# THE 4th CHAPTER SEMINAR – SOUTH AFRICA

Theme: *Harnessing Sustainable Economic Growth and Human Development in Africa*

**Venue: The Capital Empire, 177 Empire Place, Cnr. Rivonia Road, Sandhurst, Sandton, Johannesburg, 2031, South Africa.**

**Date: 28th to 30th August 2019**

Uphold public interest

# A case for Joint Collaborative/Infrastructure Investment in Africa )

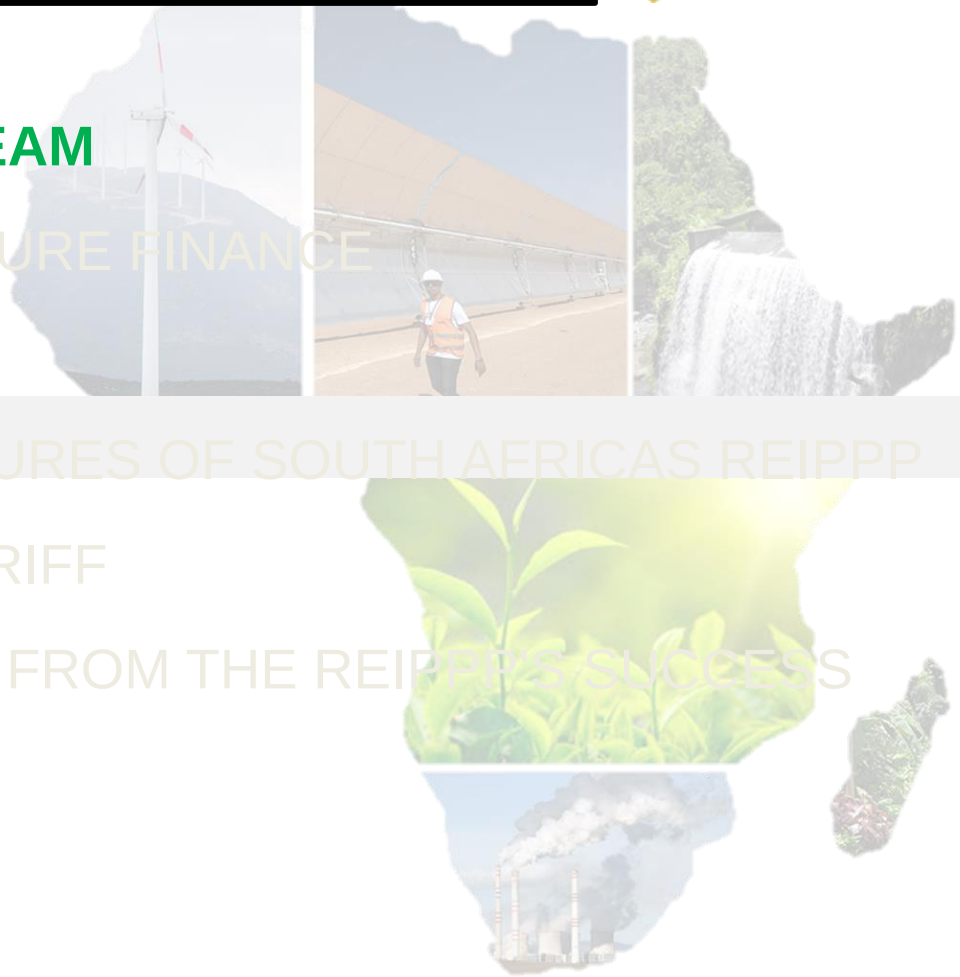
**4th CHAPTER SEMINAR  SOUTH AFRICA**

Mr Pramodh DEBIPERSAD, Mr Jectone ACHIENG

Date 28 August 2019

# OUTLINE

- **BIO OF THE TEAM**
- INFRASTRUCTURE FINANCE
- CHALLENGES
- SALIENT FEATURES OF SOUTH AFRICAS REIPPP
- TRENDS IN TARIFF
- KEY LESSONS FROM THE REIPPP'S SUCCESS



# PRAMODH

Mr Pramodh Debipersad is a qualified Electrical Engineer (Heavy Current) with a Masters degree in Finance specialising in Energy as an investment class. He is an Investment Officer within PESR.2 of the AFDB. He has worked in the Renewable and Non Renewable Energy sector for the past 18.5 years, in Africa. He has experience across Energy Generation, Private Equity in Energy and Renewable Energy Project Development and financing.

**Pramodh Debipersad, Investment Officer PESR.2 AFDB**
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**BIO:**

He has 18.5 years of direct experience in both private sector energy project financing and PPP energy project financing. He has direct experience in the Energy sector, having worked on the Electrical Generation Utility side, the debt, equity/sponsors, EPC and O&M side, of IPP Energy Transactions in South Africa, Zambia, Mali, Uganda, Sierra Leone, Ghana and Malawi. He has a very deep understanding of project commercial bankability (during project development), capital raising and post commercial financial close management around project financing energy transactions in Africa. Having worked very closely with private sector investors and DFI's in the energy sector in Africa, he has an intimate understanding of their investment requirements, and is well placed to advise energy projects.

# PRAMODH

**Sector Based Experience**:

Currently working on a 26MW solar IPP project in Malawi for AFDB financing. Also engaged on a 143 MW hydro project in Sierra Leone. Advisor to the AFDB TEMA LNG FSU and FRU project team in Ghana which the AFDB is considering financing. Lead speaker for the AFDB at the 9th Zambia International Mines and Energy conference (ZIMEC) 2019 in Zambia. Financial Model build for African Infrastructure Investment Managers ("AIIM") on a 90 megawatt (MW) thermal power station in Kayes, western Mali which was the West African nation's first independent power project (IPP) to feed into the national grid. The project reached commercial close in July 2017 with a 16 months construction period only from commencement date (5th July 2017) to the latest date of contractual Taking-Over Certificate (4th November 2018). Financial Model build and commercial advisory to Simba Oil in Uganda for a PPP project finance model build on an energy project in 2018. Engagement was extended to include structuring and advisory for the sponsors to financial closure. Commercially advised Grupo Cobra the sponsors/EPC/O&M side of Karoshoek Solar RF (Pty) Ltd a 100MW Concentrated Solar Power ("CSP") Renewable Energy Project during development to reach commercial closure in 2014, which reached Commercial Operations, in South Africa, on 30th of November 2018. Commercial advisory on a small scale Renewable Energy fund (USD 100M) for financing small-scale Solar projects (5X15MW) as part of the REIPPP, together with KfW and RMB, called FIRST (Pty) Ltd, in South Africa. Commercial close achieved in 2017. On the financial advisory (model build, model assurance (across logic, accounting and tax) and model advisory) Rounds 3 and 4 bid and financial close side of Acciona, FRV, Biotherm, Mainstream, Engie, BrightSource, Scatec Solar and Building Energy Renewable Energy transactions (large scale > 50MW and small scale < 50MW), in South Africa. Model auditor to Cenpower in Ghana and. Commercial advisory to the Central Energy Fund on a $1 Bn investment into a Concentrated Solar Power ("CSP" or solar thermal) renewable energy project called Redstone for a minority equity position, in South Africa. Commercial advisory to sponsors on the 50MW De Aar (Solar PV), 50MW Droogfontein (Solar PV) and 138MW Noblesfontein (Wind) for the refinancing of existing minority sponsors

# ACHIENG

Mr Achieng holds a Master of Commerce (Development Finance) - University of Cape Town, South Africa, MBA (Finance) and a Bachelor of Commerce (Accounting) – The University of Nairobi, Kenya. He has also undertaken an advanced course in Project finance and Financial Modelling for Infrastructure Projects from the Queens University, Canada. He is also a CPA(K). Further, he has undertaken trainings in Management Development, Project Management, Supervisory Skills and Corporate & Project Finance and Negotiation Skills. His professional career spans over 15 years the field of Accounting (Eastern Produce Ltd); Strategy and Corporate Finance Consulting (Deloitte & KPMG), Public Enterprises Divestiture and Structuring (Privatisation Commission, Kenya); Strategy, Financial Analyst and Project Management (Geothermal Development Company, Kenya). He is currently an Investment Officer with the A

**Achieng Jectone Tocho, Investment Officer**
**PESR.2 AFDB**
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**BIO:**

Mr. Achieng's professional working experience spans over 15 years. He has held senior managerial positions in private (professional Services Firms) and public sector (Public Finance and Energy Sector.

He has also accumulated experience in the areas of Public Private Partnership Transactions, Transaction structuring, Financial Analysis, Due Diligence Investigations, Financial Modelling, Project and Infrastructure Finance and management of Donor Funded Projects, teams, Strategy Development and Implementation, Project Risk Analysis and Evaluation and Project Management.

Currently, he is an investment Officer with the African Development Bank focusing on structuring financial solutions for Energy projects.

# OUTLINE

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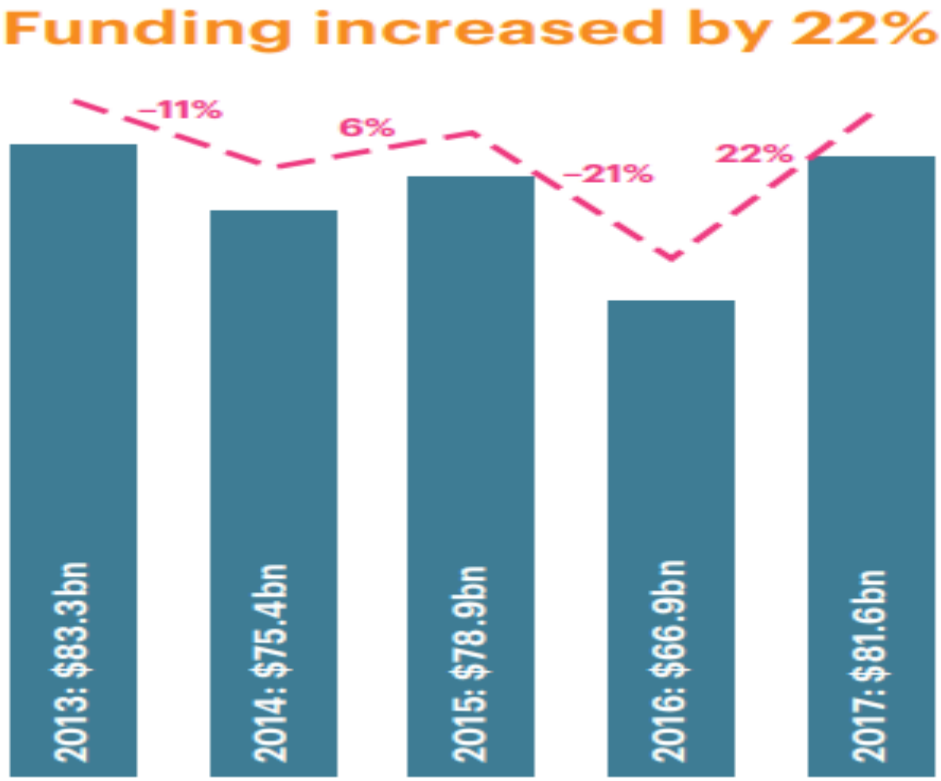
- **INFRASTRUCTURE FINANCE**
- CHALLENGES
- SALIENT FEATURES OF SOUTH AFRICAS REIPPP
- TRENDS IN TARIFF
- KEY LESSONS FROM THE REIPPP'S SUCCESS

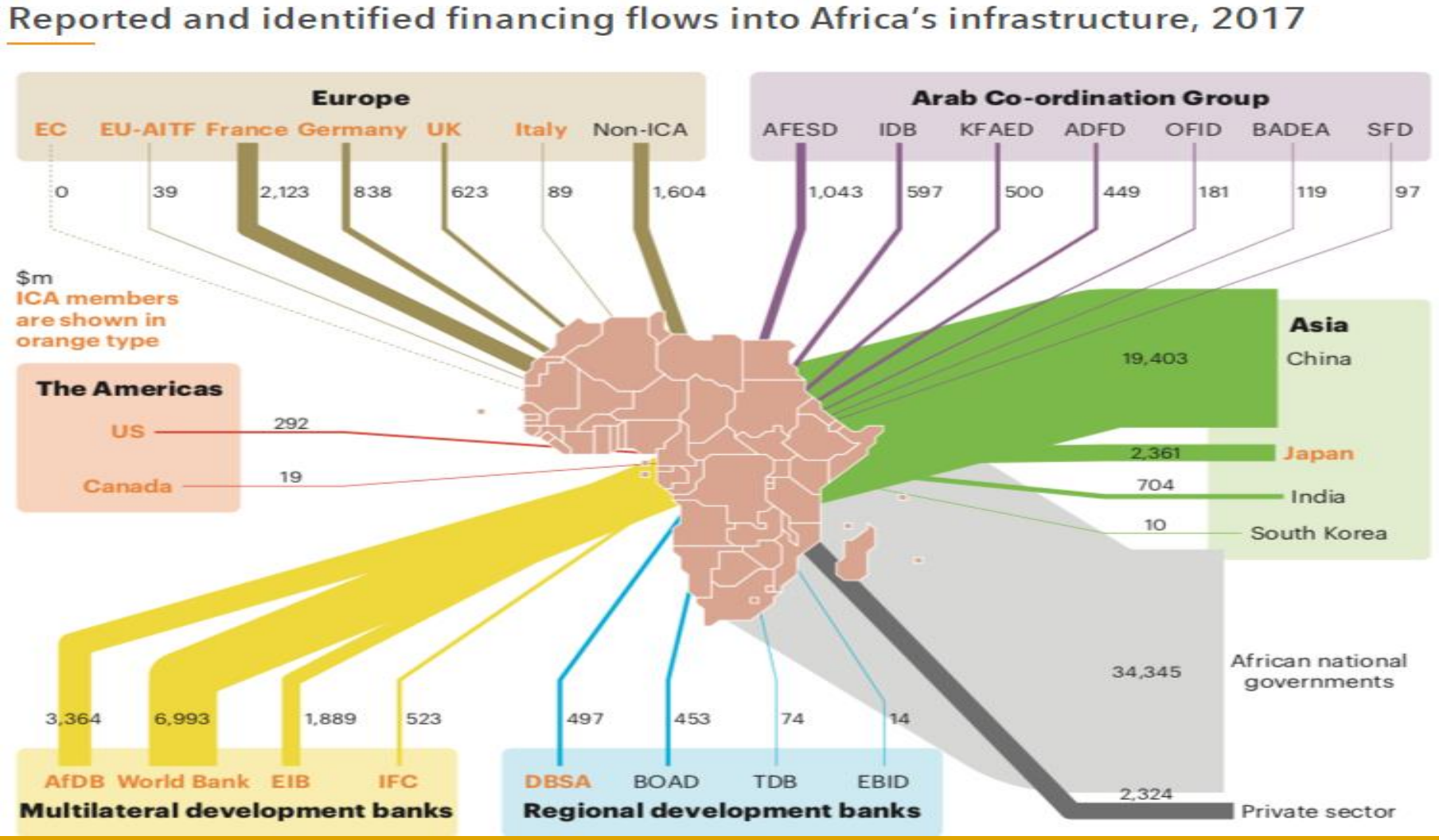
# Big Picture – Flows 2017



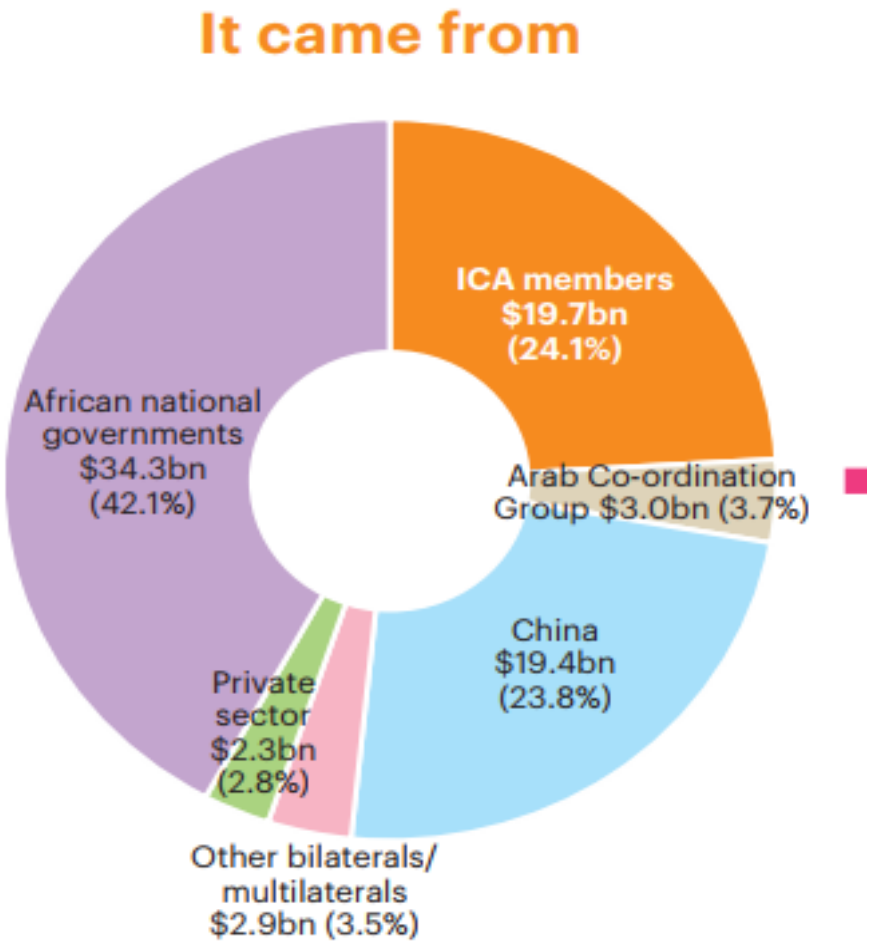

Total Funding reached
**U$ 81.6 billion**

**Source**: ICA, 2017

# Sources of Financing

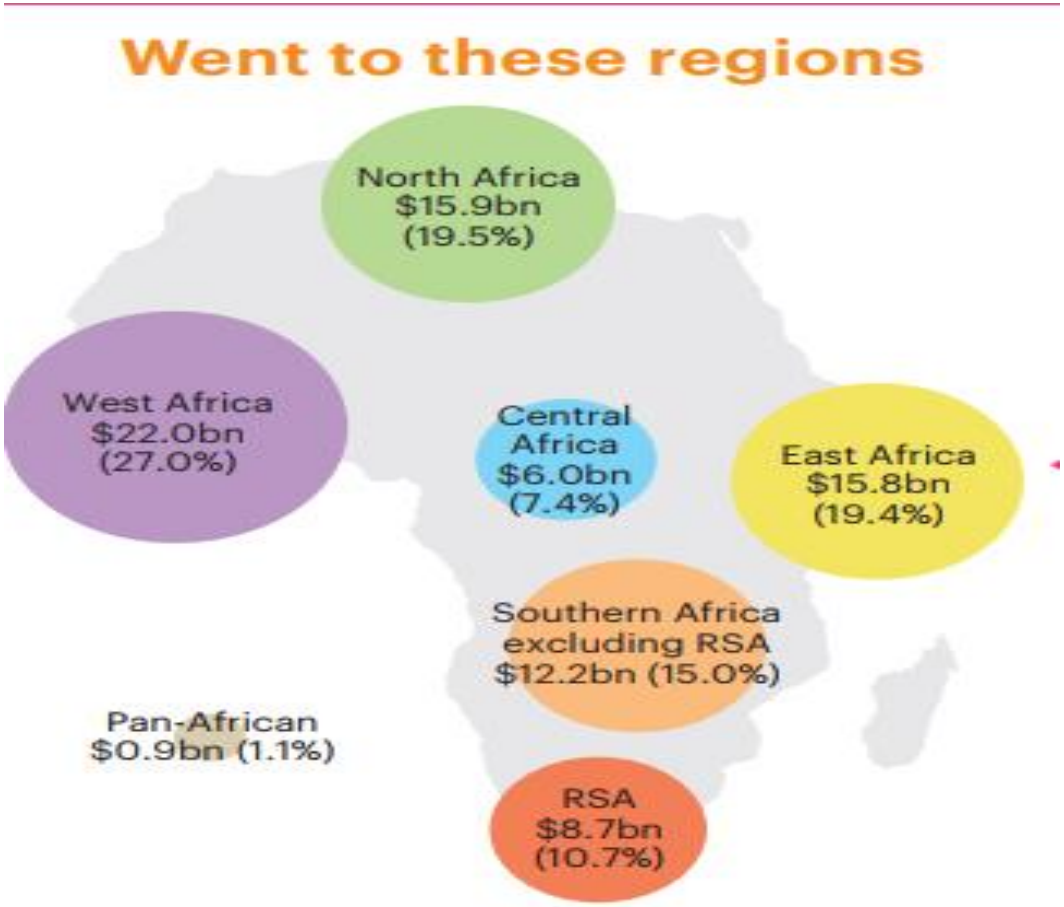


# Where From?




**Source**: ICA, 2017

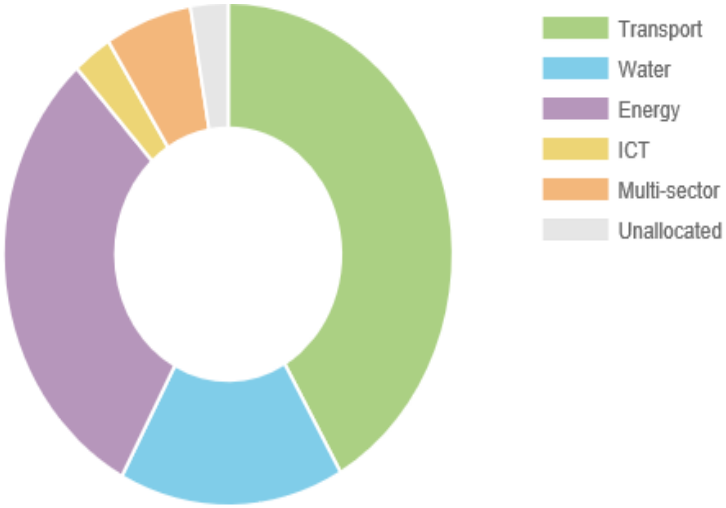
# Which Regions?




**Source**: ICA, 2017

# Which Sectors?

## Funding distribution by sector




Transport $34.0bn (41.7%)

Water $13.2bn (16.2%)

Energy $24.8bn (30.4%)

ICT $2.3bn (2.8%)

Multi-sector $5.1bn (6.3%)

Unallocated $2.2bn (2.7%)

**Source**: ICA, 2017

# Projections

| Commitments from All Sources, Six Year Trend ($bn) | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Average |
| Transport | 30.06 | 37.26 | 34.24 | 32.36 | 26.24 | 34.04 | 32 |
| Water | 11.53 | 11.20 | 9.38 | 7.54 | 12.22 | 13.18 | 11 |
| Energy | 28.18 | 28.60 | 24.06 | 33.52 | 20.62 | 24.78 | 27 |
| ICT | 1.30 | 1.91 | 2.39 | 2.38 | 1.66 | 2.27 | 2 |
| Multi-sector | 2.97 | 2.26 | 2.61 | 2.15 | 2.77 | 5.13 | 3 |
| Other | 0 | 0 | 0 | 0 | 0.48 | 0 | 0.1 |
| Unallocated | 1.07 | 2.03 | 2.74 | 0.97 | 2.91 | 2.17 | 2 |
| Total | 75.11 | 83.26 | 75.42 | 78.92 | 66.90[1] | 81.57 | |

[1] As restated in *Infrastructure Financing Trends in Africa, 2017*

# Projections

**TABLE 3.2 Preliminary figures on investment needs ($ billions)**

| Infrastructure subsector | Target by 2025 | Annual cost | Notes |
|---|---|---|---|
| Power | 100% urban electrification<br>95% rural electrification | 35–50 | New Deal on Energy target by 2025 |
| Water supply and sanitation | 100% access in urban area<br>100% access in rural area | 56–66 | Water access includes: Piped water, public tap/standpost, safe wells/boreholes<br>Sanitation access includes: Improved latrines, safe pit latrines, septic tank, sewer |
| Information and communication technology | Mobile universal coverage<br>50% of population within 25 km of a fiber backbone<br>Fiber to home/premises internet penetration rate (10%) | 4–7 | |
| Road and other transport sectors (air, rail, and port) | 80% preservation; 20% development | 35–47 | Preservation: Maintenance and rehabilitation<br>Development: Upgrading and new construction |
| Total | | 130–170 | Preliminary figures |

# Agenda 2063 - Infrastructure

*Connect Africa through world-class Infrastructure,* including interconnectivity between island states and the mainland, and with a concerted push to finance and implement the major infrastructure projects in:

- *Transport: connecting all African capitals and commercial centres through the Africa Integrated High Speed Train Network, the PIDA transport corridors; improving the efficiency and connections of the African aviation sector and implementing the Yamoussoukro Declaration, and strengthening the African port and shipping sector as regional and continental assets.*
- *Energy: harnessing all African energy resources to ensure modern, efficient, reliable, cost-effective, renewable and environmentally friendly energy to all African households, businesses, industries and institutions, through building the national and regional energy pools and grids, and PIDA energy projects.*
- *ICT: a continent on equal footing with the rest of the world as an information society, an integrated e-economy where every government, business and citizen has access to reliable and affordable ICT services by increasing*

# Funding Models

1. Exchequer/Public Finance
2. Public-Private Partnerships
3. Private Capital
4. DFIs
5. Commercial Banks

# Funding Models

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## MKU signs new hostels deal with South Africa firm

SUNDAY AUGUST 11 2019


Mount Kenya University's main campus in Thika. The institution has signed a memorandum of understanding with a South African property developer to put up a 3,000-bed ultra-modern hostel at the campus. PHOTO | FILE | NATION MEDIA GROUP

**In Summary**

- Kabusha Investments (PTY) Ltd, trading as Stag African, is expected to design, finance and build a 3,000-bed ultra-modern hostel at its Thika Campus.
- The university will "provide Stag African with the site layout diagram(s) of the proposed site (s) for the development", all the necessary documentation and land for the development.

By AGGREY MUTAMBO
More by this Author

By DAVID MUCHUNGUH
More by this Author

Mount Kenya University (MKU) has signed a memorandum of understanding with a South African property developer to put up a 3,000-bed

# Funding Models

FCPA John Mudany • 1st

Experienced MD&CEO, CFO, Finance & ICT Director, Marketing, Strategist - Sp...

3d

Kenya expands geothermal capacity

KenGen catapulted Kenya into 8th position as the 8th World largest Geothermal Developer after displacing the indomitable Iceland. This came with the commissioning of the first unit generating 86.6MW out of 165MW expected from Olkaria V. The second unit is expected to be commissioned by end of August 2019. The project is funded jointly betweenJICA and KenGen using Rights Issue funds.

#geothermal

29 • 1 Comment

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# What are the Challenges

1. Host country risks/governance framework
2. Environmental & Social Issues
3. Project Readiness – Feasibility, Permitting etc
4. Risk Perception and Reality Gap
5. Financing Gaps
6. Regulatory Challenges/Inhibitors
7. Skills Capacity constraints
8. Contractors capacity
9. Project Management/Procurement Challenges

# Opportunities

1. Credit Enhancement Instruments
2. Engaging Local Partners
3. DFIs - PCs
4. Training and Capacity Building
5. Tender Agent role
6. Capital Markets/Local Currency loans
7. Dedicated Implementation Institutions/Teams
8. Consultancy & Professional Services

# OUTLINE

- BIO OF THE TEAM
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- CHALLENGES AND OPPORTUNITIES
- **CASE STUDY – SOUTH AFRICA**
- TRENDS IN TARIFF
- KEY LESSONS FROM THE REIPPPS SUCCESS

# SOUTH AFRICA REIPP

## SALIENT FEATURES OF SOUTH AFRICAS REIPPP

**What is it**

- The South African Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) is a competitive tender process that was designed to facilitate private sector investment into grid-connected renewable energy (RE) generation in South Africa

**Where did it start**

- The Department of Energy's (DoE) Independent Power Producers Procurement Programme (IPPPP) was established at the end of 2010 as one of the South African government's urgent interventions to enhance South Africa's power generation capacity. The Department of Energy (DoE), National Treasury (NT) and the Development Bank of Southern Africa (DBSA) established the IPPPP Office for the specific purpose of delivering on the IPP procurement programme objectives.

# SOUTH AFRICA REIPP

Energy supply impact

- 6 422MW[1] of electricity had been procured from 112 RE Independent Power Producers (IPPs) in seven bid rounds[2];
- 3 976 MW of electricity generation capacity from 64 IPP projects has been connected to the national grid;
- 35 669 GWh of energy has been generated by renewable energy sources procured under the REIPPPP since the first project became operational. Renewable energy IPPs have proved to be very reliable. Of the 64 projects that have reached COD, 62 projects have been operational for longer than a year. The energy generated over the past 12 month period for these 62 projects is 10 648 GWh6, which is 96% of their annual energy contribution projections (P50) of 11 146 GWh over a 12 month delivery period. Twenty eight (28) of the 62 projects (45%) have individually exceeded their P50 projections

1. 6 422 MW from 92 large scale RE + 99 MW from 20 small scale RE IPPs
2. Bid windows 1, 2, 3, 3.5, 4 and smalls BW1 (1S2) & smalls BW2 (2S2).

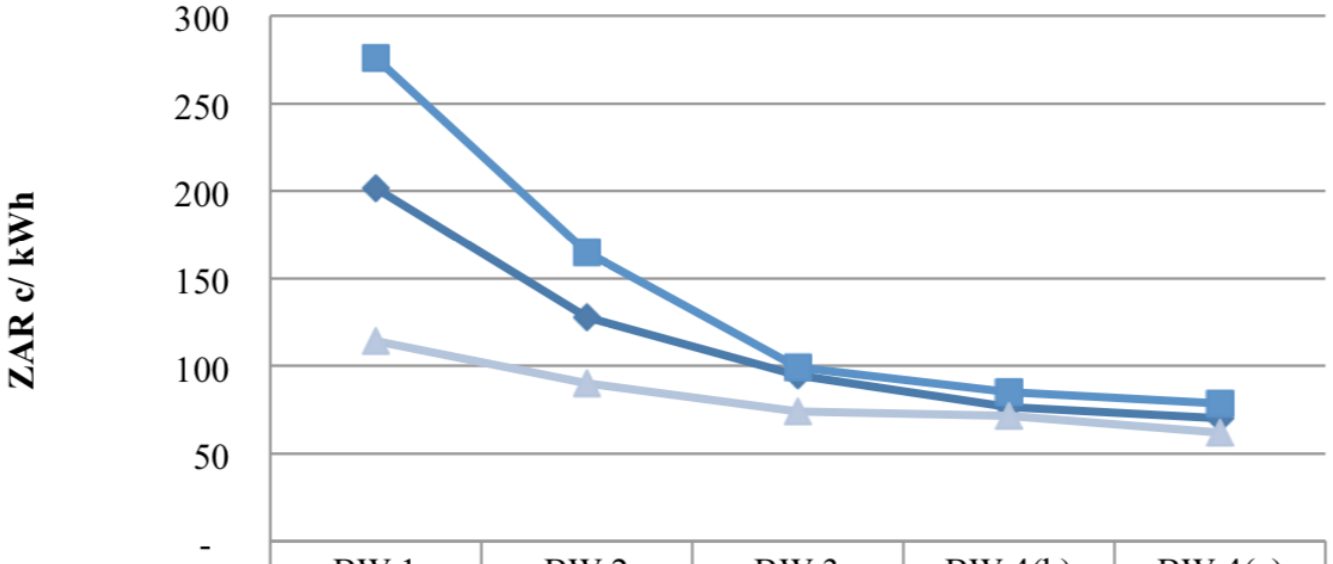
# SOUTH AFRICA REIPP

Investment, economic, social and environmental impacts

- Investment (equity and debt) to the value of R209.7 billion, of which R41.8 billion (20%) is foreign investment, was attracted;
- Created 40 134 job years for South African citizens to date
- Socio-economic development contributions of R860.1 million to date
- Enterprise development contributions of R276.7 million to date
- Carbon emission reductions of 36.2 Mton $CO_2$ has been realised by the programme from inception to date
- Water savings of 42.8 million kilolitres has been realised by the programme from inception until the end of March 2019

# SOUTH AFRICA REIPP

## WEIGHTED AVERAGE BID TARIFF (ACROSS ALL SELECTED PROJECTS) PER BID WINDOW




| | BW 1 | BW 2 | BW 3 | BW 4(b) | BW 4(a) |
|---|---|---|---|---|---|
| Blended weighted average tariff (all technologies) | 202 | 128 | 95 | 77 | 70 |
| Solar PV average tariff | 276 | 165 | 99 | 85 | 79 |
| Wind average tariff | 114 | 90 | 74 | 72 | 62 |

# Critical Success Factors

## WHY WAS REIPPP SO SUCCESSFUL

1. Enabling policy and regulatory environment
2. Mandated, authorized leadership to manage the procurement programme
3. Adequate resources for hiring experienced transaction advisors
4. Auction Design Built on International Best Practice
5. High quality, bankable documentation and contracts
6. Fairness, transparency and trust building to earn private sector trust
7. Capital markets that provide adequate and competitively priced funding
8. Maintain credibility of the procurement programme