



## **Eskom Feedback**

Feedback to the Portfolio Committee on Public Enterprises

22 April 2015

### Brief from the Portfolio Committee Secretary





The purpose of the meeting is to have an interaction with the board of Eskom on the challenges facing the company, which include governance instability, operational performance (delays in build programme, labour unrest and load shedding), financial challenges, maintenance, progress update on the five point plan and the war room.

## Agenda



- Executive Summary
- Governance
- Operational Performance
  - Financials
  - Build programme
  - Labour unrest
  - Maintenance
- Progress on War Room and Five Point Plan

### Executive summary (1 of 2)



- Eskom is a **fully integrated power utility** (generation, transmission, distribution and wholesale/retail) that supplies 95% of SA's electricity and **fourth largest in the world** in terms of installed capacity
- We are well-governed with a Shareholder, functioning Board and EXCO and more than 46 000 employees
- Eskom's Labour Relations has matured over time and since 1998, Eskom has never had a strike except for isolated localized incidents of work-stoppages (in 2010 and in 2013 both in support of the wage demands).
- We are currently undertaking a R280 bn capex programme over 5 years and building two of the biggest coal fired power plants in Africa
- Since 2001 we added 32 generating units increasing a number of current units to 121
- Medupi Unit 6 has been synchronised and Sere Wind farm (100 MW) is completed.
- Delays in new build has primarily been caused by our contractors through strikes or technical non-performance

### Executive summary (2 of 2)



- We have a maintenance backlog due to commitments made to "keep the lights on" and this has led to deteriorating power station availability and subsequent load shedding. We however need a minimum of 3000 MW and maximum of 5000 MW buffer either through supply-side or demand-side options in order to close the backlog within 3 5 years and avoid load-shedding
- At Stage 1 load-shedding we still supply 96% of the required demand. At stage
   2 it is 94% of required demand
- We have added about 160, 000 new electrification customers in the last financial year
- In Distribution side we have sustainably reduced the duration of customer interruptions over the last three years by close to 10 hours per annum
- Eskom has developed a turnaround strategy addressing its financial strength, operational excellence and new build delivery
- The government initiated war room is up and running and provides the required interface to drive improvements together with government

# The Capital Portfolio is made up of almost 8000 projects costing R280bn over 5 years...



### The main drivers of the CAPEX requirements are:

- New build / new capacity (R159bn)
- Major overhauls that are capitalized (R29bn)
- Refurbishment and replacements (R63bn)
- Customer connections (R10bn)
- Compliance (legal, regulatory, safety, environmental) R19bn

### Our Vision and Mission



### **Our Vision:**

To provide energy today for a better tomorrow

### **Our Mission**

By providing sustainable electricity solutions, to grow the economy and improve the quality of life of people in South Africa and in the region

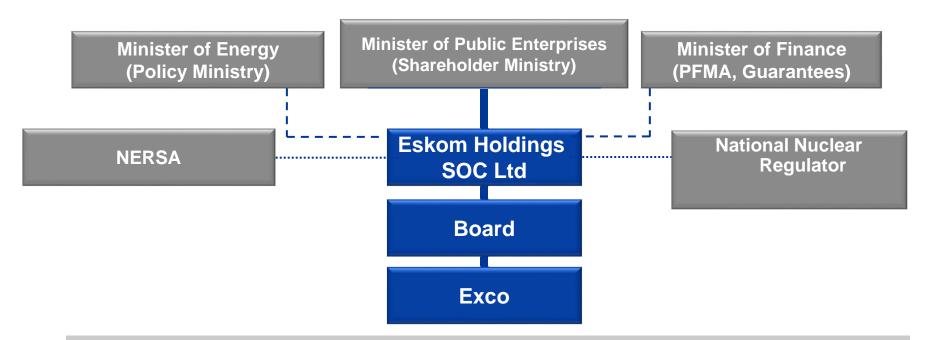
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### Governance



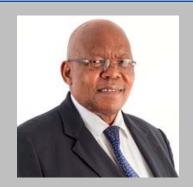


### **Board Committees**

- Audit and Risk
- Social, Ethics and Sustainability
- People and Governance
- Tender
- Investment and Finance
- Recovery & Build Programme

## Governance: Board of Directors (1/4)





**Dr Baldwin Sipho Ngubane** 

### **Acting Chairperson of Board**

- Recovery and Build Programme
- People and Governance



Dr Pathmanathan Naidoo

### **Non-executive Director**

- Chairperson Recovery and Build Programme
- Tender
- Social, Ethics and Sustainability

Chairman of Board Zola Tsotsi has resigned

\*The Acting Chief Executive and Acting Chief Financial

Officer are not Board Members

## Governance: Board of Directors (2/4)





Zethembe Khoza

### **Non-executive Director**

- People and Governance
- Investment and Finance
- Tender



Chwayita Mabude

### **Non-executive Director**

- Chairperson Audit and Risk
- People and Governance
- Tender

## Governance: Board of Directors (3/4)





### Venete Klein

### **Non-executive Director**

- Chairperson People and Governance
- Chairperson Social, Ethics and Sustainability
- Investment and Finance



Romeo Kumalo

### **Non-executive Director**

- Audit and Risk
- Investment and Finance

## Governance: Board of Directors (3/4)



Nazia Carrim	<ul> <li>Non-executive Director</li> <li>Chairperson Tender</li> <li>Audit and Risk</li> <li>Recovery and Build Programme</li> </ul>
Mark Vivian Pamensky	Non-executive Director  • Chairperson Investment and Finance

### Governance: Board of Directors (4/4)





Devapushpum Viroshini Naidoo

### **Non-executive Director**

- Social, Ethics and Sustainability
- Audit and Risk
- Recovery and Build Programme



Norman Tinyiko Baloyi

### **Non-executive Director**

- Audit and Risk
- Social, Ethics and Sustainability
- Investment and Finance

# Governance: Executive Management Committee (1/3)



Brian Molefe **Acting Chief Executive** 



Nonkululeko Veleti Acting Chief Financial Officer



Mongezi Ntsokolo **Generation** 



Abram Masango **Group Capital (Acting)** 



\*The Acting Chief Executive and Acting Chief Financial Officer are not Board Members

# Governance: Executive Management Committee (2/3)



Ayanda Noah

Distribution and Group

Customer Service



Thava Govender
Transmission and
Sustainability



Elsie Pule
Human Resources
(Acting)



Edwin Mabelane
Technology and
Commercial (Acting)



\*The Acting Chief Executive and Acting Chief Financial Officer are not Board Members

# Governance: Executive Management Committee (3/3)



- The Following Executives have been suspended:
  - Tshediso Matona Chief Executive\*
  - Tsholofelo Molefe Finance Director\*
  - Dan Marokane Group Executive Group Capital
  - Matshela Koko Group Executive Technology and Commercial

\*The Chief Executive and Finance Directors are Members of the Board

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# The Capital Portfolio is made up of almost 8000 projects costing R280bn over 5 years...



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## Financial results for the period to 30 September 2014



Measure and unit	Reviewed <sup>1</sup> period to 30 Sept 2014	Reviewed period to 30 Sept 2013	Audited year to 31 March 2014	Audited year to 31 March 2013
Key financial statistics				
Revenue, R million	81 898	77 722	139 506	128 775
EBITDA	22 413	23 929	24 300	21 543
Profit for the period after tax, R million	9 287	12 241	7 089	5 183
Electricity revenue, c/kWh	74.00	68.97	62.82	58.49
Electricity operating costs, c/kWh	62.14	55.29	59.67	54.15
Capital expenditure, R million	27 452	23 440	59 803	60 133
Average days coal stock, days	46	53	44	46
Key financial ratios				
Gross debt securities issued/borrowings, R million	264 915	236 780	254 820	202 956
Gearing	67%	66%	68%	65%

- Revenue grew of 5.4% from R78bn R82bn
- Primary energy cost increased significantly, particularly due to use of OCGTs and IPP purchases
- **R200 billion** funding plan for remainder of MYPD 3 (I April 2014 to 31 March 2018) is progressing well, with **32.8**% of funding secured by 30 September 2014
- Municipal arrear debt has increased to R4 billion, negatively impacting liquidity
  - I. Figures have been reviewed, but not audited, by the independent auditors, SizeNtsalubaGobodo Inc.



## Income statement for period ended 30 September 2014



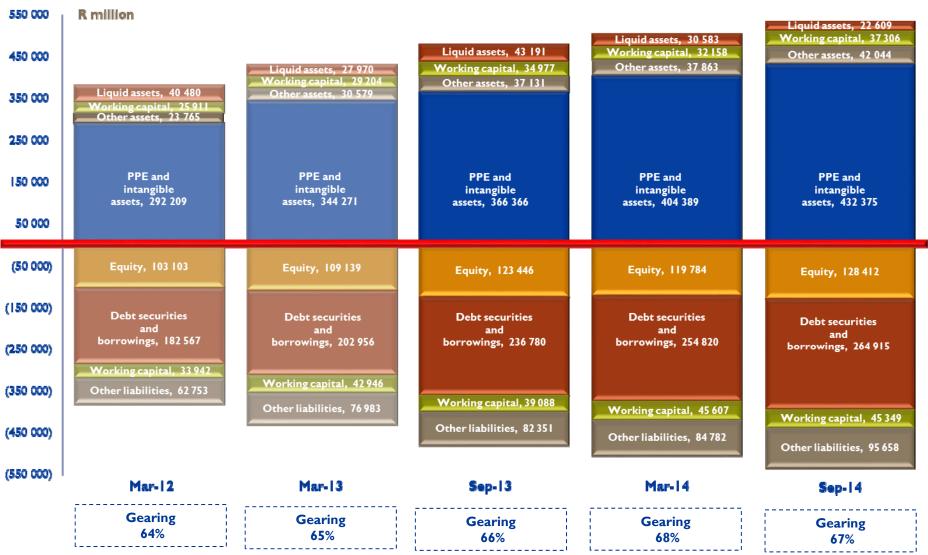
		Restated <sup>1</sup>	A 197
	Reviewed period to	Reviewed period to	Audited year to
	30 <b>S</b> ep	30 <b>S</b> ep	31 March
R million	2014	2013	2014
Revenue	81 898	77 722	139 506
Other income	452	183	962
Primary energy cost	(38 065)	(31 266)	(69 812)
Operating expenses (including depreciation and amortisation)	(28 544)	(28 622)	(58 293)
Operating profit before net fair value gain and net finance cost	15 741	18 017	12 363
Net fair value loss on financial instruments	(860)	(998)	(620)
Net fair value gain on embedded derivatives	I 62I	I 868	2 149
Operating profit	16 502	18 887	13 892
Net finance cost	(3 539)	(1 853)	(4 772)
Share of profit of equity-accounted investees	33	26	43
Profit before tax	12 996	17 060	9 163
Income tax	(3 675)	(4 846)	(2 137)
Discontinued operations	(34)	27	63
Net profit for the period  EBITDA	9 287 22 413	12 241	7 089 24 300

- Group revenue of R81.9 billion (2013: R77.7 billion), an increase of 5.4% against the comparative period.
- Revenue growth has been offset by escalating primary energy costs
- Cost Efficiency drive through the implementation of Business
   Productivity programme has resulted in contained operating expenditure.
- Finance costs of R8.3 billion were capitalised during the period to 30 September 2014 (2013: R6.1 billion)

### Financial position

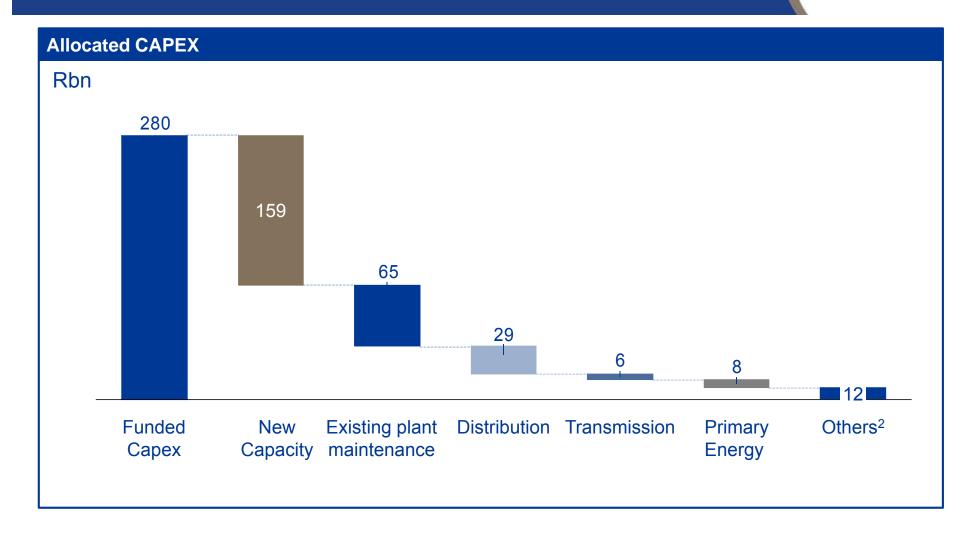






## The divisional breakdown of the available R280bn CAPEX budget is as follows:





- 1. Gx is made up of Gx Outages (R29bn), Gx Tech Plan (R31.8bn) and Nuclear Fuel (R3.7bn)
- 2. Others includes Sustainability (R6bn), Group Information Technology (R5bn) and Fleet (R1bn) SOURCE: BPP CAPEX central team



# About 80% in the top 10 Capital investment accounts for bringing new capacity on line



Project Name	Description	MYPD3 Total R bn
Kusile Power Station	Six 800MW coal-fired generating units for a total generating capacity of 4800 MW	52
Medupi Power Station & Integrations <sup>1</sup>	<ul> <li>Six 800MW coal-fired generating units for a total generating capacity of 4800 MW and Integrations</li> </ul>	51
Ingula Pumped Storage	<ul> <li>Four 333MW pump turbines with a total capacity of R1332 MW</li> </ul>	9.4
Replacement of the Koeberg Generator	<ul> <li>6 steam generators for 2 Koeberg nuclear-fired generating units</li> </ul>	5.7
Modular and Strategic Turbines spares	<ul> <li>Turbine spares that will significantly reduce Outage duration</li> </ul>	5.1
Concentrated Solar Power	<ul><li>Planned capacity of 100MW</li><li>Planned storage for 9-12 hours</li></ul>	4.5
Majuba Rail	<ul> <li>Coal supply for Kusile expected coal supply agreement of 16-17mbps</li> </ul>	3.8
Nuclear Fuel	Purchasing of nuclear fuel for Koeberg Power Station	3.7
Sere	46 wind turbines with a total of 100 MW	2.4
Hydro – Omega 765kV line	<ul> <li>Transmission line connecting Hydro and Omega transmission substation</li> </ul>	2.2
Total impact		140

# Capital investment is critical to the reliability of electricity supply...



- Meeting the emission requirements specified in the environmental laws, operating the plant safely and complying with Nuclear Regulator Requirements with regards to Koeberg will ensure that the power stations are not shutdown, thus ensuring reliable supply
- Investing in new capacity ensures that Eskom will be able to meet future electricity requirements
- Midlife refurbishments or replacement being carried timeously, reduce equipment failures from occurring, thus improving the ability to provide a reliable supply to customers

## Revised funding plan: R200 billion from 1 April 2014 to 31 March 2018



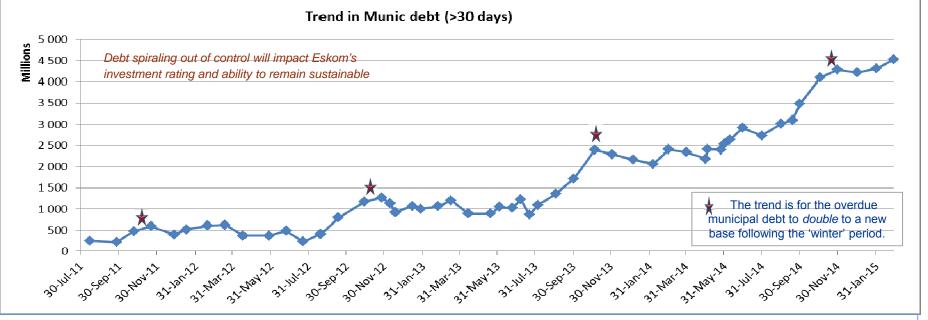
Source of funds	Funding sourced R billion	Currently secured <sup>1</sup> R billion
Domestic bonds	41.0	5.0
International bonds	42.0	3.3
Commercial paper <sup>2</sup>	60.0	2.4
Existing domestic DFIs	6.0	6.0
Existing international DFIs	32.3	32.3
Existing ECAs	15.4	15.4
Other and new sources	2.8	1.1
Totals	199.5	65.5
Percentages		32.8% <sup>3</sup>

- I. For the period from I April 2014 to date
- 2. Commercial paper is issued for up to one year and then redeemed and reissued for the same net amount. The commercial paper is thus by definition not fully secured for the full period, however, Eskom's long term observations and past trends support a high level of confidence that Eskom will be able to roll over the redemptions each year. For this reason, the gross value of the commercial paper issued is shown as "secured"
- 3. As a percentage of the R199.5 billion funding sourced



### Status of Overdue Municipal Debt





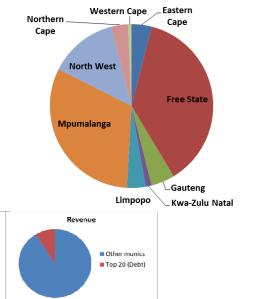
Arrear Debt

■ Other Munics ■ Top 20 (Debt)

The total municipal overdue debt to Eskom is R4,913 million as at the 28 February 2015.

Ageing of Debt	15-30days	31-60 days	61-90 days	>90 days
(Feb '15)	R404m	R590m	R618m	3,319m

- The financial year-end projection for total overdue municipal debt is R5 billion expecting payments from munics with their equitable share income.
- The municipal debt is largely confined to the FS, MP & NW provinces.
- The top 20 defaulting municipalities make up approx. 80% of the outstanding debt; however, only approx. 10% of Eskom's total monthly municipal sales.
- Several interventions have been pursued by Eskom, Provincial and National government in the last two years but there was no improvement in reducing the growing municipal debt.
- Eskom has previously been restricted in effecting disconnections.



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### New generation capacity & transmission lines

Leading and partnering to keep the lights on



### Return-to-service (RTS)



• None

### **Base load**



- Nuclear New Build Programme
- Next Coal (Coal 3)
- Biomass

None

9 564 MW

- Majuba Underground Coal Gasification Demo Plant (UCG)
- Primary Energy projects (Road and Rail)

### Peaking and renewable



- Pilot Concentrated Solar Power (100 MW)
- Open Cycle Gas Turbine
   Conversion Project –
   conversion of Ankerlig and
   Gourikwa OCGT power plants
   to a Combined Cycle Gas
   Turbine (CCGT)
   Photovoltaic (own use)

air quality projects

Refurbishment and

**Mpumalanga** 

refurbishment

### **Transmission**



 >60 Grid strengthening projects

# construction

development

Construction Completed None

- Medupi (4 764 MW)
- Kusile (4 800 MW)

- Ingula (1 332 MW)
- Acacia relocation
- · Matla refurbishment
- Duvha refurbishment
- Grootvlei Fabric Filter Plant (FFP)
- Kriel Retrofit
- 765kV projects
- Central projectsNorthern projects
- Cape projects

- Ankerlig (1 338.3MW)
- Gourikwa (746 MW)
- Sere (100 MW)
- Solar PV installations: MWP, Lethabo, Kendal (1.62 MW) – own use
- Arnot capacity increase (282.5 MW)
- · Kriel refurbishment

Synchronisation of the first / next units are expected as follows:

- Medupi Unit 6 in 1<sup>st</sup> half of 2015 (achieved 2 March 2015)
- Medupi Unit 5 in the 1<sup>st</sup> half of 2017

Komati (990 MW)

3 741 MW

Camden (1 571 MW)

Grootvlei (1 180 MW)

- Kusile Unit 1 in the 2<sup>nd</sup> half of 2017
- Ingula Unit 3 in the 2<sup>nd</sup> half of 2016

- 3 616.3 MW (excl. Solar PV)
- 282.5 MW

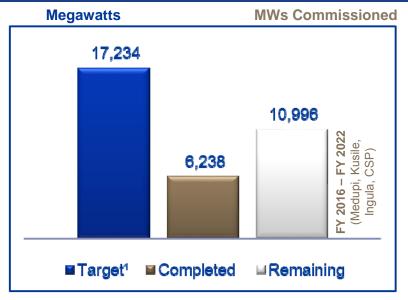
- 9 756 km
- ~ 17.23 GW of new capacity (6 238MW installed and commissioned)
- ~ 9 756 km of new transmission network (5 814km installed)
- ~ 42 470 MVA of new transformation capacity (29 655MVA installed)

#### In addition, Recovery Projects are underway at Duvha and Majuba:

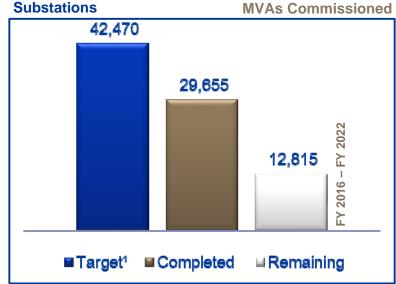
- Duvha Unit 3 Recovery: contract awarding planned for 2<sup>nd</sup> half of 2015
- Majuba Silo 20 Recovery Project: interim solution commissioned in 2<sup>nd</sup>
   30half of 2015; permanent solution in infancy stage

# A large amount of construction work has been completed to date...









# We have learnt a number of key lessons on our Build Programme...



### Lessons Learnt

- The completion of all necessary project development activities before commencing construction
- The development, deployment and adoption of internationally benchmarked project management methodologies, processes and systems
- The establishment of a suitably capacitated contract management capability due to the complexity and extent of contractor claims
- Additional owner's oversight to manage fabrication and installation quality issues of international contractors
- Additional owner's supervisory requirements for local contractors
- The establishment of suitable levels of monitoring, oversight and assurance across the Build Programme
- Ensuring an adequate project pipeline to prevent the loss of skills and capabilities and to build on the existing capabilities through continuous improvement
- Engaging with the international asset creation community to share experiences and lessons

**21-Apr-15** 32

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### Labour Relations



### **Eskom's workforce segmentation**

- Eskom employs roughly 46000 employees
- About 42000 are permanent employees whilst the rest comprises of a variable number of temporary employees for both operations and.
   the project environment

## Eskom Labour Relations has matured over time and are generally healthy

- Whilst Eskom is highly unionized, there has not been any major strike since 1998.
- Workplace practices are governed by robust agreements and the participative structures are effective

# The building of Power Plants(Medupi/Kusile/Ingula) is contracted to Private Sector Companies

 Eskom's role is limited to facilitation and the monitoring of compliance rather than the

- management of employee relations for the contractors
- 15575 employees at Medupi are employed by private companies and their respective conditions of employment are managed by those contractors.
- At Medupi since programme inception it is estimated that at least 18 months of productivity was lost due to labour unrests.
- Multiple trade unions represent contractor employees with NUMSA as the majority at 49%
- They have been on a strike since the 25th March 2015 and are currently in a process of resolving the strike to return the site

# Labour Relations at Eskom and its impact on the capacity issues



- Eskom employs about 46000 of which 83% are bargaining unit employees
- Even though Eskom is highly unionized (Solidarity 18%;NUMSA 23%;NUM 40%) there has never been labour unrest or a strike since 1998.
- Eskom generally has good employee relations as a result of :
  - Recognition Agreement(RA) that regulates employee relations and workplace harmony
  - Most issues resolved are through mechanisms determined through the RA
  - Most issues are proactively managed through the established structures therefore there is minimal workplace conflict. Employees also utilize matured grievance and dispute resolution.

# Delays at Medupi as a result of Labour Relations



- The Medupi and Kusile projects experienced varying levels of work stoppages and/or site-wide labour strikes particularly in the 2011 to 2013 period.
- 15575 workers are employed by Private Companies
- On the 25th March 2015 employees of these companies went on strike thus impacting productivity at the Medupi site
- The contractors are currently working with their employees to resolve their labour issues to enable return to work.

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### **Eskom Generation Plant Mix**



Eskom Gx Mix			
	MW		
Coal	35 721 (82%)		
Gas Turbines	2 409 (6%)		
Nuclear	1 860 (4%)		
Cahora Bassa	1 500 (3.5%)		
Pumped Storage	1 400 (3%)		
Hydo	600 (1%)		
Wind	103 (0.5%)		
Gx Total	43 594		

NB: We have more installed capacity (43 594 MW) than the highest maximum demand of (37 158 MW) in winter 2007.

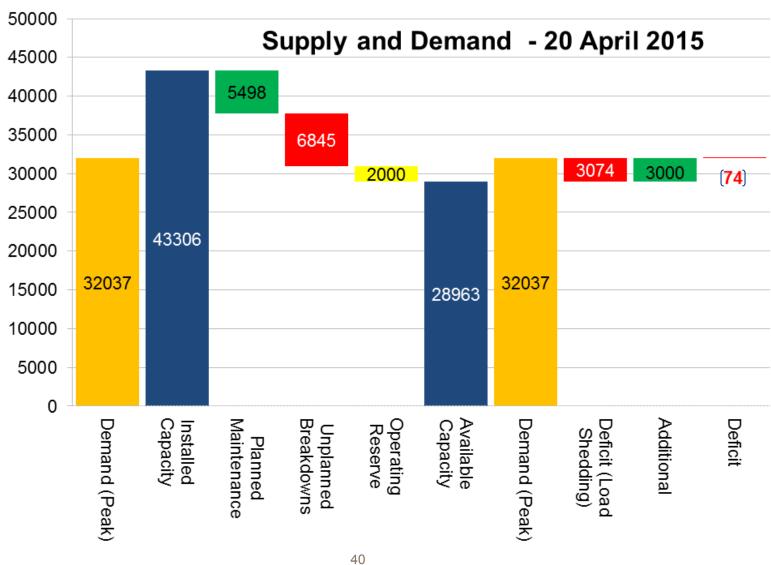
### Maintenance Challenge



- Over the years Eskom has <u>under maintained</u> its generation fleet, leading to a backlog in maintenance.
- Maintenance is carried out in the following three ways:
  - Shutting down the machine. (We have a backlog)
  - Running the plants at <u>half load</u> to gain access to areas we must maintain.
     (Up to date)
  - Online maintenance. (Up to date)
- Our challenge is getting an additional <u>3000 MW</u>, to allow us to shut down our machines for maintenance without load shedding.
- Execution skills plus workshop capacity will be mobilized in line with the execution schedule.

### Supply vs Demand for Peak Projection 20 April 2015

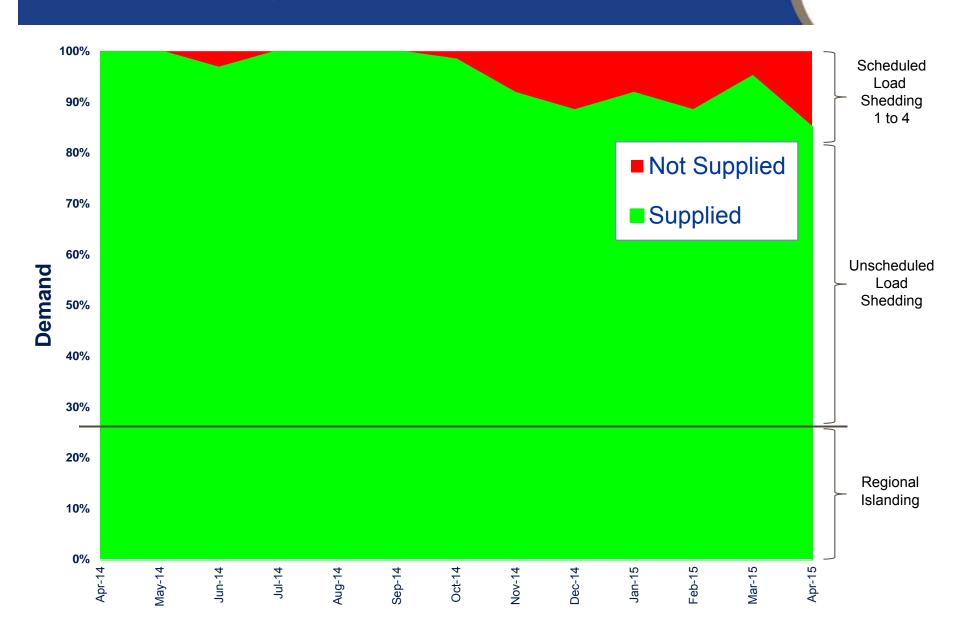




### How much Load shedding?

NB: Summer is normally high





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## **Problem Statement**



- Management of electricity challenges requires cooperation of a number of different government departments and Eskom.
- It requires rapid collaborative decision-making based on the best available information, which comes from various sources.
- It also requires timely and effective implementation of decisions.
- As the challenges grow, it became clear that extraordinary measures need to be taken to ensure that cooperation, decisionmaking and implementation improve.
- Cabinet decided to create a War-Room to address this issue.

### Eskom focus areas in line with the 5 point plan



Generation	
<b>Maintenanc</b>	e and
operational	efficiency
operational	efficiency

#### Short-term: FY 15/16

- Eskom is working together with government to:
  - Improve unplanned outages
  - Reinforce leadership within Eskom
  - Drive asset management in Generation
  - Focusing on problematic plants
  - Tracking the 5000 MW space required for maintenance
  - Resolve critical issues at power stations through the deployment of senior management

#### **Progress**

 Eskom, together with government, is tracking the implementation of interventions to improve the maintenance and operational efficiency

#### **Co-Generation**

 Eskom has renewed the existing cogeneration contracts for FY15/16 Complete

### Gas for power generation

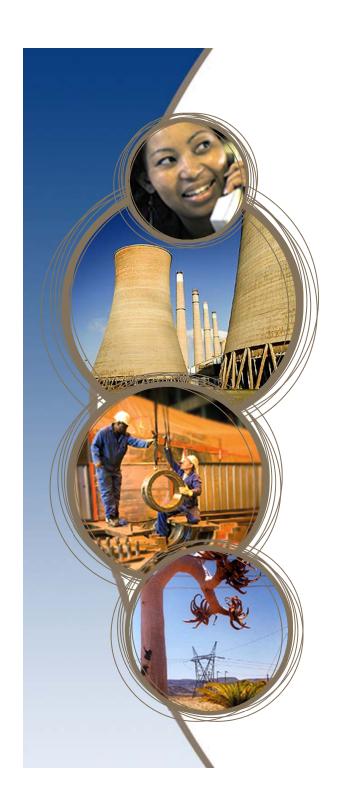
- Eskom is developing the partial conversion of one of the open cycles gas turbines (OCGTs) to dual fuel
- Eskom is working to expedite the fuel sourcing and implementation of the conversion

Other Independent Power Producers (IPPs – driven by DOE)

- The DOE is expediting the implementation of already-awarded peaking IPPs to assist with the current capacity constraints
- In progress and tracked by the DOE

Demand Side Management

- Eskom is expediting the implementation of initiatives including compact fluorescent lamps (CFLs), light emitting diodes (LEDs), energy efficiency solutions and load management
- Eskom is working together with government and is tracking the implementation of the DSM initiatives





**Thank You**