

DEPARTMENT OF MINERALS AND ENERGY

WELCOME!



the dme

Department
Minerals and Energy
REPUBLIC OF SOUTH AFRICA



Meeting the required conditions for successful private sector participation in the SADC

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Nuclear Energy**

World Class Minerals and Energy sectors for the benefit of all

Issues addressed

- Projected demand in the sub-region
- South African supply side scenario
- Investments in New Generation Capacity
- Strategic objectives of Independent Power Producers
- IPP project – progress to date
- Conditions for Private Sector Investments
- Risk Allocation



Projected demand in sub-region

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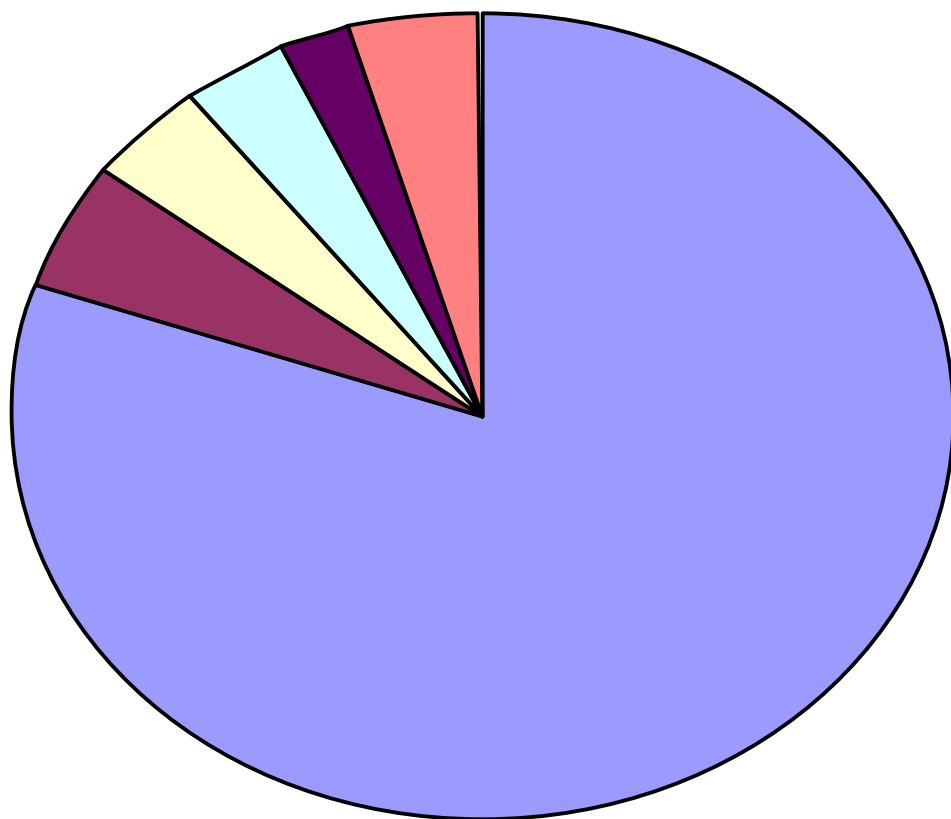
Southern African Power Pool



**SOUTHERN
AFRICAN
GRID**

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Generation Distribution by Country



- 80.4% South Africa
- 5.0% Mozambique
- 4.1% Zimbabwe
- 3.6% Zambia
- 2.6% DRC
- 4.4% Rest

NIRP 2 – Stage 2 Scenario 14

YR	Mothballed			Coal-Fired			FBC	Gas	Pumped Storage			DSM		Reserve on moderate forecast	
	Cam (PF)	Grootvlei (PF)	Komati (PF)	PF (1)	PF (2)	PF (3)	Green-field FBC	OCGT	PS (A)	PS (B)	PS (C)	CEE	IMEE		IMLM
	Committed							Decide	Committed			Committed			
2003		Committed	Committed										152	24%	
2004				Decide							Decide		152	21%	
2005							Decide						152	18%	
2006	380							720					152	17%	
2007	570	188											152	16%	
2008	190	377	101		Decide			480					152	16%	
2009		565	202			Decide		720			Decide		152	17%	
2010			303					720					152	17%	
2011			303										152	13%	
2012							932			333				13%	
2013							466			999				13%	
2014							932				999			15%	
2015														13%	
2016				1284										13%	
2017				1284										14%	
2018				1284										14%	
2019												999		14%	
2020					1284									15%	
2021					1284	642								14%	
2022					1284	1284		240						13%	
TOTAL	1520	1130	909	3852	3852	1926	2330	2880	1332	999	999	1370			

Investments in New Generation Capacity (1)

- The total investment required by the electricity sector in the next five years (2005-2009) is approximately \$14 billion.
- The generation sector alone requires \$8 billion in the next five years (2005-2009).
- The magnitude of this capital expenditure is significant and cannot be funded by the public sector alone
- Introduction of IPP's

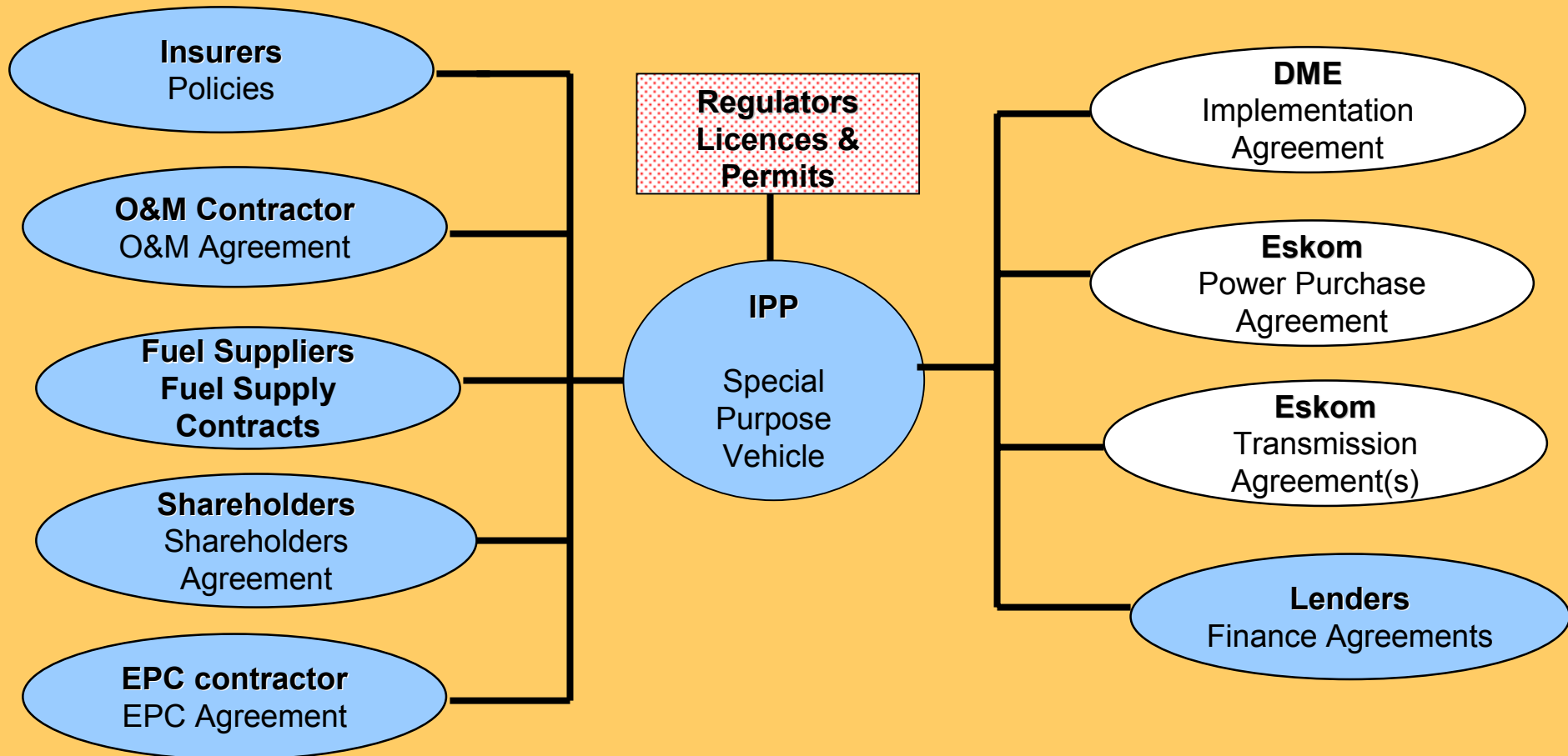
Investments in New Generation Capacity (2)

- **Security of supply**
- **The generation capacity will comprise two open cycle gas turbine (OCGT) power stations with a combined capacity of 1000 MW.**
- **The successful bidder will enter into a long term Power Purchase Agreement (PPA) with Eskom to cover the sale of capacity and energy.**

Strategic Objectives of the IPP project

- Meeting new generation capacity requirements
- Introducing private sector participation in the generation sector
- Enhancing security of supply through fuel diversity
- Accessing private sector financing and informing policy decisions on public versus private sector procurement
- Enhancing Black Economic Empowerment (BEE) in the energy sector
- Maintaining low cost electricity

Contracts, Licences and Permits



Private Sector



Regulators



Public Sector

Primary Agreements

The primary Agreements will be:

- separate but near-identical agreements for each of the two power plants;
- drafted to allow the commercial parameters which determine the payments to be taken from the bid of the successful Bidder(s) and inserted in the relevant agreements.
- subject to only very limited adaptation by the successful Bidder(s), on technical grounds

Implementation Agreement

- The parties to the IA will be DME and the IPP. The IA will contain the following
 - the obligations on the IPP to construct and commission the plant to an agreed specification and by a fixed date;
 - certain assurances of assistance from the Government regarding the permitting of the Project; and
 - provisions relating to the monitoring and enforcement of certain obligations (such as ongoing BEE compliance and shareholding changes) during the operating period.

Power Purchase Agreement

- The parties to the PPA will be Eskom and the IPP.
- Eskom will be the buyer of capacity, energy and ancillary services and the IPP will be the seller
- PPA will require the IPP to make plant available and to generate in accordance with Eskom's instructions.
- 15 year term, with an option for extension

Transmission Agreement(s)

- **The parties to the Transmission Agreement(s) will be Eskom and the IPP. The Transmission Agreement(s) will comprise the following:**
 - **Connection Agreement** dealing with Eskom's obligations to design and construct the interconnecting assets and payment of the connection charges by the IPP;
 - **Operating Agreement** dealing with defining the required operating procedures as outlined in the Grid Code.
 - **Use of System Agreement** dealing with payments that will be imposed on the IPP for the availability and use of the transmission system and the rights of access to the transmission system.

IPP project – progress to date

- The DME invited Expression of Interest (Eoi) for the peaking power plants (OCGT) in December 2004.
 - The response is overwhelming and shows that there is sufficient appetite in the market.
- The Request for Qualification (RfQ) was issued in April 2005
 - Eleven (11) bids were received
- Five bidders were short listed
- The Request for Proposals (RfP) will be released to the short listed bidders soon.

Challenges

- Due to tight project timetable, the dme is doing some work on behalf of the IPP. This include:
 - Site(s) Selection;
 - Environmental Impact Assessment (EIA); and
 - Preparation of primary contracts

Public Private Partnerships (PPP)

- Experience with Public Private Partnerships.
- Comprehensive feasibility study be conducted prior to issuing tenders.

Stages of the PPP Feasibility Study (1)

- Needs Analysis
 - Strategic objectives
 - Budget
 - Institutional Environment
 - Output Specifications
 - Project Definition

Stages of the PPP Feasibility Study (2)

- Options Analysis
 - Options Analysis
 - Options Selection
- Project Due Diligence
 - Legal
 - Site
 - Socio Economic

Stages of the PPP Feasibility Study (3)

- **Value for Money, Affordability & Risk Transfer Assessment**
 - Base Public Sector Comparator (PSC)
 - Risk Adjusted PSC
 - PPP reference
 - Risk adjusted PPP
 - Sensitivity analysis
 - Affordability
 - Value for money
 - Procurement choice
 - Information VERIFICATION

Stages of the PPP Feasibility Study (4)

- Economic Valuation
- Procurement and Implementation Plan
- Feasibility Study for Treasury Approval
- Revisiting Feasibility Study

PPP Feasibility Study (1)

- According to the PPP Manual, the Feasibility Study must demonstrate whether the PPP choice:
 - affordable;
 - transfers appropriate technical, operational and financial risk to the private party; and
 - gives value for money.

PPP Feasibility Study (2)

- The Feasibility Study forms a critical part of a PPP project by:
 - Providing information about costs and gives an indication of whether the costs can be met from within the Institutional budget without disruption to other activities;
 - Allowing for the identification, quantification, mitigation and allocation of risks;
 - Prompting the Institution to consider how the project will be structured;
 - Identifying constraints which may cause the project to be halted;
 - Ensuring that the project is developed around a proper business plan.



Attracting private sector investment!

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Conditions for Private Sector Participation

- Reasonable Rate of Return from a predictable and reliable cash flow;
- Enforceable agreements;
- Sound energy sector governance;
- Favourable investment environment;
- Absence of corruption;
- Transparent, fair, stable and credible commercial frameworks; and
- Independent regulatory agencies

Meeting the conditions

- Bankable long-term Power Purchase Agreement (PPA)
- Credible legal framework
- Clear IPP and energy sector policies
- Revamp the regulatory framework and ensure minimum or no Government intervention
- Ensure competitive, transparent and auditable bidding processes (absence of corruption)
- Proper Risk Allocation
- Assign the risk to the party best able to control and manage the risk.

Private Sector risks

- Design, Construction & Site risks
- Finance risk (i.e. debt; interest rate variation; insurance premiums; foreign exchange risk on dividends; Corporation Tax etc)
- Plant performance risk
- Operating and Maintenance costs risk
- Fuel supply risk
- Health, Safety and Environment risk
- Permits and licences risk
- Risks of Force Majeure (such as acts of God)

Public Sector risks

Public Entities (Off - taker)

- Regulatory risk (Cost Recovery Mechanisms)

Electricity Customers

- Fuel price risk
- Changes in law
- Inflation
- Uninsurable Force Majeure risks such as war, nationwide strikes, grid failure

Government

- Termination due to expropriation
- Termination due to Government led restructuring

Conclusions

- The need for investment in the power sector, particularly the generation sector is imminent.
- This need can best be met by a good partnership between the public and private sector (sharing risks and benefits)



THANK YOU