

# The Role of DFI's in Energy Sector Development in Southern Africa

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# Outline

1. Background
2. Key Challenges
3. Regional Power Supply and Demand
4. Electrification in SADC
4. Generation & Transmission Requirements
5. Financial Challenges and Requirements
6. Electricity Prices
7. The Role of DFI's
8. DBSA's Mandate and Role
9. DBSA Energy Sector Investments
10. Conclusion

# Background

- The SADC region has abundant energy resources
- Well over 60% of the population dependant on biomass energy
- Energy is a key driver for economic growth and social development
- Energy sector policies have fluctuated from security of supply to increasing access to self-sufficiency and now focus on increasing power supply for export and power trading
- Power demand in SADC is increasing at an average rate of +/- 4%
- Demand is driven by:
  - *Historic underinvestment leading to power shortfalls*
  - *Higher than expected economic growth*
  - *Population growth has outpaced electrification*
- Reforms and Restructuring have focused on:
  - *Providing macro-economic stability*
  - *Commercialising , unbundling & privatising of SOE's*
  - *Improving legal & regulatory framework to support investments*
  - *Introducing competition: IPPs, co-generation,*
  - *Diversifying the supply mix to include renewables & clean energy*

# Key Challenges

- Insufficient power supply: load shedding from 2008 – 2013
- Low levels of electrification – (avg: 20% urban; 5-7% rural)
- Low reserve margin - (avg: 8%)
- Significant investment is required for energy projects
- Legal and regulatory framework not conducive for private sector participation
- Tariffs not cost reflective to sustain industry
- Projects failing to attract investment - poorly structured and packaged for bankability
- Political will and commitment is key to decision-making
- Need for affordable and sustainable energy in rural areas
- Renewable energy technologies tend to be expensive, imported and experimental, feed-in tariffs, etc

*Funding is available for good and well structured projects*

# Regional Power Supply & Demand

No.	Country	Utility	Installed Capacity [MW] As at Sept 2010	Available Capacity [MW] As at Sept. 2010	Installed minus Available [MW]	2009 Peak Demand [MW]	Capacity Required [MW] 10.2% Reserve	Shortfall ( MW)
1	Angola	ENE	1,187	930	257	724		
2	Botswana	BPC	202	190	12	553		
3	DRC	SNEL	2,442	1,170	1,272	1,028		
4	Lesotho	LEC	72	72	-	116		
5	Malawi	ESCOM	287	267	20	260		
6	Mozambique	EDM	233	174	59	435		
		HCB	2,075	2,075	-			
7	Namibia	NamPower	393	360	33	451		
8	South Africa	Eskom	44,170	40,483	3,687	35,850		
9	Swaziland	SEC	70	70	-	204		
10	Tanzania	TANESCO	1008	780	228	783		
11	Zambia	ZESCO	1,812	1,200	612	1,604		
12	Zimbabwe	ZESA	2,045	1,320	725	1,714		
TOTAL SAPP			55,996	49,091	6,905	43,722	48,182	909
Total Interconnected SAPP			53,514	47,114	6,400	41,955	46,235	879

# SADC Energy Access Strategy

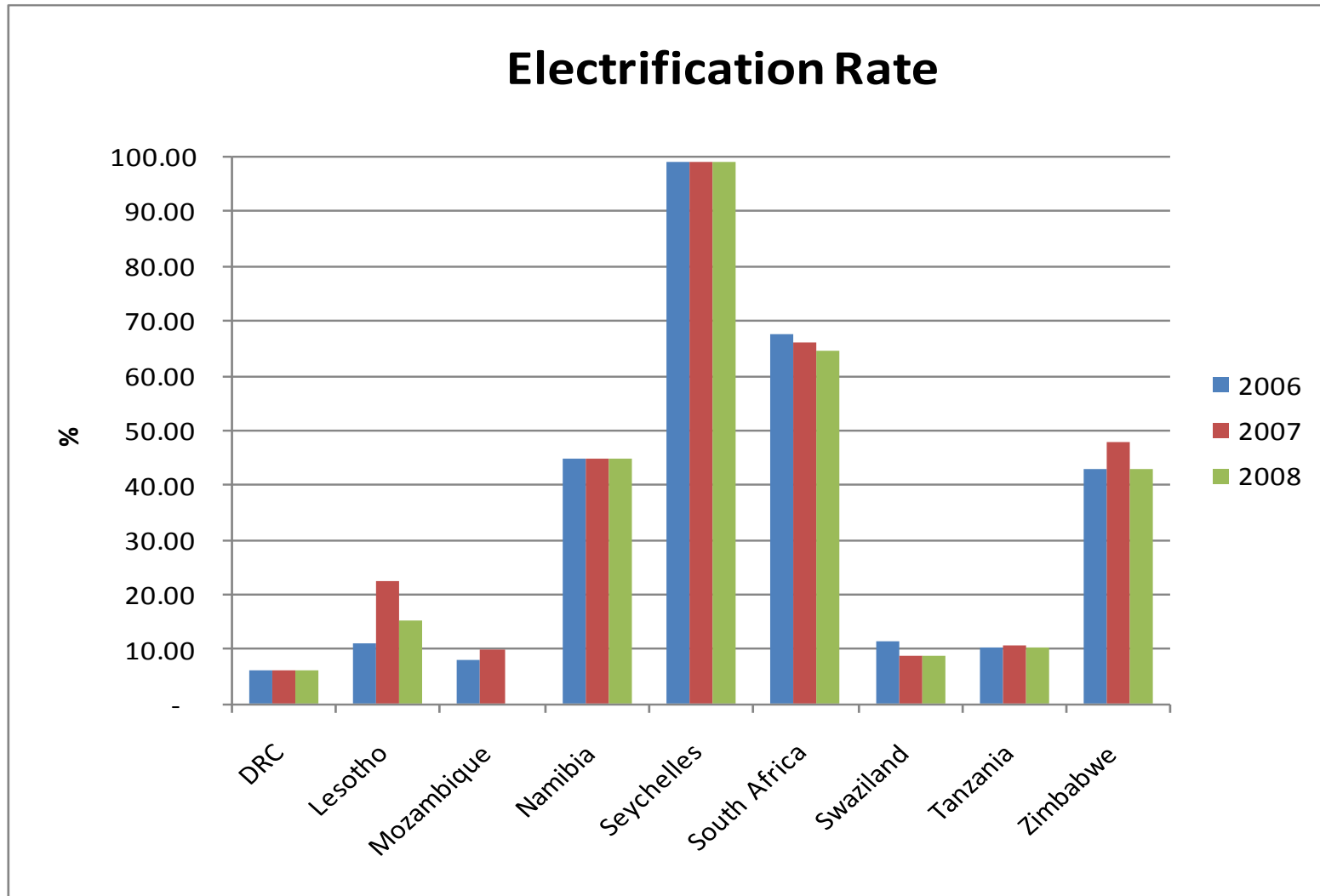
- In November 2009, SADC Member States agreed to the following Energy Access Goals:

**Strategic goal:** All people in SADC should have access to adequate, reliable, least cost, environmentally friendly sustainable energy services

**Operational goal:** To halve the number of people without access within 10 years for each end use and halve again in successive 5 year periods until there is universal access for all end uses

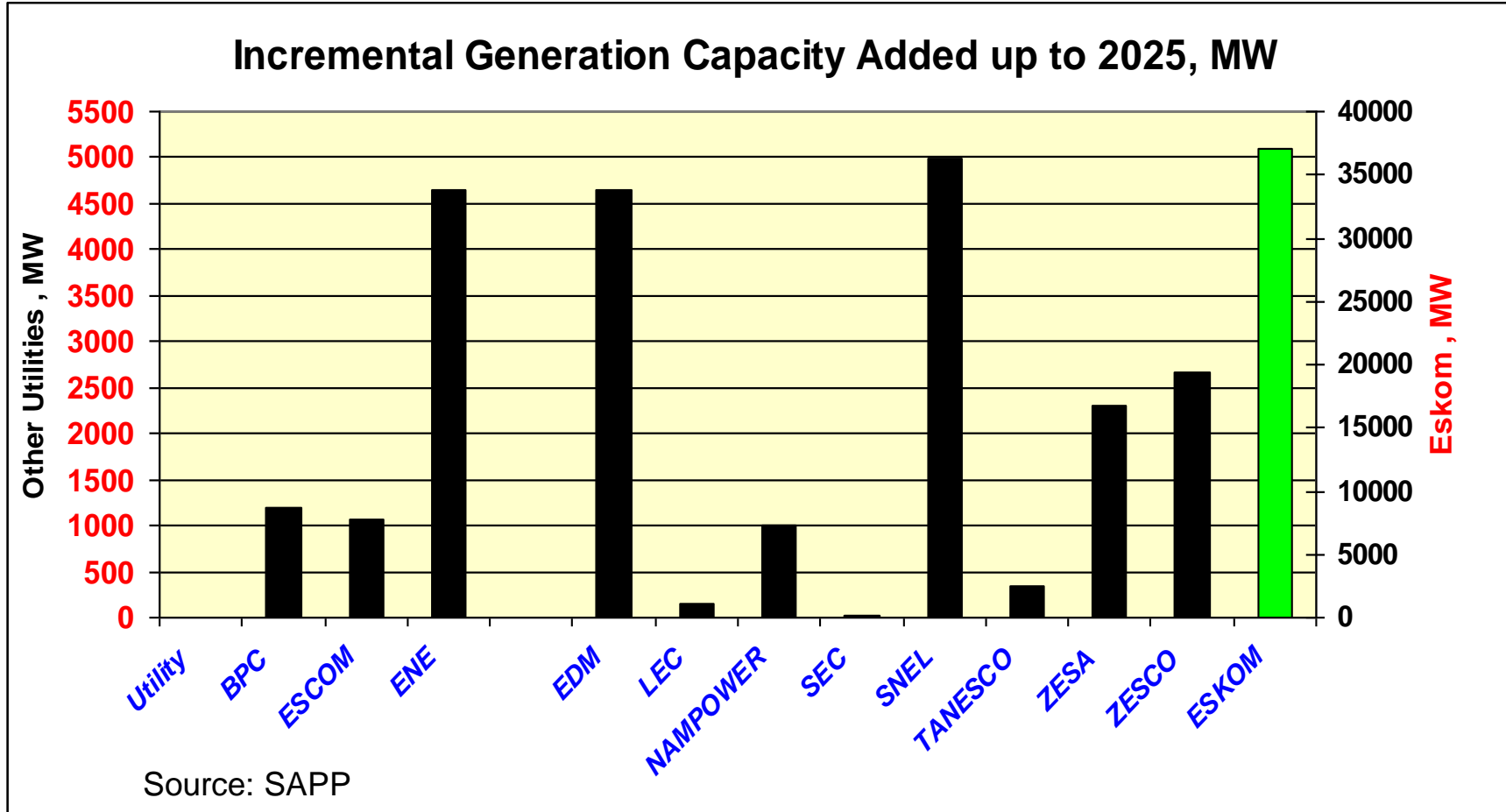
*Access defined as availability, affordability, acceptability*

# Electrification in SADC



Source RERA

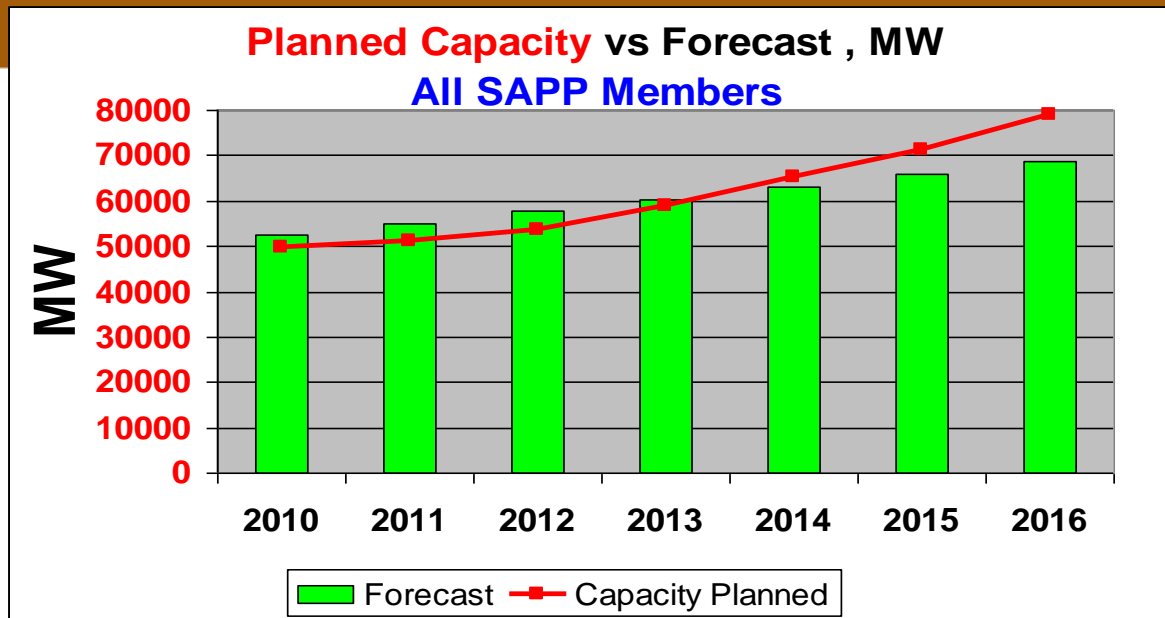
# Generation Requirements [2010 to 2025]



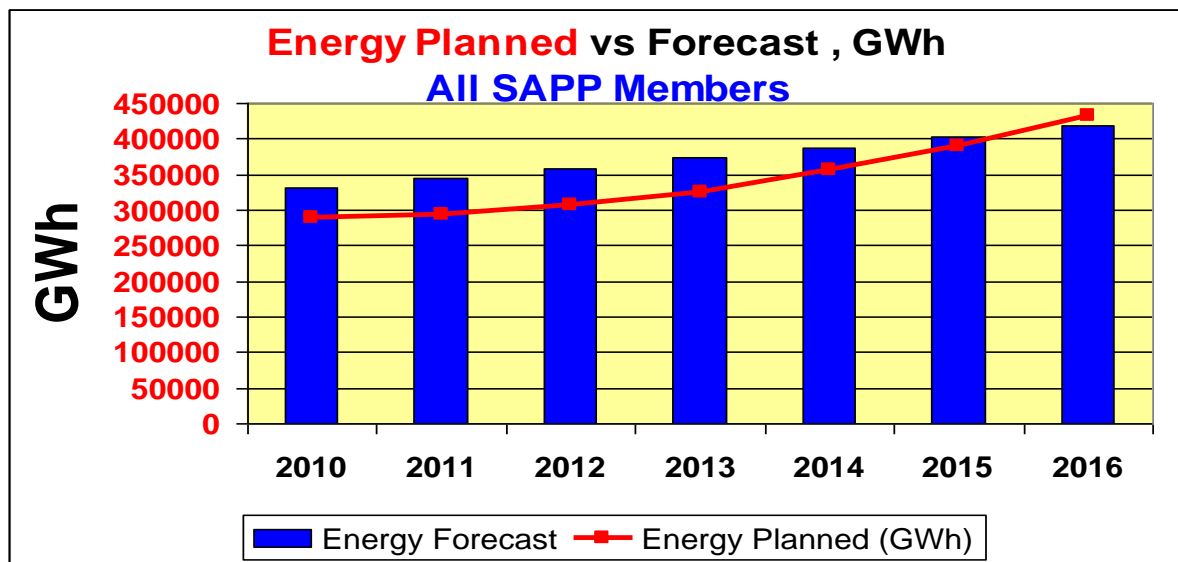
**A total of 57,000 MW is required**



# SAPP Planned & Required Capacity



**2014**  
**Critical**  
**For**  
**Capacity**



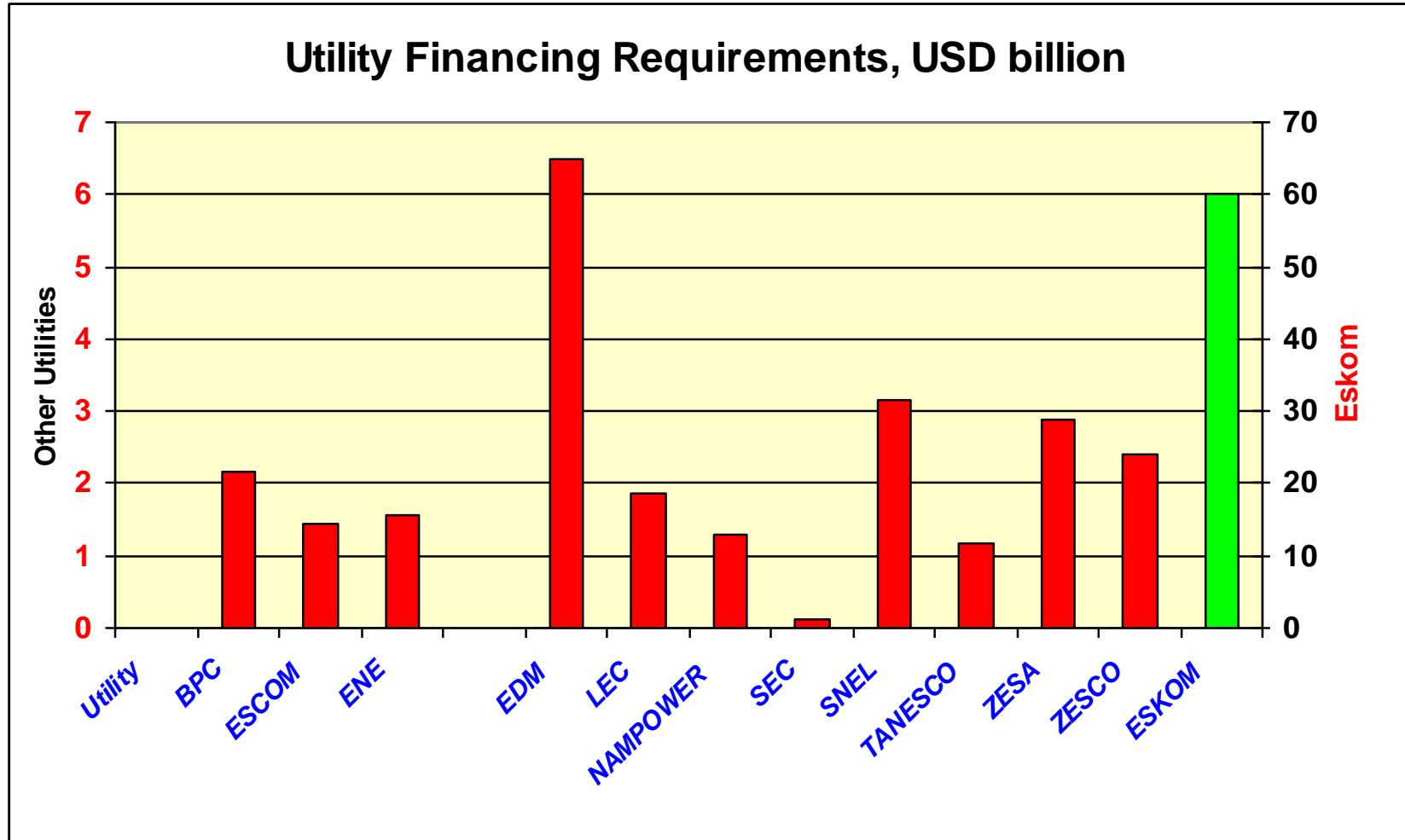
**2016**  
**Critical**  
**For**  
**Energy**



# Financial Challenges and Requirements

- High dependence on foreign capital - competition for limited financial resources
  - *Traditional financiers: Multilaterals; DFI's+ IFI's, Commercial Banks; Donors*
  - *Newer players: BRIC*
- Significant project development & start-up costs – sponsors/developers lack equity
- Many power utilities with weak balance sheet, low ROA – moves to assess readiness for credit rating (WB/SAPP study)
- Poor legal and regulatory frameworks to attract private investments
- Local capital markets under-developed with limited capacity
- Power trading is on a bilateral basis – need for regional model
- Need for credible power off-taker & predictable pricing regime
- Projects need to be well structured and packaged for bankability
- Loan covenants require construction, O&M to be performed by experienced firms
- Problems with hedging currency mismatch between PPA and loan repayment
- Environmental requirements & compliance for best practice increasing
- It can be difficult to secure financing if the project is not considered “**clean**”
- Very few projects in Africa access ‘CDM’ funding or ‘Carbon Credits’
- Financial challenges for maintenance backlogs

# Financing Requirements in SADC (2010 – 2025)

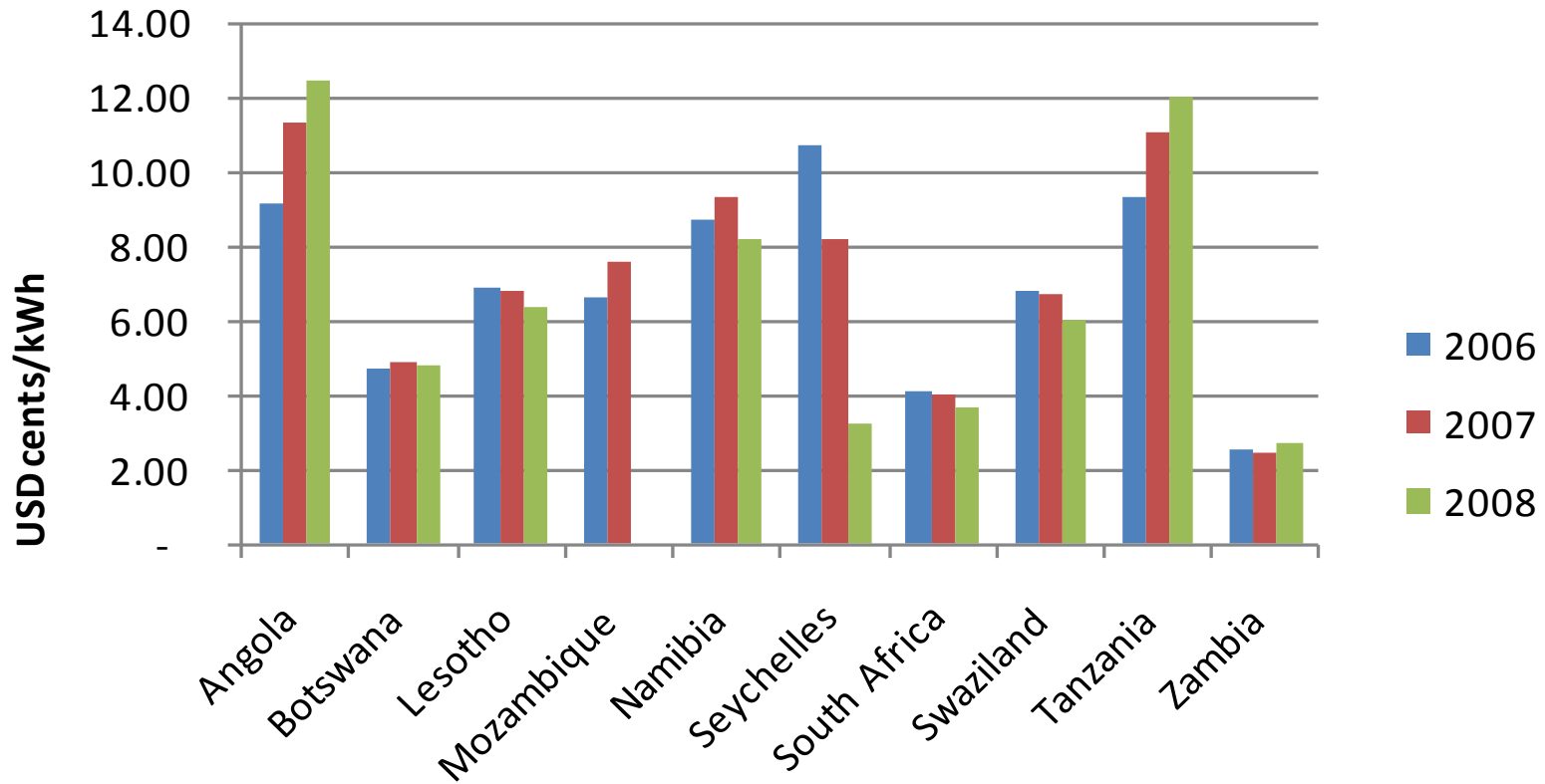


**A total of US\$ 83bn is needed**  
**Potential savings of US\$ 48bn thru regional development**

# Electricity Prices in SADC



## Average Electricity Price



Source RERA

Many countries include a levy for rural electrification

# Future Energy Tariffs

## New Supply Options (expressed in 2008 values)

<b>Gas (Peaking)</b>	<b>22.0 USc/kWh</b>
<b>Integrated Gas Combined Cycle</b>	<b>10.5 USc/kWh</b>
<b>Nuclear</b>	<b>10.0 USc/kWh</b>
<b>Coal (Conventional)</b>	<b>7.5 USc/kWh</b>
<b>CCGT</b>	<b>7.2 USc/kWh</b>
<b>Hydro</b>	<b>6 - 8 USc/kWh</b>

✓ **This is only generation costs**

✓ **Average retail tariffs range: 2.7 – 12.5 USc/kWh**

# The Role of DFI's

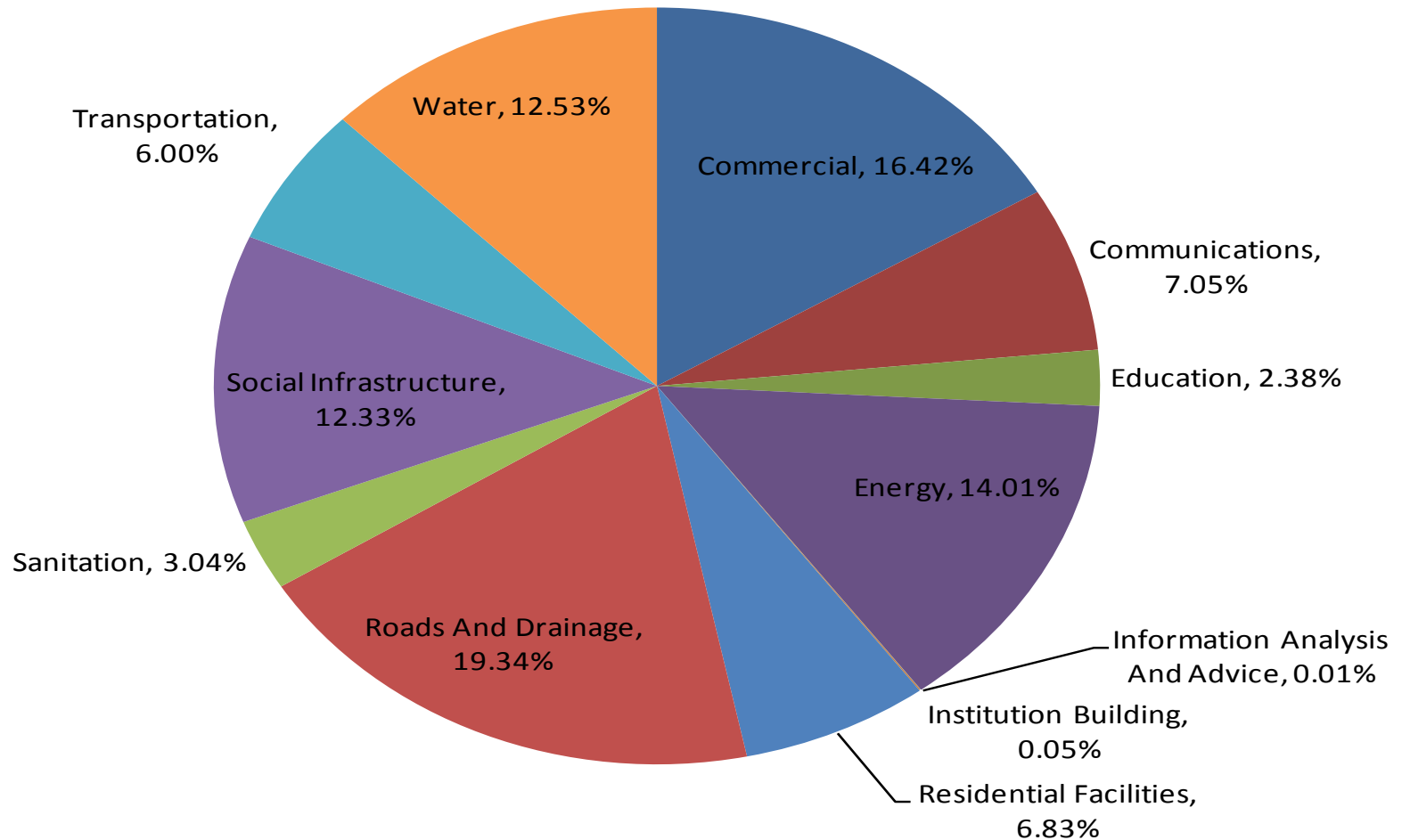
- To promote economic growth and development through investments in economic infrastructure
- Fill gaps in lending capabilities arising from market failures
- Provide access to long-term capital at affordable rates
- Aim to improve the quality of life & alleviate poverty
- Create a balance between commercially viable and socially desirable investments
- Exploit energy resources in an environmentally friendly & sustainable manner
- Support delivery of access to basic energy services
- Diversify regional power supply – increase use of 'clean energy' resources
- Provide the customer with choice of supply
- Capacity building, technology transfer & training
- Strengthen institutions, policies and practices
- Job creation during and after construction
- Develop local capital markets
- Enhance environmental benefits – reduce GHG emissions

# DBSA's Mandate & Role

- Established in 1983 by an Act of Parliament
- Mandated to promote economic growth through infrastructure development
- The Bank may commit 1/3 of its loan book to SADC (excl. SA)
- Financier, Advisor, Partner, Implementer & Integrator
- Over R35bn invested in economic & social infrastructure
- **Products and Services:** *Loans, Equity, Lines of Credit, Bonds, Guarantees, Credit enhancement, Technical Assistance, Capacity Building, Grants, Advisory Services, Empowerment Funds*
- Provide comfort on political risk through knowledge of the region
- Strengthen partnerships and co-funding



# DBSA Infrastructure Sectors

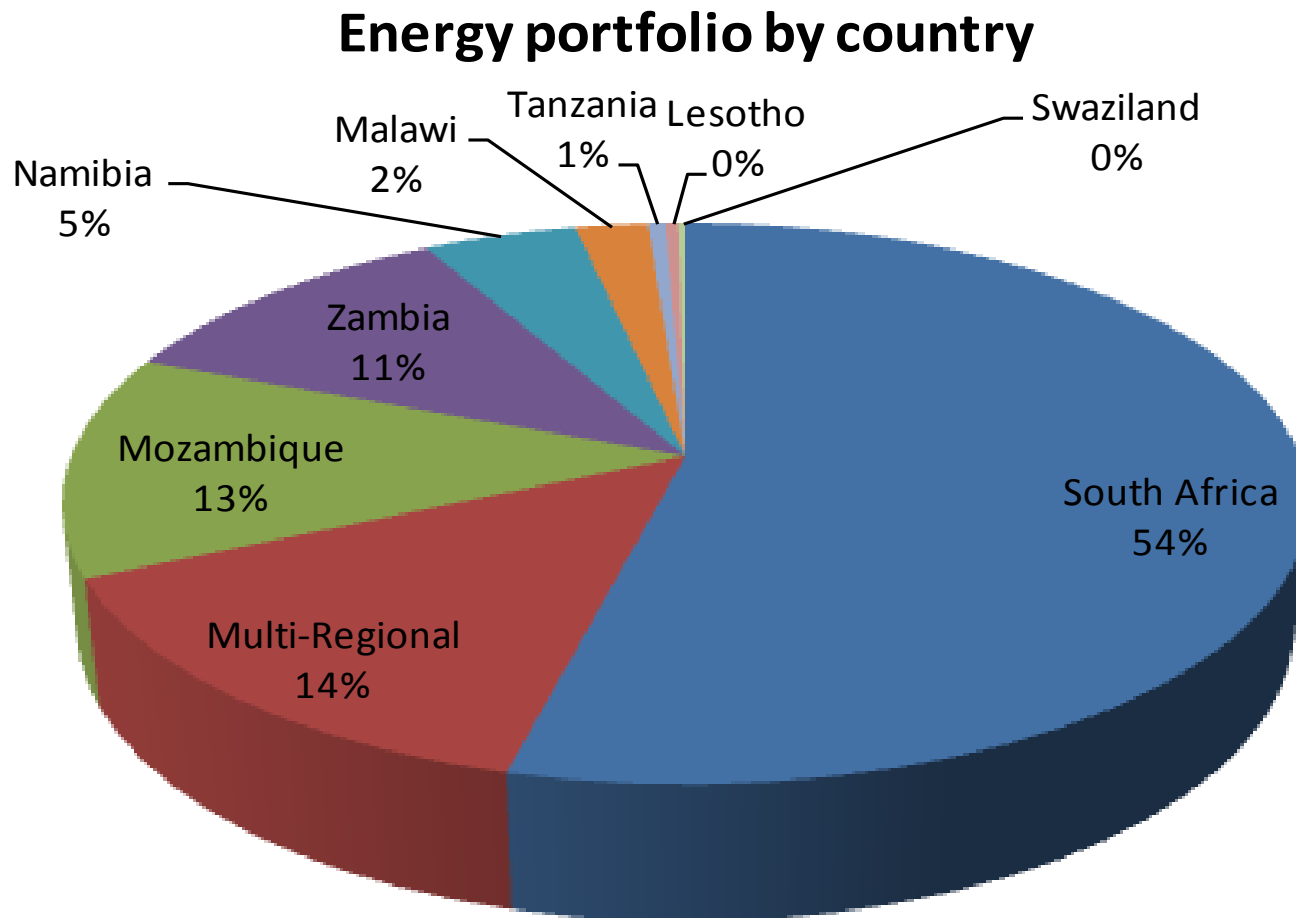


**Total Loan Book approx R35bn – Energy represents 14%**

# DBSA Energy Sector Investments

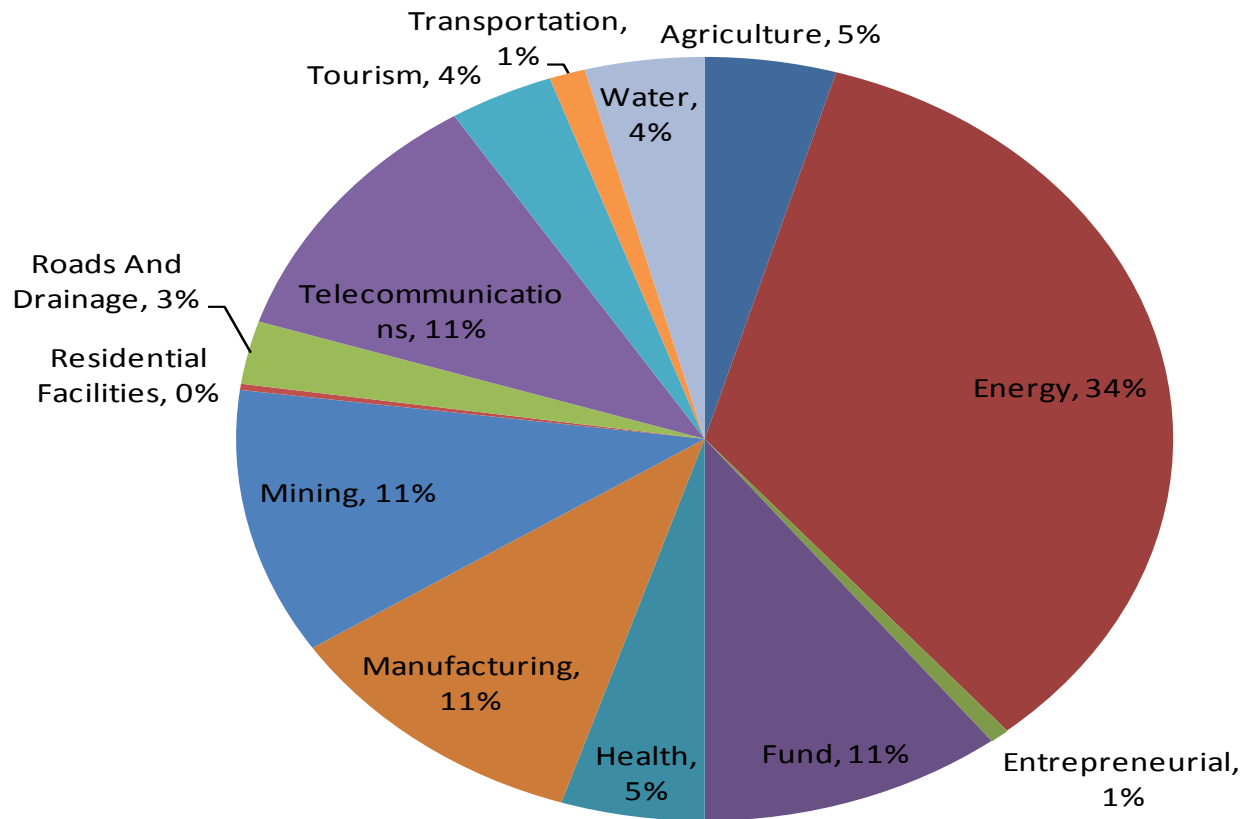
- Regional co-operation and interconnectivity are key focus areas to increase access to energy
- Provide resources for project origination, preparation, development and packaging
- Support Renewable Energy projects & DSM Initiatives
- Project implementation & monitoring – rehabilitation, extension & new power generation, transmission & distribution, gas pipelines, supporting systems, WRU for (*SOEs, IPPs, PPPs, BOTs, etc*)
- Work with all key stakeholders i.e. govts, utilities, developers, financiers, private sector, industry, etc to share information, develop policies, projects & programmes
- Support to key regional institutions in the energy sector i.e. SADC/SAPP/RERA on policy & projects, tariff & market studies, financial models, conferences, training, etc

# Energy Sector by Country



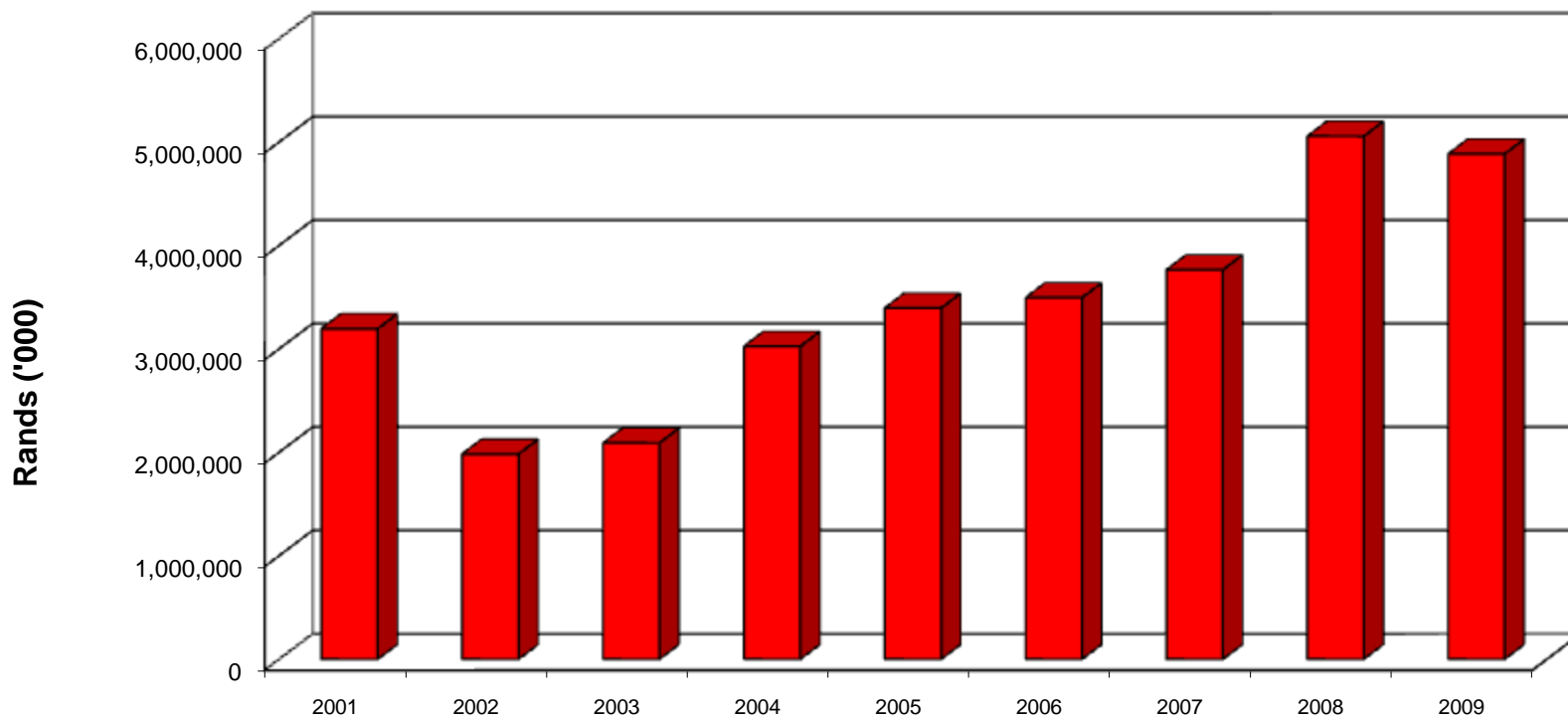
# Energy Exposure in SADC

## Exposure by Sector



# Energy Sector Loans Profile

DBSA Energy sector loans; 2001 to 2009



# TA Facilities & Partnerships

- TA Facilities primarily for project prep related to upstream business development; research & capacity building – *AFD, AfDB, EIB, JICA, SADC, etc*
- DFID/DBSA – TTA for North-South Corridor development
- Africa Financing Partnership (AFP) - collaborative co-financing platform comprising 8 major DFIs
- CE's Corporate Social Responsibility Fund
- Capital Projects Feasibility Fund (CPFF) – DTI
- African Renaissance Fund – DIRCO
- NEPAD IPPF Facility & AfDB trust funds
- Lines of Credit – national DFIs (DBZ, TIB, IDBZ, DBN, PTA)
- Agency Role – kfW, Finland/Austria, EIB, DFID, WB

# Conclusion

- The SADC region offers immense investment opportunities with high and sustainable returns and manageable risks, despite the existence of some key challenges
- Regional co-operation is necessary for socio-economic growth and development
- Pooling of technical and financial resources is key to addressing investment requirements
- The DBSA, with its strong regional presence, provision of long term capital and close ties with key players in Southern Africa is ideally positioned to help maximize investments into the region.
- However, there is a need to explore innovative approaches for new services & investments