

A decorative graphic on the left side of the slide features three overlapping circular frames. The top frame shows a woman in a dark suit sitting at a desk with a computer monitor. The middle frame shows an industrial power plant with tall chimneys and green buildings. The bottom frame shows a wind farm with several white wind turbines in a grassy field under a blue sky.

Eskom Interim Results for the six months ended 30 September 2011

November 2011

Eskom, Megawatt Park

Presentation
version

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In preparation of this document we used certain publicly available data. While the sources we used are generally regarded as reliable we did not verify their content. Eskom does not accept any responsibility for using any such information.

Today's agenda and presenters

Executive Summary

Brian Dames

Financial Results

Paul O'Flaherty

Capital Expenditure

Paul O'Flaherty

Operations

Brian Dames

State of the System

Brian Dames

Concluding Remarks

Brian Dames

Brian Dames

Remember your power

In support of



The structure of SA's electricity industry is changing

Change of the industry value chain



- The ISMO Bill was tabled in Parliament on 13 May 2011
- A phased approach to be taken
- The actual path to be followed is to be finalised

Eskom

To be moved out

Primary energy sourcing



Generation



System operations



Transmission



Distribution



Customer Service



Construction



Support functions

- No load shedding since April 2008, despite an extremely tightly balanced energy system
- Safety remains a major concern and is of primary focus
- Two and half years of strong financial performances – these financial surpluses will be reinvested in the business, helping to fund the capacity expansion programme and to service debt
 - Funding plan for the capacity expansion programme more than 74% secured
 - 2 AfDB loans (USD 365 million) were signed on 25 September 2011 and a World Bank loan (USD 250 million) was signed on 14 November 2011 in respect of renewable projects
- Eskom build programme progress:
 - We have commissioned 160MW of additional capacity, 263km of high-voltage transmission lines and 250MVA of new transformer capacity during the six months to 30 September 2011
 - There is a concern that the performance of some contractors has put the Medupi schedule at risk
- R31.8bn spent on Broad-based Black Economic Empowerment (65.8% of attributable spend)

Performance against shareholder compact

Performance area	Company level performance indicator	September 2011 Actual	2011/2012 Projection	2011/2012 Target	March 2011 Actual
Ensuring adequate future electricity	Generation capacity installed (MW)	160	385	385	315
	Transmission lines completed (km)	263	606	606	443
	Transmission MVA installed	250	500	500	5 940
Ensuring reliable electricity supply	Management of the national supply/ demand constraints	-	-	No load shedding	-
	DSM energy efficiency (GWh)	116	1 051	1 051	1 339
Business sustainability	Internal energy efficiency (annualised GWh)	-	25.5	25.5	26.2
	Water usage (L/kWh sent out)	1.3	1.4	≤1.35	1.4
	Cost of electricity (R/MWh)	347.3	387.0	387.0	296.4
	Debt: equity	1.4	2.0	≤2.6	1.7
	Interest cover	3.4	1.5	≥1.0	1.4
Supporting the developmental objectives of South Africa	% local content in new build contracts placed	78.4	80.0	52.0	79.1
	Total learners in the system - engineers	1 723	1 800	1 800	1 335
	Total learners in the system - technicians	564	700	700	692
	Total learners in the system - artisans	1 992	2 350	2 350	2 213
Pursuing private sector participation	Setup a ring-fenced Systems and Market Operator (SMO) Division within Eskom	-	Completed by year end	Completed by year end	n/a

In support of

Triple bottom line: socio-economic

Supplier development and localisation

- B-BBEE attributable spend amounted to **65.8%** or **R31.8 billion** of attributable spend for the period
- Job creation – **25 437** individuals working on new build project sites, of which **10 664** are employed from the local districts
- 78.4%** of local content for major projects for contracts awarded in the period
- Since the inception of the build programme, **5 069** individuals have completed their skills development training and **2 563** are currently in training

Electrification

- Since inception of the electrification programme in 1991, a total of **4 092 027** homes and **12 654** grid schools and clinics have been electrified

Training and development

- Investment in training for the half-year was **R745.5** million (half-year to 30 September 2010: R469.4 million)
- Eskom's learner pipeline consists of **5 173** learners. This includes **4 279** engineering/technical learners
- Initiatives underway to train a further **2 500** learners this year

Corporate governance

- Eskom leads by example in corporate governance, contributes to the country's leading position in anti-corruption performance within Africa and supports the realisation of South African development goals set out by the government
- Eskom's 2011 Integrated Report was awarded 2nd place in the Ernst and Young, Sustainability Reporting Awards

Eskom Development Foundation

- Invested **R43.0** million in corporate social initiatives during 2011/12 which impacted **180** organisations with some **533 422** project beneficiaries during the period (R33.2 million invested in corporate social initiatives during the same six month period in 2010/11 which impacted 196 organisations with some 95 363 project beneficiaries)

Triple bottom line: safety

	6 Months to 30 Sep 2011	6 Months to 30 Sep 2010	Year to 31 March 2011	
Employee and contractor fatalities	Fatalities			
	Employees	6	2	7 ⁽¹⁾
	Contractors	7	6	18
Public fatalities	Public	9	18	43
Employee lost-time incident rate	Employee lost-time incident rate	6 Months to 30 Sep 2011	6 Months to 30 Sep 2010	Year to 31 March 2011
	Index (target:0.40)	0.45	0.52	0.47
Causes of fatalities	Causes of fatalities (1 April – 30 Sep 2011)	Electrical Contact	Vehicle Accidents	Other
	Employees and contractors	2	6	5
	Public	6	2	1

In support of

⁽¹⁾ Amended after issuing the annual report due to a lost time injury reported in January deteriorated to a fatality in July 2011

- Internal team under leadership of Exco members appointed and extensive action taken already
- Safety Bootcamp held and detailed action plan developed for management consideration
- Shut down principles revised; may lead to shutdowns that inconvenience customers, but save lives
- New safety initiative in 2012: considering the appointment of a Safety Panel of local and international experts:
 - Investigate safety in Eskom and contractors
 - Recommend best local and global practices as gold standard for safety in Eskom
 - Overhaul safety policies, procedures and practices
 - Re-invigorate safety training and practices

Triple bottom line: environmental

Atmospheric emissions	Atmospheric emissions	Unit of measure	Change	6 Months to 30 Sep 2011	6 Months to 30 Sep 2010	Year to 31 March 2011
	Carbon dioxide (CO ₂)	Mt	↓	117.6	117.7	230.3
	Sulphur dioxide (SO ₂)	kt	↓	911.1	929.3	1 810
	Nitrogen oxide (NO _x)	kt	↑	493.3	492.7	977
	Relative particulate emissions	kg/MWh sent out	↓	0.30	0.31	0.33

Water	Water			6 Months to 30 Sep 2011	6 Months to 30 Sep 2010	Year to 31 March 2011
	Specific water consumption	l/kWh sent out	↓	1.29	1.32	1.35
	Net raw water consumption	ML	↓	154 905	156 014	327 252

Management systems	
	Obtained ISO 14001 certification for four operational sites

Triple bottom line: financial highlights

	Reviewed six months to 30 Sep 2011	Reviewed six months to 30 Sep 2010	
Income statement for the 6 month period			
Income statement	Revenue (R m)	63 882	51 114
	Growth in GWh sales (%) ⁽¹⁾	0.9	3.3
	Profit for the period after tax (R m)	12 810	9 533
	Return on average total assets (%)	3.7	3.6
	Revenue per kWh (cents per kWh) ⁽²⁾	55.3	44.6
	Operating costs per kWh (cents per kWh) ⁽³⁾	38.2	30.6
Capital expenditure			
Capital expenditure (R m) ⁽⁴⁾	30 572	22 949	
As at end of the 6 month period			
Balance sheet	Average days coal stock (days)	41	46
	Debt securities issued/borrowings (R m)	178 487	127 207
	Debt: equity (ratio)	1.4	1.5
Funding and credit ratings	<ul style="list-style-type: none"> Funding plan well advanced and more than 74% of sources of funds secured Credit ratings remained the same during the period: Baa2 (Stable)/ BBB+ (Stable) rating by Moody's and S&P; however Moody's changed its outlook from stable to negative in November 2011 to align with the adjusted South African sovereign rating 		

In support of

(1) Compared to the same period last year
 (2) Includes environmental levy

(3) Includes depreciation and amortisation costs
 (4) Including interest capitalised

Paul O'Flaherty

Remember, we're all connected

In support of



Income statement for the six months ended 30 September 2011

- Electricity sales of 114 043 GWh for the half-year ended 30 September 2011, an increase of 0.9% when compared to the 113 072 GWh reported in the same period in 2010
- Electricity sales are subject to seasonal fluctuations:
 - Higher electricity demand and prices during the cold winter months
 - Large power user prices significantly higher during the winter period
 - Maintenance undertaken during the warmer summer months
- Group revenue of R63.9 billion (30 September 2010: R51.1 billion), an increase of 25.0%
- Revenue growth driven primarily as a result of the 25.8% tariff increase granted by NERSA effective from 1 April 2011
- Effective tax rate of 28.6% (2010: 28.9%)
- Net profit increased from R9.5 billion as at 30 September 2010 to R12.8 billion as at 30 September 2011

R m	Reviewed six months to 30 Sep 2011	Reviewed six months to 30 Sep 2010	Reviewed six months to 30 Sep 2009
Revenue	63 882	51 114	38 264
Other income	395	351	181
Primary energy	(21 858)	(17 199)	(13 980)
Opex (including depreciation & amortisation)	(21 534)	(16 400)	(14 326)
Net fair value loss on financial instruments	(1 126)	(625)	(2 131)
Operating profit before embedded derivatives	19 759	17 241	8 008
Embedded derivative gain / (loss)	263	(1 471)	(5 638)
Operating profit	20 022	15 770	2 370
Net finance costs	(2 106)	(2 366)	(278)
Share of profit of equity - accounted investees	16	8	9
Profit before tax	17 932	13 412	2 101
Income tax	(5 129)	(3 879)	(746)
Loss from discontinued operations	7	0	(242)
Net profit for the period	12 810	9 533	1 113

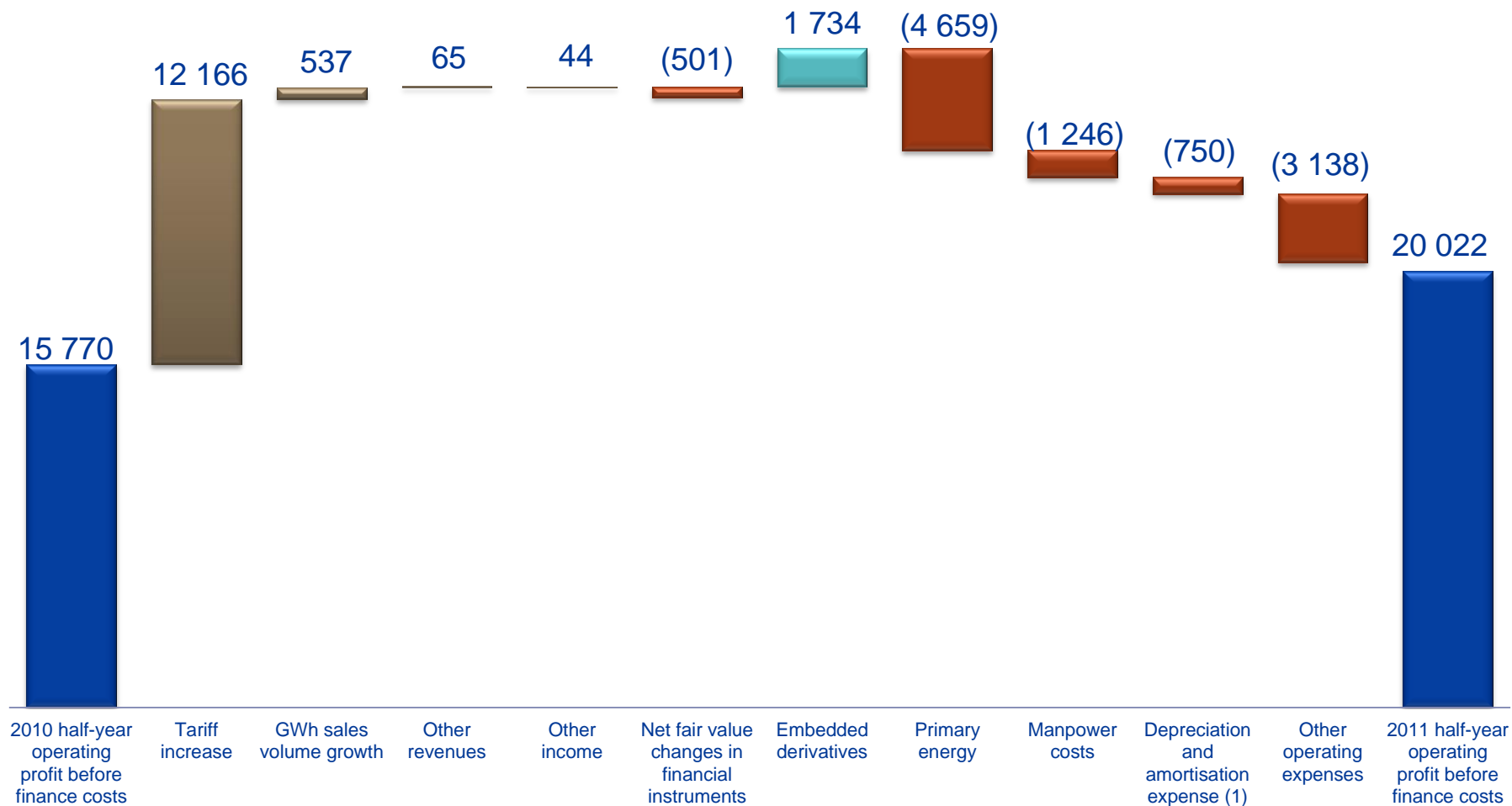
Key performance ratios

	Unit	Reviewed six months ended 30 Sep 2011	Reviewed six months ended 30 Sep 2010	Reviewed six months ended 30 Sep 2009
EBITDA	R m	24 093	19 188	4 861
Funds from operations (FFO)	R m	22 755	14 635	8 241
Gross debt/ EBITDA	ratio	8.3	7.5	20.8
FFO/ gross debt	%	11.4	10.1	8.1
Return on average total assets	%	3.7	3.6	0.5
Return on average equity	%	13.4	12.4	1.8
Working capital ratio	ratio	1.0	1.1	1.1
Revenue per kWh (electricity sales)	cents per kWh	55.3	44.6	34.0
Costs per kWh (electricity business)	cents per kWh	38.2	30.6	26.6
Bad debt as percentage of revenue	%	0.9	0.8	0.7
Average debtor days: Dx LPU	days	21.0	20.3	19.4
Dx SPU	days	40.5	40.0	39.3
Average debtor days: Transmission ⁽¹⁾	days	15.5	16.2	18.5

⁽¹⁾ Excluding disputes

Net operating profit

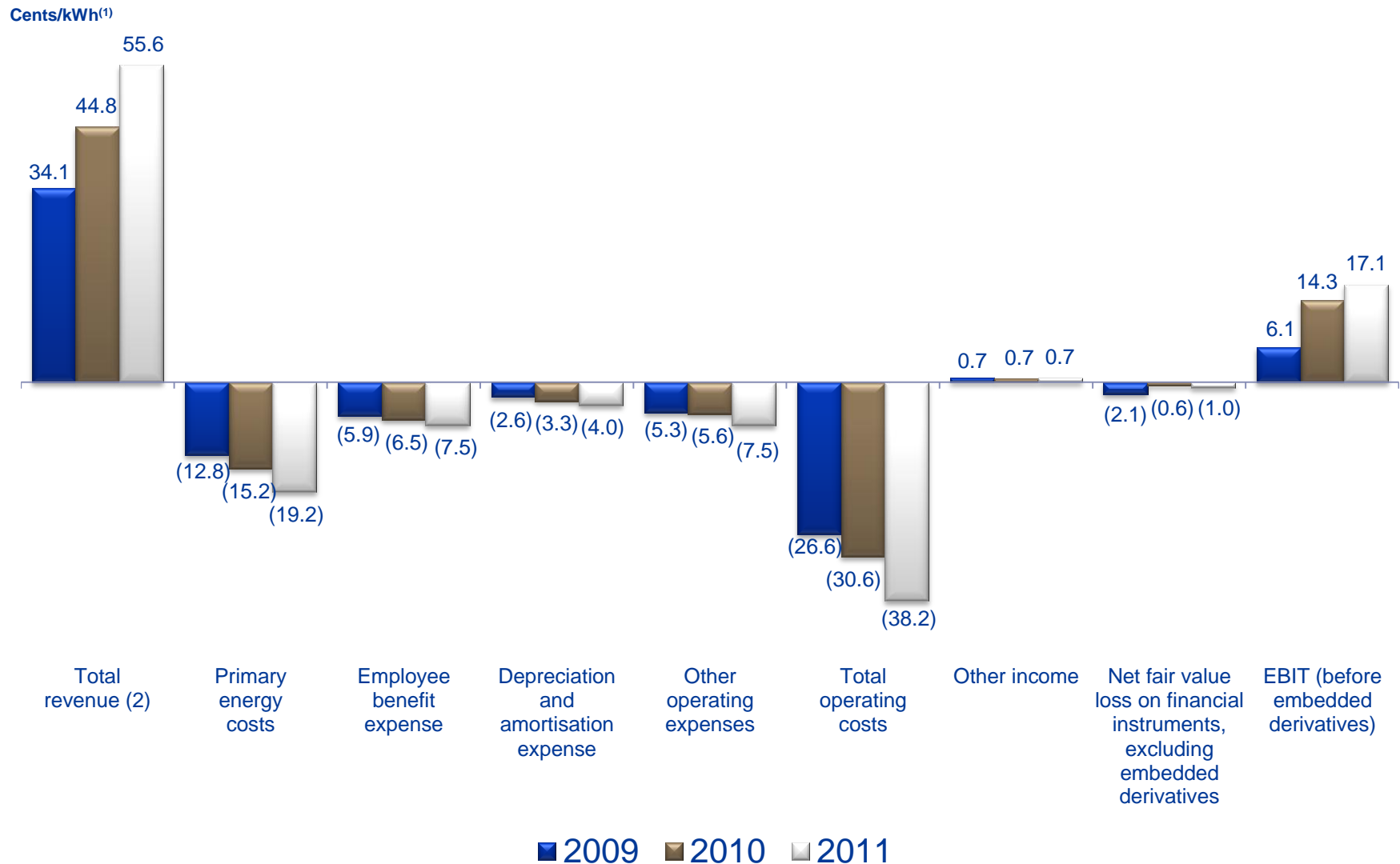
R million



(1) Includes net impairment losses

In support of

EBIT before embedded derivatives



In support of

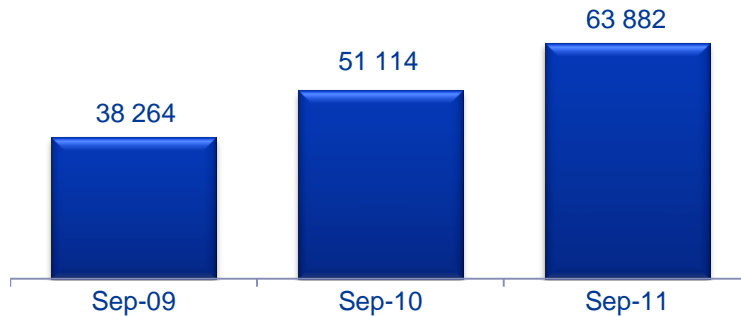


(1) Numbers represent the Eskom Company results

(2) Total revenue includes non-electricity revenues

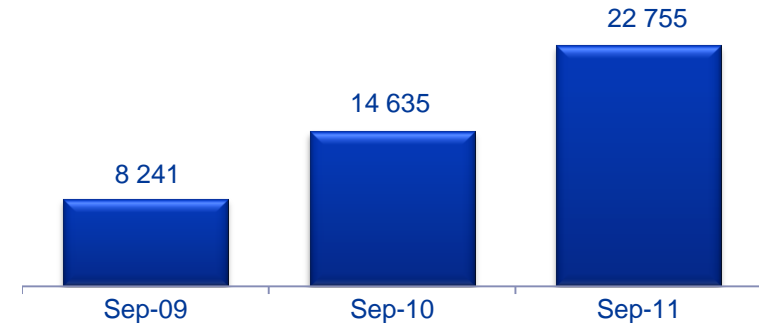
Total revenue ⁽¹⁾

R m



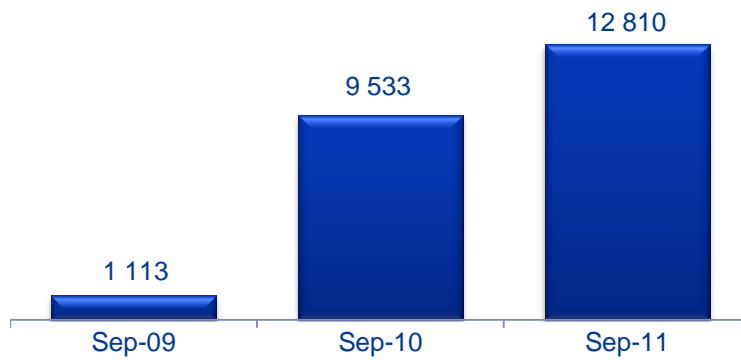
Free funds from operations (FFO) ⁽¹⁾

R m



Net profit ⁽¹⁾

R m



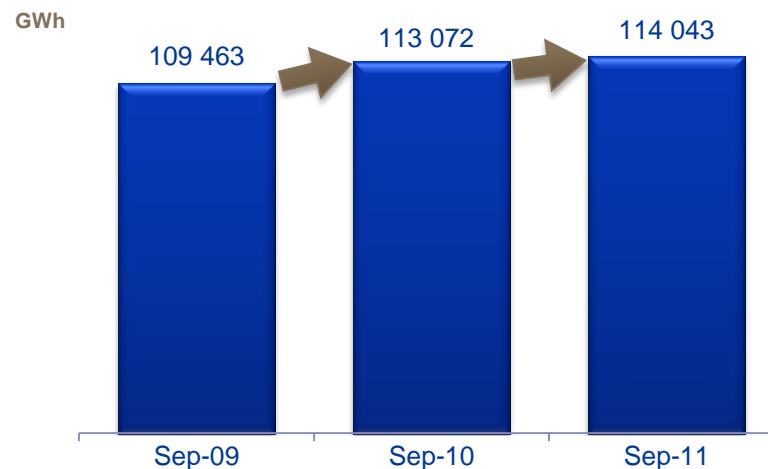
- Revenue growth is primarily driven by an increase in tariffs
- Electricity sales are subject to seasonal fluctuations and are higher in the first two quarters of Eskom's reporting cycle
- Large power user prices higher in winter compared to summer
- Eskom has held a moratorium on dividend payments since 2008 due to its capacity expansion programme

⁽¹⁾ For the six month period ended 30 September 2009, 2010 and 2011

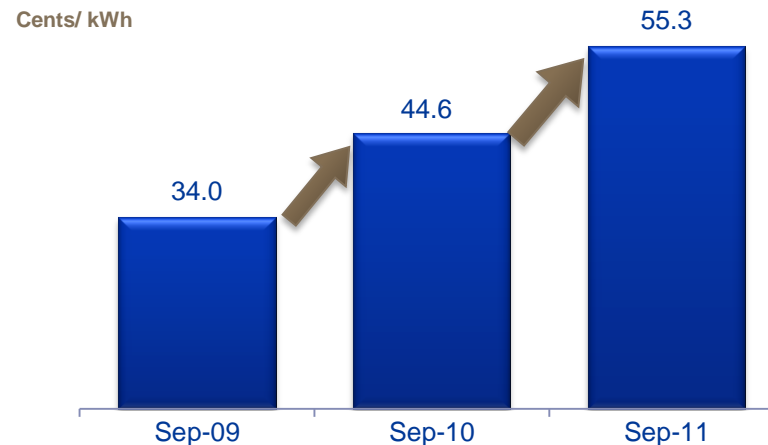
In support of

- **114 043 GWh** sales for the half-year to 30 September 2011:
 - represents a **0.9%** increase compared to the same half-year period last year; and
 - below the budgeted sales of 114 636GWh (1.4% budgeted growth for the half-year to 30 September 2011)
- Growth affected by:
 - Industrial action in the metal and gold industries
 - Winter demand from large power users was significantly below expectations
 - Winter cold snaps were severe, but relatively brief
 - Demand patterns also reflect weaker than expected economic activity
- Lower growth rate projected to continue; year-end projected sales have been adjusted down to 225 781GWh from the budgeted 227 073GWh
- **24.1%** increase in electricity revenue per kWh, predominantly due to the 25.8% tariff increase granted by NERSA effective from 1 April 2011

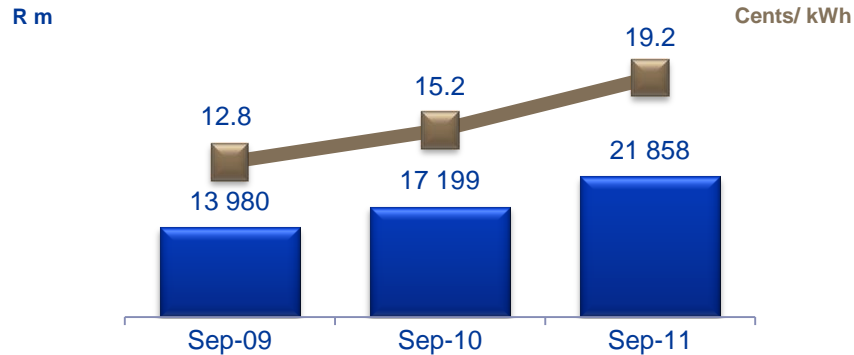
Electricity sales (GWh)



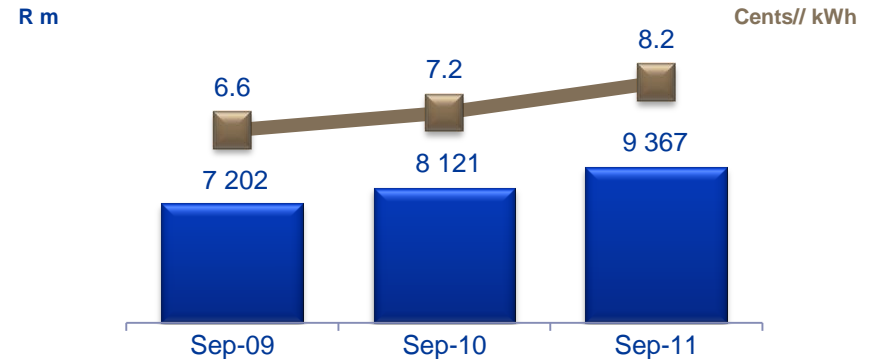
Electricity revenue (c/kWh)



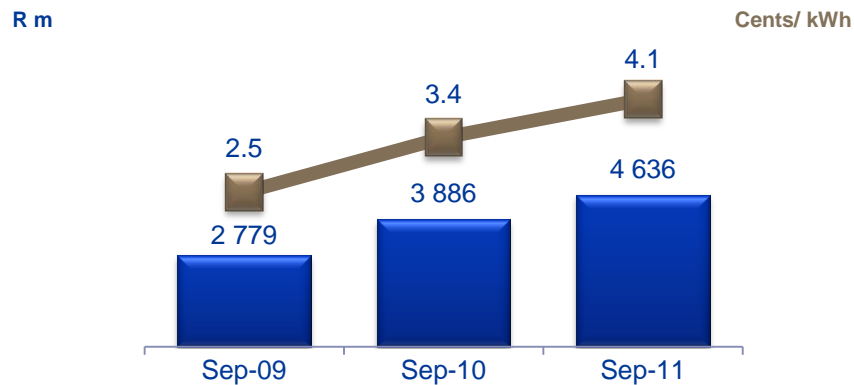
Primary Energy Costs



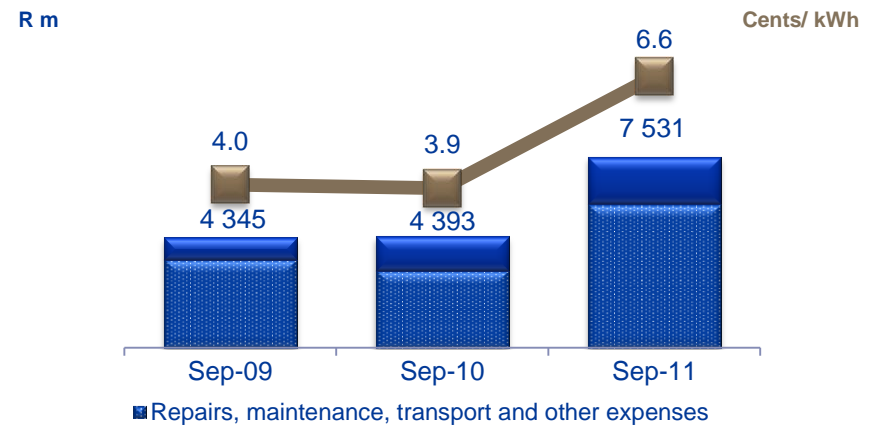
Employee Benefit Expenses



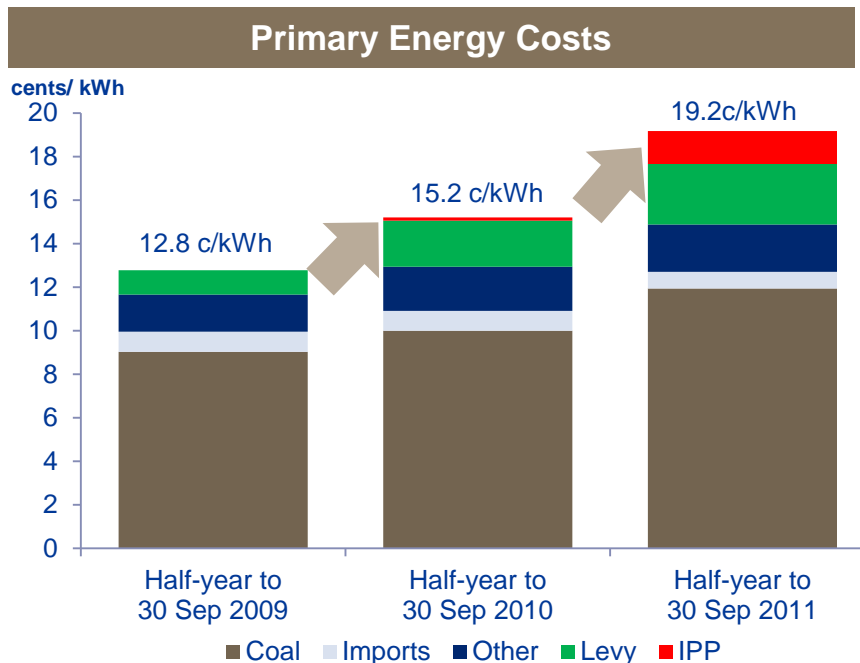
Depreciation & Amortisation Expenses⁽²⁾



Other Operating Expenses⁽³⁾



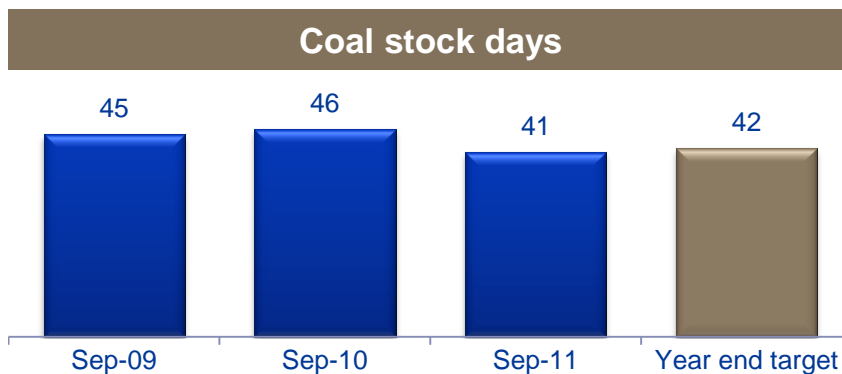
Analysis of primary energy costs



Primary energy costs increased by 26.0% from 15.2 c/kWh (half-year to 30 September 2010) to 19.2 c/kWh for the current half-year to 30 September 2011

The 3.96 c/kWh increase is made up of the following:

- the increased cost of coal burnt (19.5% per ton) contributed 1.94 c/kWh (49% of the increase)
- the environmental levy increase of 0.5c/kWh which took effect on 1 April 2011 contributed 0.66 c/kWh (17% of the increase)
- the cost of using IPPs (R1.7 billion) contributed 1.35 c/kWh (34% of the increase)



Coal burnt

	Sep 2009	Sep 2010	Sep 2011
Coal burnt (Mt)	61.8	62.8	63.3

In support of

Primary Energy Hedging:

- Eskom does not formally hedge against increases in coal prices
- Limited correlation with International Coal Prices

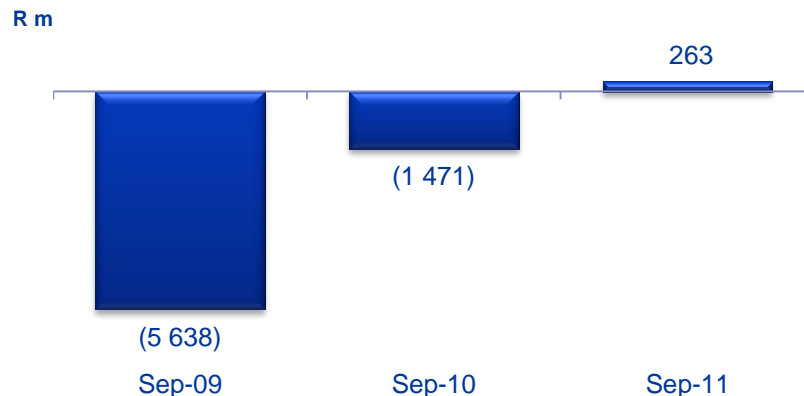
Commodity Derivatives Hedging:

- Hedging in place to mitigate potential losses on the embedded derivatives since 1998
- Discussions with relevant stakeholders to find a solution on the last remaining commodity linked power agreement continue

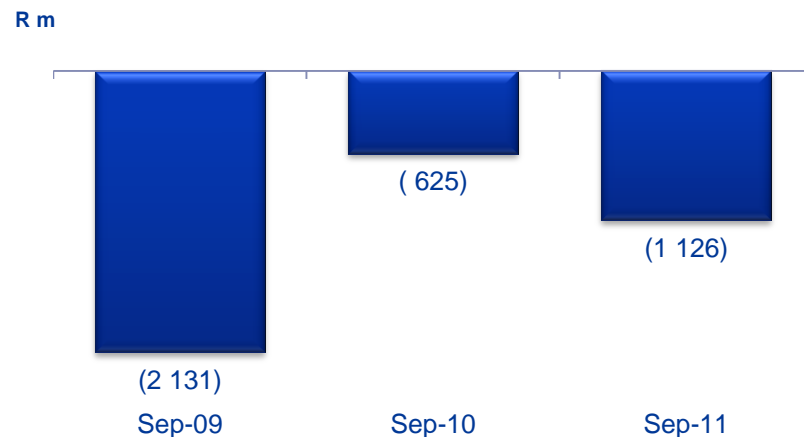
Foreign Currency Hedging:

- Eskom's policy is to hedge all foreign currency exposure over R50 000 once commitment has been made
- Uses inter-alia forward exchange contracts with short maturities and roll-over at maturity as well as cross-currency and interest-rate swaps
- Note that 87% of our total debt as at 30 September 2011 has a fixed interest rate component

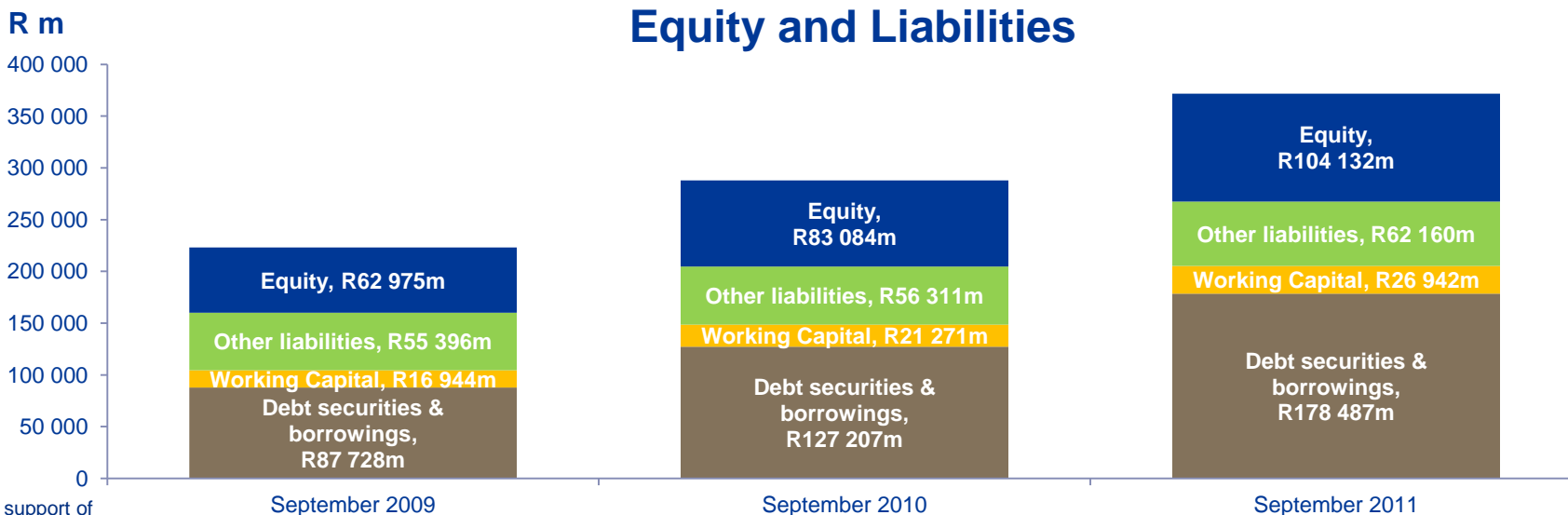
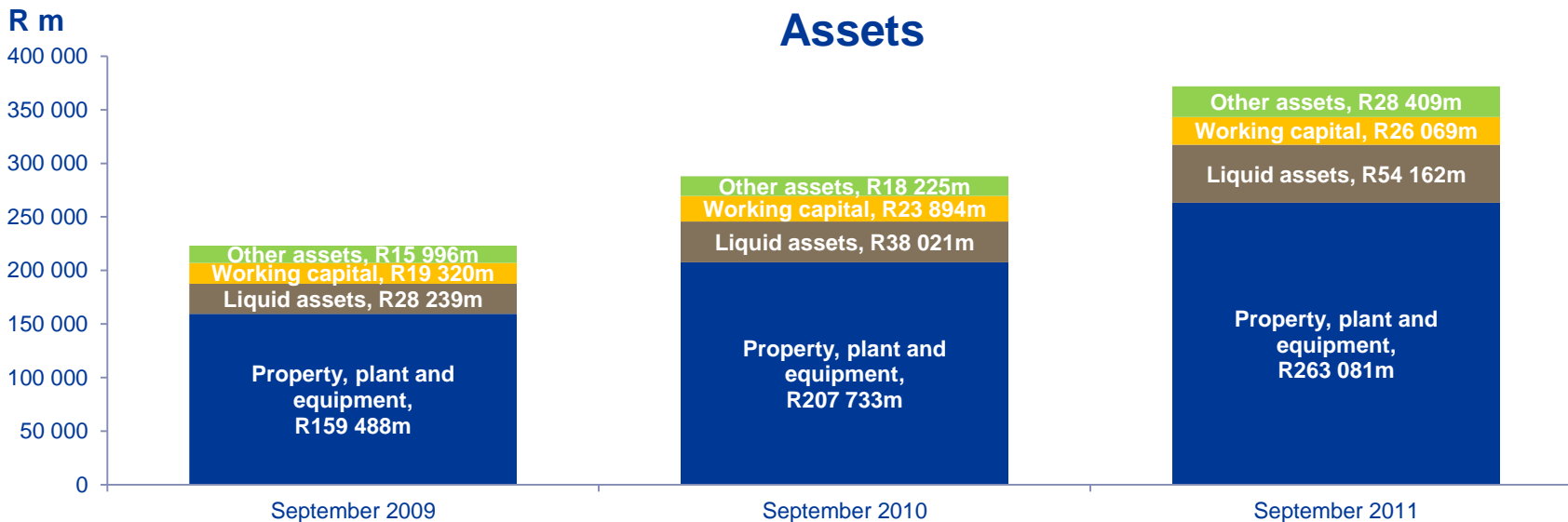
Embedded Derivatives (Loss) / Gain



Net Fair Value Loss on Financial Instruments



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



In support of

Revaluation of assets

R million

	Historical cost: For 6 months to 30 Sep 11	After revaluation: For 6 months to 30 Sep 11	Historical cost: For 6 months to 30 Sep 10	After revaluation: For 6 months to 30 Sep 10
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Total profit/ (loss) for the year

Historical profit/ (loss) for the period	12 810	12 810	9 533	9 533
Adjustments: Depreciation and amortisation expense	-	(7 308)	-	(7 298)
Net impairment loss and other operating expenses	-	(225)	-	(69)
Net finance cost	-	(4 855)	-	(2 985)
Income tax	-	3 469	-	2 898
Adjusted profit after revaluation for the year	12 810	3 891	9 533	2 079

Equity (cumulative impact)

Historical closing equity balance	-	104 132	-	83 084
Adjustments: Additional comprehensive loss for the year	-	(8 919)	-	(7 454)
Revaluation of property, plant and equipment	-	271 276	-	305 139
Deferred tax on equity adjustments	-	(75 957)	-	(85 439)
Adjusted closing Equity balance		290 532		295 330

Statement of financial position

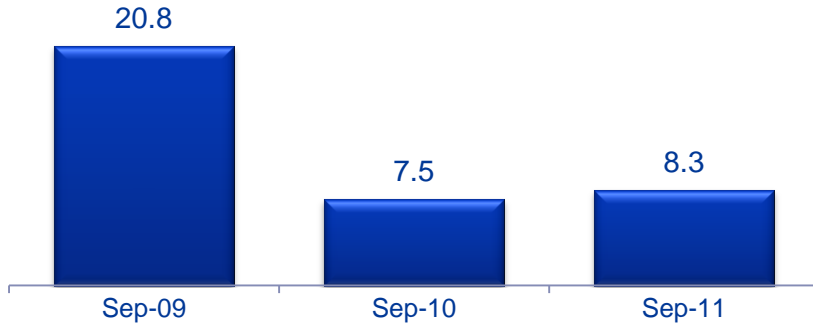
Property, plant and equipment	263 081	521 969	207 733	502 519
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Ratios

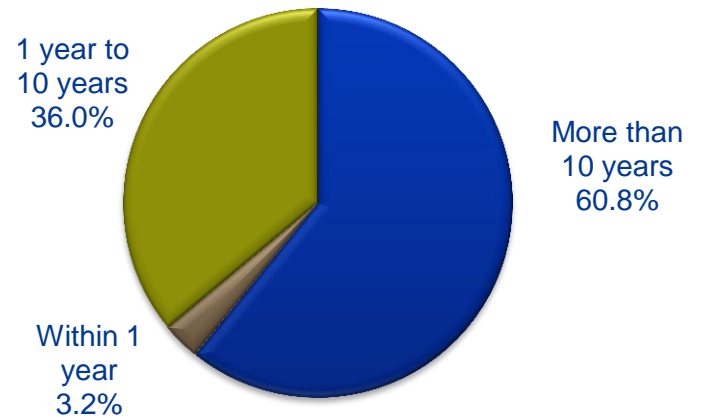
Cost (cents) per kWh (Company)	38.2	44.9	30.6	37.1
Interest cover	3.5	2.2	3.9	2.1
Return on assets	3.7%	0.6%	3.6%	0.4%

In support of

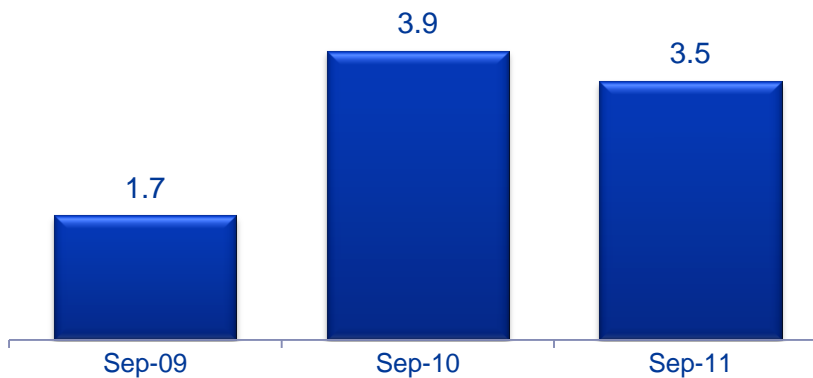
Gross Debt/ EBITDA ratio



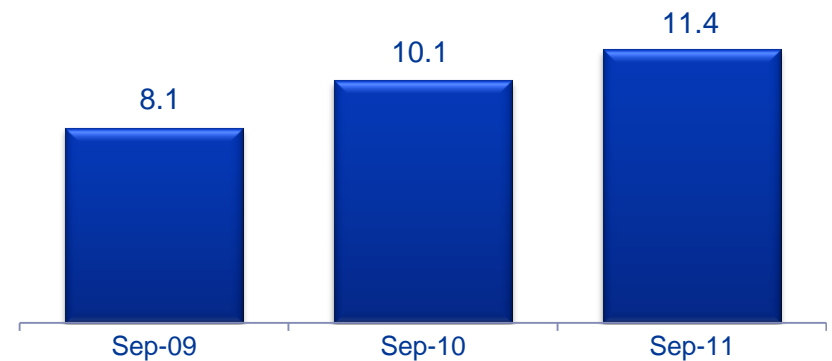
Debt Securities & Borrowings Maturity Profile⁽¹⁾



Interest Cover ratio



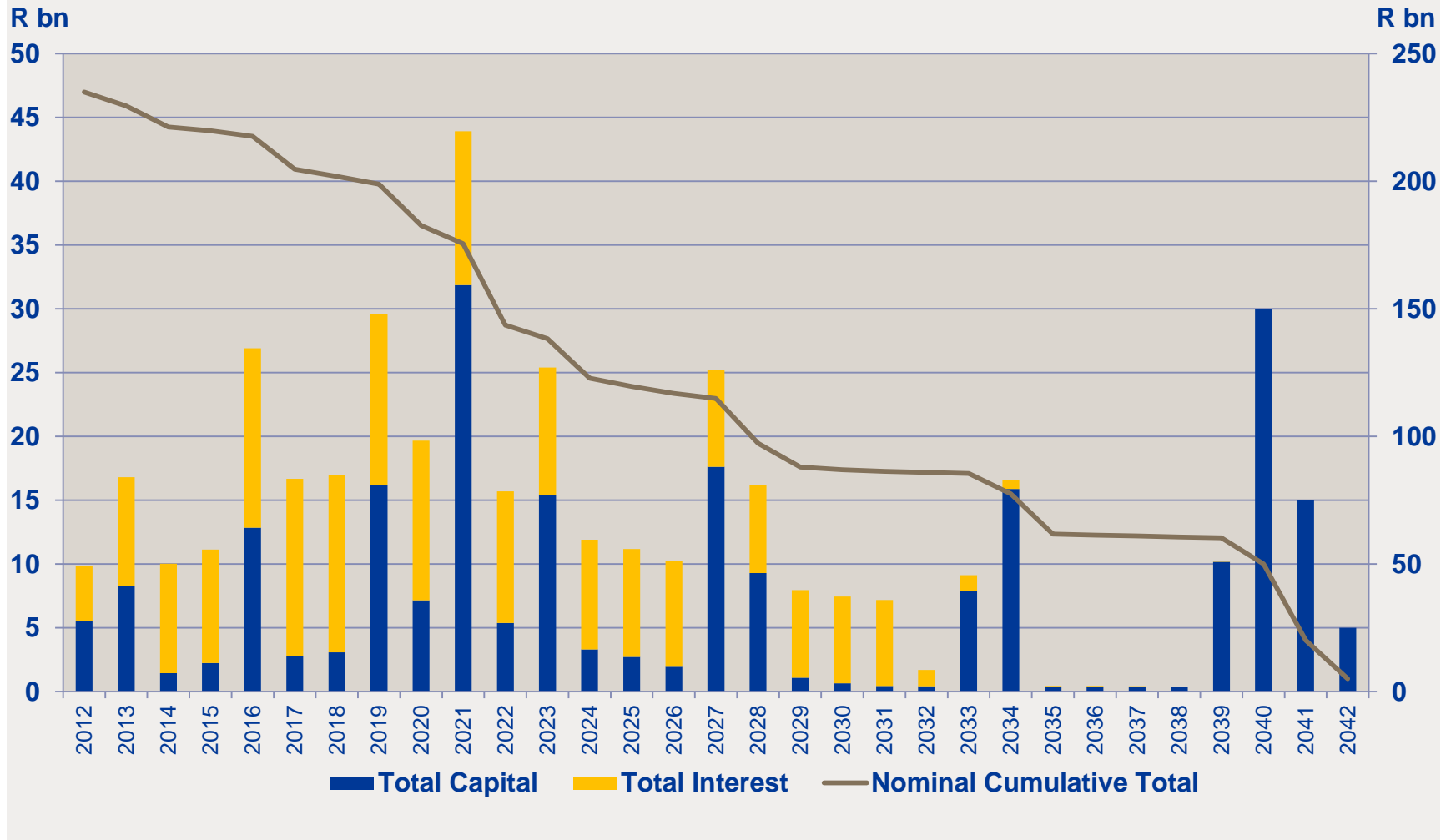
FFO as a % of Gross Debt



(1) As at 30 September 2011

Debt maturity profile

Strategic portfolio nominal and interest cashflows as at 30 September 2011

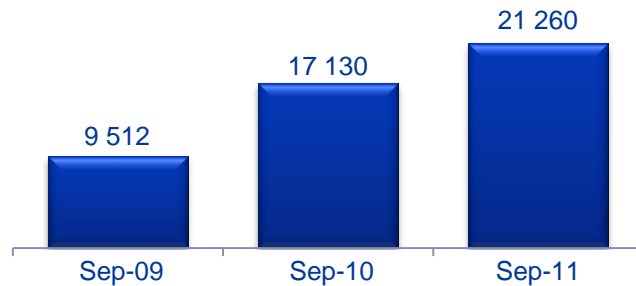


In support of



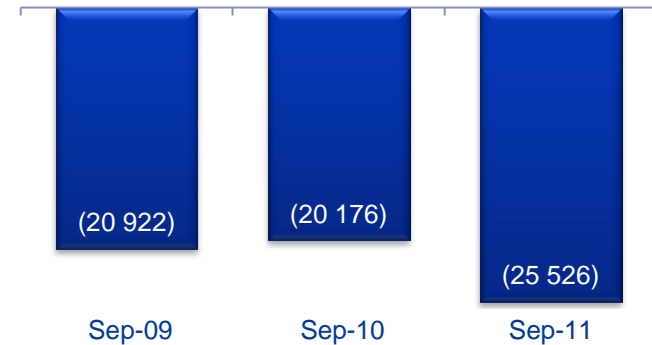
Cash flows from operating activities

R m



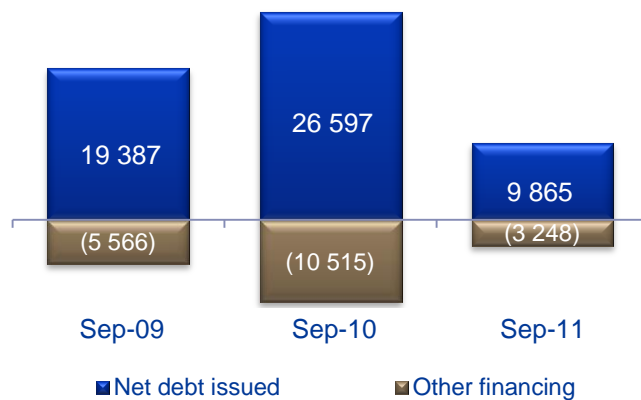
Cash flows utilised in investing activities

R m



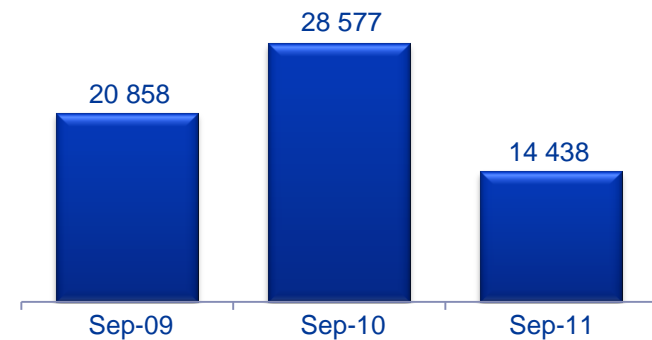
Cash flows from financing activities

R m

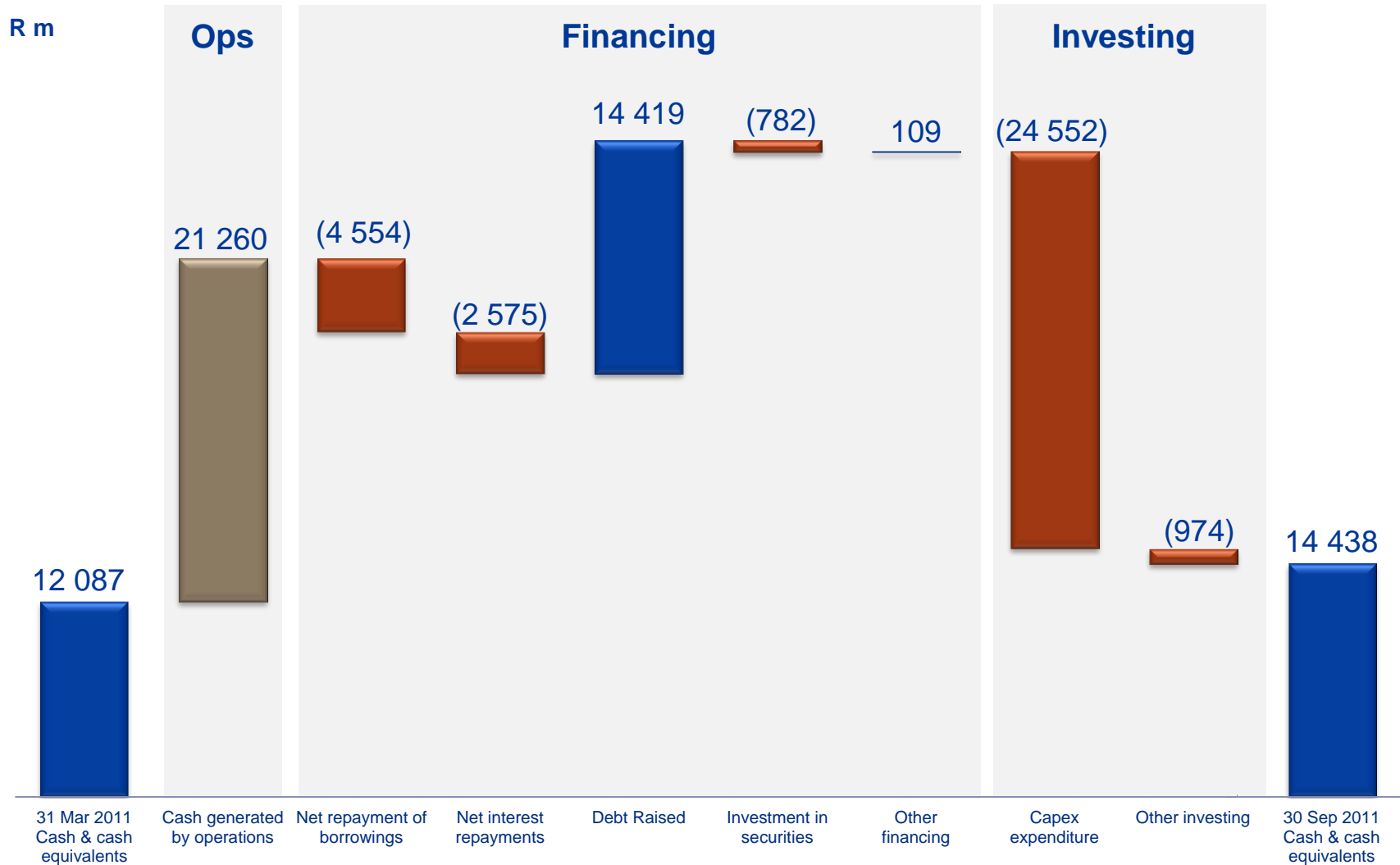


Cash and cash equivalents at period end

R m



Summary of cash flows



In support of

Funding plan – R300 billion to 2017

Source of funds	Funding sourced Rbn	Currently secured Rbn	Draw-downs to date Rbn	Amount supported by Government Rbn
Bonds	90.0	30.4	30.4	17.9
Commercial paper	70.0	70.0	15.0	0.0
Export Credit Agency backed	32.9	32.9	12.8	0.0
World Bank loan	29.7	29.7	3.8	29.7
AFDB loan	20.7	20.7	5.9	20.7
DBSA loan	15.0	15.0	2.0	0.0
Shareholder loan	20.0	20.0	20.0	20.0
Other sources	21.7	5.0	0.4	3.0
Totals	300.0	223.7	90.3	91.3
Percentages		74.6%⁽¹⁾	40.4%⁽²⁾	40.8%⁽²⁾

⁽¹⁾ As a percentage of the R300bn funding sourced

⁽²⁾ As a percentage of the currently secured total

Credit ratings as at 30 September 2011

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

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

Current credit rating uplifts⁽¹⁾

	 Moody's Investors Service	STANDARD & POOR'S	 Fitch Ratings	
	Long-term	Long-term	Long-term local currency	
Investment grade	Aaa	AAA	AAA	
	Aa1	AA+	AA+	
	Aa2	AA	AA	
	Aa3	AA-	AA-	
	A1	A+	A+	
	A2	A	A	
	A3	A-	A- (Final rating)	
	Baa1	Baa2 (Final rating)	BBB+ (Final rating)	BBB+
	Baa2	Baa3	BBB	BBB
	Baa3	BBB-	BBB-	BBB-
Non-investment grade	Ba1	BB+	BB+	
	Ba2	BB	BB	
	Ba3 (Standalone)	BB-	BB-	
	B1	B+	B+	
	B2	B (Standalone)	B	
	B3	B-	B-	
	Caa1	CCC+	CCC+	
	Caa2	CCC	CCC	
	Caa3	CCC-	CCC-	
	Ca			

The certainty of the “user pays” principle for regulated entities is critically important from a ratings perspective

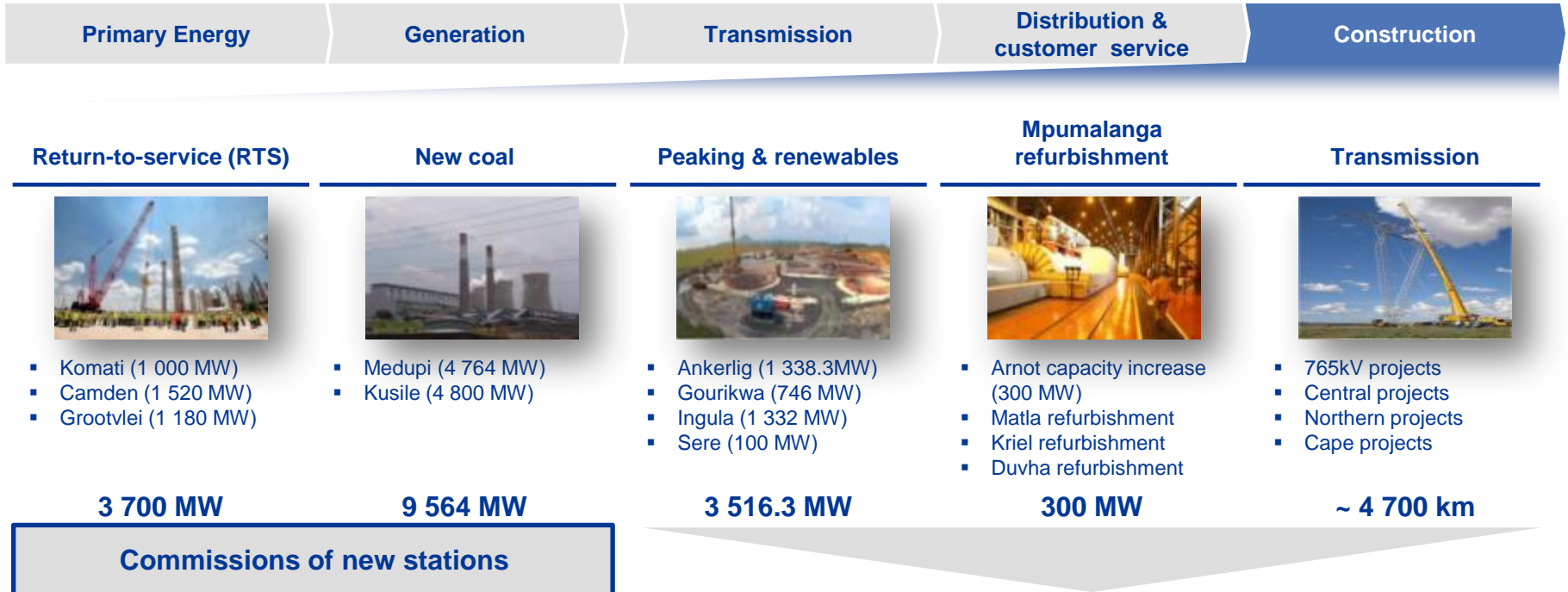
Paul O'Flaherty

Switch from traditional light bulbs to CFLs or LEDs

In support of



Capacity expansion programme



Commissions of new stations		
	First Unit	Last Unit
Medupi	2013	2018
Kusile	2014	2018
Ingula	2014	2014

- ~ **17 080 MW** of new capacity (**5 381 MW** installed and commissioned)
- ~ **4 700 km** of required transmission network (**3 531 km** installed)

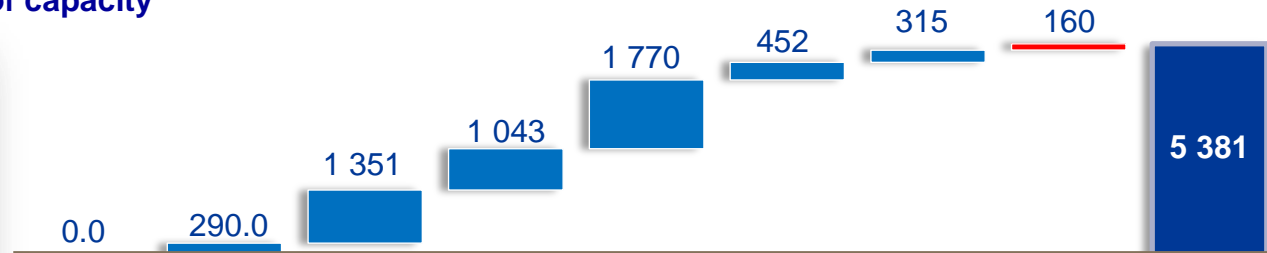
Medupi is the first coal-generating plant in Africa to use supercritical power generation technology

Build progress to date

To date, a large amount of construction work has been completed, adding ~ 5 381 MW of capacity, ~ 3 531 km of transmission network and ~ 17 920 of sub-station transformers

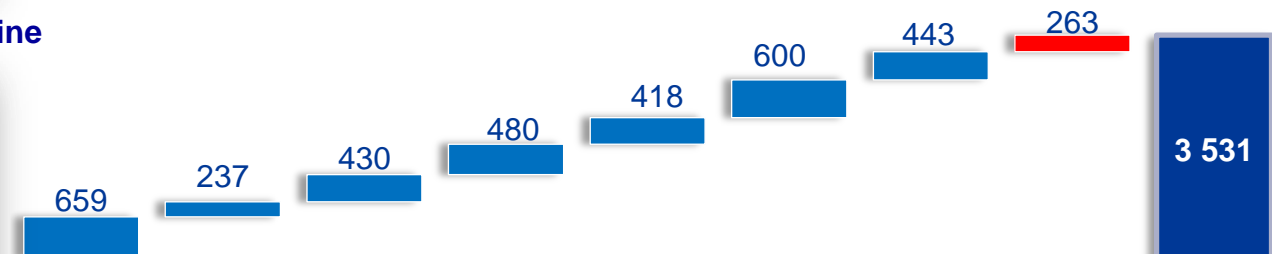
Megawatts

MW of capacity



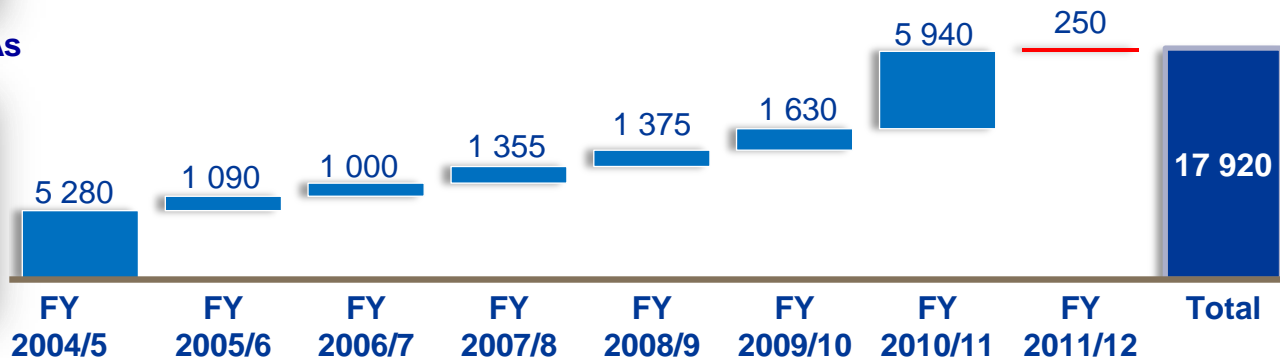
Transmission

Km line



Substations

MVAs



In support of

I'm part of the **49M initiative!**
www.49m.co.za

REMEMBER YOUR POWER **49m**

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

Current planned capacity expansion plan

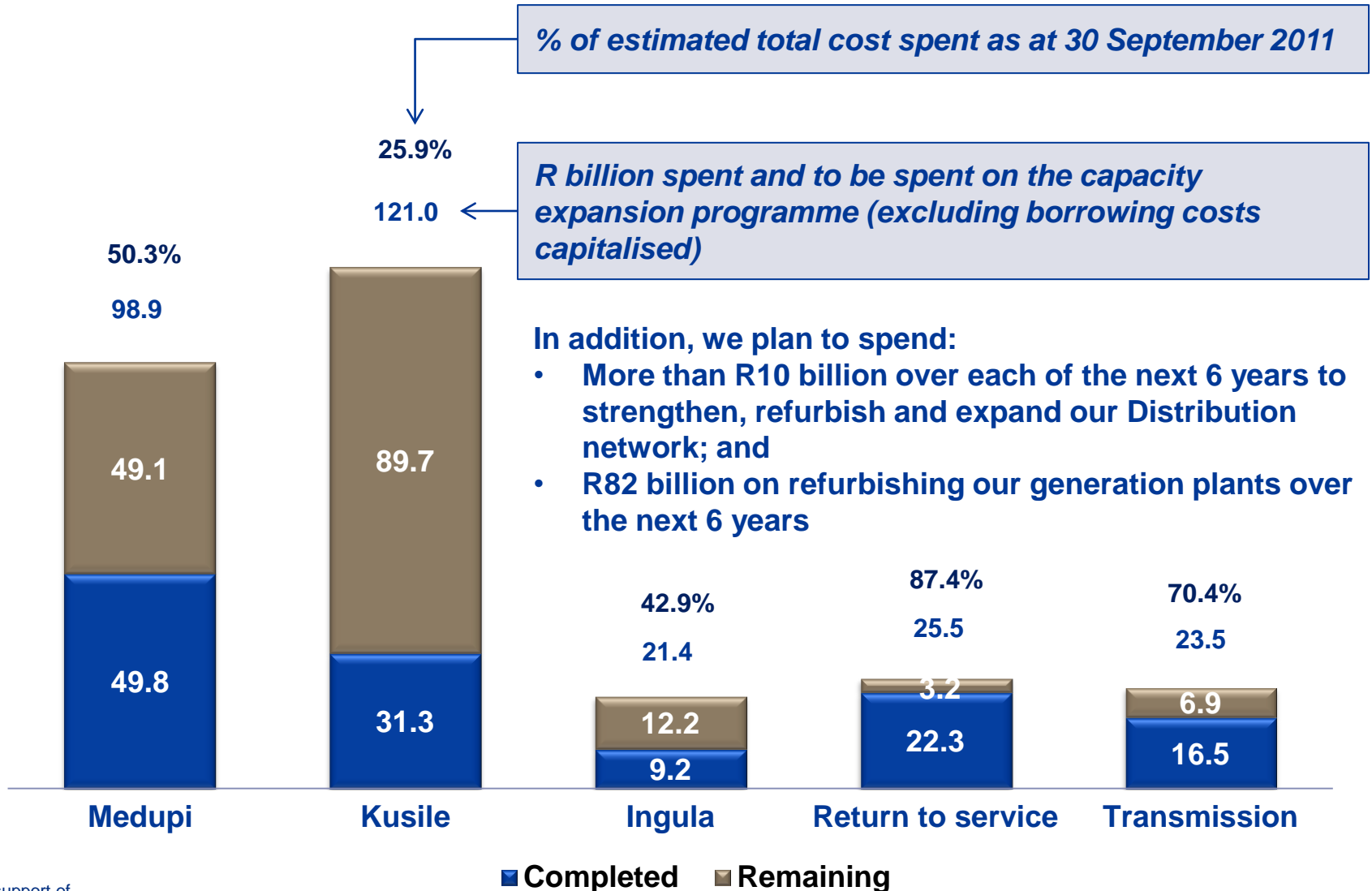
Project	11/12 FY	12/13 FY	13/14 FY	14/15 FY	15/16 FY	16/17 FY	17/18 FY	18/19 FY	Total
Grootvlei (return to service)	160	30							190
Komati (return to service)	225	400							625
Arnot capacity upgrade (coal fired)	30								30
Medupi (coal fired)			794	1 588	794	794	794		4 764
Kusile (coal fired)				800	800	800	1 600	800	4 800
Ingula (pumped storage)			333	999					1 332
Sere wind farm (renewable)			100						100
TOTAL (MWs)	415	430	1 227	3 387	1 594	1 594	2 394	800	11 841

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



In support of

Significant progress in build programme – began in 2005 with completion in 2017/18



Investment Decision Delays:

Investment decisions not made timeously for capacity to be realised when required according to IRP and Eskom Business Plan. This could have various consequences ranging from the need for higher tariffs, use of more expensive generation options and insufficient reserve margin



Inadequate Engineering Definition During Project Planning & Development:

Scope creep, cost overruns, time delays and poor quality, caused by poor defined/ inadequate project scoping and engineering specifications



Primary Energy challenges:

Late delivery of primary energy that could affect plant commissioning. At present the primary concern is at Kusile as the Medupi Coal Conveyor project is on track and contingencies are in place to truck in coal



Industrial Action:

Industrial action, leading to employee safety incidents (injury and fatalities), project delays and/or property damage. Resulting from employee dissatisfaction and, in particular, contractor treatment of their employees



Delays in Acquiring Servitudes:

Delays in acquiring servitudes caused by appeals and land disputes, leading to delayed starts on projects and cost escalations



Targeted Disruption During Climate Change Conference (COP17):

Targeted disruptions by environmental activists during the COP17 Climate Change Conference (28 Nov to 10 Dec), leading to site closures and press coverage. Particularly adverse publicity would result if activists were able to access a site



- As announced on 11 October 2011, Eskom initiated a detailed assessment of the timelines for the first unit of Medupi (Unit 6), which was due to deliver first power to the national grid in late 2012; We said the schedule was at risk
- Main concern is the unit's boiler, which is being built by a consortium comprising Hitachi Power Africa and Hitachi Power Europe. We are working closely with the parent company in Japan and Hitachi has put remedial measures in place to mitigate the risks
- Hitachi has made commitments to enable Unit 6 to deliver first power to the grid by May 2013 – in line with the Integrated Resource Plan
- Other contractual arrangements arising out of the delay are being addressed



Brian Dames

If you're not using it, switch it off

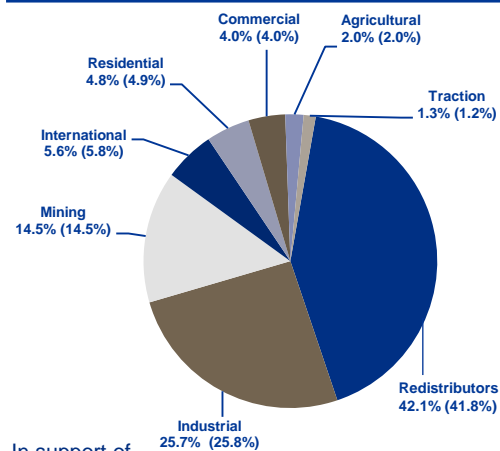
In support of



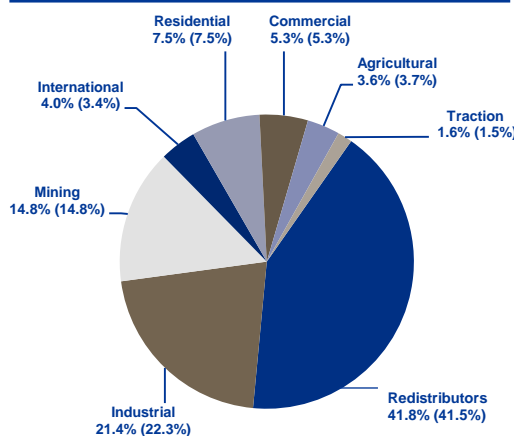
- Total electricity sales of 114 043GWh and more than 4.7 million customers (including transmission customers) as at 30 September 2011
- Directly provides electricity to 45% of all end users in South Africa
- Two main types of customers:
 - Redistributors: Mainly municipalities that sell electricity to end customers.
 - Direct customers: Industrial, commercial, mining, agricultural and residential consumers
- Key Sales and Customer Service unit deals with customers using $\geq 100\text{GWh}$ of energy per year
 - At 30 September 2011, KSACS had approximately 143 customers accounting for 38.6% of total revenues
- One customer has a supply contract indexed to commodity prices
- A member of Southern African Power Pool (“SAPP”)

Key figures for the half-year to 30 September 2011

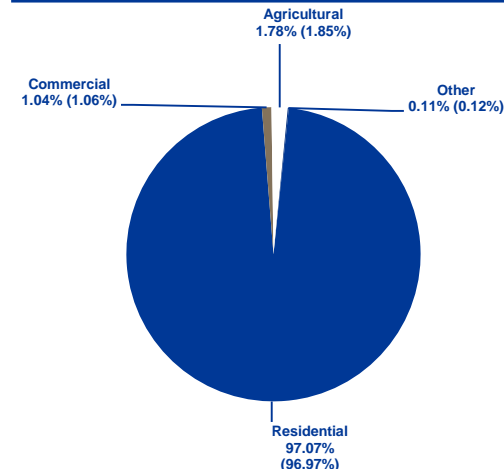
Sales Split
Total: 114 043GWh (113 072GWh)⁽¹⁾



Gross Electricity Revenue Split
Total: R63 096m (R50 392m)⁽¹⁾



Number of customers
Total: 4.7 million (4.6 million)⁽¹⁾

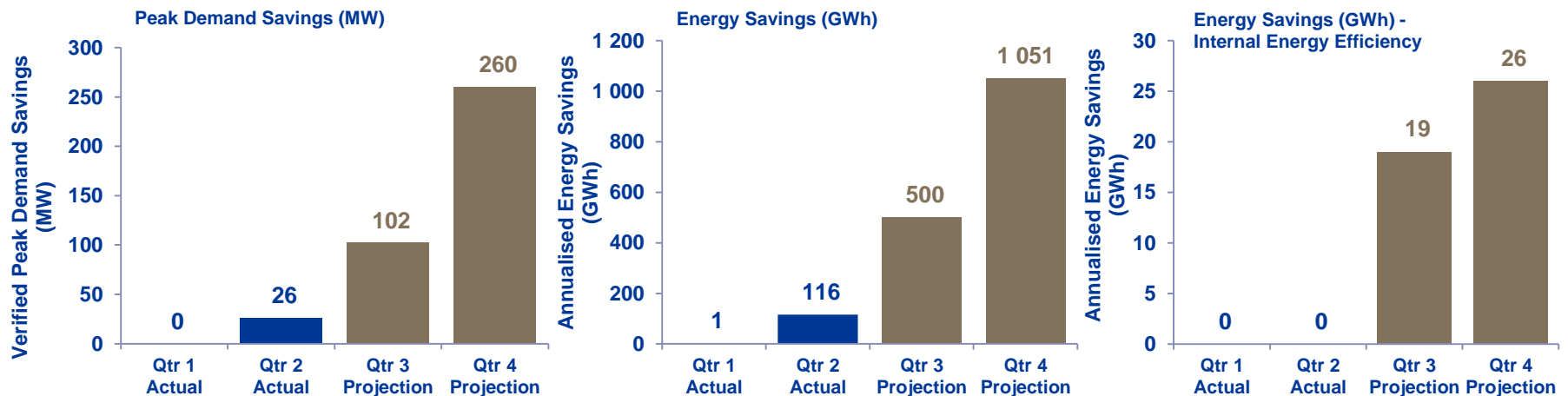


⁽¹⁾ Numbers in brackets refer to the half-year to 30 September 2010

Integrated Demand Management Performance for the six months ended 30 September 2011

Programme Category	Peak Demand Savings (MW)		Annualised Energy Saving (GWh)		Project Expenditure (R million)
	Installed	Verified	Installed	Associated Verified	
Water heating load management	0	0	0	0	45
Compressed air systems	9	9	65	62	13
Industrial process optimisation	0	0	1	1	17
Lighting and air-conditioning	23	17	65	49	84
Solar water heating	0 (99 320 Units)	0	0 (99 320 Units)	5	429
Heat pumps	1	0	4	0	27
Shower Heads	0	0	0	0	2
Total	33	26	135	116	617

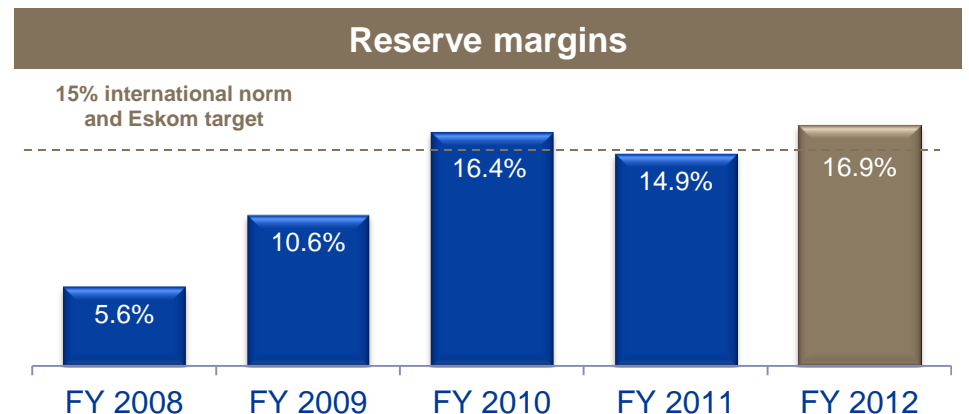
Quarterly Cumulative Projection



In support of

- Operates 27 power stations: 13 coal, 4 gas / liquid fuel turbines, 6 hydro electric, 2 pumped storage, 1 nuclear and 1 wind
- Total net capacity of 41 334MW as at 30 September 2011
 - Approximately 85% of net capacity is coal-fired
- Koeberg nuclear power station
 - 1 830MW net capacity
 - 6.8TWh electricity produced from nuclear in the half-year to 30 September 2011
- Reserve margin of 16.9% for FY 2012. The reserve margin has been steadily increasing since FY 2008. It must be noted that this is not reflective of system adequacy, due to other factors like maintenance and plant availabilities that results in lower operational reserves provided to the system operator

Key figures		
	Half-year to 30 Sep 2011	Financial Year to 31 March 2011
Net Capacity (MW)	41 334	41 194
Capacity from Coal (MW)	35 092	34 952
<i>Coal Share in Total Capacity</i>	84.9%	84.8%
Capacity from Nuclear (MW)	1 830	1 830
<i>Nuclear Share in Total Capacity</i>	4.4%	4.4%
Total Energy Output (TWh)	121	237
Energy from Coal (TWh)	111	220
<i>Coal Share in Total Output</i>	92.0%	92.8%
Energy from Nuclear (TWh)	6.8	12.1
<i>Nuclear Share in Total Output</i>	5.6%	5.1%



Highlights

- General improvement of coal quality to some power stations
- All Grootvlei units are now in commercial operation
- The fleet has shown an improvement in the utilisation of water compared to last year and the YTD performance is within target
- Several stations are showing an improved particulate emission performance when compared to last year and the general trend of the fleet's performance is improving



Challenges

- The return to service of Duvha Unit 4 turbine and generator which was extensively damaged in February 2011
- In a constrained power system we balance risk, planned maintenance and production requirements on ageing plant with the demand for electricity of a growing economy
- Maintain focus to ensure coal qualities do not deteriorate
- Original equipment manufacturer (OEM) supplier performance for maintenance

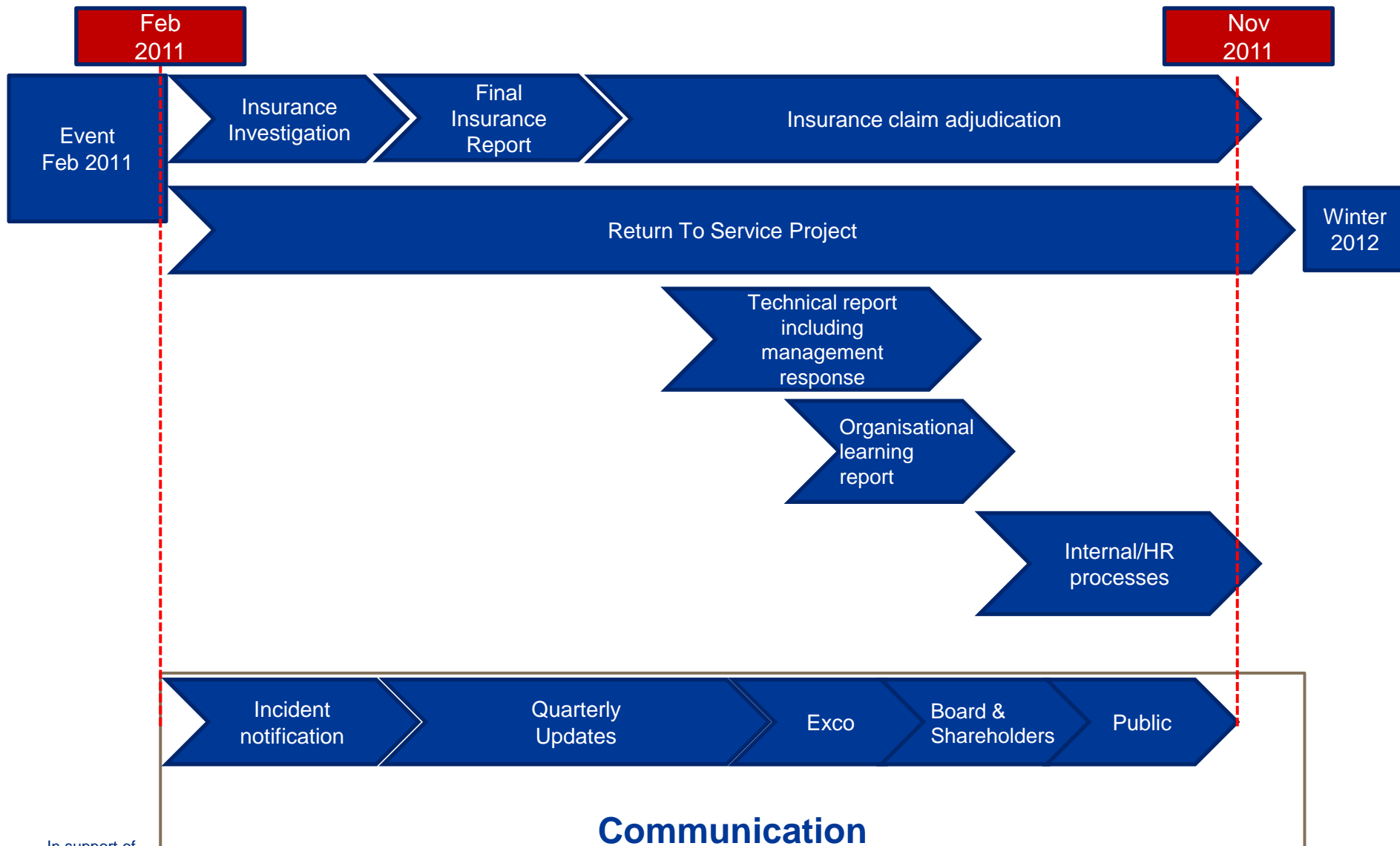


- Since the incident at Duvha Unit 4 on 9th February 2011 Eskom has launched a comprehensive and methodical recovery project, while also reporting timeously and regularly about progress, within legal, management, regulatory and governance framework requirements
- Progress to date includes completion of the Technical Investigation and acceptance of the claim by the insurers, while keeping the Unit 4 Recovery Project on track for return to service in Winter 2012
- The focus is now on returning Unit 4 to service

Latest News

Following the completion of the joint investigation process by a joint team of experts, Eskom's insurers have accepted the claim. Eskom has therefore mitigated the financial risk and now moves on to final phase of the recovery project

A comprehensive recovery project



The investigation made three main findings





- The incident was investigated by a team comprising representatives from TUV (investigating consultants appointed by insurers), Robertson and Co SA. (investigating consultants appointed by insurers), Eskom and VGB Powertech (engineering consultants to Eskom)
- The insurers' investigation report has been finalised and there was agreement on the findings between the investigating parties:
 - The overall conclusion reached by the investigators is that at the Power Station, there were a number of areas affected by inadequate and ineffective management of people, plant and procedures
 - The **root cause** of the incident was a modification undertaken by the Power Station in 2004 on the electro-hydraulic governor controller (known as the droop controller)
 - The **direct cause** of the incident is attributed to an operating error, in that the operator did not follow the set procedure while undertaking the physical overspeed test

Eskom is taking comprehensive action

- Everything Eskom has learned about the incident through the incident report will be used in training
- Actions related to the inadequate and ineffective management of people, plant and procedures:
 - Where there has been inadequate controls, steps have been taken to improve these controls and to take corrective action
 - Every specific issue in the report will be addressed
- Actions regarding the root cause; the modification undertaken by the Power Station in 2004 on the electro-hydraulic governor controller (known as the droop controller):
 - All software had been replaced with Original Equipment Approved software modifications
 - All units in Duvha have been checked for the same modification and where necessary replaced
 - New engineering governance regulations are in place to prevent a similar decision in future
- Actions about the direct cause of the incident, attributed to an operating error, in that the operator did not follow the set procedure while undertaking the physical overspeed test
 - Where it has been determined in the investigation that procedures were not followed, action will be taken
 - Oversight and supervisory procedures for overspeed tests have been revised
 - Training on revised procedures has been done at Duvha and the learning will be extended across the fleet

- Recovery Project Team established
- An initial visual inspection indicated that the steam turbine, generator and supporting components were extensively damaged during the event
- The mechanical failure caused fire damage and structural damage to adjacent walls and supporting steel structures
- The initial focus of the recovery team was to safeguard the unit and do critical repairs in order to make the area safe for work. Thereafter, the team focused on finalising the commercial strategy for the recovery of the unit.
- Project comprises of 4 phases as follows:

-  Completed
-  Still progressing
-  Not started

	Phase		Status
1	1.1 Strip down and damage assessment 1.2 Procurement and refurbishment of spares	1.1 Q4 2011 1.2 Q1 2012	
2	Repair turbine and generator foundations	Q1 2012	
3	Assembly of centreline	Q2 2012	
4	Commission the centre line and associated systems	Q3 2012	

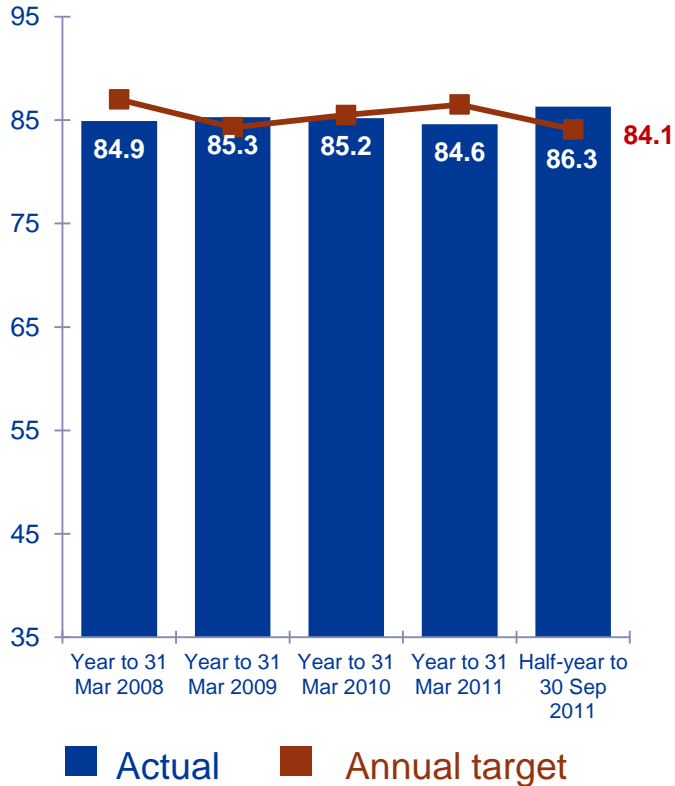
Generation – technical performance

Measure	Description	Target 31 March 2012	As at 30 September 2011	As at 30 September 2010	As at 31 March 2011
Unit capability factor (UCF)	UCF measures the plant availability and indicates how well the plant is operated and maintained.	85.1%	87.2%	88.0%	85.9%
Energy availability factor (EAF)	EAF measures plant availability (UCF above), plus energy losses not under the control of plant management	84.1%	86.3%	86.7%	84.6%
Unplanned capability loss factor (UCLF)	UCLF measures the lost energy due to unplanned production interruptions resulting from equipment failures and other plant conditions.	6.5%	6.8%	5.4%	6.1%
Generation load factor (GLF)	GLF indicates the extent to which the generation fleet was loaded on average over the year to produce the energy demanded.	66.9%	66.9%	67.2%	66.4%
Planned capability loss factor (PCLF)	PCLF - planned energy loss is energy not produced during the period because of planned shutdowns or load reductions due to causes under plant management control.	8.4%	6.1%	6.6%	8.0%
Unplanned automatic grid separations / 7000 hours (UAGS/7000)	UAGS/7000 indicates the amount of unplanned unit trips per 7000 operating hours	2.8	2.8	3.7	3.6

In support of

Generation – technical performance

Energy availability factor (EAF) %



- The actual YTD EAF for September 2011 was 86.3% which is lower than target. This was affected by the total unplanned unavailability
- The actual YTD planned unavailability (PCLF) is 6.1%. Eskom requires an aspirational PCLF (maintenance ratio) of 10%, but the constraint of the system meant that we could achieve only 6.1%. There is a growing maintenance backlog that will require plant shutdowns, and this must be addressed over the coming years
- The Duvha Unit 4 event negatively impacted period on period performance

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

Coal

- Largest primary energy source in South Africa
- Average coal stock of 41 days as at 30 September 2011 (September 2010: 46 days); Burnt 63.3 million tonnes of coal in the half-year to 30 September 2011 (September 2010: 62.8 million tonnes)
- Coal purchased as follows:
 - 43.6% cost plus contracts
 - 25.7% fixed price or indexed contracts
 - 30.7% short/medium - term contracts
- Limited correlation with International Coal Prices

Water

- 154 905ML of water used in the half-year ended 30 September 2011 (*156 014ML for the half-year ended 30 September 2010)
- Relative water consumption to generate electricity improved from 1.32 litres/kWh as at 30 September 2010 to 1.29 litres/kWh as at September 2011

Nuclear

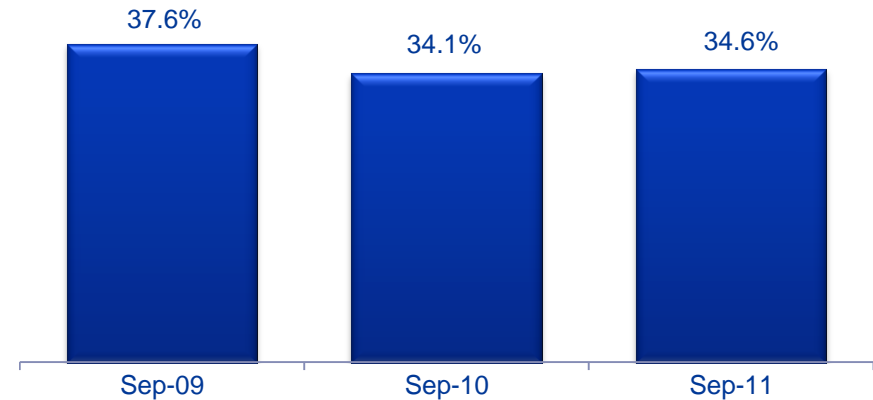
- Sourced mainly on international market
- Annual average ~ 30 tonnes of enriched uranium (equivalent to ~270 tons natural uranium) fabricated into ~ 70 fuel elements
- Government authorizes all nuclear fuel contracts and importation of nuclear fuel in accordance with the Nuclear Energy Act

Gas / Liquid Fuel

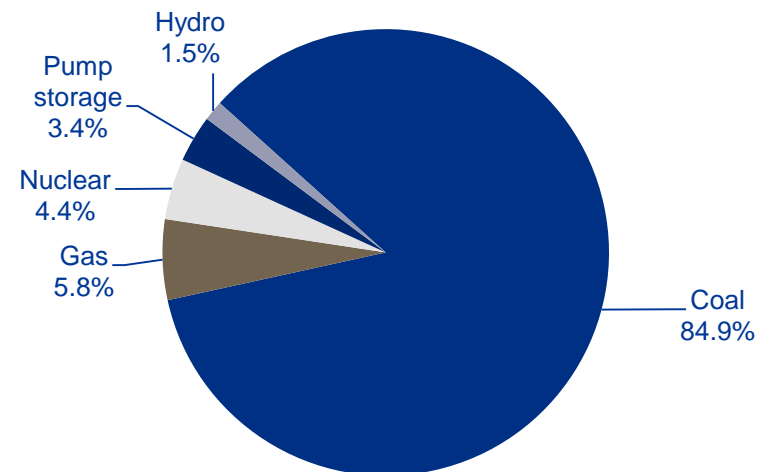
- Sourced locally with regulated price
- No take or pay obligations in place except for tank rental obligations
- Eskom does not hedge against diesel price fluctuations due to the uncertainty around the timing and quantity of usage

* Figure excludes Grootvlei and Komati's water use

Primary Energy Costs as % of Electricity Revenues



Eskom's Net Capacity Mix – 30 September 2011



Highlights

- For the half year ended 30 September 2011 coal cost maintained below budget
- Implementing the Tutuka containerised rail solution
- Stock days have recovered well despite coal mining industry industrial action
- Lower pumping costs as a result of the higher than expected rainfall and better water consumption rates at the power stations
- Construction of the Komati water scheme augmentation project to support Kusile has commenced



Challenges

- Delays in spending on the road repair programme
- Road fatalities due to the transport of coal
- Poor performance of some mines has resulted in the purchasing of more coal from the short/medium-term market, resulting in higher coal and transport costs
- Poor performance of Majuba tippler impacting rail deliveries to Majuba Power Station
- Maintenance of water schemes



Highlights

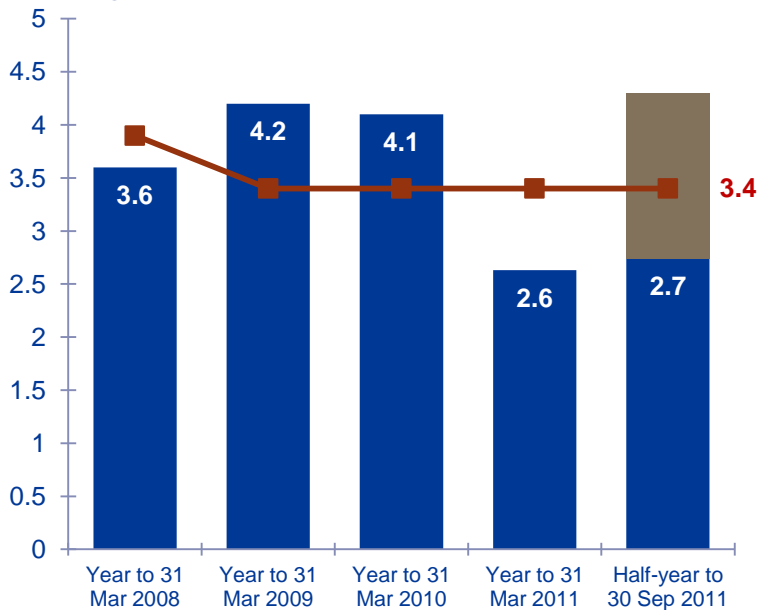
- For the first 6 months of this financial year, the Single Buyer Office has successfully purchased 2 133 GWh of energy from non Eskom generation at a cost of R1.6 billion
- Transmission energy losses of 3.14% versus a target of 3.40%

Challenges

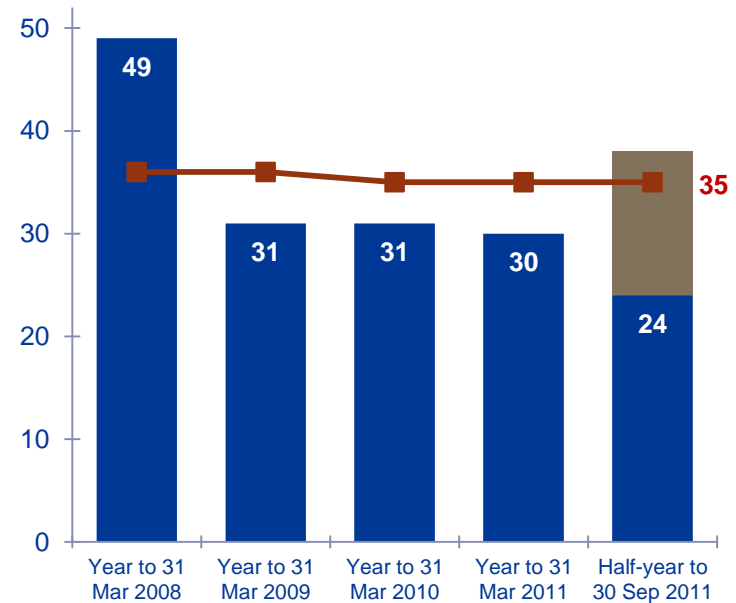
- High levels of theft of equipment and electricity is affecting plant performance and increasing cost
- Transmission system performance (SM<1) negatively impacted by risks resulting from modifications at operational sites
- Employee security remains a concern
- On 28 September 2011, a transmission fault caused an outage that lasted just under an hour. Eskom lost supply of approximately 1 186 MW, affecting supply to customers in Cape Town. The fault happened while planned maintenance was taking place

- Both the number of interruptions and the system minutes lost < 1 performance during the half-year were worse than expected. This is primarily attributable to:
 - human performance
 - equipment failure during planned plant outages for maintenance
- One major incident was recorded on the Transmission network during the half-year

Severity of Interruptions (System minutes lost ≤ 1)



Number of Supply Interruptions



■ Actual
 ■ Year end projection
 ■ Annual target

Energy Losses (12 MMA)⁽¹⁾

	Budget / Target	30 Sep 2011	30 Sep 2010	31 March 2011
Distribution losses	≤ 6.00%	5.94%	5.76%	5.68%
Technical losses	-	4.16%	4.03%	3.98%
Non-technical losses	-	1.78%	1.73%	1.70%
Transmission losses ⁽²⁾	≤ 3.40%	3.14%	3.30%	3.27%
Total Eskom losses	≤ 8.75%	8.52%	8.46%	8.25%

(1) 12 month moving average

(2) Transmission losses are all technical losses

In support of

Independent Power Producer Procurement Programme

Independent Power Producer and Municipal Purchases April to September 2011

Programme Category	Planned Purchases ⁽¹⁾		Actual Energy Purchases (GWh)		Average cost (R/kWh)
	Capacity	Energy	Capacity	Energy	
Pilot National Cogeneration Programme (PNCP)	-	-	-	-	-
Medium term power purchase programme (MTPPP)	376	2 655	288	1 044	0.77
Municipal Generation	150	657	515	1 089	0.76
Independent Power Producer Programmes	-	-	-	-	-
Total	526	3 312	803	2 133	-

- Eskom supporting two municipalities to run their generation plant – 515 MW signed up
- PPAs have been signed with the following five MTPPP projects:
 - Sasol - (operational)
 - Sappi Saiccor - (operational)
 - Sappi Ngodwana - (operational)
 - IPSA - (operational)
 - Tangent Mining - (not yet operational)
- The PPA for TSB Sugar has been approved by NERSA and is awaiting sign off by TSB Sugar



Highlights

- Distribution energy losses of 5.94% versus a target of 6.00%. (Total Eskom energy losses of 8.52% versus a target of 8.75%)

Challenges

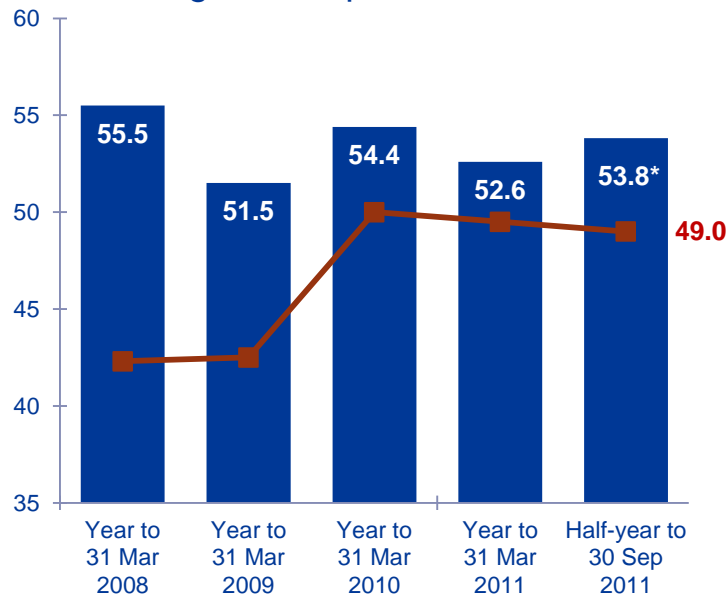
- Safety performance
- Distribution technical performance
- Electricity theft
- Electrification



- Average customer interruption duration of 54 hours per year
- SAIFI and SAIDI performance has marginally deteriorated since March 2011
- Slower than anticipated benefit realisation for Distribution’s network performance improvement initiatives
- There has been a continued focus on planned work

SAIDI (hours/annum)

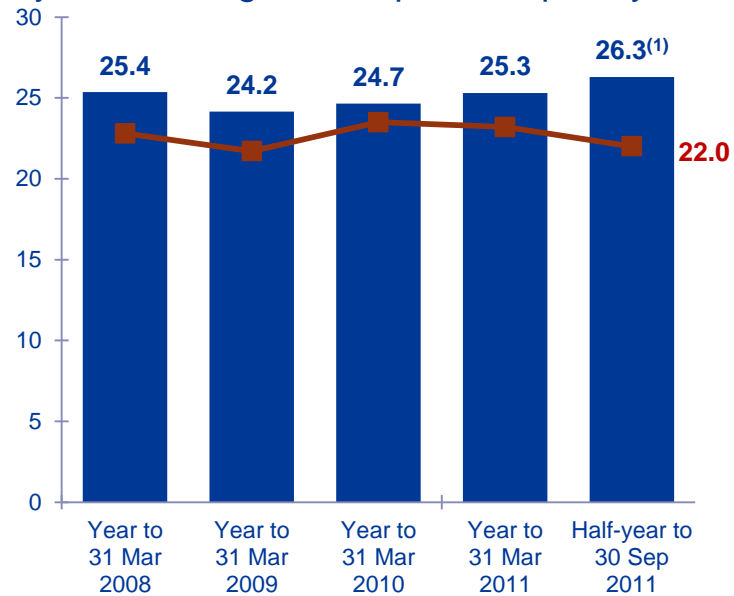
System average interruption duration index



■ Actual ■ Annual target

SAIFI (number/annum)

System average interruption frequency index



■ Actual ■ Annual target

⁽¹⁾ The 53.8 SAIDI and 26.3 SAIFI measurements as at 30 September 2011 represent a 12 month moving average

In support of

	Movement	Half-year to 30 Sep 2011	Half-year to 30 Sep 2010	Movement	Financial year to 31 March 2011	Financial year to 31 March 2010
No. of incidents	38% ↑	1 252	905	(9)% ↓	1 896	2 078
Value of materials stolen	78% ↑	R12.8m	R7.2m	(2)% ↓	R38.6m	R39.5m
Perpetrators arrested	+5 ↑	142	137	+11 ↑	284	273

The increase in crime statistics seen in 2011 has been contributed by:

- An increase in international **demand for copper**
- Security capacity during the 2010 World Cup resulted in a decrease of crime

Eskom's strategy to combat crime:

- **Proactive patrols** in “hotspots” where cable thieves are active, aimed at identifying and apprehending the same
- **Air support** to support ground teams in “hotspots”
- **Aggressive policing** of the scrap market
- Continuous research and utilisation of **technology**
- **Co-ordination of all related functions in Eskom**
- On-going government and public **awareness initiatives**
- **Continued interaction/co-operation between government departments and industry role-players experiencing a similar problem**

Brian Dames

If we all save as much as we can, we'll all have as much as we need

In support of



- The system will be tight for the next five years, the next two years critical
- Most of our power stations are in their mid-life and require more maintenance; backlog has built up which must be addressed
- Summer is maintenance season in Eskom, when we normally take advantage of lower demand to take capacity out of service, on a planned basis, to do maintenance
- In addition, supply has also been constrained this summer by:
 - Koeberg Unit 2 shutdown for repairs (as announced 29/10/2011)
 - Hot weather, which impairs efficiency of certain dry-cooled power stations
 - Poor coal quality affecting performance of certain plants
- Higher than expected demand in recent weeks, in part because of increased air-conditioning load
- This summer has seen significantly increased use of open cycle gas turbines and other reserves to balance supply with demand

We urge all customers to partner with us to save electricity and keep the lights on

We took action to address the challenges we identified at the beginning of the year

What we said	What we did
We would improve coal handling and coal quality to reduce load losses	Coal-related load losses have shown an improving trend over the past few months
We targeted to improve generation output by 1%-2% over three years	Comparing September 2011 YTD with the same period in 2010, the EAF performance deteriorated slightly by 0.4%. The Duvha unit 4 incident was a major setback in improving performance
We would sign up about 400 MW of co-generation and own generation by April	373MW MTPPP signed up and about 515MW of municipal generation contracted
We needed to undertake significant maintenance during summer	Critical maintenance has been prioritised
Demand side management programme in place to reduce demand and energy savings	Realised energy savings of 116GWh during the first half of the year
We would communicate with our stakeholders on the state of the system	Extensive programme of engagement with stakeholders

Expected system status

Week Start	Week	MW Forecast	MW Operational Surplus / Deficit	MW Risk Level	MW 500 MW Risk Mitigation
21-Nov-11	47	32526	30	Green	Green
28-Nov-11	48	32513	-972	Yellow	Yellow
05-Dec-11	49	32252	-908	Yellow	Yellow
12-Dec-11	50	31768	-1427	Orange	Yellow
19-Dec-11	51	30296	-1114	Orange	Yellow
26-Dec-11	52	28434	-510	Yellow	Yellow
02-Jan-12	1	30055	-506	Yellow	Yellow
09-Jan-12	2	31003	111	Green	Green
16-Jan-12	3	31958	-730	Yellow	Yellow
23-Jan-12	4	32037	-541	Yellow	Yellow
30-Jan-12	5	32062	-993	Yellow	Yellow
06-Feb-12	6	32368	-1169	Orange	Yellow
13-Feb-12	7	32387	-527	Yellow	Yellow
20-Feb-12	8	32740	-823	Yellow	Yellow

A **green** week indicates that demand and all reserve requirements can be met with all installed capacity (including the Open Cycle Gas Turbines).

A **yellow** week indicates that there is up to 1,000 MW shortage of meeting the demand and reserves. There is an increased probability of requiring some emergency reserves to meet the peak demand

A **orange** week indicates that there is between 1000 and 2000 MW shortage of meeting the demand and reserves. There is a high probability of requiring substantial emergency reserves to meet the peak demand

The above doesn't show the full picture

- We have been making increased use of open cycle gas turbines
- There is still a significant maintenance backlog
- We are concerned about summer

Brian Dames

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

In support of



Eskom's strategic pillars support our purpose

“To provide sustainable electricity solutions to grow the economy and improve the quality of life of people and in the region”

1

Leading and partnering to keep the lights on

2

Reducing our carbon footprint and pursuing low carbon growth opportunities

3

Securing our future resource requirements, mandate and the required enabling environment

4

Implementing coal haulage and the road to rail migration plan

5

Pursuing private sector participation

1st Building Block:

Setting ourselves up for success

2nd Building Block:

Ensuring our financial sustainability

3rd Building Block:

Become a high performance utility

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 socio-economic roles

Accomplish Eskom's purpose

Execute Strategic Pillars

Get foundation right, build capacity

Eskom and COP17 – Eskom commits to a reduction of its carbon footprint

Ensure reliable electricity delivery for the event, treatment of identified risks and managing Eskom’s reputation through delivery on renewable and energy efficiency initiatives and collaborating on government and business initiatives to enable a successful COP 17

	Energy Efficiency and Renewable Energy	<ul style="list-style-type: none"> • Photo Voltaic’s at Kendal, Lethabo, Megawatt Park and MWP solar traffic lights • Solar Water Heating (SWH), Compact Fluorescent Lights (CFL) and SERE wind • Solar traffic lights, photo voltaic and Emitting Diodes (LED) street lights with partners
	Security of Supply	<ul style="list-style-type: none"> • Adequate generation capacity. • Backup – Open Cycle Gas Turbines and Demand Market Participation • Working with and supporting local municipalities
	Security	<ul style="list-style-type: none"> • Eskom power plants national key points • Engagement with all stakeholders to ensure preparedness
	Business	<ul style="list-style-type: none"> • SA COP 17 CEO Forum • Sector case studies on positive action taken in SA and appropriate mitigation actions • Business roundtable pre-COP Ministerial and Business Day at COP
	Electricity Utilities Project	<ul style="list-style-type: none"> • To profile the work done by the electricity sector in combating climate change • 21 utilities participating including South African Power Pool
	Communications Stakeholder engagement	<ul style="list-style-type: none"> • Engagement with government, business and other key stakeholders • 49m and Eskom Exhibition at COP
	Government Initiatives	<ul style="list-style-type: none"> • Supporting the negotiations and logistical arrangements • Supporting in profiling initiatives including SERE, SWH and CFL rollout

In support of

- Addressing safety is a priority
- System is tight – we urge South Africans to partner with us
- Financial position is sound
- Operational improvement programmes on-going
- Refocusing on B-BBEE spend and job creation
- Reviewing all capacity expansion schedules
- All at Eskom working hard to keep the lights on
- Continuing on the road to a sustainable future



Thank you