

Financing Renewable Energy in BRICS: A Comparison of South Africa, China and India

Mr Krish Chetty 24 October 2022

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Economic Development Opportunities



Promoting local industrialisation
and manufacturing is key to create
jobs



Opportunity to locate distributed
Biomass Energy Generation
facilities at the municipal level



Must promote Energy Storage –
battery manufacturing

Reducing Investor Risk



Accurate data about conditions



Expertise in construction and manufacturing



Conducive Policy Environment

- Influence perceptions of investors and international finance sector

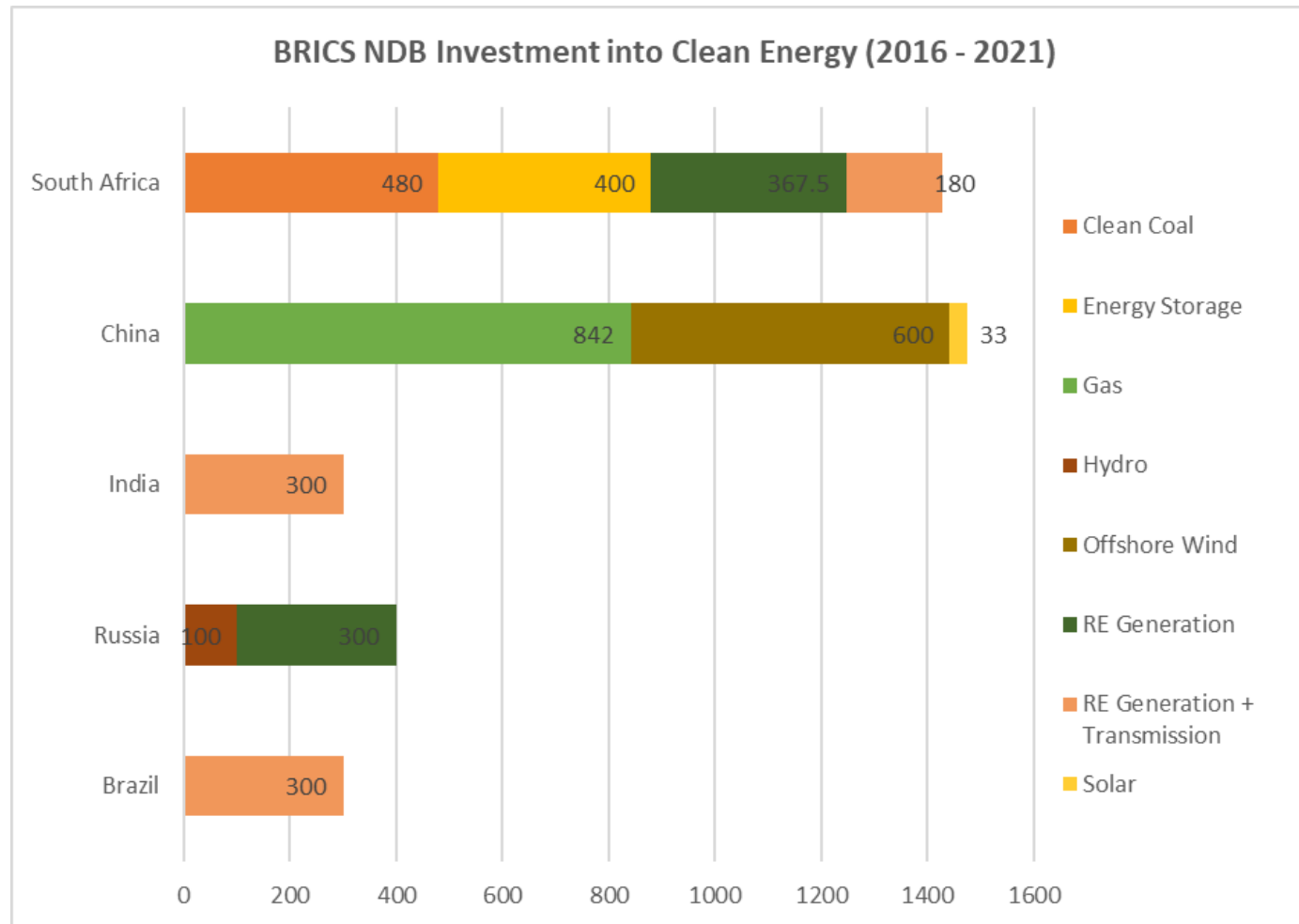


Skilled workers for Operations



Accessing Dollar denominated loans

BRICS New Development Bank Financing



Approved 14 projects in 'Clean Energy' valued at US\$4 billion

China – US\$ 1.47 billion

South Africa – US\$ 1.43 billion

The South African Experience

- Renewable Energy Rollout in SA has been slow
- Considerable Market Uncertainty
- Difficulties securing an Independent Power Producer License
- Need for a broad Climate Change Policy
- Must produce 2.8 GW of new power costing US\$ 2.4 billion annually to reach goal of 60.7GW by 2040
- However, IDC calculated US\$ 484 billion to meet its NDC, annual investment of US\$ 32 billion from 2015 to 2030

REIPPPP BIDDING WINDOW	YEAR ANNOUNCED	POWER PROCURED
1	2011	1425MW
2	2012	1040MW
3	2013	1657MW
4	2015	2205MW
5	2021	2583MW
6	2022*	5200MW



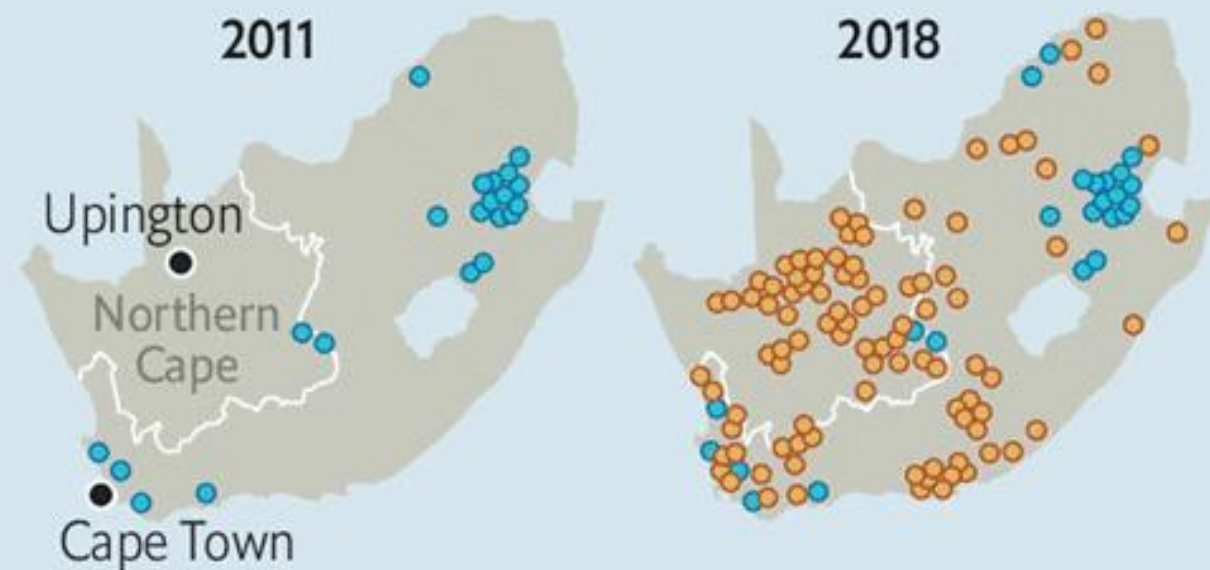
The South African Experience

- Policy Uncertainty amplifies investor risk perceptions
- Access to market depends on Transmission Infrastructure – need a Smart Grid with distribution of Substations in areas
- Need greater coordination between MDBs, DFIs and Commercial Banks
- Low skills base

Power to the people

South Africa, energy suppliers' power plants

● Eskom ● Independent power producer



Source: Power Futures Lab, UCT



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Masala Bonds

Rupee Denominated Debt Instrument
Issue In Offshore Market To Investors
By Indian Companies

Settlement Happens In Dollars



The Indian Experience

Challenges

- Size contributes to coordination challenges
- Attempted to promote local solar manufacturing by imposing tariffs on Chinese imports – costs transferred to Power Producers and Consumers – slowed growth
- Debt financing is more expensive – repayments are locked in with USD exchange rate volatility

Successes

- Green Masala Bonds
- Access more international climate finance than other developing countries.

The Chinese Experience

Challenges

- Struggles to secure International Climate Finance
- Smaller companies struggled to access Green Bonds

Successes

- Policy environment is stable and well coordinated
- Feed-in Tariff Guarantee / Subsidies promotes growth in young market
- Green Bond Market has boomed
- Green Panda Bonds
- Including incubators in Economic Development Zones built skills and expertise



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Creating the 14th Five Year Plan

2019

Research into the plan got underway

29 October

The proposals were approved at the Fifth Plenum

March 2021

The plan will be launched at the Two Sessions

March - October 2020

The Party drafted proposals for the plan

Nov 2020 - March 2021

The State Council is now drafting the plan

Post March 2021

Special sectoral and regional plans will follow

 中外对话
China Dialogue



Longyuan Mulilo De Aar Wind Farms Case Study

Partnership with China

Background

- 2 Wind Farms established in De Aar after 2 successful bids to the REIPPP
 - De Aar 1 – Produces 96.4MW – Runs 67 Turbines – REIPPP Bidding Window 1
 - De Aar 2 – Produces 140 MW– Runs 96 Turbines – REIPPP Bidding Window 3
- Opportunity arose from local electricity substation in De Aar
- First Chinese supported Wind Farm in Africa
- Acts as a model of China-Africa Energy cooperation





International Partnership with Longyuan Power China

- Guodian Group in China – 1 of 5 largest power producers in China – interested in African Market in 2009
- Guodian approached its subsidiary Longyuan China to investigate opportunities for Wind Energy
- Partnership Structure – 60% Longyuan, 20% Mulilo + 20% Consortium of Black Businesses
- Challenges
 - Configuring the Capital Contribution Shares
 - Understanding REIPPP BBBEE requirements
 - Language – De Aar Community didn't speak English
- Took 8 years from 2009 visit to get plant to operations state
- Longyuan praised in China for 1st successful development in Africa

Gaining Financial Support

- Initially planned to source a USD loan from China Development via China-Africa Fund
 - However, the 40% South African ownership clause made it difficult to source an international loan
 - USD to ZAR Volatility –loan repayments fluctuating was a major risk
- Opted to source a local ZAR-based loan from Nedbank and the Industrial Development Corporation
- Essential to install equipment on designated sites to measure wind strength to model Wind Farm profitability
- With withdrawal of China Africa Fund, Longyuan needed to build a consortium of local partners to co-invest in the project



Contribution to Socio-Economic Development

- Job Creation
 - 700 Construction Jobs
 - 100 Long term Operations and Maintenance Jobs
 - Provides internships to top-performing students from De Aar
- Longyuan provides training to local recruits
 - Subsidise studies of 40 university students
- Fund and Operate 4 ECD Centres
 - Support > 320 children
- Donates R1million to nursing homes annually
- Invested R28 million in social welfare
- Established the “Red line of Defence” Project providing R4 million in COVID protection equipment
- Operate a Medical Bus in the community providing COVID testing and other medical support

Longyuan funded students



Longyuan ECD Centre





Key Findings

- Promote policy certainty – like China
- Must expand grid infrastructure
- Improve data collection methods – invest in measurement infrastructure
- Subsidies for local manufacturers incentivises growth in a young market
- SA BBBEE policy is unique
- Own-currency Green Bonds promote international investment
- Non-Bank Financial Institutions specialise in 'Green' Finance with accurate financing models

Thank you

Krish Chetty – Research Manager

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kchetty@hsrc.ac.za