support our new strategy and purpose
- New executive management committee established to support the Chief Executive and ensure that the strategic imperatives are executed



- Line functions to focus on operations and on creating value
- Service functions to safeguard assets, provide expertise on day-to-day standardised services and leverage synergies in the organisation
- Strategic functions aim to bring about step changes in performance and provide broader strategic support to the group



# The structure of SA's electricity industry is changing

# Eskom

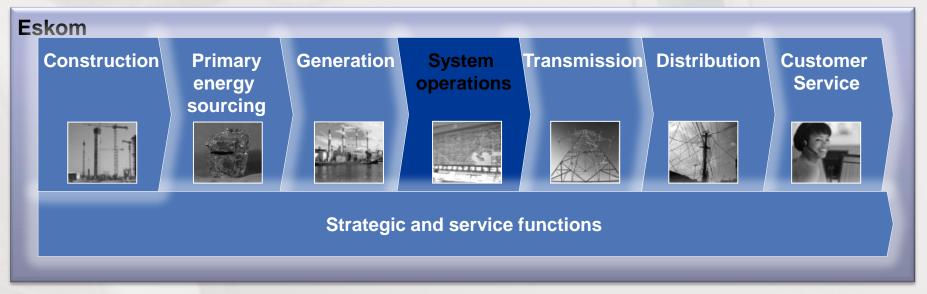
#### Change in the industry value chain:

- The ISMO Bill was tabled in Parliament on 13 May 2011
- A phased approach to be taken
- The System and Market Operator division was instituted on 1 October 2011





- Eskom expects to phase in the subsidiary structure during 2012/13
- It is envisaged that the subsidiary be transformed into a separate state owned company





#### Performance against shareholder compact



Performance area	Company level performance indicator	2011/2012 Target		March 2012 Actual	March 2011 Actual	March 2010 Actual
Ensuring	Generation capacity installed (MW)	385	$\checkmark$	535	315	452
adequate future electricity	Transmission lines installed (km)	606	$\checkmark$	631	443	600
clockloky	Transmission capacity installed (MVA)	500	$\checkmark$	2 525	5 940	1 630
Ensuring reliable	Management of the national supply/ demand constraints	No load shedding	1	None	None	None
electricity supply	DSM energy efficiency (GWh)	1 051	V	1 422	1 339	n/a
	Internal energy efficiency (annualised GWh)	25.5	$\checkmark$	45.0	26.2	n/a
	Water usage (L/kWh sent out)	≤1.35	$\checkmark$	1.34	1.35	1.34
Business sustainability	Cost of electricity (rand/MWh)	387.0	$\checkmark$	374.2	296.4	255.1
ouotamaonity	Debt: equity	≤2.6	V	1.7	1.7	1.7
	Interest cover	≥1.0	$\checkmark$	3.3	1.4	0.8
Supporting the	% local content in new build contracts placed	52.0	$\checkmark$	77.2	79.7	73.9
developmental	Total learners in the system - engineers	1 800	V	2 273	1 335	955
objectives of South Africa	Total learners in the system - technicians	700	$\checkmark$	844	692	681
	Total learners in the system - artisans	2 350	$\checkmark$	2 598	2 213	2 144
Pursuing private sector participation	Setup a ring-fenced Systems and Market Operator (SMO) Division within Eskom	Completed by year end	<b>V</b>	Done	n/a	n/a

## Eskom's integrated reporting journey

# Eskom

Benchmarked (2010 annual report) against the Dow Jones Sustainability Index (DJSI) and the Johannesburg Stock Exchange (JSE) Socially Responsible Investment (SRI) index

According to the JSE feedback on the 2010 report, Eskom "achieved a performance level that not only complies with the minimum requirements for inclusion in the index, but which is also very close to the best performer level in the category for companies with a high environmental impact"

#### 2002

**First Integrated Annual Report** (including Financial and Sustainability information) Environmental

1994 First

Report for

Eskom

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In support of



2008 **Integrated Annual** Results with first B+ **GRI** declaration

# 2012

Integrated report aligned with IIRC and IRC of SA discussion papers **B+ GRI declaration** 





2011 **Integrated Annual Results** with B+ GRI declaration





#### Triple bottom line: socio-economic



Supplier levelopment localisation	<ul> <li>Eskom is a major driver of the South African economy – approximately 3% of the country's GDP can be attributed to Eskom</li> <li>B-BBEE attributable spend amounted to R72.1 billion or 73.2% of attributable spend for the year (2011: R41.9 billion or 52.3%)</li> <li>Job creation – 28 616 (2011: 21 477) individuals working on new build project sites, since 2005 of which 13 954 are employed from the local districts</li> <li>77.2% local content in the new build contracts placed for the financial year</li> <li>Since inception of the respective new build projects, the total local content committed by the Eskom supplier network amounted to R75.2 billion or 62.6% of the total contract values awarded in the new build projects</li> <li>Since the inception of the build programme, 5 915 individuals have completed their skills development training and 2 342 are currently in training</li> </ul>
lectrification	<ul> <li>A total of 155 213 (2011: 149 914) homes were electrified during the financial year</li> <li>Since inception of the electrification programme in 1991, a total of 4 206 181 (2011: 4 050 968) homes have been electrified</li> </ul>
n support of REMEMBER YOUR POWER 49	

## Triple bottom line: socio-economic

Employment equity	<ul> <li>The Eskom company disability percentage is 2.49% of the total workforce</li> <li>Racial equity<sup>(1)</sup> in senior management is 53.9% and in professionals and middle management 65.7%</li> <li>Gender equity<sup>(2)</sup> in senior management is 24.3% and in professionals and middle management 32.4%</li> </ul>
Training and development	<ul> <li>Over 130 000 people employed in the Eskom cloud and over 500 000 people supported by Eskom</li> <li>Over 60 000 jobs in non-mining related industries suppliers</li> <li>Eskom's learner pipeline includes 2 273 engineering, 844 technical, 2 598 artisan and 1 079 other learners</li> <li>A further 5 159 learners in the youth programme</li> <li>Investment in training for the year was R1.4 billion (2011: R1.0 billion)</li> </ul>
Corporate governance	<ul> <li>Eskom's 2011 Integrated Report was awarded 2nd place in the Ernst and Young, Sustainability Reporting Awards</li> <li>Eskom is a member of the International Integrated Report Committee's pilot programme, which continues our drive and commitment of open, transparent and relevant communication to all our stakeholders</li> </ul>
Eskom Development Foundation	<ul> <li>Invested R87.9 million in corporate social initiatives during the year which impacted 256 organisations with some 531 762 project beneficiaries during the period</li> </ul>
In support of	(1)Percentage of black employees14(2)Percentage of female employees14

## Triple bottom line: safety

Eskom

Veerte

Employee and contractor fatalities and LTIR

Causes of fatalities

Action

taken



Year to 31 March 2012	Year to 31 March 2011	Year to 31 March 2010
13	7 (1)	2
12	18	15
cident rate:		
0.41	0.47	0.54
Electrical Contact	Vehicle	Other
5	9	11
	31 March 20121312ident rate:0.41Electrical Contact	31 March       31 March         2012       2011         13       7 (1)         12       18         cident rate:       0.41         0.41       0.47         Electrical Contact       Vehicle

Veerte

Veerte

- Incorporation of safety into performance management system
- Safety training and monitoring for staff
- Launch of Zero harm campaign
- Peer reviews of risk control interventions conducted at selected sites
- Regular work stoppages to discuss and embed safety issues
- Management took robust action on repeat incidents
- Boot camps were held to focus on specific safety issues

<sup>15</sup> (1) Amended after issuing the annual report due to a lost time injury reported in January deteriorated to a fatality in July 2011 (2) Covers the period 1 Apr 2011 – 31 Mar 2012

#### Triple bottom line: environmental

	Atmospheric emissions:	Change	Year to 31 March 2012	Year to 31 March 2011	Year to 31 March 2010		
	Carbon dioxide (CO <sub>2</sub> ) (Mt)		231.9	230.3	224.7		
	Sulphur dioxide (SO <sub>2</sub> ) (kt)	+	1 849	1 810	1 856		
al 📗	Nitrogen oxide (NOx) (kt)		977	977	959		
	Nitrous oxide (N <sub>2</sub> O) (t)		2 967	2 906	2 825		
	Relative particulate emissions (kg/MWh sent out)	₽	0.31	0.33	0.39		
	Specific water consumption (I/kWh sent out)	₽	1.34	1.35	1.34		
_	Number of legal contraventions:	+	50	63	55		
	Installed solar panels at Kendal and Lethabo power stations to supplement auxiliary power consumption at these stations – the start of a programme that will be rolled out across our fleet of coal-fired stations						
	ISO 14001 certification achieved	at 9 coal	fired power	stations. Ko	ebera		

Management systems

Solar panel installations

Environmenta

performance

s cuai ilicu nuclear plant, Peaking Business Unit, Generation Head Office, Medupi, Kusile, Ingula, Power Delivery Projects and Group Capital Head Office The execution of the ISO 9001 implementation plan is underway, with good progress made on certification

( Eskom

# Triple bottom line: financial highlights<sup>(1)</sup>



Income statement for the period	Audited year to 31 March 2012	Audited year to 31 March 2011	Audited year to 31 March 2010
Revenue (Rm)	114 760	91 447	71 130
Growth in GWh sales (%) <sup>(2)</sup>	0.2	2.7	1.7
Profit for the period after tax (Rm)	13 248	8 356	3 620
Return on average total assets (%)	3.7	2.9	1.6
Revenue per kWh (cents per kWh) <sup>(3)</sup>	50.3	40.3	31.9
Operating costs per kWh (cents per kWh) <sup>(4)</sup>	41.3	32.8	28.2
Capital expenditure (Rbn) <sup>(5)</sup>	58 815	47 932	43 663
As at end of the period:			
Average days coal stock (days)	39	41	37
Gross debt securities issued/borrowings (Rm)	182 567	160 310	105 973
Debt: equity (ratio)	1.6	1.6	1.6

Funding plan well advanced and more than **77%** of sources of funds secured Credit ratings remained unchanged but the outlook turned negative



- (1) Group numbers unless otherwise specified
- (2) Compared to the same period last year
- (3) Company numbers and includes environmental levy
- (4) Company numbers and includes depreciation and amortisation costs
- (5) Excluding interest capitalised

#### Audited financial results



#### Paul O'Flaherty Finance Director

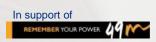
Remember, we're all connected



#### Income statement for the year ended 31 March 2012



- 224 785GWh electricity sales for the year ended 31 March 2012, an increase of 0.2% on the 224 446GWh reported for the year ended 31 March 2011
- Group revenue of R114.8 billion (31 March 2011: R91.4 billion), an increase of 25.5%
- Effective tax rate of 28.0% (31 March 2011: 27.9%)
- Net profit increased from R8.4 billion as at 31 March 2011 to R13.2 billion as at 31 March 2012



Rm	NERSA target to 31 March 2012 <sup>(1)</sup>	Audited year to 31 March 2012	Reviewed half-year to 30 Sept 2011	Audited year to 31 March 2011	Audited year to 31 March 2010 <sup>(2)</sup>
Revenue	116 152	114 760	63 882	91 447	71 130
Other income	2 791	699	395	587	552
Primary energy	(47 399)	(46 314)	(21 858)	(35 795)	(29 100)
Opex (incl. depreciation and amortisation)	(47 683)	(44 762)	(21 534)	(36 772)	(31 719)
Net fair value loss on financial instruments	(815)	(2 388)	(1 126)	(1 816)	(4 239)
Operating profit before embedded derivatives	23 046	21 995	19 759	17 651	6 624
Embedded derivative gain / (loss)	0	334	263	(1 261)	2 284
Operating profit	23 046	22 329	20 022	16 390	8 908
Net finance costs	(5 965)	(3 963)	(2 106)	(4 741)	(2 938)
Share of profit of equity - accounted investees	0	41	16	24	14
Profit before tax	17 081	18 407	17 932	11 673	5 984
Income tax	(4 783)	(5 156)	(5 129)	(3 261)	(2 080)
Loss from discontinued operations	0	(3)	7	(56)	(284)
Net profit for the period	12 298	13 248	12 810	8 356	3 620
(1) NERSA target for 2012 is at	an Eskom con	npany level			19

(2) Restated

## Key performance ratios

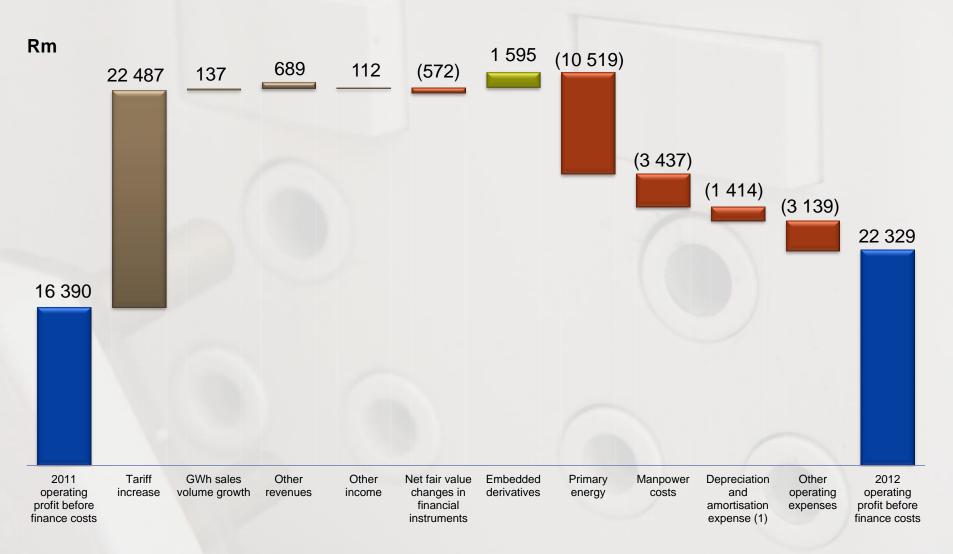


	Unit	Audited year to 31 March 2012	Audited year to 31 March 2011	Audited year to 31 March 2010
EBITDA	Rm	31 130	23 609	14 624
Funds from operations (FFO)	Rm	30 483	16 953	2 356
Gross debt/ EBITDA	ratio	6.5	7.5	8.4
FFO/ gross debt	%	15.2	9.5	1.9
Return on average total assets <sup>(1)</sup>	%	3.7	2.9	1.6
Return on average equity <sup>(1)</sup>	%	13.9	10.7	5.6
Working capital ratio	ratio	0.8	0.9	0.9
Revenue per kWh (electricity sales)	cents per kWh	50.3	40.3	31.9
Costs per kWh (electricity business)	cents per kWh	41.3	32.8	28.2
Bad debt as percentage of revenue	%	0.5	0.8	0.8
Average debtor days:				
Customer service large power users	days	21.8	18.9	18.9
Customer service small power users <sup>(2)</sup>	days	42.9	45.1	40.5
Key industrial and international customers <sup>(3)</sup>	days	14.4	15.5	15.4



Historic
 Excluding Soweto debt
 Excluding disputes

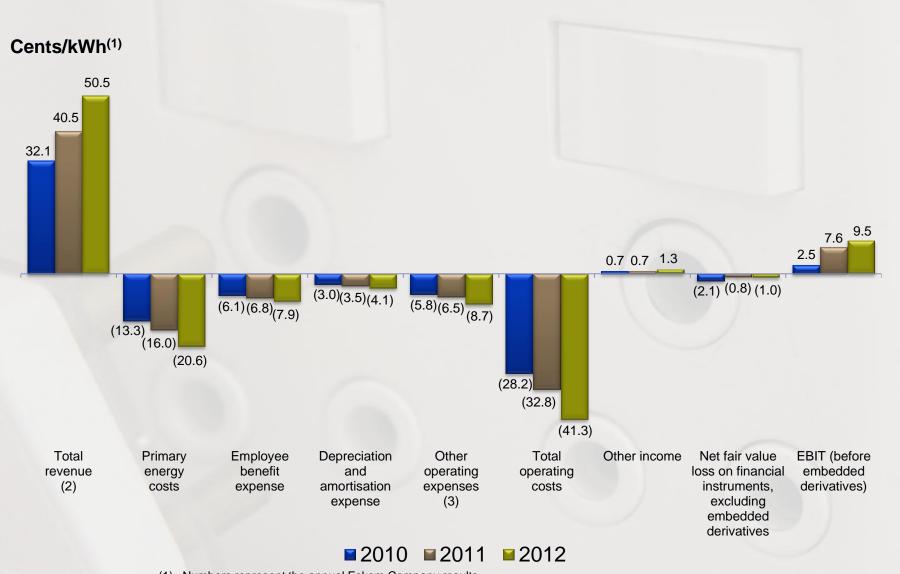
#### Earnings before interest and tax (EBIT)



(1) Includes net impairment losses



#### EBIT before embedded derivatives



In support of REMEMBER YOUR POWER 49 (1) (2) (3)

(1) Numbers represent the annual Eskom Company results

) Total revenue includes non-electricity revenues

Other operating costs include repairs and maintenance costs of 4.0 c/kWh for 2012 (2011: 3.3 c/kWh and 2010: 2.3 c/kWh)

**(})** 

## Improving profitability

- Improving profitability mainly as a result of revenue growth which is primarily driven by an increase in tariffs
- Revenue growth has been offset by escalating operating expenditures mainly due to an increase in primary energy costs
- Gross finance costs continue to rise as additional borrowings are raised to finance the capital expansion programme
- Net surplus of R13.2 billion for the year to be reinvested in the business
- Eskom has held a moratorium on dividend payments since 2008 due to its capital expansion programme

# ult Free funds from operations (FFO) <sup>(1)</sup>



(1) For the years ending 31 March 2010, 31 March 2011 and 31 March 2012

23



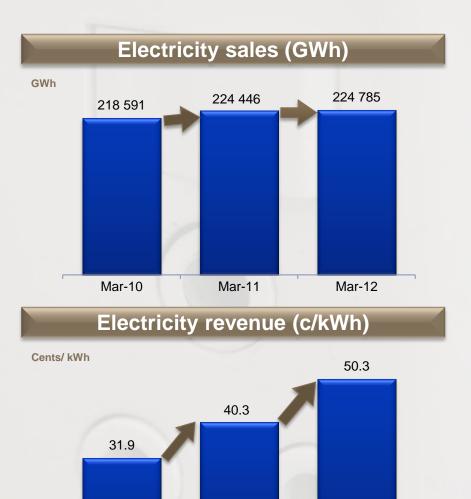
#### Sales and revenue growth



- 224 785GWh sales for the year:
  - represents a 0.2% increase compared to last year; and
  - below the budgeted sales of 227 073GWh (budgeted growth of 1.2%)
- Sales growth (in GWh) affected by:
  - Industrial action in the metal and gold industries
  - Winter demand from large power users was significantly below expectations
  - While the last winter's cold snaps were severe, they were relatively brief
  - Demand patterns also reflect weaker than expected economic activity
- Revenue per kWh increased by 24.8% primarily as a result of the 25.8% tariff increase granted by NERSA

In support of

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Mar-11

Mar-10

Mar-12

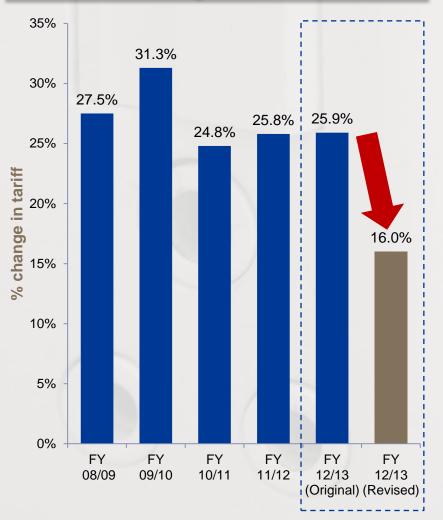
# MYPD2 - NERSA approved a lower tariff increase

- NERSA approved Eskom's revised tariff increase for the final year of MYPD 2, beginning 1 April 2012, to an average increase of 16% (NERSA had previously approved an increase of 25.9% for 2012/2013)
- The revised tariff strives to achieve a balance between the interests of the South African economy, our customers, credit providers and shareholder
- Revised tariff based on the acceptance of key principles:
  - Not to compromise Eskom's financial viability
  - Continued commitment to migrate to cost reflective tariffs
  - Price path certainty within extended time frame

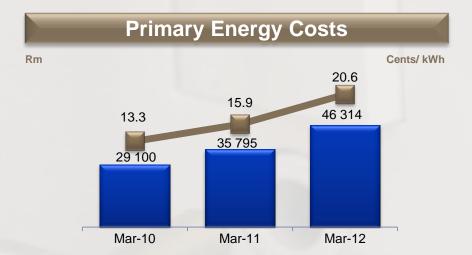
In support of

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#### Operating expenses<sup>(1)</sup>



#### Depreciation & Amortisation Expenses<sup>(2)</sup>



- (1) Cents/KWh figures are calculated based on total electricity sales numbers
- (2) Including net impairment loss

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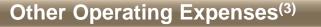
Rm

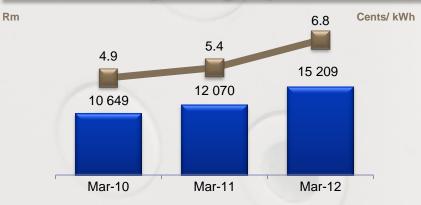
(3) Including managerial, technical and other fees, R&D, operating lease expense, auditor's remuneration, repairs and maintenance In support of

# Employee Benefit Expenses Cents// kWh

Mar-10 Mar-11

Rm







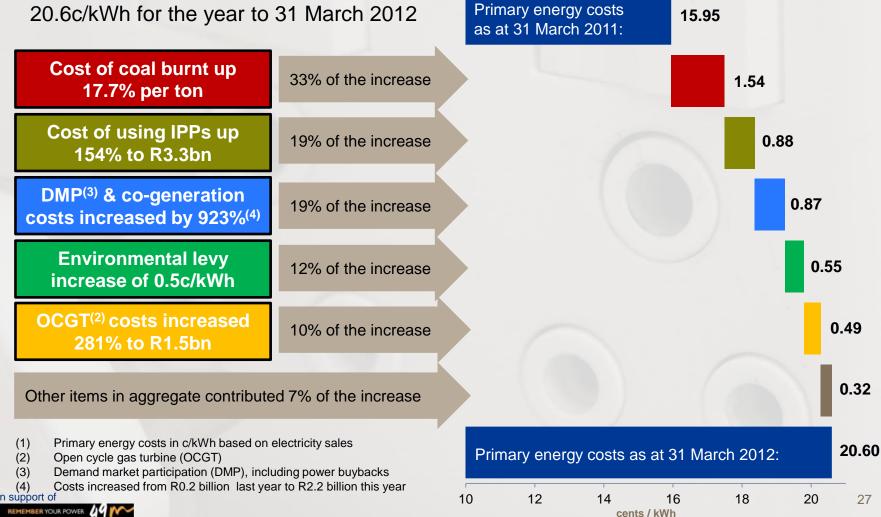
Mar-12

#### Analysis of primary energy costs



 Primary energy costs increased by 29.2% from 15.9c/kWh (31 March 2011) to 20.6c/kWh for the year to 31 March 2012

#### Primary Energy Costs (c/kWh)<sup>(1)</sup>



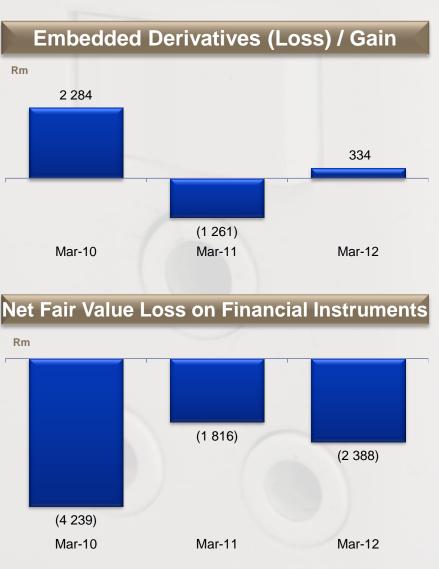
## Hedging policy

Eskom

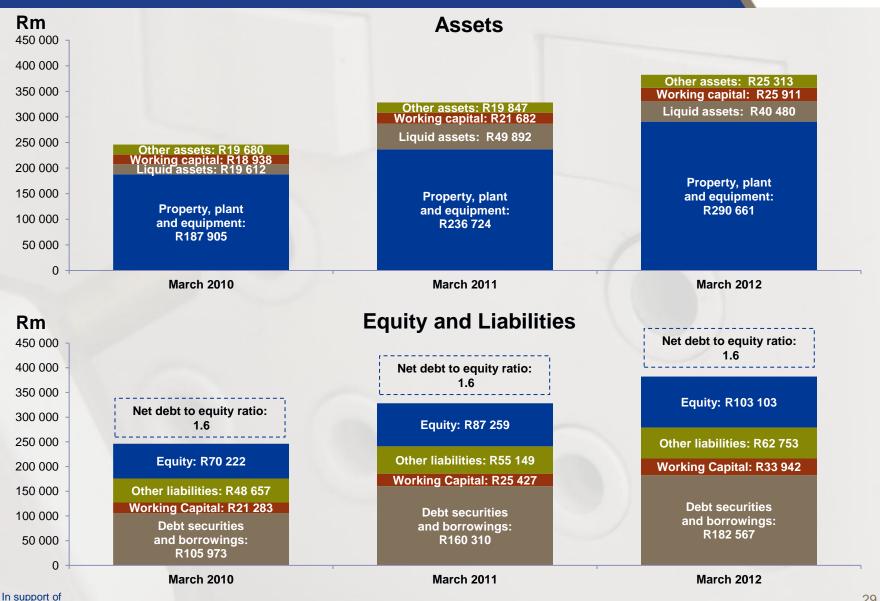
- Primary energy hedging:
  - No formal hedging against increases in coal prices
  - Limited correlation with International Coal Prices
- Commodity derivatives hedging:
  - Hedging in place to mitigate potential losses on embedded derivatives
  - Discussions continue with relevant parties to find a solution on the remaining special pricing agreements
- Foreign currency hedging:

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- All foreign currency exposure over R50 000 is hedged
- Uses inter-alia forward exchange contracts with short maturities and roll-over at maturity as well as crosscurrency swaps
- 87% of total debt as at 31 March 2012 has a fixed interest rate component
- R69.4 billion of derivatives held for risk management as at 31 March 2012 (2011: R58.7 billion)



#### Group audited financial position – growth in property, plant and equipment through debt raised



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# Revaluation of assets – proforma if aligned to regulatory asset base

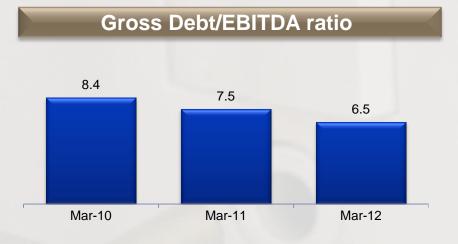


Rm	Historical cost: For the year to 31 March 2011	After revaluation: For the year to 31 March 2011	Historical cost: For the year to 31 March 2012	After revaluation: For the year to 31 March 2012
Total profit/ (loss) for the year				
Historical profit/ (loss) for the period	8 356	8 356	13 248	13 248
Adjustments: Depreciation and amortisation expense	-	(16 898)	-	(14 368)
Net impairment loss and other operating expenses	-	(27)	-	(250)
Net finance cost	-	(8 589)	-	(4 999)
Income tax	-	7 144	-	5 493
Adjusted profit after revaluation for the year	8 356	(10 014)	13 248	(876)
Equity (cumulative impact)				
Historical closing equity balance	-	87 259		103 103
Adjustments: Additional comprehensive loss for the year	-	(35 117)		(49 241)
Revaluation of property, plant and equipment	-	332 482	<u> </u>	277 703
Deferred tax on equity adjustments	-	(93 095)	-	(77 757)
Adjusted closing Equity balance		291 529		253 808
Statement of financial position				
Property, plant and equipment	236 724	520 432	290 661	499 973
Ratios				
Electricity operating costs - cents per kWh (Company)	32.8	40.3	41.3	47.8
Interest cover ratio(Group)	1.5	(0.2)	3.3	0.7
Return on assets % (Group)	2.9%	(1.7)%	3.7%	(0.1)%
Debt: equity ratio (Group)	1.6	0.5	1.6	0.7

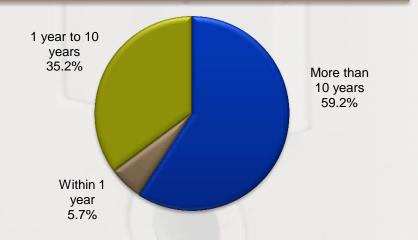


## Debt maturity and leverage

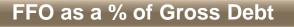


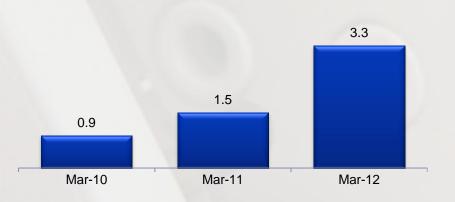


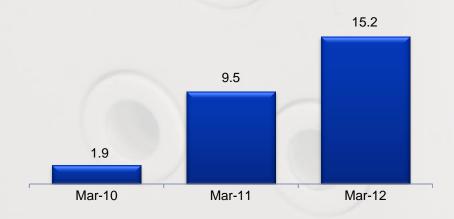
#### **Debt & Borrowings Maturity Profile**<sup>(1)</sup>



#### Interest Cover ratio



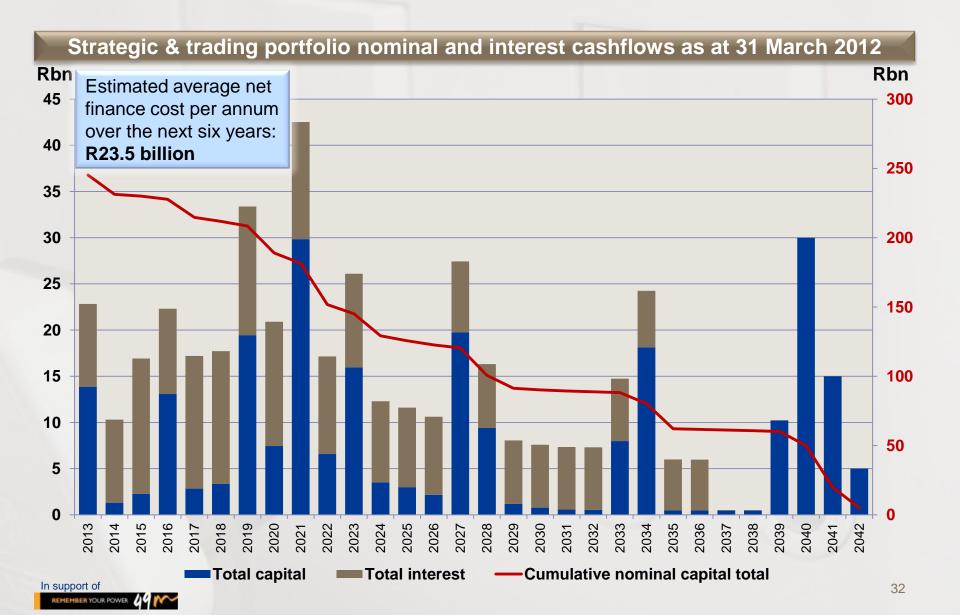




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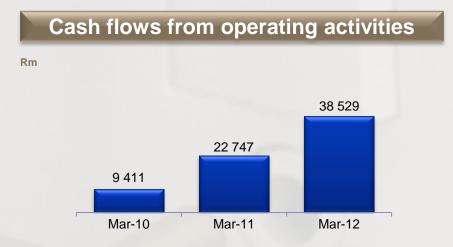
#### Debt maturity profile



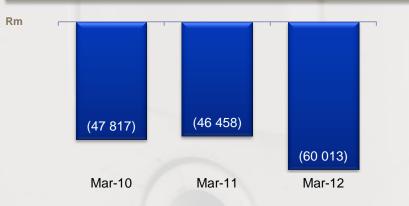


# Group audited cash flows<sup>(1)</sup>

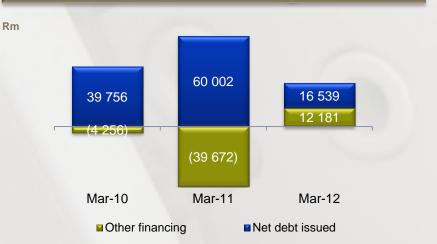




#### Cash flows utilised in investing activities



#### Cash flows from financing activities



#### Cash and cash equivalents at period end

Rm

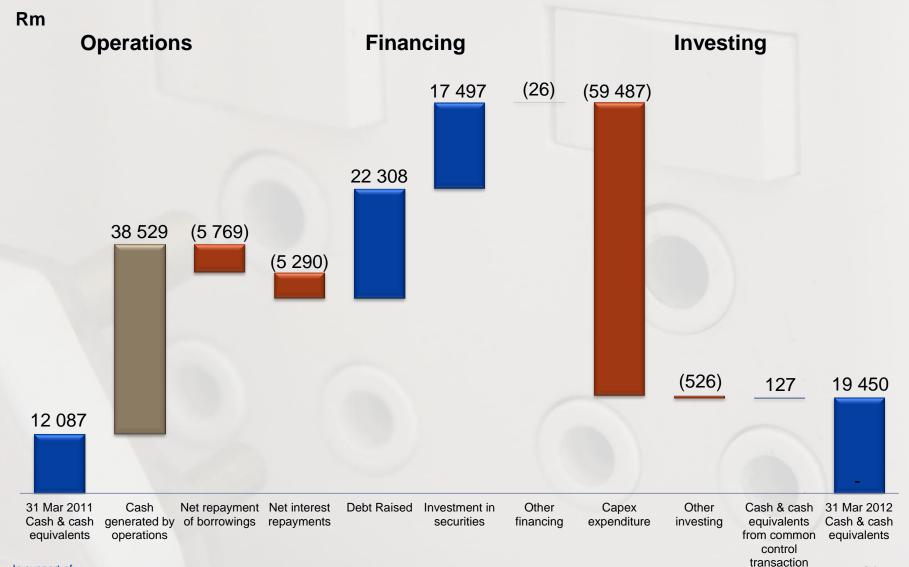




(1) Cash flows from operating and investing activities for 2010 have been restated. R127m cash and cash equivalents resulting from common control transaction adjusted in 2011/12 cash flow statement

#### Summary of audited cash flows







# Funding plan – R300 billion from 1 April 2010 to 2017



Source of funds	Funding sourced Rbn	Currently secured Rbn	Draw-downs to date Rbn	Amount supported by Government Rbn
Bonds	90.0	32.9	32.9	20.4
Commercial paper	70.0	70.0	20.0	0.0
Export Credit Agency backed	32.9	32.9	15.6	0.0
World Bank Ioan	27.8	27.8	5.6	27.8
AFDB loan	20.9	20.9	5.9	20.9
DBSA loan	15.0	15.0	3.0	0.0
Shareholder loan	20.0	20.0	20.0	20.0
Other sources	23.4	13.2	0.8	4.9
Totals	300.0	232.7	103.8	94.0
Percentages		77.6% <sup>(1)</sup>	44.6% <sup>(2)</sup>	40.4% <sup>(2)</sup>



## Credit ratings as at 31 March 2012

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Entity	Rating Status	Moody's	S&P	Fitch
	Foreign Currency	Baa2	BBB+	-
Eskom	Local Currency	Baa2	BBB+	А
Holdings SOC Ltd	ZAR Long-term	-	AA	AAA
	ZAR Short-term	-	A1	F1+
	Outlook	Negative <sup>(1)</sup>	Negative <sup>(2)</sup>	Stable/Negative <sup>(3)</sup>
Stand-Alone Ratings		Ba3	В	None
	Foreign Currency	A3	BBB+	BBB+
	Local Currency	A3	A+	А
RSA Govt.	ZAR Long-term	-	AAA	AAA
	ZAR Short-term	-	A1	F1+
	Outlook	Negative <sup>(1)</sup>	Negative <sup>(2)</sup>	Negative <sup>(3)</sup>

(1) During November 2011 Moody's lowered its outlook on Eskom's and South Africa's sovereign credit rating to negative from stable

(2) During March 2012, S&P lowered its outlook on Eskom's and South Africa's sovereign credit rating to negative from stable

(3) During January 2012 Fitch lowered its outlook on Eskom's local currency rating as well as South Africa's sovereign credit rating to negative from stable. Eskom's ZAR long- and short-term rating statuses remained 'stable'

#### Construction



#### Paul O'Flaherty Finance Director

Switch from traditional light bulbs to CFLs or LEDs



## New generation capacity and transmission networks 2005–2018



	Return-to-service (RTS)	Base load	Peaking & renewables	Mpumalanga refurbishment	Transmission	
	1/11	the				
In development	• None	<ul> <li>Nuclear–site development and front end planning</li> <li>Biomass</li> <li>Primary Energy projects (Road &amp; Rail)</li> </ul>	<ul> <li>Sere (100MW)</li> <li>Pilot Concentrated Solar Power (100MW)</li> <li>Photovoltaic (Own use*)</li> </ul>	<ul> <li>Refurbishment and air quality projects</li> </ul>	<ul> <li>60 Grid strengthening projects</li> </ul>	
Under Construction/ complete	<ul> <li>Komati (1 000MW)</li> <li>Camden (1 520MW)</li> <li>Grootvlei (1 180MW)</li> </ul>	<ul> <li>Medupi (4 764MW)</li> <li>Kusile (4 800MW)</li> </ul>	<ul> <li>Ankerlig (1 338.3MW)</li> <li>Gourikwa (746MW)</li> <li>Ingula (1 332MW)</li> <li>Solar PV installations at MWP (0.4MW)</li> </ul>	<ul> <li>Arnot capacity increase (300MW)</li> <li>Matla refurbishment</li> <li>Kriel refurbishment</li> <li>Duvha refurbishment</li> </ul>	<ul> <li>765kV projects</li> <li>Central projects</li> <li>Northern projects</li> <li>Cape projects</li> </ul>	
	• 3 700MW	• 9 564MW	• 3 518MW <sup>(1)</sup>	• 300MW	• ~ 4 700km	
	Commissions of new stations					
		First Unit Last Unit	<ul> <li>~ 17 082MW of and commiss</li> </ul>	of new capacity (5 sioned)	756MW installed	
	Medupi	2013 2017		of required transmission network installed) planned (20 195MVA installed)		
	Kusile	2014 2018	•			
	Ingula	2014 2014	Note: * Solar PV Plants at Lethabo (0.575MW) & Kendal (0.620MW) are in operation p			

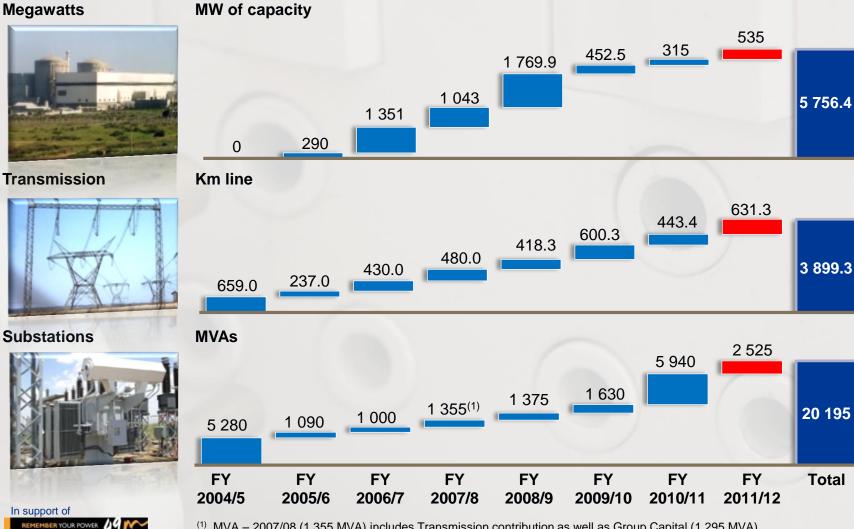
#### Medupi is the first coal-generating plant in Africa to use supercritical power generation technology



#### Build progress to date

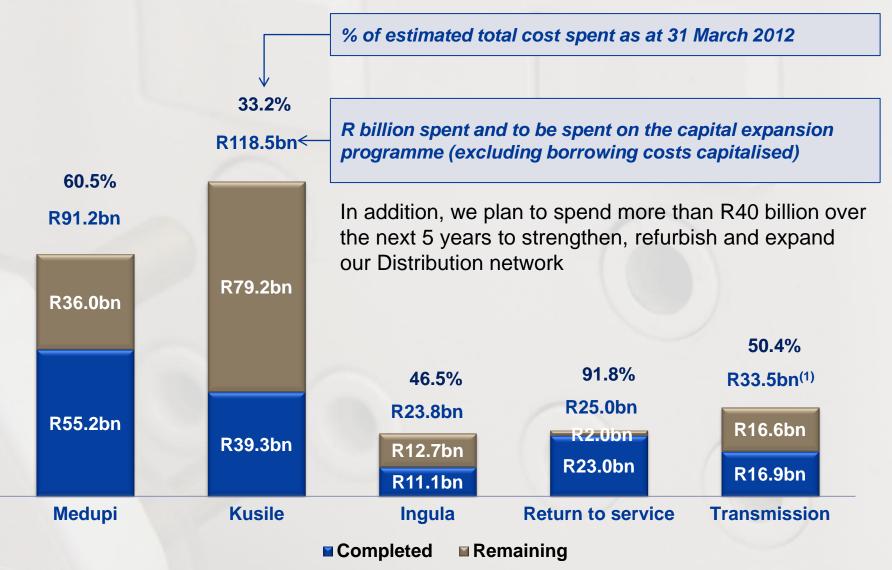


To date, a large amount of construction work has been completed, adding ~ 5 756MW of capacity, ~ 3 899km of transmission network and ~ 20 195 of MVAs



<sup>(1)</sup> MVA – 2007/08 (1 355 MVA) includes Transmission contribution as well as Group Capital (1 295 MVA)

# Significant progress in build programme – began in 2005 with completion in 2018



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<sup>(1)</sup> Includes transmission costs for Ingula, Kusile and Medupi

## Current planned capital expansion plan



Project	Year to 31 March 2013	Year to 31 March 2014	Year to 31 March 2015	Year to 31 March 2016	Year to 31 March 2017	Year to 31 March 2018	Year to 31 March 2019	Total
Grootvlei (return to service)	30							30
Komati (return to service)	200							200
Camden (return to service)	30							30
Medupi (coal fired)		794	794	1 588	794	794		4 764
Kusile (coal fired)			800	800	800	800	1 600	4 800
Ingula (pumped storage)			1 332					1 332
Sere wind farm (renewable)		100						100
Total (MW)	260	894	2 926	2 388	1 594	1 594	1 600	11 256

#### In addition, Eskom has commenced the development of a 100MW CSP plant









41





#### Brian Dames Chief Executive

If you're not using it, switch it off



## Primary Energy – operational performance

- Highlights:
  - Coal by rail to Majuba and Camden increased by 1.4 million tons to 8.5 million tons for the year
  - Establishment of the rail line and inland coal terminals in Mpumalanga resulted in greater flexibility
  - Conclusion of a memorandum of understanding with a mining coal supplier, Sekoko Resources (Pty) Ltd in the Waterberg
  - Construction of Komati Water Scheme on track for completion at the end of 2012 and the Department of Water Affairs began construction of Mokolo and Crocodile water augmentation project
  - The Primary energy division has achieved ISO 9001 certification as at the end of March 2012 and are working towards ISO 14001 in the coming financial year



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## Primary Energy – operational performance

- Challenges:
  - Road fatalities involving the public and coal transporters continue despite safety initiatives
  - Maintaining coal stock levels at acceptable levels
  - Purchasing more expensive coal due to the poor volume performance of cost-plus mines<sup>(1)</sup>
  - Achieving contractual performance on all coal supply agreements as coal quality is poor
  - Road construction progress was affected by unreliable bitumen supply and delays in water-use licences

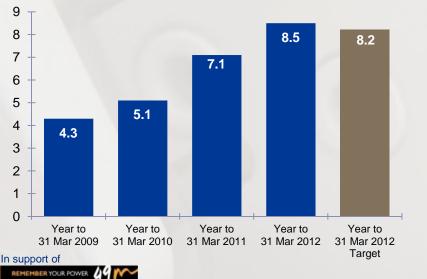




## Primary Energy – road to rail migration plan

#### The strategy focuses on mode selection and infrastructure and short term truck reductions

- Since 2009, the implementation of the strategy has resulted in the following successes:
  - An innovative containerised rail solution has been implemented in Camden
  - Tutuka coal terminal will receive its first coal in July 2012
  - Rail deliveries have increased steadily



#### Coal road to rail migration (Mt)





### Generation – operational performance



- Highlights:
  - Coal-related energy losses decreased compared to the previous year
  - Received praise from the World Association of Nuclear Operators for Eskom's proactive approach in assessing Koeberg's state of readiness in response to the Fukushima review guidelines
  - The number of unplanned unit trips which is an indication of reliability has improved to 3.19 (2011: 3.62)
  - Installed gaseous-emission monitoring systems on one unit of each coal-fired power station







### Generation – operational performance



- Challenges:
  - Balancing the conflicting needs of shutting down power plants to perform maintenance with generating electricity to meet demand
  - Unplanned outages on Koeberg unit 2, the long-term shutdown of Duvha unit 4 and unplanned outages at coal-fired power stations severely affected key performance indicators
  - Coal-related energy losses at Matla, Tutuka, Duvha and Arnot power stations remain a concern and may increase if mines continue to deviate from coal-quality specifications
  - The tight system, poor coal and under-performing plant resulted in a high number of exemptions against emissions standards









## Generation – technical performance

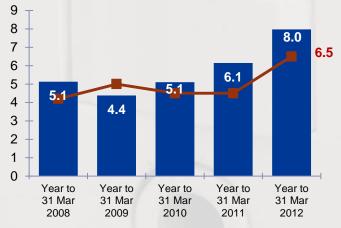
## • EAF performance deteriorated in 2012 compared to the previous year

- The damage to Duvha unit 4 power station, contributed more than 1% to the UCLF
- Boiler tube failures remain the significant contributor to total unplanned capacity losses
- Coal quality improved. It is important to note though that the effects of the previous batches of poor quality coal continue to effect the performance of some of the units as the damage that was caused will take some time to fix
- There has been an improvement in the reliability of Eskom's plant fleet although Koeberg's performance was negatively impacted by a forced outage to repair a hydrogen leak related to the generator stator coolant system

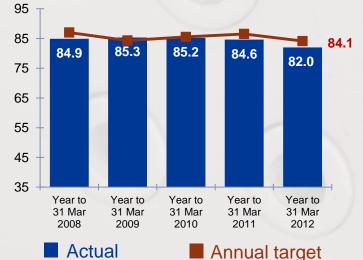
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#### Unplanned capability loss factor (UCLF<sup>(1)</sup>) %



#### Energy availability factor (EAF<sup>(2)</sup>) %



(1) EAF measures plant availability, plus energy losses not under the control of plant management

## Generation - preventative maintenance

 A typical coal-fired generating unit requires certain necessary routine maintenance to ensure that it accedes in its technical performance requirements, is safe to operate and does not violate any environmental laws



Activity	Cycle time (years)	Duration (days)
General Overhaul (GO)	6 - 12	40 - 60
Interim Repairs (IR)	2 - 3	14 - 35
Mini – General Overhaul (MGO)	6	28
Boiler Inspection (BI)	1 – 1.5	7 - 14
Statutory inspection and test (ST)	6	35
Main steam pipe work		120



### Transmission – operational performance



- Highlights:
  - Substantially improved the availability of transmission assets
  - Improved number of line faults per 100km performance
  - Only one major incident<sup>(1)</sup> was recorded, less than the maximum of two as specified in the key performance indicators
  - Identified future trading opportunities in the Southern African region to assist in alleviating potential shortfalls in the medium-term electricity supply
- Challenges:

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- Transmission interruption performance deteriorated during 2011/2012:
  - The 'number of system minutes lost ≤ 1' was 4.7 against a target: of ≤ 3.4
  - The 'number of interruptions' recorded was 48 against a target of  $\leq$  35
- High levels of conductor, equipment and electricity theft are affecting plant performance and increasing cost
- The number of protected bird mortalities due to collisions with power lines







(1) Major incident: This is an interruption with a severity ≥ 1 system minute

#### Transmission – technical performance

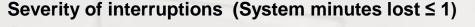
C C Eskom

- Both the number of interruptions and the system minutes <sup>(1)</sup> lost ≤ 1 performance deteriorated during the year
- This was primarily due to risks associated with the execution of increased expansion and refurbishment projects at operational sites
- One major incident was recorded on the Transmission network during the year (target: ≤ 2)

(1) System minutes: Is a measure of the severity of interruptions to customers. One system minute is equivalent to the loss of the entire system for one minute at annual peak

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#### Number of major incidents

Actual



Annual target

51

#### Independent power producers



- Eskom is committed to facilitating the entry of Independent Power Producers (IPPs) and acknowledges the role that IPPs must play in the South African electricity market
- To date Eskom has contracted 1 008MW of installed capacity from IPPs
- The amount paid for this capacity amounted to R3 250 million in 2011/12 (2010/11: R1 264 million) at an average cost of 0.77R/kWh
- Eskom has actively supported the Department of Energy in finalising its request for proposal documents and power purchase agreements for the renewable energy IPP programme. The request for proposal document calls for 3 725MW of renewable energy technologies to be in commercial operation between mid-2014 and the end of 2016
  - 28 preferred bidders announced for the first submission with a combined 1 416MW contribution
  - 19 preferred bidders announced for the second round of submissions with a combined 1 275MW contribution

Cumulative IPP installed capacity (MW)	Target 2012	Actual 2012	Actual 2011	Actual 2010
Medium term power purchase programme		373	373	-
Municipal base load generation		515	515	-
Short term energy purchases		120	-	-
Total	1 500	1 008	888	0
IPP power purchased (GWh)	n/a	4 107	1 833	0
In support of				52



## Distribution – operational performance

- Highlights:
  - Significant improvement of the system average interruption duration index (SAIDI) performance and marginal improvement of the system average interruption frequency index (SAIFI) performance during the year
  - Electrification connections during the year were 155 213 versus a target of 125 377
- Challenges:
  - Safety performance is a serious concern especially employee and contractor fatalities
  - High levels of theft of equipment and electricity including illegal connections affects plant performance and increases costs
  - Collisions and electrocutions of birds on distribution power lines
  - Acquisition of land and servitudes for electricity infrastructure



#### Distribution – technical performance

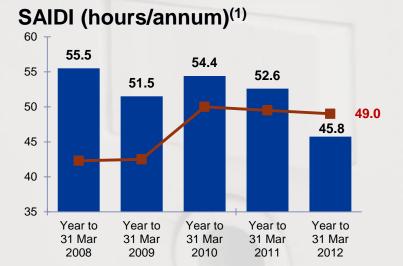


- SAIDI performance improved to 45.8 hours per annum against a target of 49.0 hours per annum
- The improved SAIDI performance is attributed to the benefits of the reliability improvement investments, which include the focussed attention to and improved management of outages
- SAIFI performance improved to 23.7 interruptions per annum, although the target of 22.0 interruptions per annum was not achieved

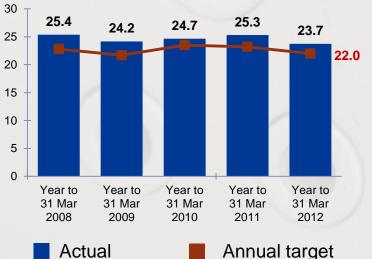
(1) SAIDI: System average interruption duration index(2) SAIFI: System average interruption frequency index

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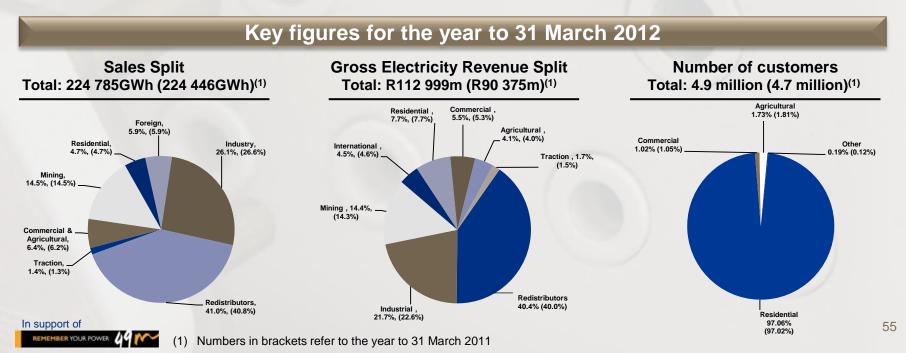
#### SAIFI (number/annum)<sup>(2)</sup>



#### **Customer services**



- Directly provides electricity to about 45% of all end users in South Africa
- Two main types of customers:
  - Redistributors: Mainly municipalities that sell electricity to end customers.
  - Direct customers: Industrial, commercial, mining, agricultural and residential consumers
- Eskom top Mining and Industrial customers (previously KSACS) deals with customers using ≥100GWh of energy per year. At 31 March 2012, KSACS had approximately 146 customers accounting for 34% of total Eskom electricity revenues
- One customer has a supply contract indexed to commodity prices
- A member of Southern African Power Pool ("SAPP")



#### Customer services – operational performance

- Highlights:
  - Secured a number of electricity buy-back deals amounting to 817MW
  - Successfully encouraged customers to reduce electricity load on short notice when required
  - Media advert "Power Alert" continued to drive savings in critical times. During the year average demand savings of 261MW was attained during "red" periods. The overall savings of Power Alert translate to 50.6GWh of energy savings
  - Accelerated the solar water-heating rebate programme. In the current year 158 175 units were verified
  - Rolled out 49M, a marketing campaign aimed at promoting long-term behavioural change in favour of energy savings
  - Introduced alternative incentive programmes for managing demand





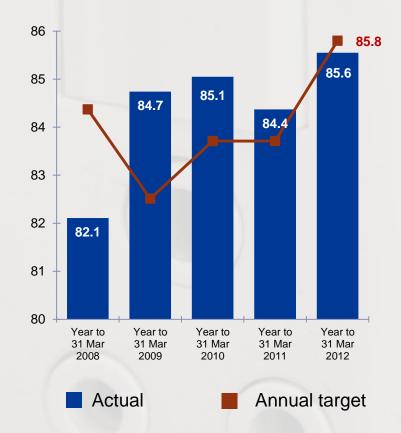




#### Customer services – operational performance

- Challenges:
  - Ensuring customers are updated on their quality of supply as well as planned outage plans
  - High electricity price increases negatively affect the profitability and financial sustainability of Eskom's customers and their ability to pay their electricity bills
  - Management of Soweto outstanding debt
  - Ensuring that tariffs are cost reflective taking into account size, locality and time of use by customers as well as addressing cross subsidisation issues
  - Roll-out of the Energy Conservation Scheme – ensuring that all affected customers understand the process and are comfortable with the reference consumption

#### Weighted customer service index<sup>(1)</sup>

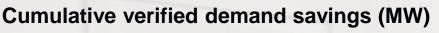


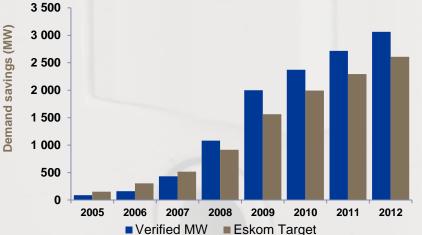


(1) Eskom uses a composite index to measure the service delivered to its residential, small and medium customers. The index combines the results of two external customer service perception surveys and four internal customer service process measures.

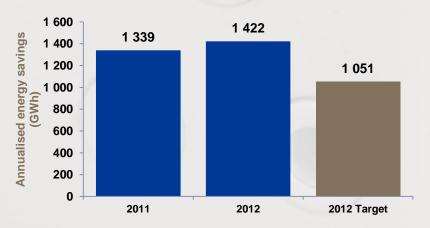
## **Integrated Demand Management**

- The accumulated verified demand savings for the combined financial years 2005 to 2012, is 2 997MW (this is equivalent to five units worth of output of a typical power station<sup>(1)</sup>)
- The total evening peak demand savings achieved of 365MW against a target of 313MW (2011: 354MW)
  - The CFL roll-out programme contributed 215MW to verified savings
- The annualised energy savings for this financial year are 1 422GWh against the target of 1 051GWh
- Eskom's aim is to improve the energy efficiency of its facilities (over plants and buildings) through the undertaking of energy audits and efficiency programmes focusing on lighting, heating, ventilation and air-conditioning (HVAC):
- For the year internal energy demand savings of 1.4MW and energy savings of 45GWh were achieved





#### Energy Savings (GWh)



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skom

## Energy losses and theft



 Energy losses reflect the difference between the quantity of energy sent out from the power stations and the quantity sold to the various customers at the end of the value chain

Energy losses	Target % 2012	Actual % 2012	Actual % 2011	Actual % 2010
Distribution loss	≤6.07	6.32	5.68	5.87
Transmission loss	≤3.40	3.08	3.27	3.27
Total Eskom loss	≤8.75	8.65	8.25	8.45

- Eskom loses an estimated R1.2 billion annually due to energy theft and related activities
- High levels of theft of copper and pylon persist, which are affecting plant performance and increasing costs
- Operation Khanyisa, a public-awareness campaign about legal power usage, is now in full operation and South Africans have heeded the call to report electricity theft and illegal electricity sales





#### Concluding remarks



#### Brian Dames Chief Executive

Watch out for Power Alert and switch off appliances you don't need



### Priorities for next year



- Safety
- Keeping the lights on
  - Ensuring security of supply in partnership with South Africans
  - Ensuring demand side savings by both our customers and our own facilities
- Ensure financial sustainability
  - MYPD3 application and country choices
- Deliver on the build programme
  - Special focus on the commissioning of the first unit of Medupi
- Improve operations by focusing on the continuation of the:
  - Next phase of the implementation of the Back to Basics programme (Processes, Systems and Tools) and
  - Implementation of the Generation (Reducing our unplanned capability load factor (UCLF) and ensuring the reliability of our power stations), Distribution and Customer Centricity Excellence Programmes
- South African Energy
  - Separate unit formed to investigate regional power opportunities

#### Conclusion



- In 2013 Eskom will be celebrating our 90<sup>th</sup> anniversary. For nine decades, Eskom has been adding quality to the lives of South Africans and enabling the country's economic growth
- Eskom's progress equates to that of South Africa's advancement. In this regard, Eskom's success is crucial
- Embrace energy saving as a national culture, joining the global journey towards a sustainable future







# Thank you

#### Websites and email contacts

- Eskom website: Eskom email: Investor relations: Eskom media desk: Eskom environmental: Eskom annual report: Eskom Development Foundation:
- www.eskom.co.za contact@eskom.co.za investor.relations@eskom.co.za mediadesk@eskom.co.za envhelp@eskom.co.za www.eskom.co.za/IR2012/ www.eskom.co.za/csi