SUSTAINABLE MUNICIPAL ENERGY BUSINESSES

Presentation to the Urban Energy Network

14 October 2020
Purpose of meeting

1. To engage the UEN on the challenges that metros face on Muni Procurement of Energy
   - Do we have correct understanding of problem statement?

2. To engage the UEN on NT CSP’s programme of work in response to the challenges
   - Engagement with primary stakeholders
   - Garner practical, on the ground input to influence the applicability of the work to ensure ‘fit for purpose’
   - For alignment, strategic direction and buy-in
Overview

• Context

• Problem statement
  • Discussion and input

• NT CSP’s Programme of work in response
  • Discussion and input

• Summary and next steps
  • Is the problem statement correct?
  • Are the proposed barriers / challenges correctly identified?
  • Is there alignment with the proposed response?
CONTEXT AND PROBLEM STATEMENT
Context

- South Africa is entering a new era with respect to electricity demand and supply
- Decentralised supply options much more competitive than the traditional monopoly electricity generation
- Changing landscape has huge implications for municipalities and should be capitalised on to cater for the current unsustainability of municipalities
- The National Development Plan states that ‘A reliable electricity supply depends on sufficient generating capacity coupled with a dependable transmission and distribution grid.’
Problem Statement and Focus

How to identify and address the barriers and challenges for reform to enable resilient, sustainable municipal energy businesses through a reform of the electricity distribution industry and a reform to enable procurement of energy by municipalities.

A reliable electricity supply depends on sufficient generating capacity coupled with a dependable transmission and distribution grid.

**Improving Electricity Distribution:**
NDP Proposal to address problem
Invest in **human and physical capital** in the 12 largest municipal distributors, which account for 80 percent of the electricity distributed by local government. This is a **high-priority programme** that needs to be driven at national level in collaboration with these municipalities.

Balance state ownership of energy enterprises with **effective regulation and market reforms needed to stimulate competition** and achieve greater private-sector involvement.

**New business models for sustainability of municipalities**
Cities Support Programme’s
Climate & Sustainability Component
&
Sustainable Muni Energy Workstreams
CSP Climate & Sustainability Projects

- Systems for Climate Response
  - Improved Disaster Management
  - CR Planning
  - CR Capital Investments
  - CR Asset Management

- Climate Responsive Service Delivery
  - Water resilience
  - Solid waste transitions
  - Sustainable energy

- Fiscal & Financial
  - Financing climate resilience
  - Fiscal reforms

- Sector Coordination
  - Policy & system reforms
  - Sector coordination and capacity
Objective of project

- The Sustainable Municipal Energy Businesses (SMEB) programme is implementing the Cabinet approved NDP proposal to address the problem statement.

- To support the transition to sustainability within the metro energy sector.

Focus of this discussion

Three workstreams:

<table>
<thead>
<tr>
<th>New business models</th>
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<tbody>
<tr>
<td>Readiness for municipal IPP procurement (status quo, framework, toolkit)</td>
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<td>Advisory support to metros on business model innovations</td>
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<td>Scenarios for sustainable service delivery</td>
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<tr>
<th>Revenue management &amp; resilient metros</th>
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<tr>
<td>Cost of supply studies</td>
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<td>Municipal revenue impact studies</td>
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<th>Intergovernmental coordination</th>
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<td>Input to policy processes</td>
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<td>IG support to existing platforms and initiatives</td>
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<td>Coordination within NT</td>
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<td>Coordination with external stakeholders</td>
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OBJECTIVES AND PROPOSED OUTCOMES
New Business Models workstream
outcomes & objectives

• Identify the appropriate procurement processes through which metros can effectively, transparently, sustainably and efficiently procure energy

• Expeditiously alleviate constraints to municipal electricity procurement and creation

• Create an enabling policy and regulatory environment for municipal procurement of energy

• Facilitate private sector participation and unlock investment

• Institutionalisation and capacity building

Stable and sustainable municipal energy businesses
Muni Procurement of Energy

Benefits of muni procurement

- Deferred capital expenditure
- Cohesive localised economic development, socio-economic development, enterprise development and development of women and youth
- Procure at a cost equal to or lower than Eskom/value for money
- Retention of grid connected customers
- Capacity building and a rolling programme
- Depending on site, productive use of land

CO-BENEFITS:
reduction in carbon emissions, pollution and intensity of natural resource use
POLICY AND REGULATORY FRAMEWORK
### Policy and Regulatory Framework

#### POLICY FRAMEWORK
- **National Development Plan (NDP)**
  Identifies long-term plans to meet SA’s economic, social and environmental needs. Energy infrastructure is a critical component for economic growth. The NDP proposes diversity and alternative energy resources and energy supply options, both in terms of power generation and the supply of liquid fuels.

- **1998 White Paper**
  Long-term (2050) Integrated Energy Plan being developed - informed by key sectoral Masterplans and Road Maps (Gas, Liquid Fuels, Electricity).

- **Integrated Resource Plan (IRP) for electricity**
  The IRP requires a specific generation mix to meet the electricity needs and informs Ministerial Determinations on energy capacity.

#### REGULATORY FRAMEWORK
- Constitution of the Republic of South Africa, 1996;
- The Preferential Procurement Policy Framework Act, 2000 (“PPPFA”) and the regulations promulgated in terms thereof (“PPPFA Regulations”);
- The Broad-Based Black Economic Empowerment Act, 2003, as amended (“BBBEE Act”) and the codes of good practice issued in terms of the BBBEE Act (“DTI Codes”);
- Electricity Regulation Act, 2006 (Act No. 4 of 2006), as amended (“ERA”)
- Electricity Regulations on New Generation Capacity (“NewGen Regs”)
- National Energy Act, 2008 (“NEA”) (Act No. 34 of 2008) - requires development of IEP
- Certain guidelines, rules and decisions made by the National Energy Regulator (“NERA”) (found at www.nersa.org.za)
- Licences – issued through the National Energy Regulator of South Africa
- New Determinations on the IPP Procurement Programmes
Policy and Regulatory Framework - Munis

In line with National Treasury’s Municipal PPP Manual, Module 4: PPP Feasibility Study, the feasibility study must include the following:

**COMPONENTS OF THE FEASIBILITY EVALUATION AND PRELIMINARY DESIGN STUDY**

**Introduction**
- Submission requirements
  - Covering letter from the accounting officer requesting TPA where applicable
  - Brief introduction
  - Project background
  - Approach and methodology to the feasibility study and the MIPvA requirements, and the obtaining of Treasury Views and Recommendations.

**Section 4: Submission requirements - Project due diligence**
- Legal aspects
  - Regulatory matters
  - Site evaluation
  - Social-economic and BEE
  - Accuracy of measurements and recordings infeasible to study
- Items such as:
  - Identify any ongoing financial or other contractual commitments which are binding on the Client and advise on options for dealing with them within the framework of the proposed transaction structure.
  - Assess any contingent liabilities, including tax and environmental as well as needed to be addressed in formulating a structure for private sector participation in coordination with the Client and other counterparts.
  - Review legal aspects of existing loan arrangements in the context of the proposed structure.
  - Review existing Client contractual arrangements to ensure compatibility with proposed arrangement.
  - Assist the Client in the development and presentation of recommendations for private sector participation in Project.
- MIPvA requirements relating to the Project:
  - Analyse and make recommendations on the initial concept for the Project and the risk allocation in draft Project Agreement based on relevant precedents, and suggest and assist in making modifications as necessary following discussions with other members of the transaction team, must also be catered for in the legal due diligence.

**Section 5: Submission requirements - Value assessment**
- Detailed financial model based on technical options and risk assessment per option inclusive of contributions and financing
- Discussion on project assumptions and implications made in respect of financial statements (asset related
- Technical definition of project:
  - Discussion on model assumptions made in the construction of the model, including inflation rates, discount rates, depreciation, taxes and VAT.
  - Discussion on all model assumptions made in the construction of the model, including inflation rates, discount rates, depreciation, taxes and VAT.
  - A comprehensive risk matrix for all project risks
  - Summary of all necessary transferable risks
  - Summary of results
  - Summary of relevant key indicators
  - Sensitivity analyses
  - Risk studies
  - Risk transferability
  - Statement of value for money if appropriate
  - Risk management procedures
  - Summary of assumptions (attached in Annexure 1 to verify information found in the feasibility study report).

Requirements for Munis in terms of the New Gen Regs (including proposed amendments):

- Municipality may apply to the Minister to establish new generation capacity in accordance with the integrated resource plan, and such application must:
  - Be accompanied by a detailed feasibility study as specified in sub-regulation (2).
  - Demonstrate sound financial standing of the Municipality and be signed by the Mayor of the Municipality.
  - Be signed, or the integrated generation plan of the Municipality.

5. Feasibility studies

(a) the anticipated cost of the proposed new generation capacity.

(b) the proposed allocation of financial, technical, and operational risks between the prospective buyer and the seller, and the use of such risks.

(c) whether the appropriate seller should be named as part of its services as the national electricity producer, another organ of state or an IPP.

"Secure financial standing" means that the prospective buyer of the service is an organ of state acquiring new generation capacity that can be paid by the following:

(a) destined within the organ of state a maximum Buyout / Buy Back amount and

(b) destined for the organ of state to be in accordance with the future budget forecasts for the period of the agreement.

The integrated report must be determined.

Munis
## Table 5: IRP 2019

<table>
<thead>
<tr>
<th></th>
<th>Current Base</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
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<th>2060</th>
<th>2070</th>
<th>2080</th>
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<tr>
<td>Installed Capacity</td>
<td>37 149</td>
<td>1 860</td>
<td>2 100</td>
<td>2 912</td>
<td>1 474</td>
<td>1 980</td>
<td>300</td>
<td>3 830</td>
<td>499</td>
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<tr>
<td>Committed / Already Contracted Capacity</td>
<td>-2 373</td>
<td>-557</td>
<td>-1403</td>
<td>-844</td>
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<td>-847</td>
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<td>Capacity Decommissioned</td>
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<td>1 600</td>
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<td>New Additional Capacity</td>
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<td>1 000</td>
<td>1 600</td>
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<td>1 600</td>
<td>1 600</td>
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<tr>
<td>Extension of Koeberg Plant Design Life</td>
<td>1 474</td>
<td>1 000</td>
<td>1 000</td>
<td>1 600</td>
<td>1 600</td>
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<tr>
<td>Includes Distributed Generation Capacity for own use</td>
<td>1 980</td>
<td>1 000</td>
<td>1 000</td>
<td>1 600</td>
<td>1 600</td>
<td>1 600</td>
<td>1 600</td>
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</table>

**TOTAL INSTALLED CAPACITY by 2030 (MW)**

- **33 364**
- **18 600**
- **4 600**
- **5 000**
- **8 288**
- **17 742**
- **6 00**
- **6 380**

**% Total Installed Capacity (% of MW)**

- **43**
- **2.36**
- **5.84**
- **6.35**
- **10.52**
- **22.53**
- **0.76**
- **8.1**

**% Annual Energy Contribution (% of MWh)**

- **58.8**
- **4.5**
- **8.4**
- **1.2**
- **6.3**
- **17.8**
- **0.6**
- **1.3**

* Allocation to the extent of the short term capacity and energy gap.
STAKEHOLDERS
Stakeholders

- **Metros and other muni’s**

- **DMRE**: Policy owner and designator of procurement of new generation capacity.

- **National Treasury**: Custodian of the fiscus and government procurement policy owner. NT facilitates required exemptions where necessary.

- **NERSA**: National Regulator and provider of licences

- **DEFF**: provider of environmental licences

- **DTIC**: local content requirements

- **IPP Office**: central procurement undertaken on behalf of the DMRE

- **Banking and Financial institutions**

- **DBSA**: State-owned infrastructure development and finance institution.

- Developers and investors
Workstream 3: New Business Models
PIPELINE OF PROJECTS AND READINESS

• Assimilated information provided by participating metros through questionnaire
• Questionnaire sent to the participating munis for completion

• In assessing the responses, it became apparent that procurement by municipalities could be compartmentalised into ‘within the municipality’ and ‘outside of the municipality’, the latter being a national programme.

1. Outside of the municipality

2. Within the municipality
1. National Muni IPP Procurement

**READINESS**
- Regarding readiness all 4 metros were not fully confident that they were ready to participate in large scale IPP procurement.

**IDENTIFIED SITES**
- Buffalo City Municipality was the only metro to have identified sites,
- However for a large scale programme, IPPs could be responsible for identifying sites, conducting the necessary studies and obtaining the required licences.

**CHALLENGES**
- The challenges experienced by the participating metros were similar.
- These related mainly to the legislative process, NERSA's role in issuing licences, the MFMA and PPP processes.

2. Procurement of new generation capacity from IPPs in the Municipality

**Readiness of Metros for Procurement in own Municipality**

- **CITY OF JOHANNESBURG**: Readiness 4
- **BUFFALO CITY MUNICIPALITY**: Readiness 8
- **ETHEKWINI METRO**: Readiness 5
- **CITY OF CAPE TOWN**: Readiness 5

Readiness on a scale of 1 - 10
Workstream 3: New Business Models
PIPELINE OF PROJECTS AND READINESS

3. Metro Own Generation

<table>
<thead>
<tr>
<th></th>
<th>City of Cape Town</th>
<th>eThekweni Metro</th>
<th>Buffalo City Municipality</th>
<th>City of Johannesburg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Supply Study</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Grid Impact Study</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>In progress</td>
</tr>
<tr>
<td>Energy Strategy / Master Plan</td>
<td>Partial</td>
<td>Yes</td>
<td>In the process</td>
<td>Yes</td>
</tr>
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</table>
NT: CSP NEXT STEPS
OUTCOMES OF HIGH-LEVEL NOTE

1. Metro level: Readiness of metros for IPP Procurement
   - Significant on the ground work to be undertaken such as grid impact studies, CoS studies
   - Capacity building
   - Sound financial standing requirements

2. National level: Framework and design of national and municipal IPP Procurement Programmes
   - Clarify the challenges experienced by munis in the legislative process for IPP Procurement
   - Understand the New Gen Regs and its implications for muni IPP Procurement
   - Support to proposed intergovt Sustainable Muni Energy Working Group for strategic input, collaboration and alignment
## Barriers and challenges to reform: discussion and input

<table>
<thead>
<tr>
<th>Policy, Legal &amp; Regulatory</th>
<th>Financial</th>
<th>Technical</th>
<th>Economic Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Policy &amp; regulatory barriers</td>
<td>• Municipal balance sheet</td>
<td>• Which technologies?</td>
<td>• Job creation and capacity building</td>
</tr>
<tr>
<td>• Legal agreements</td>
<td>• Economies of scale</td>
<td>• Grid impact studies</td>
<td>• SED and ED</td>
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<tr>
<td>• Monitoring, evaluation and contract management</td>
<td>• Value for money</td>
<td>• Other?</td>
<td>• Preferential procurement</td>
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<tr>
<td></td>
<td>• Tariff calculation</td>
<td></td>
<td>• SA ownership (black, women)</td>
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<td></td>
<td>• Alternative mechanisms instead of government guarantees</td>
<td></td>
<td>• Local content requirements</td>
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<tr>
<td></td>
<td>• Other?</td>
<td></td>
<td>• Price (70%) / Economic Development (30%)</td>
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<td></td>
<td></td>
<td></td>
<td>• Other?</td>
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Clarifying legal and regulatory framework: proposed work

Legislative roadmap for different scenarios:

A. National Municipal IPP Procurement Programme (assumed as being similar to the Renewable Energy Independent Power Producers Procurement Programme (“REIPPPP”) with necessary differences which would be applicable to municipalities);

B. Municipal IPP Procurement Programme (IPP is located within the municipality) where the municipality would be the procurer and the buyer with potential IPPs located within the municipality;

C. Municipal IPP Procurement Programme (IPP is located within the municipality on a municipal owned site) where the municipality would be the procurer and the buyer with potential IPPs bidding for a project to be located on municipal land;

D. Municipality own generation whether in the municipal jurisdiction or outside the municipal jurisdiction;

E. Municipality owned generation that is able to supply surrounding municipalities

F. Multi-buyer where municipality is one of more than one buyer; and

G. A pool of municipalities purchasing from one IPP or a pool of IPPs

H. Other
Legal and Regulatory Framework: **Steps**

- Reference Group set up to oversee project
- Analysis of existing legal and regulatory framework
- Gap analysis
- Proposed recommendations for short, medium and long term to improve legal and regulatory framework for each scenario
- **Issued as MFMA circular**

Other work undertaken outside of NT CSP:

- Bigger market structure reform
- Wheeling framework
Contractual Arrangements – REIPPPP

Between the Buyer, the DoE, the Seller and the Lender. Facilitates the payment conditions to be adhered to. Gives lender step-in rights.

Direct Agreement also signed by the Lenders.

Power Purchase Agreement

Between the Seller and the DoE. Facilitates monitoring of performance of parties for the Term. Also sets out the extent of the government support.

Implementation Agreement

The government support regulated by the GSFA – where Eskom fails to fulfil its payment obligations under the PPA and in respect of any payment obligations which arise as a result of any expropriation or nationalization by Government.

Guidelines, tools and templates and standardised project documents.

ToR - alternative models for clean energy investment not reliant upon fiscal support through the use of government guarantees.

Munis
Other key issues to be addressed: discussion and input

- Engagement with stakeholders
- Strong champions
- Institutional capacity
- On the ground work – grid impact studies etc.
- Larger market structural reform
  - Unbundling of Eskom and the roadmap
  - Independent market operator
  - Legacy charges for 20 year PPAs
- Sufficient competition
  - Drive down pricing
  - Impact of national IPP programme on interest in muni procurement and creation of new generation capacity
- Robustness of the procurement – transparent, efficient, no unsolicited bids, proper risk allocation

Proposed intergovt Sustainable Muni Energy Working Group for strategic input, collaboration and alignment on muni energy issues including muni IPP Procurement process

Facilitating technical support - CoS studies, grid impact studies, energy strategies and master plans etc.

• Exploring incorporating a different regime e.g. CfD

Lessons learnt from REIPPP
Summary

• Context
• Problem statement...
  • Discussion
• CSP’s Programme of work in response
  • Discussion

• Way forward
  • Is the problem statement correct?
  • Are the proposed barriers / challenges correctly identified?
  • Is there alignment with the proposed response?
Next Steps

• Presenting the project and the input at the City Budget Forum – proposed for the 16\textsuperscript{th} of October 2020

• Presenting the project and the input at the DG’s policy group – proposed for the 2\textsuperscript{nd} of November 2020

• Presenting the project to the Integrated Urban Development Framework (IUDF) technical committee

• Potential elevation of both the reforms to Operation Vulindlela
THANK YOU