



South African  
BRICS Think Tank

# Renewable Energy Promotion In BRICS Cities

## Lessons from South Africa

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26 January 2022

NELSON MANDELA  
UNIVERSITY



# Programme

11h00 – 11h10	Welcome	Prof Barwa Kanyane, University of Venda
11h10 – 11h20	Introductions	Facilitated by Mr Krish Chetty
11h20 – 11h25	Message from the South African BRICS Think Tank	Ms Auriel Niemack, South African BRICS Think Tank / National Institute for Humanities and Social Sciences
11h25 – 11h30	Research Objectives	Prof Barwa Kanyane
11h30 – 11h55	Policy Impact + Procurement	Mr Krish Chetty + Group Discussion
11h55 – 12h10	Municipal Capacity	Mr Krish Chetty + Group Discussion
12h10 – 12h40	Economic Growth / Infrastructure	Mr Krish Chetty + Group Discussion
12h40 – 13h05	Financing / International Partnership Development	Mr Krish Chetty + Group Discussion
13h05 – 13h25	Proposed Policy Recommendations	Group Discussion
13h25 – 13h30	Closing	Prof Barwa Kanyane

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# Policy Impact

- Decreasing costs in RE electricity generation have made RE energy more attractive, requiring municipalities to accelerate RE policy implementation.
- Municipalities need to develop a framework to purchase electricity from alternate renewable energy providers, satisfying the regulatory requirements from the current mix of applicable IPP procurement legislation.
  - The Legislative complexity is a barrier to municipalities interested in preparing a municipal RE procurement policy.
- Green Cape and SALGA have developed guidelines to assist municipalities in developing their procurement frameworks.
- Despite progress in developing policy frameworks, municipal councils have not prioritised approving RE procurement policies as they do not align with their political positions.
- Delays in policy adoption promote unregulated RE electricity generation. (and industry decline)

# Procurement

- Long term RE projects require support from NERSA, the city council and the relevant energy body. Multiple points of sign-off create further bottle-necks impeding RE adoption.
- Large scale projects take several years before they show a return on investment.
- Long term projects need to be included in the city's plan a year in advance. Technology could change within a year making such plans outdated.
- Municipalities tend to prefer small-scale projects due to the complex approval process and competing political ambitions.
  - Long term Wind Farm projects in Nelson Mandela Bay were handed over to the National Government's Central Energy Fund to manage.
- New vendors with innovative products and no track record do not qualify for the REIPP bidding process.
- There is also a need to develop a standardised tariff structure to update IPPs and provide the municipal council with a proposal proving how such purchases could be lucrative for the municipality.

# Policy Impact - Questions

- What other support do municipalities need to develop a local policy framework for RE procurement?
- Are the SALGA / Green Cape guidelines sufficient to develop a procurement framework?
  - Are there any gaps?
- How do we convince councillors to support an RE agenda?
- Through the Risk Mitigation Independent Producer Procurement Programme (RMIPPPP), Eskom procured 1845 MW of RE power to quickly supplement the electricity.
  - Could municipalities replicate this programme?

# Procurement Questions

- Must the municipality enter into a series of rolling 3-year agreements with an IPP if the project requires long term support?
- How do we make it easier for the municipality to embark on long term/large-scale RE projects?
- What can be done to allow vendors with innovative products an opportunity to be included in the REIPP bidding process?
- Green Cape argues for Annual Build Limits on Solar and Wind Energy, thereby setting a maximum limit for a year. The limit could create a consistent annual demand for new generation.
  - Is this recommendation viable?
  - What are the consequences for such a limit?
- The City of Cape Town described their tariffs as conservative.
  - What is the value of being conservative?
  - How does this protect the City?
  - What is the trade-off?

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# Municipal Capacity

- Smaller municipalities lack capacity and need technical experts within engineering, financial and legal backgrounds to implement a renewable energy programme.
- National Treasury had launched a Public-Private Partnership (PPP) unit tasked to provide technical advisory support to under-capacitated staff. They have acted too slowly, requiring municipalities to source external support.
- Renewable Energy studies are often technical, requiring municipal administrative staff to have some technical knowledge to interpret the results of these studies. Without such knowledge, municipalities risk getting manipulated by consultants.
- Some municipalities do not fill RE related positions, believing that Climate Mitigation/Adaptation is an unfunded mandate.
- SALGA's partnership with GIZ helped introduce specialised knowledge to municipalities related to Small Scale Embedded-Generation.

# Municipal Capacity Questions

- How do we support municipalities to source skilled resources?
  - Could additional international partnerships like the SALGA/GIZ be helpful?
  - Are there any revisions you would make to the structure/focus of the partnership?
- How might a Public-Private Partnership be used to supplement the skills gaps in the municipality?
- Has National Treasury's Public-Private Partnership (PPP) unit's support been adequate in the manner it offers technical advisory support and in developing a policy/regulatory framework for PPPs?
  - How can it be improved?

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# General Economic Growth Opportunities

- Investors need market certainty
- South Africa also has large stores of high-grade vanadium, platinum, palladium, nickel, manganese, rare earth, copper and cobalt needed by the global energy storage sector. In addition, the country possesses the metallurgical infrastructure needed to maximise local battery manufacturing.
  - Should prioritise manufacturing of lithium-ion batteries
- The Atlantis SEZ is ideal to support freight routes to the Western Cape and Northern Cape. These routes are ideal for transporting abnormally sized wind towers and turbines.
- Incentives to promote local manufacturing include tax subsidies, favourable custom duties, export credit assistance and quality certification
- IPP's have been contributing to socio-economic development in rural communities, dedicating a portion of their revenue to social development programmes

# Job Creation

- Job creation is more common in the construction and manufacturing spaces than the operations of renewable energy plants.
- Local RE manufacturing can be the predominant creator of sustainable jobs
  - The 2021 REIPPPP Bid Window 5 makes a special provision for new producers to indicate how they will procure a minimum of 40% of their components from local manufacturers, thus promoting local RE manufacturing.
- SEZs (like Atlantis) employ workers from marginalised communities
  - Created between 150 to 180 low skill factory-type jobs in metal fabrication
  - Employment accelerators like Harambee contribute to skills development in the community
  - However, a developed SEZ will create a range of indirect jobs such as accountants, sales reps.
  - SEZ also needs design, engineering, and construction skills
  - Green Cape estimates that manufacturing of Wind Turbines could create 5387 new jobs in the Western Cape
- Waste management together with Biomass energy generation could be a source of low-skill job creation
  - Workers need to be better organised
- A range of jobs could be created within the energy efficiency space through the TVET colleges.
  - Need to train students to conduct energy-efficient assessments.
  - For example, skilled workers are needed for *Cost of Supply* studies
  - Municipalities need these workers as they transition toward more energy-efficient devices.

# Infrastructure and Smart Grids

- Successful SSEG is dependent on an upgraded Grid that can efficiently wheel electricity
  - Energy loss due to outdated infrastructure could make SSEG infeasible
- It is expected that there will be an expansion of Small Scale Energy Generation through greater adoption of solar PV. However, only wealthier homeowners will be able to contribute to such projects.
- Smart Grids allow the municipality to use electricity more efficiently and wheel excess generation to areas of greater demand.
- By linking small scale solar and wind projects, municipalities are in a position to supplement Eskom's supply and guard against penalty charges if their demand exceeds their estimated requirement.
- Sustainable products such as LED light bulbs are usually more expensive and therefore not openly supported by many city councillors or procurement administrators.

# General Economic Growth Opportunities - Questions

- Can the City offer incentives to SEZ investors, or must this be done through the national government?
- Incentives to promote local manufacturing include tax subsidies, favourable custom duties, export credit assistance and quality certification
  - Which is best?
- Do we have any information about the success of Renewable Energy Development Zones (REDZ), Industrial Development Zones (IDZs) and Renewable Energy Corridors?
- How do we accelerate local manufacturing to take advantage of our natural resources and decrease our dependence on product/component imports?
  - Is this a knowledge, funding or policy problem?

# Job Creation - Questions

- Does the demand for skilled jobs currently outweigh the supply of jobs?
- Do you have any other ideas that could accelerate job creation?
- Do you expect the 40% requirement for local manufacturing to be a success?

# Infrastructure and Smart Grids - Questions

- Nelson Mandela Bay implemented a series of Small Scale Solar and Wind Projects to supplement Eskom's power supply.
  - The metro repeatedly incurred costs as their power requirement exceeded their estimated demand, thus leading to increased penalties from Eskom.
  - What was the outcome of this process? Is it still a work in progress?
- What are the barriers impeding a large scale upgrade of your municipality's grid?
- Green Cape argues that utility-scale battery storage could supplement/replace gas in the IRP 2019
  - Is this feasible at the municipal level?
  - How often is excess electricity supply lost due to a lack of storage?

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# Financing

- Municipalities raise external funding from Donor Funding or Development Finance Institutions (DFIs)
- Nelson Mandela Bay is largely dependent on donor funding or DFIs to promote energy efficiency initiatives.
- DMRE set up the Energy Efficiency Demand Side Management (EEDSM) programme to supplement municipalities funding of energy instruments
- City of Cape Town launched an oversubscribed Green Bond
  - Was a success but not repeated
  - Green Bonds are complex instruments, requiring advanced skills to ensure that projects meet the green requirements.
- Commercial lenders tend to offer more expensive loans to municipalities with a weaker financial track record

# International Partnership Development

- China has followed a similar developmental path experienced by South Africa – countries share common values
- International Partnerships have tended to be more successful where partnership agreements are supplemented with funding – leads to concrete deliverables
- SALGA's GIZ partnership has contributed to building expertise in municipalities by seconding resources to the municipalities to help implement the municipality's RE agenda.
- City of Cape Town has partnership agreements in place with Brazilian, Russian, Indian and Chinese cities, but are dormant
- Embassies and consulate offices are ideal diplomat partners to strengthen partnership negotiations between cities. They have resources and can support language and cultural translations.

# Financing - Questions

- Why have we not launched a new Green Bond?
  - Is the Green Bond actually worth the trouble?
  - Can the process be improved?
- How else could we raise alternate financing?
- Has the Energy Efficiency Demand Side Management programme been successful?

# International Partnership Development - Questions

- Do we agree that the GIZ partnership model was a success?
  - There were concerns that the secondment of resources allowed Germany to drive policy. – is this a fair position?
- How do reignite past agreements with BRICS cities?

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# Recommendations

- <Investor Confidence>
  - IPP Bidding Windows need to be planned well in advance, ensuring the timetable is adhered to, thereby building confidence among investors.
- <Recommendation to unleash long term municipal RE implementation>
- <Unleash local manufacturing to promote job creation>
- <Create financing opportunities>
  - BRICS NDB to prioritise municipal renewable energy generation projects

# Thank you

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