

Zero
Defects



THINK QUALITY!



DO IT RIGHT
THE FIRST TIME
WE DON'T ALWAYS
GET A SECOND
CHANCE



Road
to
Success

Presentation on Electricity Supply in South Africa

17 June 2013

Naresh Singh: GM: International Offices

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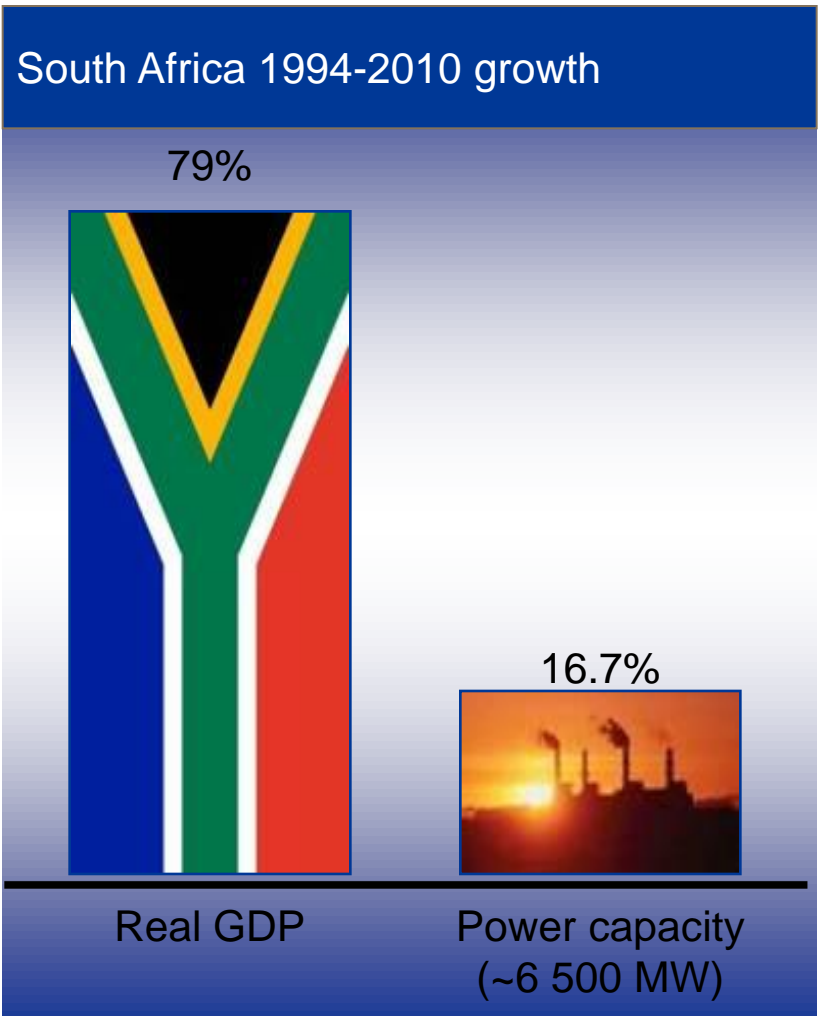
Forward-looking statements are not intended to be a guarantee of future results, but instead constitute Eskom’s current expectations based on reasonable assumptions. Forecasted financial information is based on certain material assumptions. These assumptions include, but are not limited to continued normal levels of operating performance and electricity demand in the Distribution and Transmission divisions and operational performance in the Generation and Primary Energy divisions consistent with historical levels, and incremental capacity additions through our Group Capital division at investment levels and rates of return consistent with prior experience, as well as achievements of planned productivity improvements throughout our business activities.

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Objectives

1. Overview of Eskom and the Electricity Industry
2. Provide Overview for IPP's
3. Give prospective electricity customers first hand knowledge of how the supply/demand challenge is being addressed
3. Opportunities for Plant, Equipment and Service providers
4. How to do business with State owned companies



This requires vast investments in power generation capacity; affordable and universal access to electricity; move to a cleaner future

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

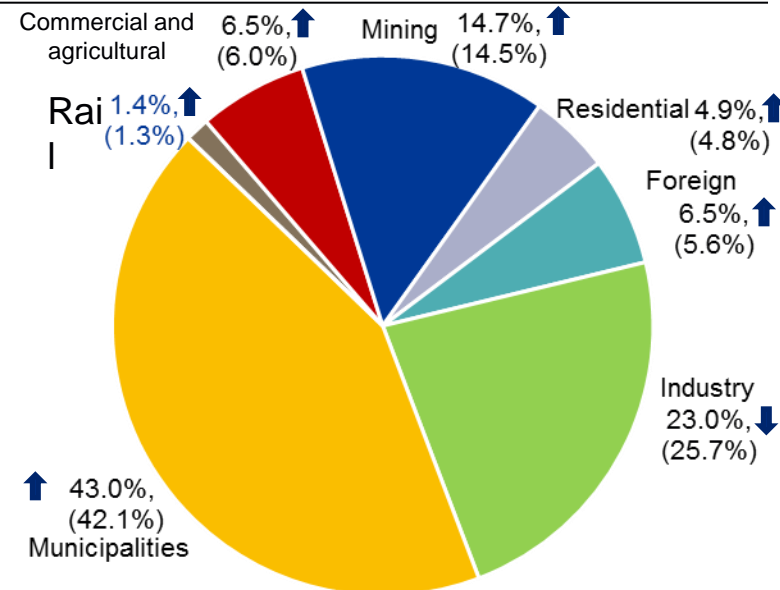
For the six months ended 30 September 2012:

- Electricity sales of 110 766GWh (2011: 114 043GWh) and electricity revenues of R71.9bn (2011: R63.1bn)

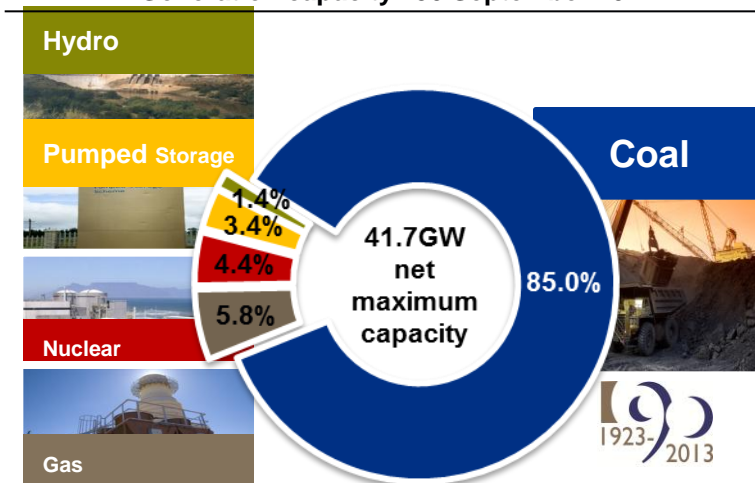
As at 30 September 2012:

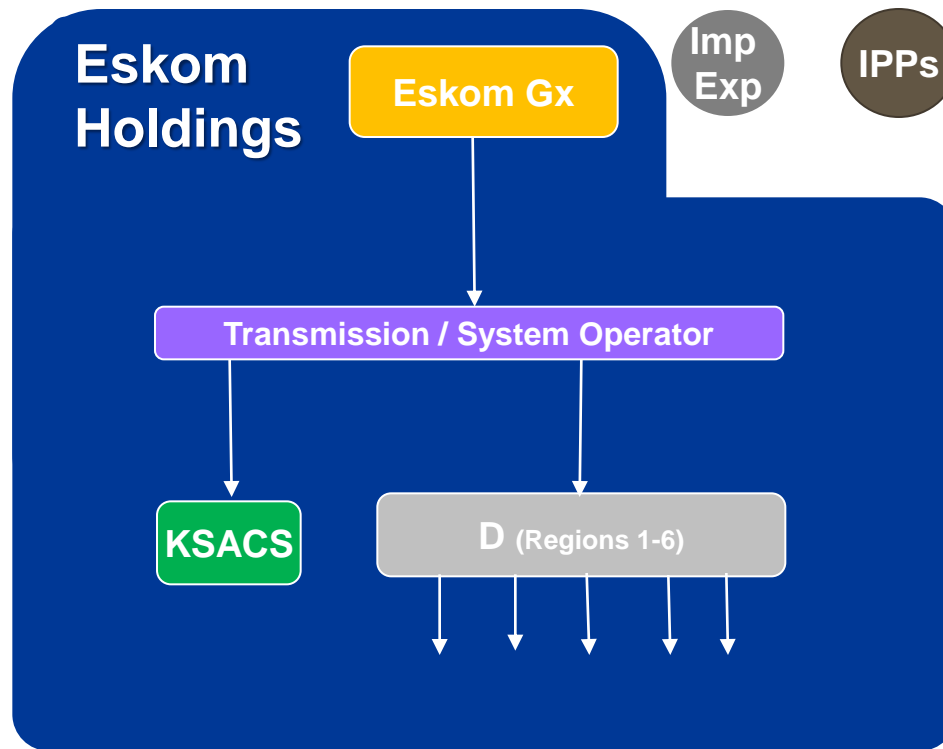
- 44 913 group employees (September 2011: 41 756)
- 4.9 million customers (September 2011: 4.7 million)
- Net maximum generating capacity of 41.7GW (September 2011: 41.3GW)
- 372 031km of cables and power lines
- Moody's and S&P ratings: Baa3 and BBB respectively with a negative outlook
- 17.1GW of new generation capacity by 30 September 2018, of which 5.8GW already commissioned

Eskom electricity sales by customer for the six months ended 30 September 2012 (2011)



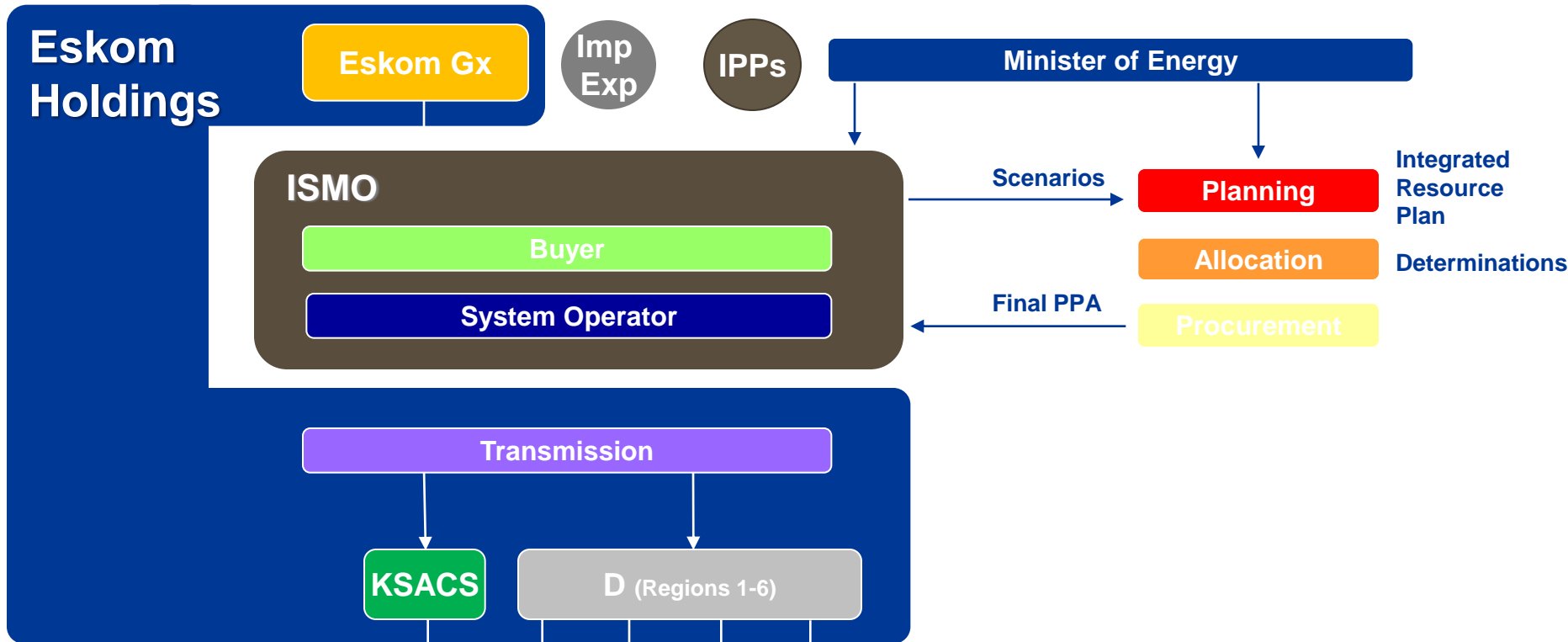
Generation capacity– 30 September 2012



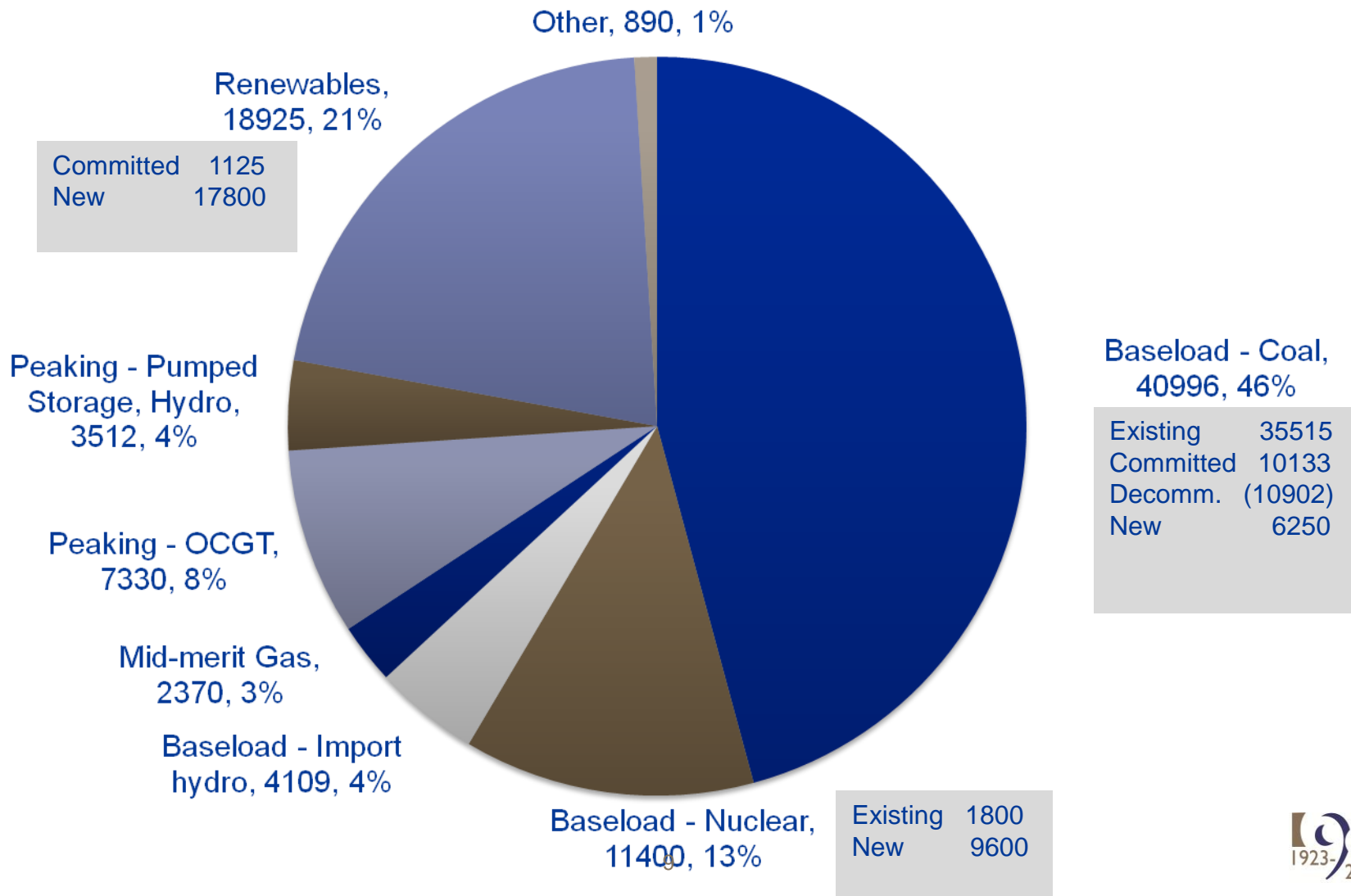


- South African energy policy has favored the entry of IPPs and the development of private sector generation
 - 1998 White Paper on Energy proposed liberalization of the power sector
 - 2001 Cabinet decision proposed a 70/30 split between Eskom generation (100% Government owned) and IPPs
 - 2004 White Paper on Renewables proposed renewable targets
 - National Government extremely supportive of creating a green economy that supports localization and job creation
 - 3 725 MW from Renewable IPP before 2016 (Ministers Determination)
 - 17 800 MW allocated to Renewable Generation in IRP by 2030
 - 12 235 MW allocated to IPP for New Capacity (Gov Gazette 19 Dec 2012)

Draft Legislation: ERA 2nd Amendment Bill and ISMO Bill



RSA Electricity capacity, 2030 (MW)



Implementation: Firm commitments

	New build options							
	Coal (PF, FBC, imports, own build)	Nuclear	Import hydro	Gas – CCGT	Peak – OCGT	Wind	CSP	Solar PV
	MW	MW	MW	MW	MW	MW	MW	MW
2010	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	300
2013	0	0	0	0	0	0	0	300
2014	500 ¹	0	0	0	0	400	0	300
2015	500 ¹	0	0	0	0	400	0	300
2016	0	0	0	0	0	400	100	300
2017	0	0	0	0	0	400	100	300
2018	0	0	0	0	0	400 ⁴	100 ⁴	300 ⁴
2019	250	0	0	237 ³	0	400 ⁴	100 ⁴	300 ⁴
2020	250	0	0	237 ³	0	400	100	300
2021	250	0	0	237 ³	0	400	100	300
2022	250	0	1 143 ²		805	400	100	300
2023	250	1 600	1 183 ²	0	805	400	100	300
2024	250	1 600	283 ²	0	0	800	100	300
2025	250	1 600	0	0	805	1 600	100	1 000
2026	1 000	1 600	0	0	0	400	0	500
2027	250	0	0	0	0	1 600	0	500
2028	1 000	1 600	0	474	690	0	0	500
2029	250	1 600	0	237	805	0	0	1 000
2030	1 000	0	0	948	0	0	0	1 000
Total	6 250	9 600	2 609	2 370	3 910	8 400	1 000	8 400

■ Firm commitment now

■ Final commitment in IRP 2012

1. Built, owned & operated by IPPs 2. Commitment necessary due to required high-voltage infrastructure, which has long lead time 3. Commitment necessary due to required gas infrastructure, which has long lead time 4. Possibly required grid upgrade has long lead time and thus makes commitment to power capacity necessary

Awards (MW)	Available	Round 1	Round 2	Balance
Wind	1,850	634	563	653
Solar PV	1,450	632	417	401
CSP	200	150	50	0
Other	125		14.3	111
Total	3,625	1,416	1,044	1,165

Bidders	Round 1	Round 2	Round 3
Bidders	53	79	??
Preferred bidders	28	19	??
Success rate	53%	25%	

Tariffs	Round 1		Round 2		Change
	ZAR/kWh	USc/kWh	ZAR/kWh	USc/kWh	
Wind					%
Solar PV					

Procurement model changed BW 1 to BW2 (Capped allocation)

Shift to real competition



Significant drop in average bid tariff

Return-to-service (RTS)



- Komati (1 000 MW)
- Camden (1 520 MW)
- Grootvlei (1 200 MW)

3 720 MW

New coal



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

9 564 MW

Peaking & renewables



- Ankerlig (1 338.3MW)
- Gourikwa (746 MW)
- Ingula (1 352 MW)
- Sere (100 MW)

3 536.3 MW

Mpumalanga refurbishment



- Arnot capacity increase (300 MW)
- Matla refurbishment
- Kriel refurbishment
- Duvha refurbishment

300 MW

Transmission



- 765kV projects
- Central projects
- Northern projects
- Cape projects

~ 4 700 km

Commissions of new stations

	First Unit	Last Unit
Medupi	2012	2015
Kusile	2014	2018
Ingula	2014	2014

- ~ 17 120MW of new capacity (5 222MW installed and commissioned)
- ~ 4 700km of required transmission network (3 268km installed)

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

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)	200								200
Komati (return to service)	225	400							625
Arnot capacity upgrade (coal fired)	30								300
Medupi (coal fired)		794	1 588	1 588	794				4 764
Kusile (coal fired)				800	800	800	800	1 600	4 800
Ingula (pumped storage)			338	1 014					1 352
Sere wind farm (renewable)			100						100
TOTAL	455	1 194	2 026	3 402	1 594	800	800	1 600	11 871



Medupi



Kusile - Unit 1 Turbine Pedestal



Central Grids



Ingula - Bramhoek dam

Eskom will invest significantly to strengthen the energy sector



New build programs

- Medupi
- Kusile
- Ingula
- Networks
- Gas
- Other

= R 308 bn¹

Growth of renewable energy

- Biomass
- Solar²
- Wind
- Waste

= R 7.4 bn (2010-15)

Support solar geyser program

= R 3.5 bn (2010-15)

Accelerating universal access

= R 18.5 bn (2010-15)

* Funding still to be found



Support IPPs

R&D

- UCG

= R 0.8 bn

Strengthen existing asset base

- Boilers
- Turbines
- T&D networks
- IT

= R 48.4 bn (2010-2015)

Growth related to mining

- Coal mining projects
- Water pipeline
- Road maintenance
- Majuba rail link (R 4.9 bl)
- Mpumalanga rail development (R 2.2 bl)
- Waterberg link

Opportunities in the Southern African Development Community (SADC)

The demand for primary energy in Africa is rapidly increasing with overall demand over 3% per annum with huge demand from mining and industrial clients

This has resulted in severe pressure on existing infrastructure and hence large scale projects are currently underway

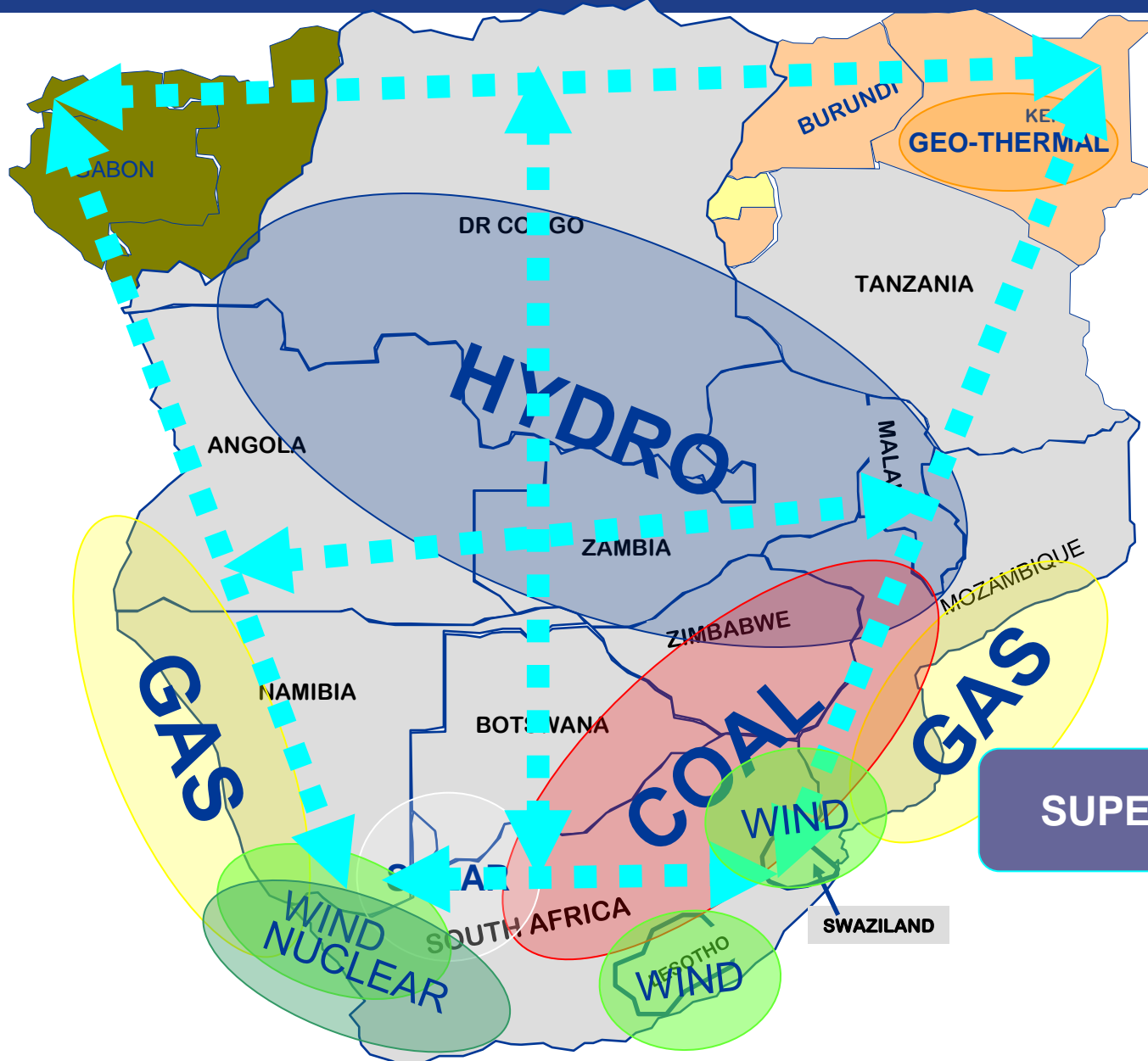
South Africa leads in this regard with an expected \$55 billion to be invested in electricity projects over the next 7 years

As in all continents the energy mix is dominated by oil, coal and gas and hence urgent steps are needed to become more sustainable and harness renewable resources in a larger scale

Top Indicators (Africa), 2005 - 2030

Key Continent Indicators (2005-2030) % Per Annum	
Electricity Demand Growth	3.1%
Coal Demand Growth	1.1%
Liquids Demand Growth	1.6%
Gas Demand Growth	3.5%
Nuclear Demand Growth	2.0%

Potential Energy Future – 2030!

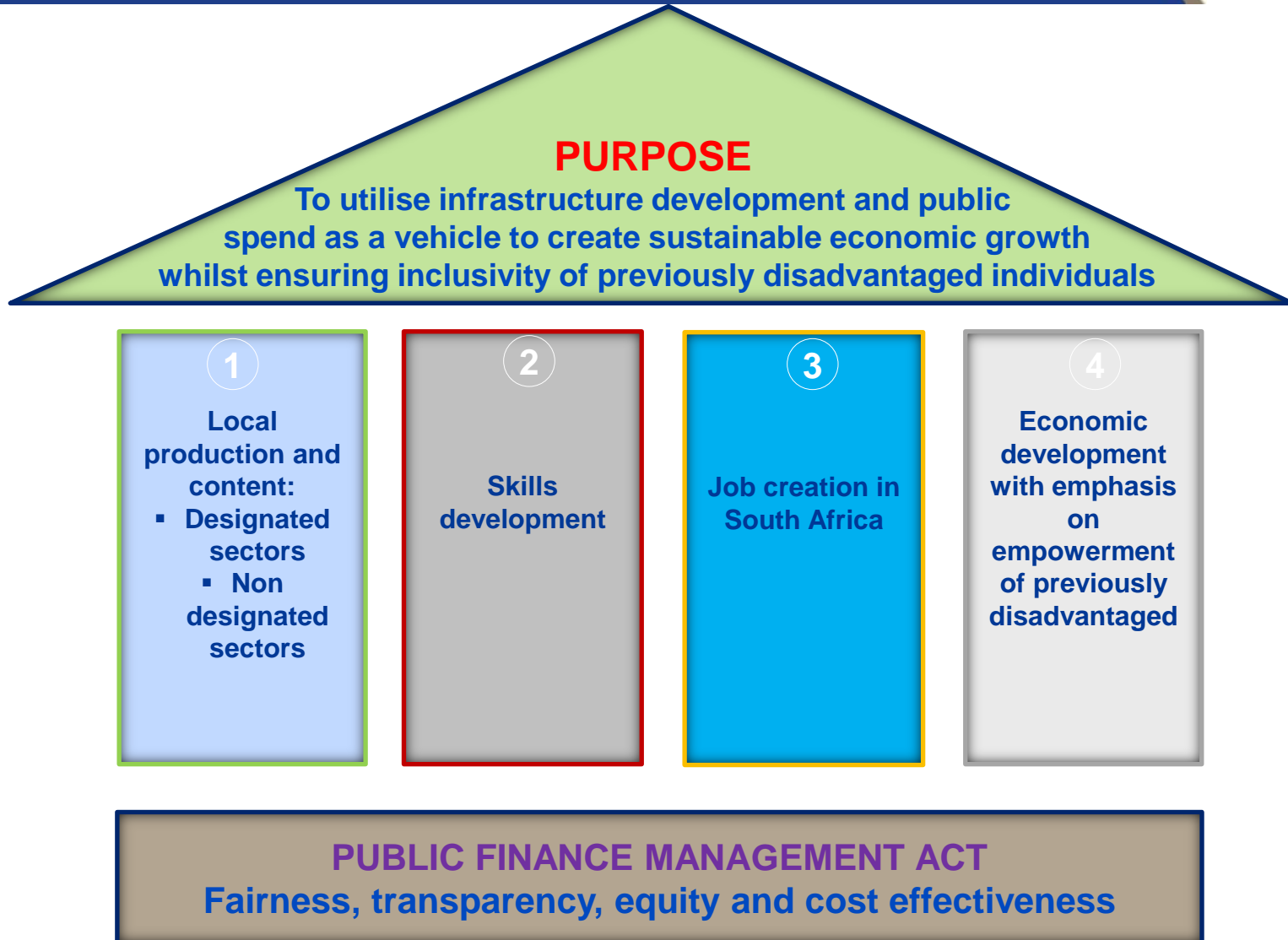


The SADC region offers significant avenues for growth and cleaner sources of power

Significant demand growth and constrained capacity represent an investment opportunity

SUPER GRID

DOING BUSINESS WITH ESKOM



Purpose

- Prevent irregular expenditure
- Fruitless and wasteful expenditure
- Reduce criminal conduct
- Manage working capital efficiency

Implications

Appropriate procurement system that is:-

- Fair
- Equitable
- Transparent
- Cost effective

Can be perceived to be bureaucratic, but is intended to protect all parties

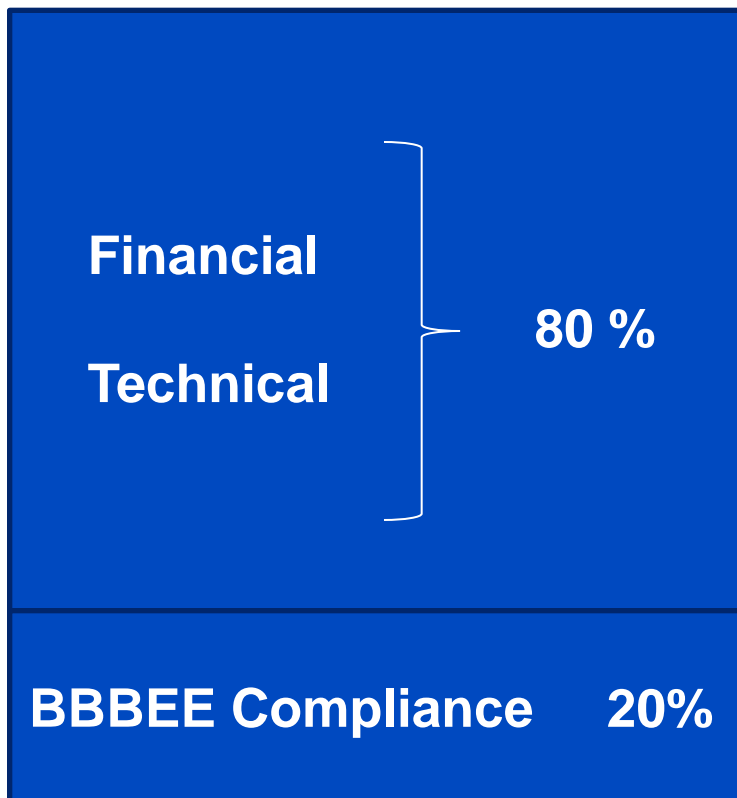
The Broad Based Economic Empowerment Act (B-BBEE), 53 of 2003, an initiative from the South African government to include previously disadvantaged individuals (PDI) in the participation of the growth of South Africa's economy and which has incorporated into Eskom's procurement system.

Level of assessment is based on the following factors:

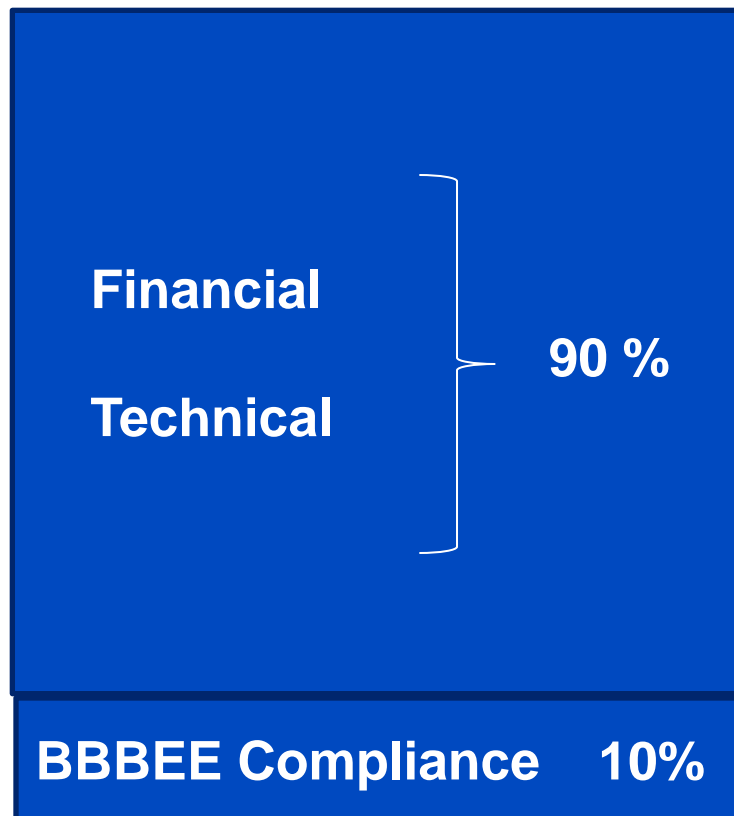
- Black ownership
- Black management and specialists
- Affirmative procurement
- Skills transfer to previously disadvantaged South Africans

Preferential procurement framework agreement prescribes minimum requirements for SOE

Evaluation Criteria < R1m



Evaluation Criteria > R1m



Eskom requires that all vendors must be registered as vendors

Apply online
(<https://supplier.eskom.co.za>)

Assessment will be done focused on financial/technical/ quality


Contact specialist buyers to introduce product and service

Lenock Meyer from my office can help facilitate this (+44 1306 64 6875)

**Tenders are advertised on www.eskom.co.za
Occasionally advertise in industry specific magazines**

Conclusion

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Thank you