

GROWING A FOCUSED, SUSTAINABLE AND DEVELOPMENTAL DBSA

TRANSPORT

ENERGY

ICT

WATER

RESPONSE: DBSA's support to the SADC Master Plan

01 August 2017

There is a strong link between public infrastructure spending and economic growth in the short and in the long term

- Many factors contribute to low growth amongst developing countries
- According to IMF (2014)¹, inadequate infrastructure is a key factor
- According to the study¹:

*...“In many emerging market economies, including Brazil, Russia, India and South Africa, **infrastructure bottlenecks are not just a medium-term worry**, but have been flagged as a constraint even on near-term growth. In low-income countries, deficiencies in the availability of **infrastructure remain glaring and are often cited as impediment to long-term development**”.*

¹ IMF World Economic Outlook: legacies, clouds, uncertainties, Chapter 3, October 2014

Role and Objectives are...

The DBSA's role is to:

- Advance and increase infrastructure development by offering project preparation, financing and implementation services to selected markets
 - o Be a catalyst for infrastructure development
- **Remain financially sustainable**
 - o Generate profit to support future growth

The DBSA objectives are:

Sustained growth in development impact

Grow each of our businesses aggressively to **maximise development impact**

Integrated infrastructure solutions provider

Provide **integrated infrastructure solutions** across the value chain and be the **partner of choice** for infrastructure solutions

Remain financially sustainable

Maintain **profitability and operational efficiency** to enable growth in equity and fund developmental activities

In implementing its mandate the DBSA is guided by relevant international, regional and local policies and agreements including:

- United Nations Transforming our World: the 2030 Agenda for Sustainable Development (SDG's).
- COP21 - investing in clean energy technologies in support of the transition to a green economy.
- **SADC Integrated Infrastructure Development Plan & Programme for Infrastructure Development in Africa (PIDA).**
- National Development Plan (NDP) - investing in social and economic infrastructure to improve livelihoods.
- GCF & GEF – As an accredited implementing agent the DBSA has committed to promoting investment in sustainable and green energy solutions.
- King IV will require that the DBSA disclose how it makes its profits, and how the costs of externalities are provided for.

Introduction – Our Strategy

Strategy

**Strategic
Ambition:**

Deliver R100Bn annually in infrastructure unlocked by 2019-20, while maintaining ROE at 4.7%+

**Paths to
Victory:**

De-risk project
finance structures to
crowd-in third party
funding

Greater investment in
early-stage
programme and
project development

Develop structured
products and funding
structures to unlock
infrastructure and
crowd-in third parties

Establish project
management offices
and focus on
maintenance of
public infrastructure

**Sources of
Competitive
Advantage:**

Strategic
partnerships

Greater risk-return
trade-off & Tenor

Integrated
infrastructure
solutions, including
early-stage risk and
delivery capability

Access to
concessionary
financing

Sustainability, Infrastructure and the DBSA

Socially sustainable infrastructure: is inclusive and respects human rights; it is designed to meet the needs of the poor by increasing access, supporting poverty reduction, and reducing vulnerability to climate change.

Economically sustainable infrastructure: provides jobs and helps boost GDP. It does not burden governments with unpayable debt or users with painfully high charges. It also seeks to build the capabilities of local suppliers and developers.

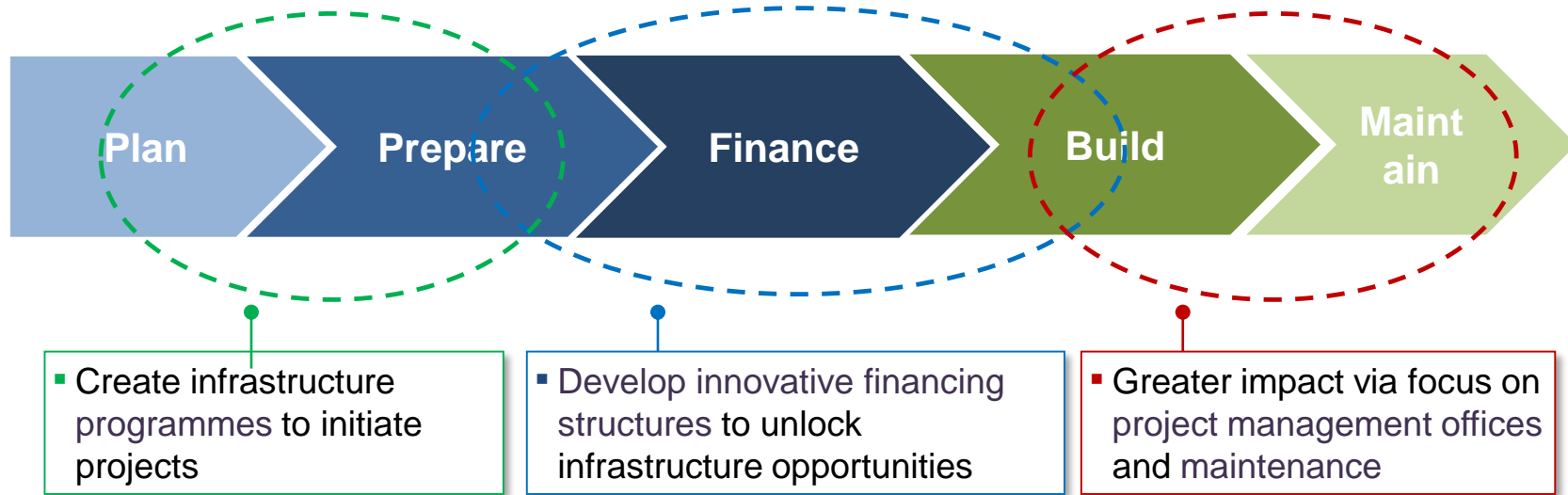
Environmentally sustainable infrastructure: mitigates carbon emissions during construction and operation and contributes to the transition to a lower carbon economy, for example, through high energy-efficiency standards. It is resilient in the face of climate-change risks. It also addresses local environmental challenges, especially regarding water provision and air quality.

“Sustainable infrastructure” are projects that are socially, economically, and environmentally sustainable



The New Climate Economy's Global Commission has called on Multilateral and other DFIs to enable **the doubling of their investments** in financing sustainable infrastructure as quickly as is feasible

3 SA will leverage its presence along the value chain to provide an integrated value offering



How

- Project preparation will move 'earlier' in the value chain to develop 'programmes' to unlock projects in new sectors

- Utilise the innovation team to develop funding structures to unlock previously unfundable projects/clients

- Project management offices (PMO) allow for oversight and delivery of large infrastructure capex budgets
- Maintenance of existing infrastructure a large source of new mandates

SIX WAYS TO ENCOURAGE MORE CAPITAL TO GO TOWARDS SUSTAINABLE INFRASTRUCTURE



1 Scale up investment in Project Preparation and Pipeline Development

- **Development banks** should focus investment on **project-preparation** facilities and technical assistance to increase the “bankability” of project pipelines.

2 Use development capital to finance sustainability premiums

- Encourage **development banks** and bilateral-aid organizations to provide financing for the incremental **up-front capital spending required to make traditional infrastructure** projects sustainable,

3 Improve the capital markets by the use of guarantees

- Increase **development bank guarantee programs** for sustainable infrastructure by expanding access to guarantees.

4 Encourage use of sustainability criteria in procurement

- Governments should strengthen sustainability criteria in both public-procurement processes and public-private partnerships,

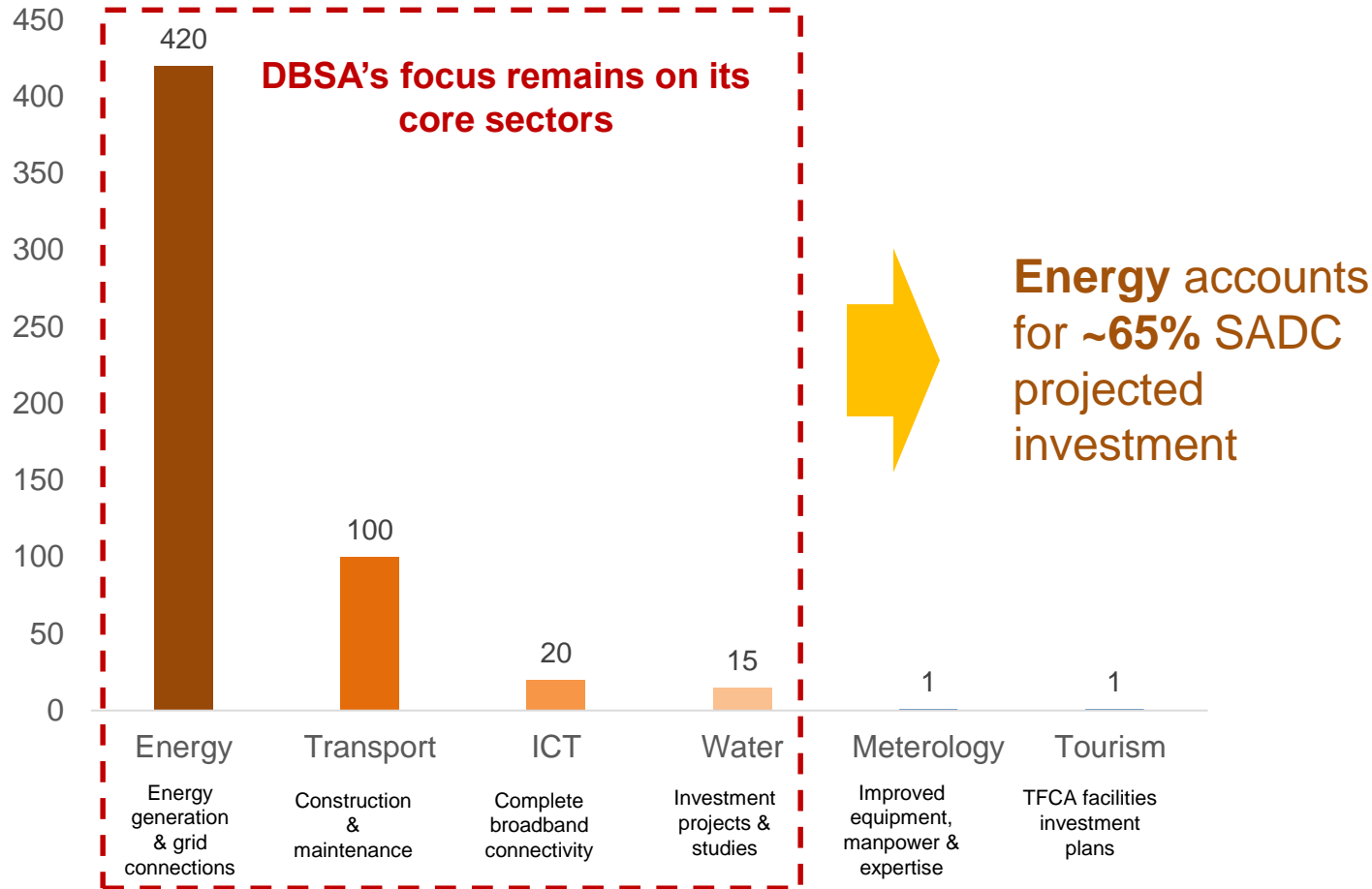
5 Increase syndication of loans

- Encourage **development banks** to **expand loan syndication** and create a larger secondary market for sustainable-infrastructure-related securities.

6 Adapt financial instruments to channel investment and enhance liquidity

- “Yieldcos” or “green bonds” have characteristics similar to traditional investment instruments, but with an emphasis on sustainability.

THE dbsa is working closely with its SADC counterparts on the region's infrastructure agenda



- SADC RIDMP calls for ~\$500Bn in investment in the regions infrastructure, with ~65% going towards energy (\$290-420Bn), followed by transport (~\$100Bn)

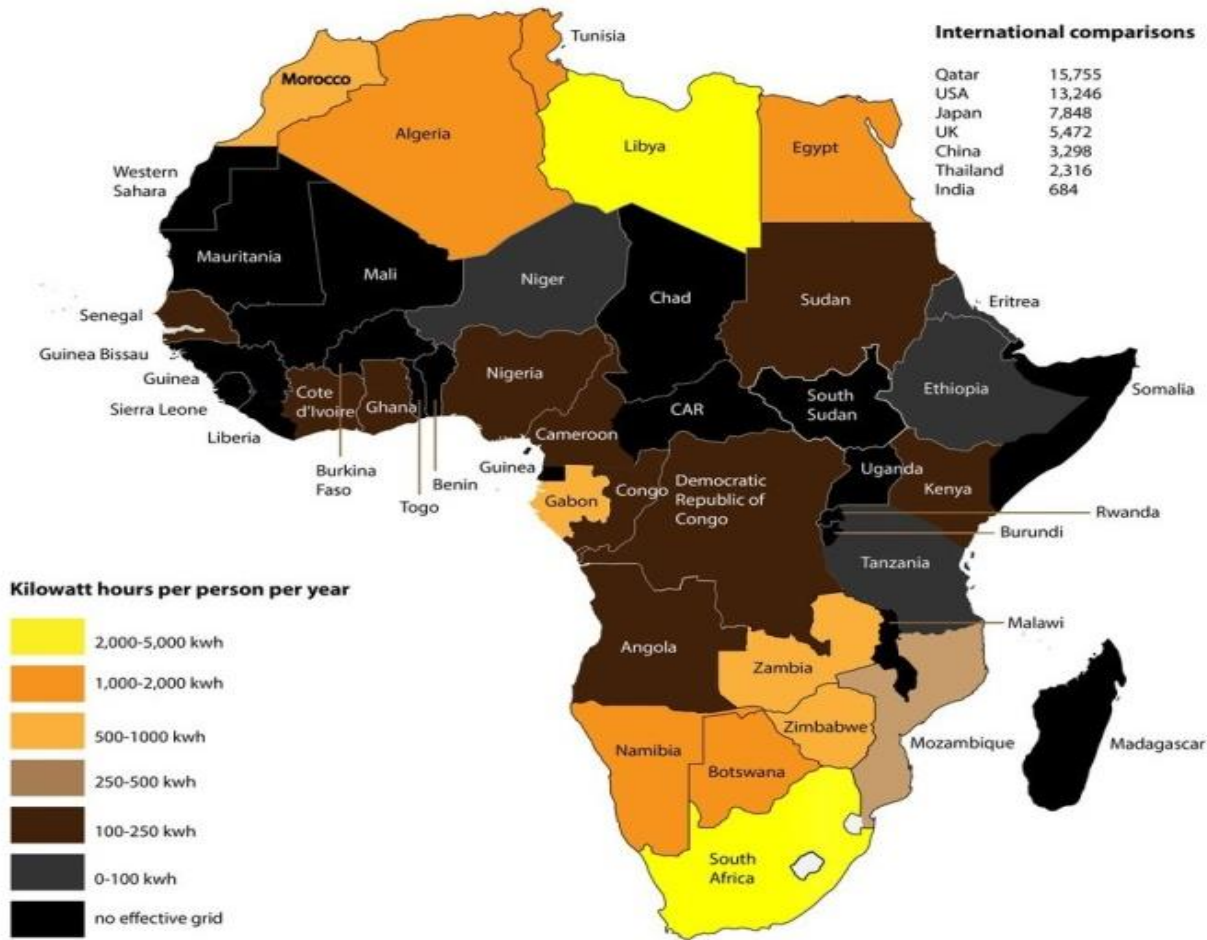


Energy

Sub-Saharan Africa has low levels of electrification which hinders economic growth and development – 78% of the population rely on biomass

Opportunities to light up Africa

Key Points



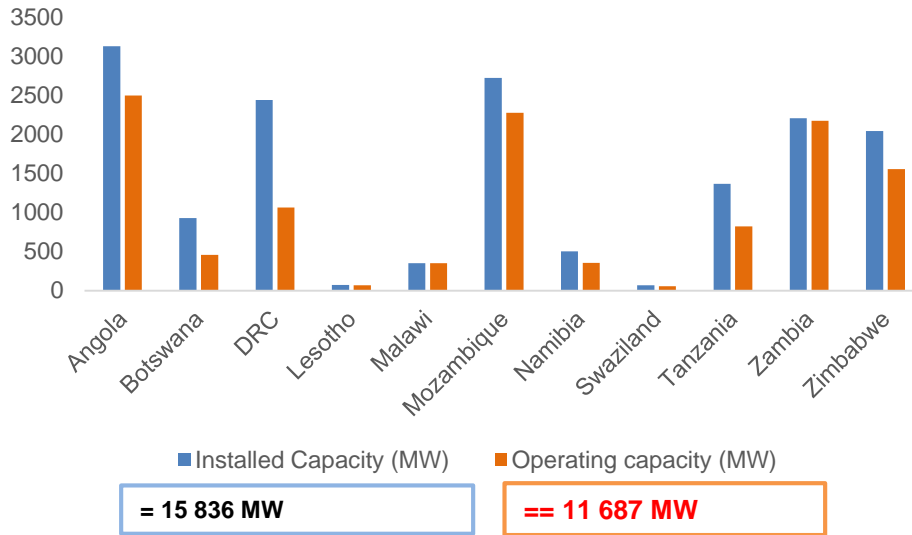
- Countries with a total of 274 mil people have a coverage of below 17%.
- Countries with a total of 163mil people have coverage of between 17 and 24%.
- Countries with half SSA population have coverage below 24%.
- South Africa has the highest coverage in SSA with 76%.

McKinsey estimates that \$57 trillion will be required till 2030 for Africa's infrastructure projects

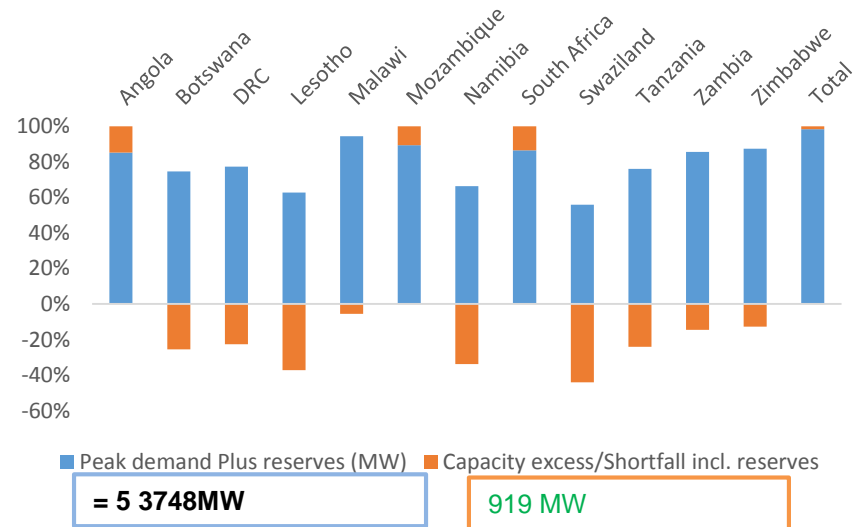
Energy Sector SADC's performance (SAPP)

1 Installed and Operating capacity (MW) excl. South Africa

Installed and Operating Capacity (MW)



2 Current Peak demand (excess/shortfall) MW

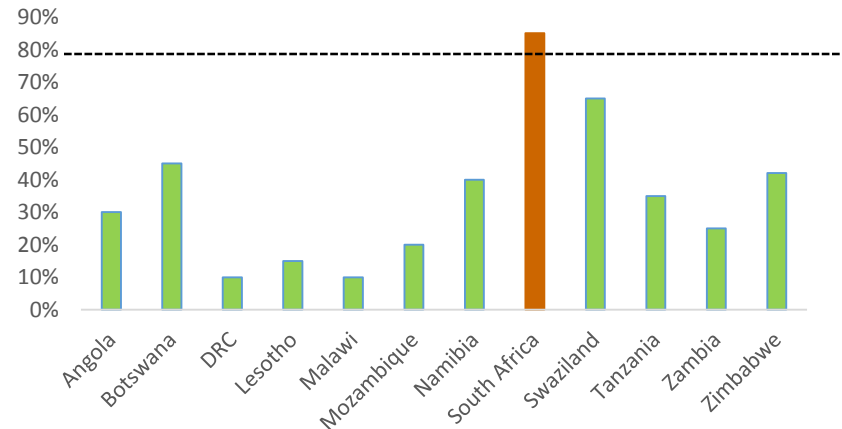


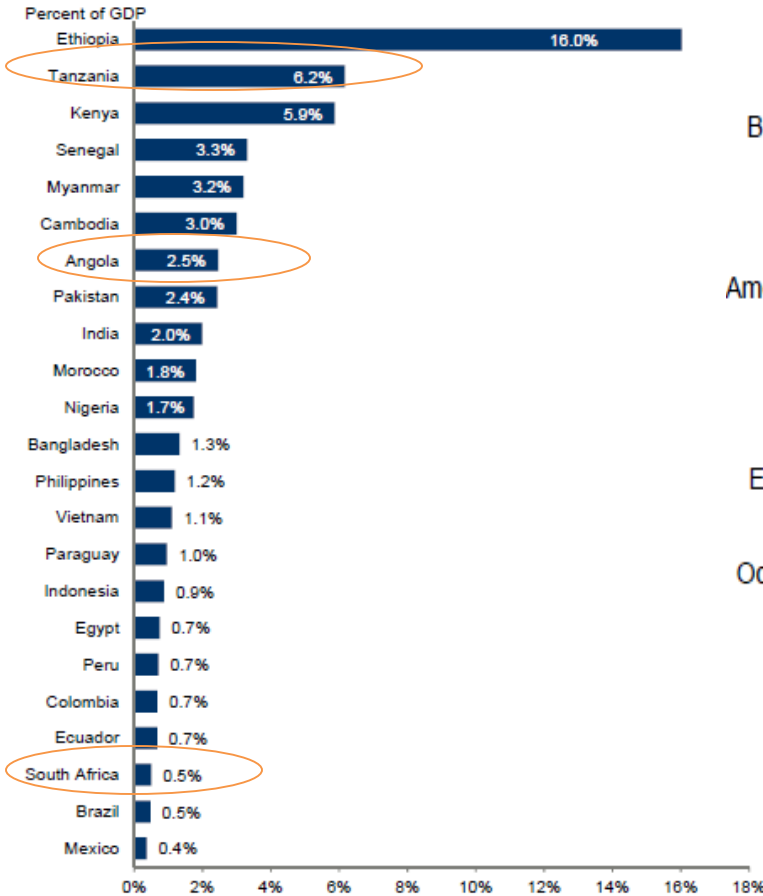
South Africa



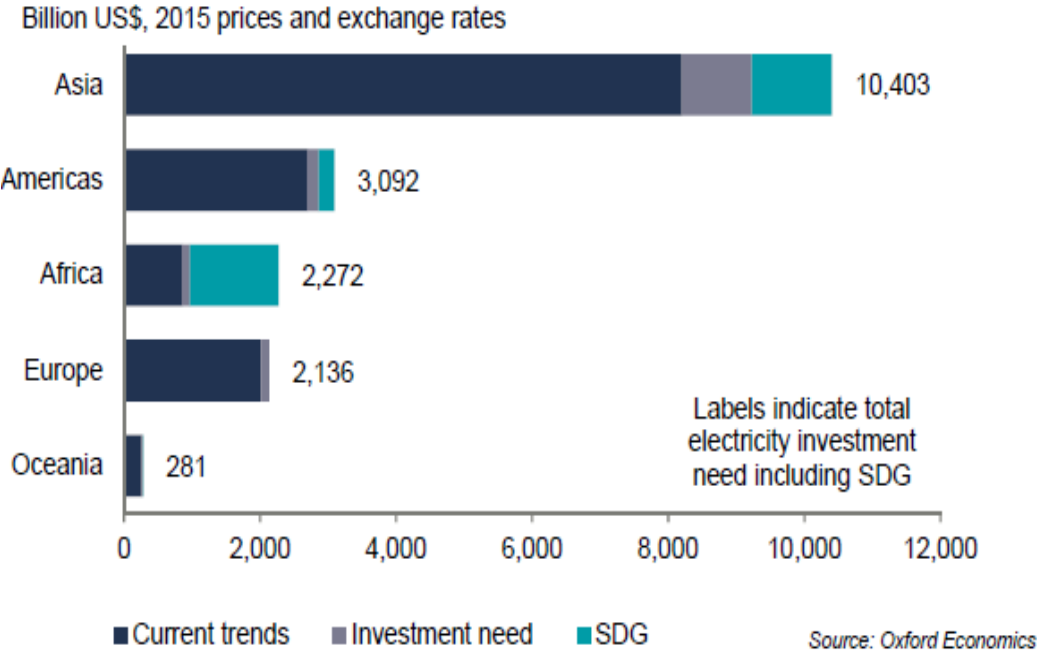
Installed capacity = 43 703 MW
 Operating capacity = 42 710 MW

3 Access to electricity





Investment required to meet the SDGs for universal access to electricity 2016 -2030 (%of GDP)



Total electricity infrastructure investment needs, including to deliver universal access to electricity, 2016 -2030 (% of GDP)

Source: Global Infrastructure outlook, 2017

DBSA in the Energy Sector

The DBSA played a significant role in the establishment of the **REIPPP** Programme

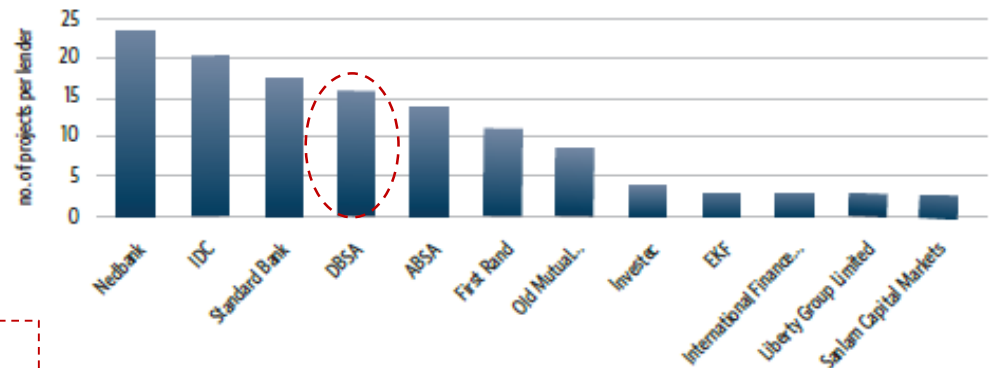


“the most successful public-private partnership in Africa in the last 20 years.”



- Renewable energy play a significant role in the nation’s power generation mix.
- The REIPPP, has successfully channeled substantial private sector expertise and investment into grid-connected renewable energy in South Africa at competitive prices.
- Finally, there have been notable improvements in the economic development commitments, primarily benefiting rural communities

Major debt providers in REIPPP Rounds 1,2,&3






DBSA signed an MOU with NT & DoE in 2010 and served as the payment gateway for the programme and provided local debt funding to the projects (mainly for BEE and community participation in the deals)

Source: PPIAF, “South Africa’s Renewable Energy IPP Procurement Program: Success Factors and Lessons“ (2014)



The DBSA continues fund the REIPPP - participation by BBBEE players and local community trusts is an upfront requirements under the REIPPP

- To date the DBSA has committed funding to **21 projects** in South Africa's IPP Programme with projects with a total of **2,550 MW** funded.
 - 18 of these projects are currently operational and delivering power onto the grid
 - 3 are currently under construction.
 - 5 CSP projects, 9 PV projects, 5 Wind projects & 2 Peaking Plants (portfolio mix)
- Funds committed at approximately **R15.1 billion** across round 1 to round 3.5 under the REIPPP and the IPP Peakers.
- **R12.6 billion** in senior debt and approximately **R2.5 billion to black empowerment parties** and local community trusts.
- DBSA will continue to support of Broad Based Black Economic Empowerment entities and local community trusts with funding to acquire equity stakes in REIPP projects.

Examples of Energy projects completed by the DBSA

Project name	Project Description	Project status	DBSA Offerings
<p>Ilanga CSP1 project</p> 	<ul style="list-style-type: none"> ▪ 100 MW concentrated solar power (CSP) plant, with a capacity to store energy for 4.5 hours ▪ Developers/Shareholders: Emvelo Holdings alongside the Industrial Development Corporation, DBSA, ACS Cobra and Local Community Trust 	<ul style="list-style-type: none"> ▪ Reached Financial Close: February 2015 ▪ Under Construction 	<ul style="list-style-type: none"> ▪ Project Preparation funding for development of a bankable feasibility study ▪ Mandated Lead Arranger/Underwriter for Senior Debt alongside South African commercial banks
<p>West Coast 1 wind project</p> 	<ul style="list-style-type: none"> ▪ 94 MW wind power plant ▪ Developers/Shareholders: Engie (ex GDF Suez) alongside Investec, Kagiso Tiso and a Local Community Trust 	<ul style="list-style-type: none"> ▪ Operational 	<ul style="list-style-type: none"> ▪ BEE & Local Community Trust funding ▪ Senior Debt alongside South African commercial banks
<p>Jasper PV Project</p> 	<ul style="list-style-type: none"> ▪ 75 MW Solar PV power project ▪ Developers/shareholders: SolarReserve alongside the Public Investment Corporation, Google, Kensani and a Local Community Trust 	<ul style="list-style-type: none"> ▪ Operational 	<ul style="list-style-type: none"> ▪ BEE & Local Community Trust funding ▪ Senior Debt alongside South African commercial banks

Energy projects completed by the DBSA

Project name	Project Description	Project status	DBSA Offerings
 ● Ithezi-Thezi - Zambia	<ul style="list-style-type: none">▪ 120 MW Hydropower Generation project	<ul style="list-style-type: none">▪ Operational	<ul style="list-style-type: none">▪ Project Preparation funding for development of a bankable feasibility study▪ Co-financier
 ● Maamba Coal - Zambia	<ul style="list-style-type: none">▪ 300MW Maamba Coal Power Plant	<ul style="list-style-type: none">▪ Operational	<ul style="list-style-type: none">▪ Co-Financier

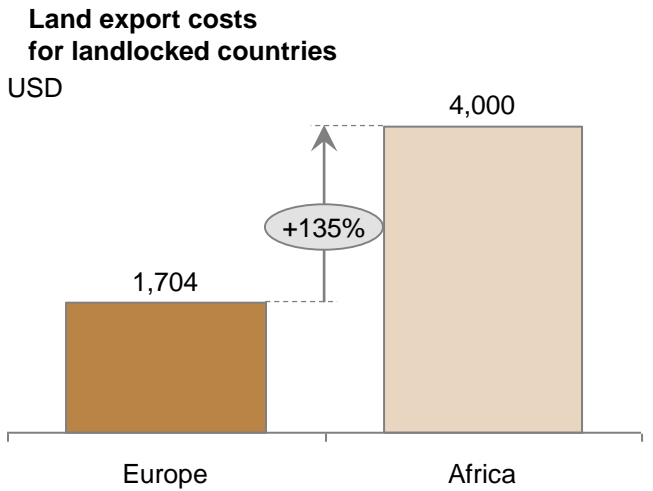
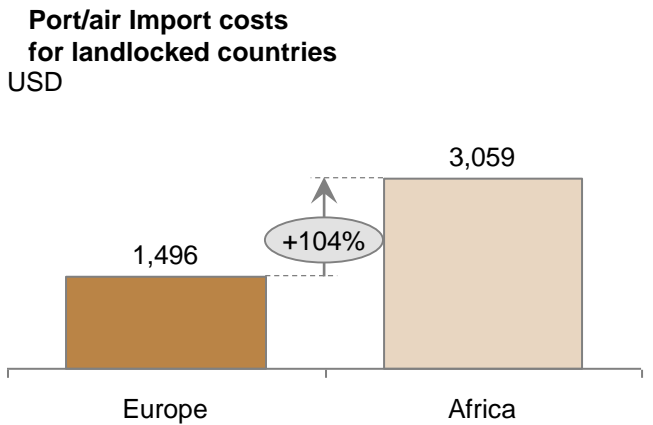


TRANSPORT Sector

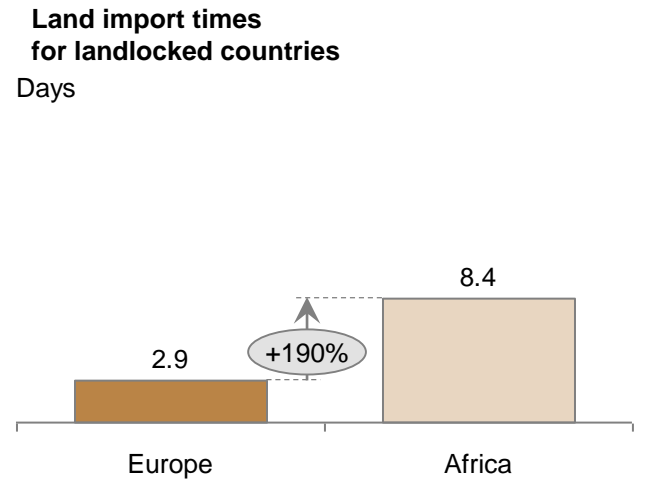
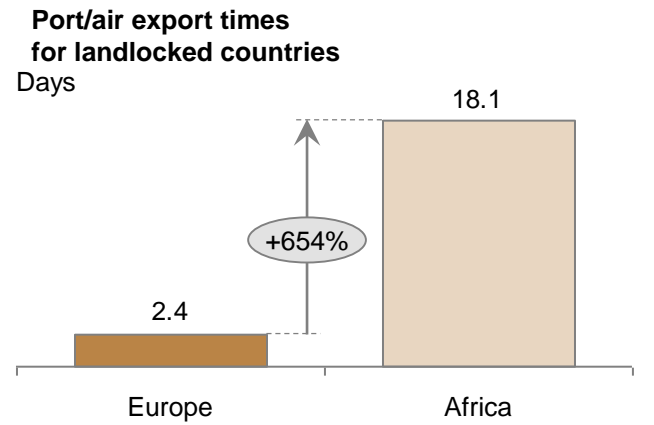
- By 2030, traffic for landlocked SADC countries will increase to **50 million tonnes, ramping to 148 million tonnes by 2040** – an 8.2% annual growth rate;
- Port traffic will expand from 92 million tonnes to 500 million tonnes by 2027;
- Port expansion projects at Dar-es-Salaam will only sustain shipment traffic through 2020;
- OR Tambo International Airport in Johannesburg, South Africa, will add two million passengers a year by 2030 and three million a year by 2040; and
- Kenneth Kaunda International Airport in Lusaka, Zambia and N'djili International Airport in Kinshasa, Democratic Republic of Congo, currently operate at 70% of capacity, but expect traffic to expand well over 100% of capacity by 2020.

More Facts...transport costs and times remains prohibitively high – especially for landlocked states

Landlocked African countries face comparatively high transport costs....



...and long transit times



Note: Costs refer to 40 dry container or semi-trailer
Source: World Bank report 2010 A Time for Transformation

On a Positive note... the North-South and BEIRA Corridor MoU was just recently signed off by Transport Ministers

The NSC Specifically

Key insights and observations

- a NSC will be one of the largest transnational corridors and has regional importance**
 - NSC will connect 8 countries, 252m people and \$458bn of collective GDP
 - NSC integrates regions from Durban to Dar via Gaborone, Harare, Lusaka and Lilongwe
- b NSC has a significant investment need**
 - Total cost of NSC at ~\$10.9bn
 - Majority of investment need is aimed towards rehabilitation of dilapidated infrastructure
- c The scale of the programme requires a structured approach to avoid technical complexities**
 - Many stakeholders involved
 - Complexity can be managed by staggering the programme with prioritised cornerstone projects
 - Major risks can be effectively mitigated with proven transnational management measures



Partnerships crucial to deliver on our shared commitments...

International



Regional



- 1. Infrastructure Vision 2027
- 2. Regional Infrastructure Development Master Plan

National



END



ICT Sector

Transformational and Developmental Impact

The DBSA continues to fund project in the ICT sector both in South Africa and the Rest of the African Continent to provide affordable high quality broadband. **Case: Smile Telecoms**



The project

- A regional project which spans across **Tanzania, the Democratic Republic of Congo (DRC)**, Uganda and Nigeria.
- The project involves a three- to four-year network roll out programme which provides affordable high quality broadband and voice services to its consumers via Internet Protocol technology

Funding requirements

- The project's cost was estimated at USD945 million, of which USD315 million was raised in senior debt.

Support from DBSA

- The DBSA participated in the non-ECA tranches with an exposure of USD50 million with the IDC and the PIC adding an additional \$70 million.
- The Smile Telecoms projects was **AWARDED the Global Trade Review (GTR) Best Deal Status** to Industry Newcomers, as the transaction helped finance a ground-breaking project supporting a relatively young and inexperienced company compete in a market that is heavily dominated by a handful of industry giants.



WATER SECTOR



Only 30% of the population have access to improved sanitation and only 68% have access to improved water resources in SSA

COUNTRY	URBAN SERVICES	RURAL SERVICES	RESOURCE
Angola	Capital and major towns do not have full, uninterrupted water supply coverage. Improving sanitation coverage	Very limited formal water services. Virtually no improved sanitation	Extensive water resources but limited infrastructure. Significant hydropower potential
Botswana	Capital and major towns were well served but recently affected by drought and slow expansion of infrastructure.	Extensive formal water services. Significant improved sanitation	Extensive water resources but very distant from main population centres which suffer water shortages
Lesotho	Reasonable water supply and sanitation provision in capital and towns.	Extensive formal water services. Limited improved sanitation.	Adequate water resources but limited infrastructure in difficult terrain.
Malawi	Capital and major towns do not have full, uninterrupted water supply coverage.	Limited formal water services. Some improved sanitation	Limited water resources on a per capita basis, considering rural nature of economy
Mozambique	Capital and major towns do not have full, uninterrupted service coverage. Sanitation coverage limited, particularly in peri-urban areas	Limited formal water services. Some improved sanitation.	Extensive water resources but limited infrastructure. Particular challenges in the dry but populous southern region. Existing hydropower with potential for more.
Namibia	Reasonable water supply and sanitation in capital and main towns	Extensive formal water services. Some improved sanitation.	Extensive water resources but very distant from main population centres. Already dependent on high tech solutions in urban areas
Swaziland	Reasonable water supply and sanitation in capital and main towns.	Some formal water services. Some improved sanitation.	Very high proportion of limited water resource used for sugar production.
Zambia	Reasonable water supply and sanitation in capital and main towns	Limited formal water services. Some improved sanitation.	Reasonable water resource endowment and significant infrastructure development. Significant hydropower,

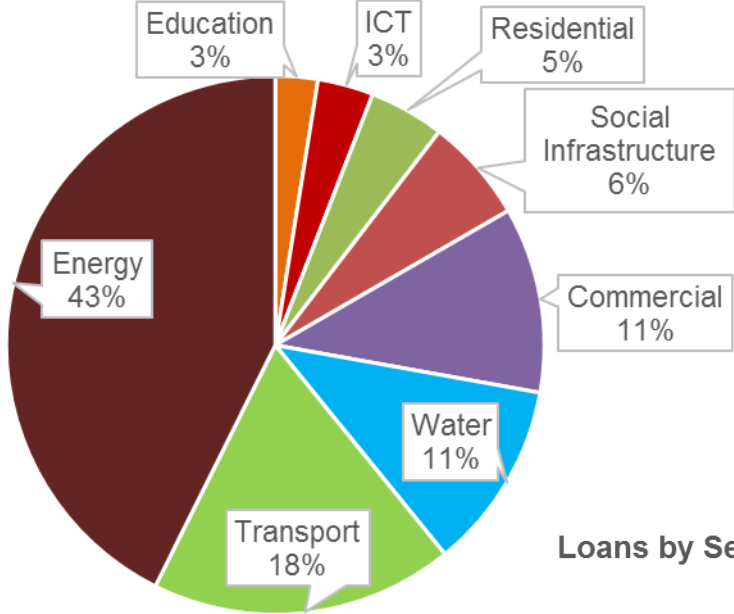
Selected SADC Countries

SADC Water resource availability and use

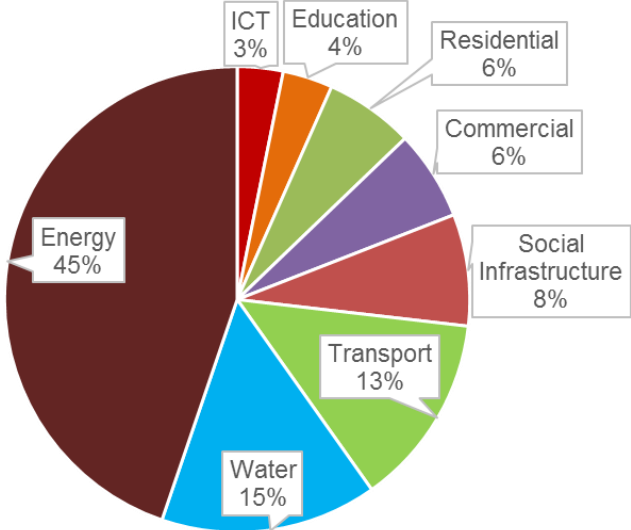
COUNTRY	Total Renewable Water Resources m ³ /p/yr	Proportion of renewable water resources withdrawn %	Agric use, percent	Use per person		Use data date
				m ³ /p/yr	l/p/day	
Angola	5931	0.48	0.1	37	101	2005
Botswana	5411	1.6	0.65	109	299	2000
Lesotho	1415	1.45	0.13	23	63	2000
Malawi	1004	7.9	6.7	100	274	2005
Mozambique	7760	0.41	0.32	46	126	2001
Namibia	16230	0.71	0.5	147	403	2002
South Africa	942	24.2	15.3	270	740	2000
Swaziland	3504	23.1	22.3	963	2638	2000
Tanzania	1800	5.4	4.8	145	397	2002
Zambia	6464	1.5	1.1	141	386	2002
Zimbabwe	1282	17.9	14.7	269	737	2007

DBSA's historical role in the water sector has been limited

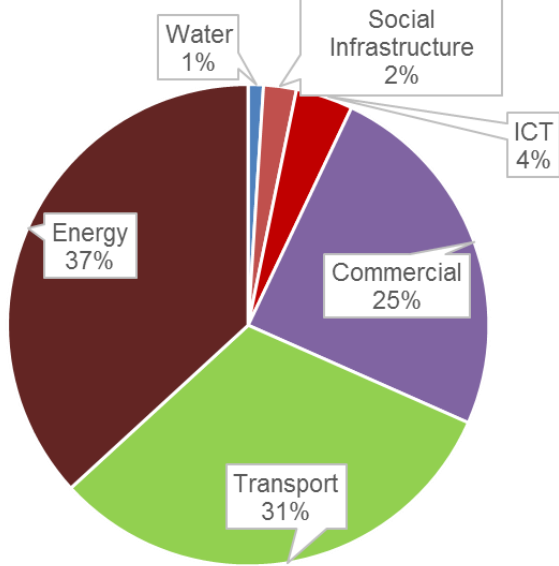
Loans by Sector - Entire Bank



Loans by Sector - SA Finance



Loans by Sector - International Finance



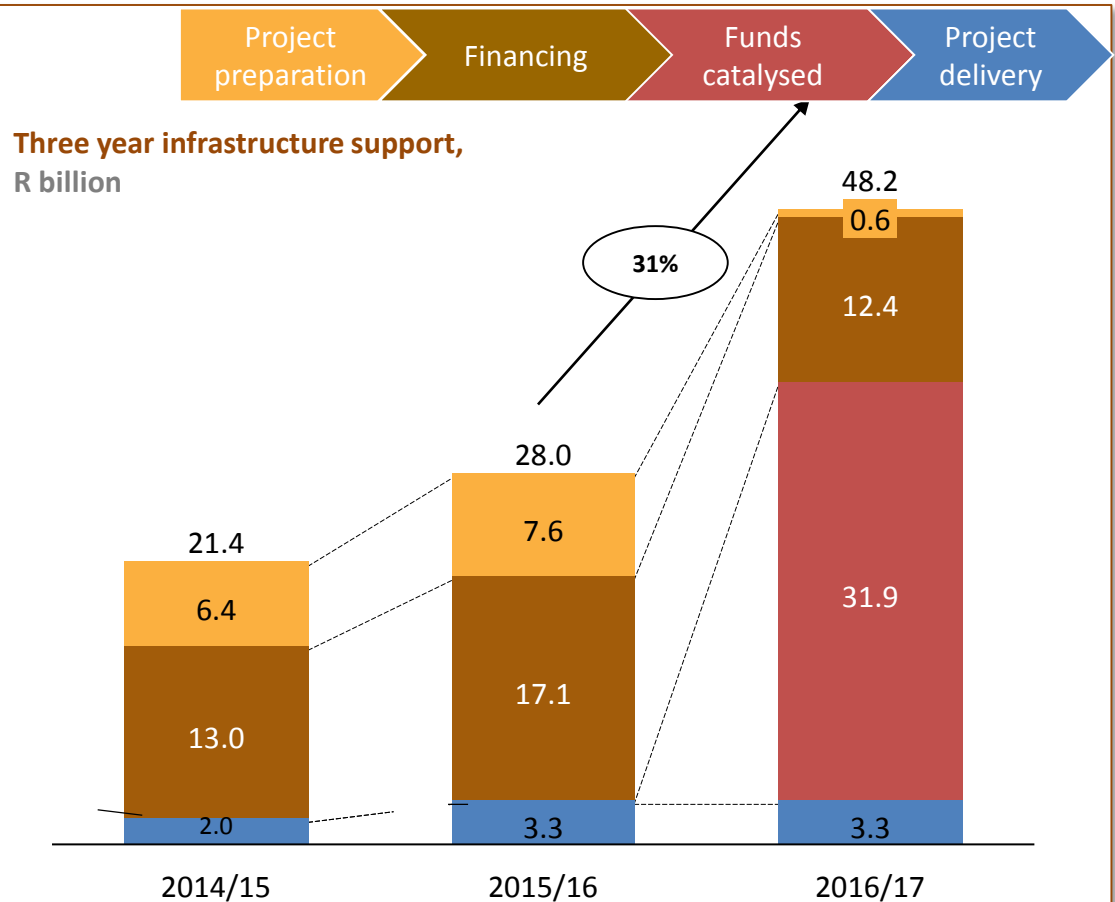


OUR IMPACT AS DBSA

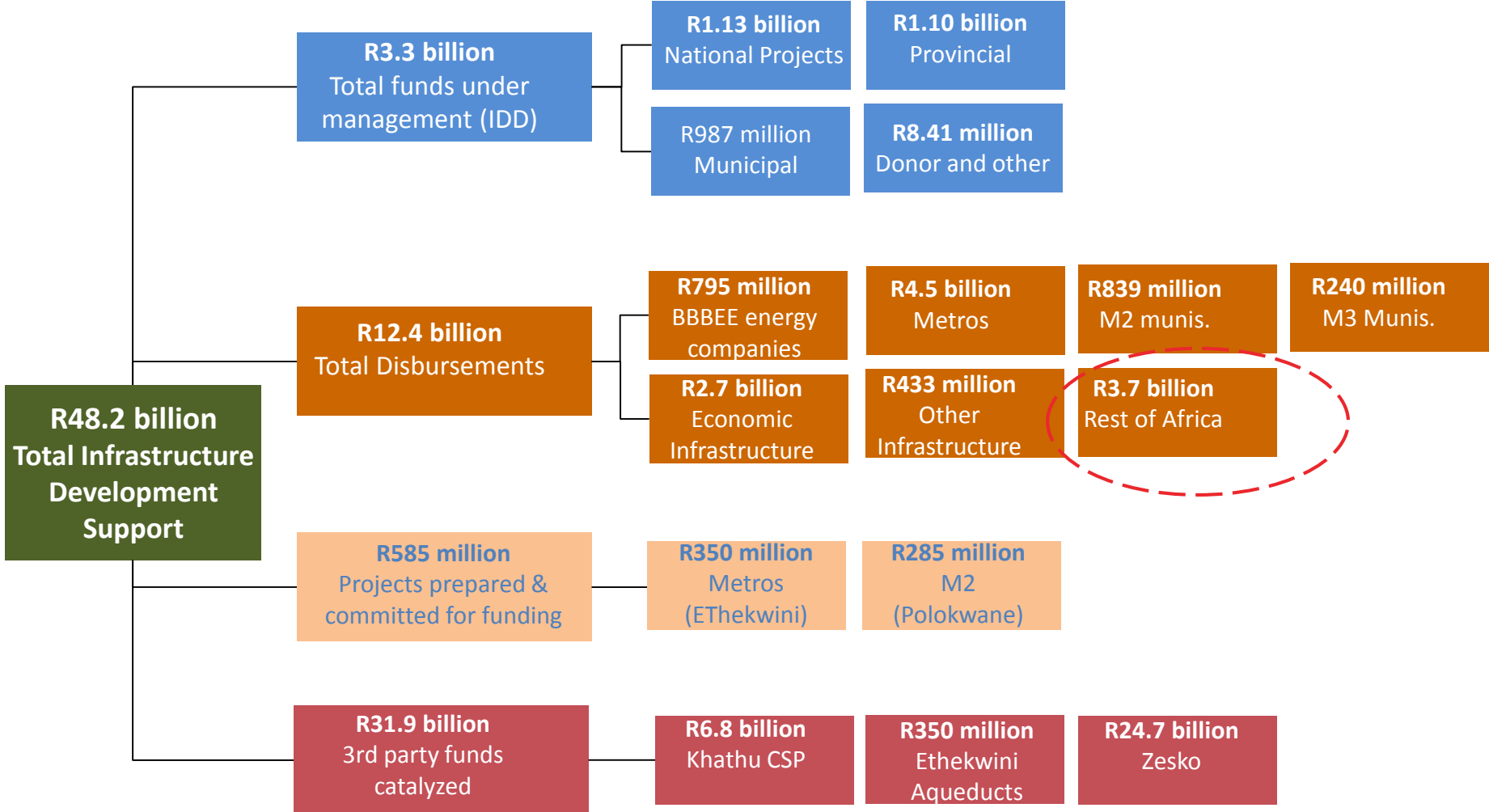
2016/17 Infrastructure Impact

In line with the strategy of operating across the infrastructure value chain, a total infrastructure development support of **R48.2 bn** was delivered in 2016/17

- Prepared projects amounting to R585 million in 2016/17
- Total disbursement of R12.4 billion
- Funds catalysed of R31.9 billion
- Funds under management of R3.3 billion



R48.2 billion infrastructure support: This covered total disbursements as well non-funding activities, including catalysation in 2016/17 alone



The DBSA PPU uses different channels and sources to access funding for project preparation

	Type of funding	Funding partners	
1 DBSA sponsored	<ul style="list-style-type: none"> Project preparation funding Based on cost recovery and return (self-sustaining model) 	<ul style="list-style-type: none"> DBSA own funding 	
2 3 rd party funding	a PPDF	<ul style="list-style-type: none"> Project preparation funding Grants 	<ul style="list-style-type: none"> KfW European Union
	b IIPSA	<ul style="list-style-type: none"> Project preparation funding & direct capital grant Grants 	<ul style="list-style-type: none"> European Union (participating DFIs: KfW, DBSA, AFD, EIB)
	c Other (PDSF, PPFS, etc.)	<ul style="list-style-type: none"> Project preparation funding Grants 	<ul style="list-style-type: none"> EIB AFD

Estimated Impact from **Project Preparation** activities in 2016/17

The impact that is estimated from the projects that were prepared during 2016/17 are:

- 182 727 households to benefit from electricity projects
- 22 814 households to benefit from water projects
- 15 533 households to benefit from sanitation projects
- 1 328 households to benefit from residential facilities
- 842 households to benefit from roads
- 792 households to benefit from transport





Annexure: Projects

PPU PROJECTs (Approved & committed) PIPELINE (OUTSIDE SA): More than 800km's of transmission and Power Generation of an ~1200MW



Project Name	Country	DBSA Role	Expected Regional Benefits	Financial Close
ENERGY				
MoZiSA Regional Transmission Line	Mozambique, Zimbabwe & South Africa	Source & manage funds for advisory services to compile feasibility studies until financial close. This was the first project approved under the PPDF funding.	Enhance power trade amongst the 3 countries, evacuation of excess power from SA, to Zimbabwe and Zambia. Ultimately increase the interconnectivity from Grand Inga.	Aug-18
BoSA Transmission Line	Botswana & South Africa	Fund management for the transaction advisory from IIPSA.	Enhance SA ability to evacuate excess power into SADC via Botswana. Ultimate linkage to ZIZABONA Transmission Line.	Apr-18
ANNA Interconnector	Angola & Namibia	Leverage PPDF with IIPSA funding and other co-funding to commence early stage development.	Angola connects to the SAPP grid. Thereby unlocking the power generation opportunity in Angola into the region.	Dec-19
2 nd Alaska - Sherwood	Zimbabwe	PPU secured gap funds for consultants to produce a bankable feasibility study.	As the centre of SADC, strengthening the internal transmission equips the country to be a conduit for power flow into the rest of the region.	Jun-18
2 nd DRC – Zambia Transmission Line**	DRC & Zambia	PPU managed the co-funding contribution for the TL construction, on behalf of DFID	Improved power trade between DRC & Zambia, distribution of power from Inga.	N/A
Luapula Hydro Power Schemes	DRC & Zambia	PPU was instrumental in approving funds for the technical feasibility studies, and catalysing funds from the World Bank for the ESIA.	Zambia is in dire need of power supply due to hydrological challenges in the southern / central parts of the country. Developing the hydro power in the northern region will shift the concentration risk.	Dec-19
Mulembo – Lelya Hydro Scheme	Zambia	PPU sourced project preparation funding from PPDF and is currently managing the feasibility study. DBSA potential for MLA and debt financing.	The project is a priority for Zambia due to the current power deficit which it is experiencing as a result of the severe drought in the Southern region. The project will also assist in plugging the gap of 8000 MW that is needed by SAPP by developing hydro in the central and eastern region.	Dec-18

*TL: Transmission Line ** Legacy Programme- TTA Fund with DFID

PPU PROJECTs (Approved & committed) PIPELINE (OUTSIDE SA) continue:

Project Name	Country	DBSA Role	Expected Regional Benefits	Financial Close
ENERGY (Continued)				
Muchinga Power Station	Zambia	PPFS approved a preparation facility for a 300 MW Hydro Power Station on the Lunsemfwa river.	Zambia is in dire need of power supply and the development of this project will increase the country's total generating capacity.	Sept-18
Ngonye Falls Hydro Power Project	Zambia	PPFS approved a preparation facility for a 40- 120 MW Hydroelectric Power Project upstream on the Zambesi River.	Zambia is in dire need of power supply and the development of this project will increase the country's total generating capacity.	Apr-18
Arandis HFO and Tank Farm	Namibia	PPU approved a project preparation facility for 120MW HFO power plant. The facility will go towards the completion of the project's bankable feasibility study.	Namibia is in need of indigenous power supply and the development of this project will increase the country's total generating capacity.	Dec-17

END