

The Role of Municipalities in the Renewable Energy Sector in South Africa

Riaz Jogiat - 24 June 2013



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The South African Energy Story – The Mineral – Energy Complex

- South African electricity generation, transmission and distribution industry was established in the early 1900s to primarily supply the rapid growth in the mining sector.
- Eskom invested heavily in the coal-fired electricity generation industry. Power plants were built near the mines to provide the mines with power and the coalmines provided the power plants with fuel.
- The symbiotic relationship between mining and energy is described as the *Mineral Energy Complex*.
- Coal-fired power evolved into the biggest centralised electricity generation industry in Africa.
- Provided South Africa with the world's cheapest electricity for most of the 20th Century.
- South Africa has 5.7% of proven global coal reserves at shallow depths & the largest coal export terminal in the world at Richards Bay



Medupi Power Station



Sasol's Secunda Synthetic Fuel Facility

The Case for Renewable Energy ???



- **ESKOM and SASOL powered South Africa to become the 12th largest emitter of carbon dioxide in the world.**
- **Sasol's Secunda synthetic fuel facility is according to some sources the largest single point source of carbon dioxide emission in the world.**
- **In a world concerned about sustainability and climate change things didn't look so good anymore !**
- **By 2008 South Africa didn't have enough electricity to keep the lights on.**

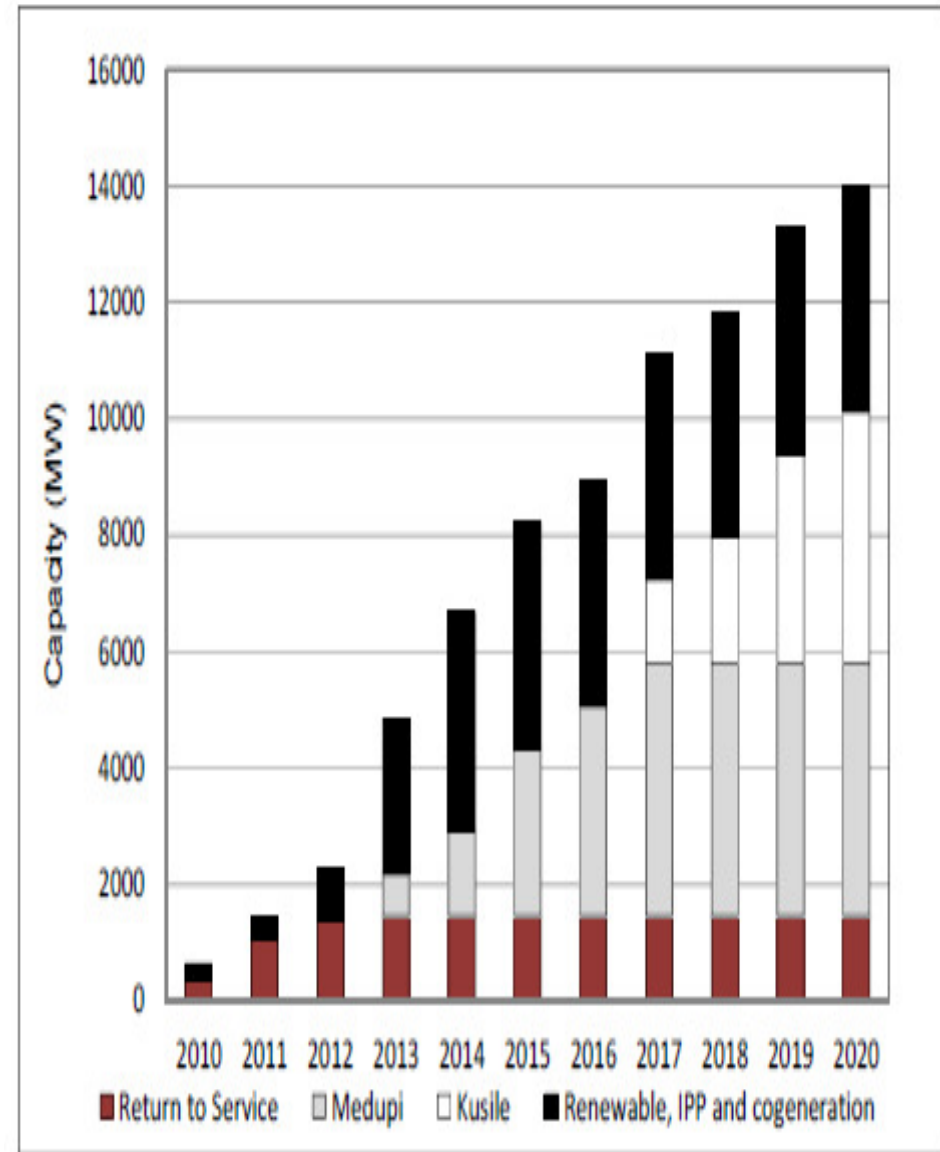


The South African Response



Top 7 utility in the world in terms of generation

Eskom - Largest infrastructure development in SA history - R 1 trillion by 2026 to double generation capacity – largely coal fired

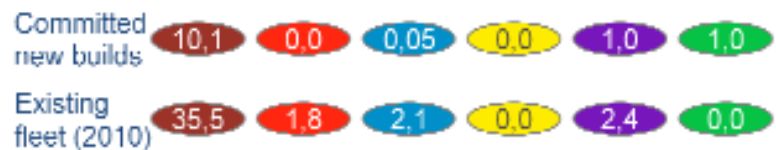
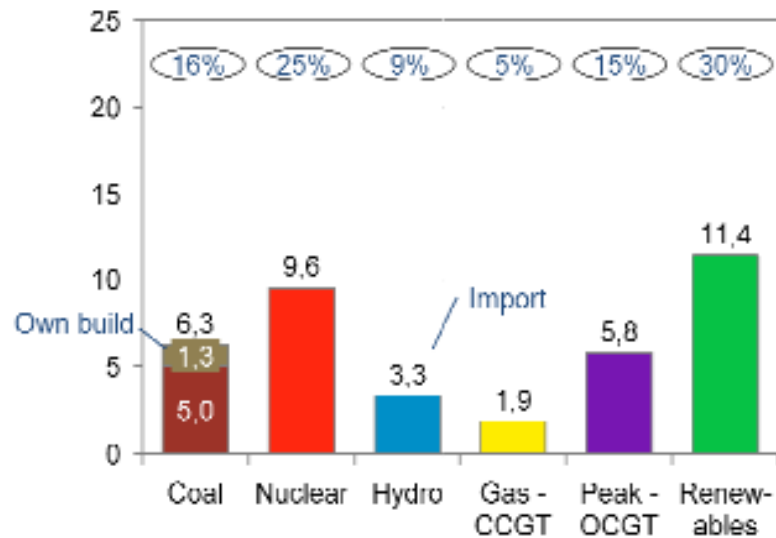


Source: Department of Energy (Integrated Resource Plan for Electricity, 2010)

Integrated Resources Plan for Electricity -2010

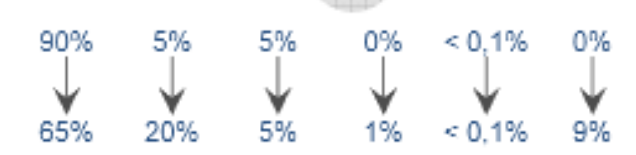
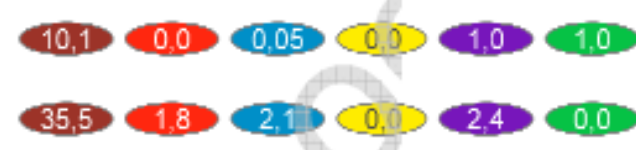
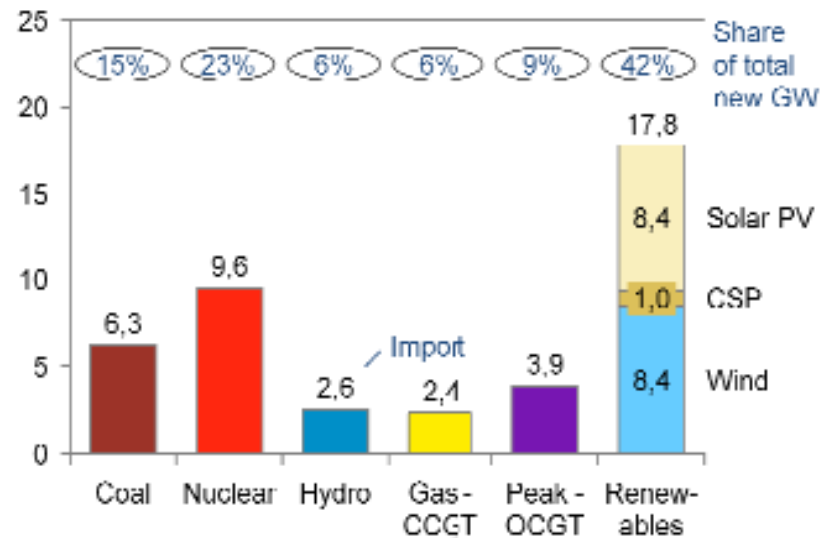
Before consultation process: Revised Balanced Scenario (RBS)

Total additional new capacity
(without committed) until 2030 in GW



After consultation process: Policy-Adjusted IRP

Total additional new capacity
(without committed) until 2030 in GW



Renewable Energy Independent Power Producer Procurement Programme (REIPPPP)

Technology	MW
Onshore wind	1 850 MW
Concentrated solar thermal	200 MW
Solar photovoltaic	1 450 MW
Biomass	12,5 MW
Biogas	12,5 MW
Landfill Gas	25 MW
Small hydro	75 MW
Small Projects	100 MW



- Electricity Regulations exempts generation systems for own use under 1MW from applying a license.
- Eskom's Small Scale Renewable Energy programme accepting applications with embedded generation capacity 10kW – 1MW
- REIPPPP small-scale *independent power producers* are defined as power plants with installed generation capacity between 1 – 5MW.

Renewable Energy Independent Power Producer Procurement Programme (REIPPPP)

- July 2012 – Dept of Energy Request for Information (RFI) on small scale REIPPPP.
- RFI - Generate information to assess the projects of potential developers & the readiness of the market to enter into intensive procurement processes.

RFI focused on:

- Land Availability
- Environmental Authorisation
- Water Services
- Zoning
- Grid Connection and Distribution Agreement
- Feasibility Study, Bankable Financial Model
- Availability of technology
- International companies must be domiciled in SA or have a formal relationship with SA company

Selection Criteria for Renewable Energy under REFIT that affect Municipalities:

Plant Location that contributes to stabilization of the grid

Preference for a plant location and technology that contributes to local economic development

Preference for projects with viable network integration requirements

Preference for projects with advanced environmental impact approvals

Preference for projects that can be commissioned in the shortest time

Energy Price Cap – RFI July 2012 for Small IPP Projects

Technology	Unit	Commercial Energy Rate
Onshore Wind	R/MWh	R1 050/MWh
Solar Photovoltaic	R/MWh	R2 000/MWh
Biomass	R/MWh	R1 070/MWh
Biogas	R/MWh	R800/MWh
Landfill gas	R/MWh	R840/MWh

Municipalities and Energy

- **National government is responsible for ensuring the generation of electricity and its transmission across the country.**
- **The state-owned electricity company, Eskom, is responsible for over 95 per cent of electricity generation and all transmission.**
- **Municipalities are responsible for the distribution of electricity to consumers.**
- **Currently 183 municipalities are electricity distributors out of 278 municipalities**
- **Not all households and businesses are supplied with electricity by municipalities as Eskom supplies a large number of customers directly.**
- **Eskom tends to supply large customers and customers in rural areas in most cases**

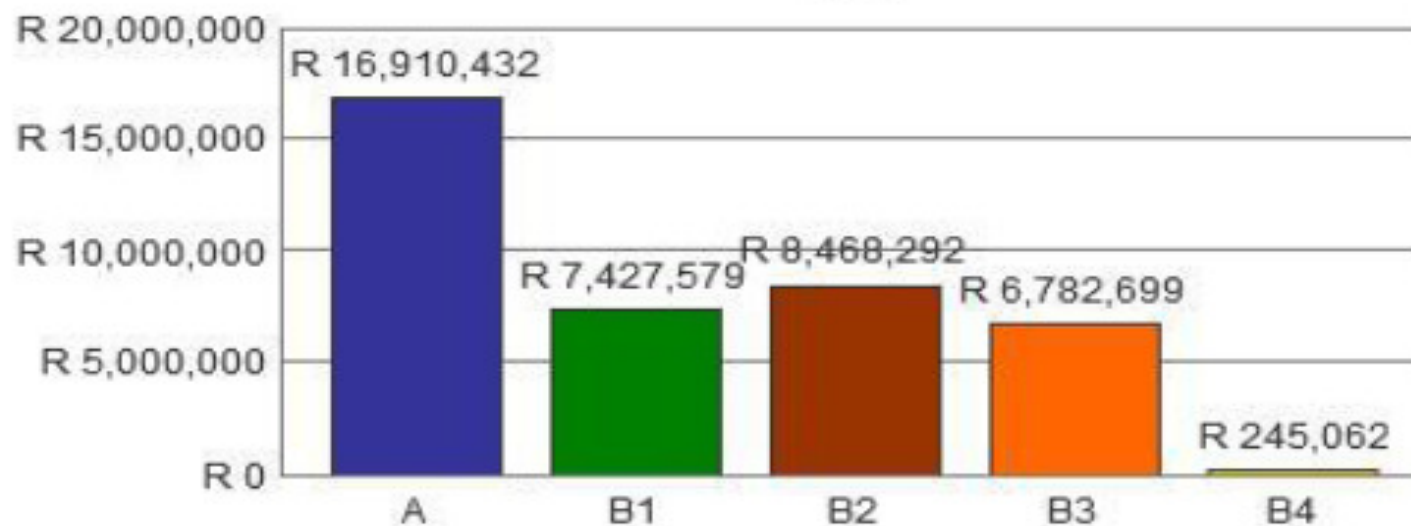
Municipalities and Energy

- **Electricity generates an average of 40% of revenue across most municipalities – largest source of revenue in most municipalities .**
- **Very few, if any, local government functions that can be described as exclusive.**
- **In nearly all instances, there is either national or provincial framework legislation.**
- **Municipalities do exercise a high degree of autonomy when making by-laws and administering these functions within the prescribed frameworks.**
- **Municipal by-laws may not conflict with either national or provincial legislation.**
- **Municipalities have different capacities to make policy, legislate, administer and comply with norms and standards**

A	Metropolitan municipalities (metros)
B1	Secondary cities, local municipalities with the largest budgets
B2	Local municipalities with a large town as core
B3	Local municipalities with small towns, with relatively small population and significant proportion of urban population but with no large town as core
B4	Local municipalities which are mainly rural with communal tenure and with, at most, one or two small towns in their area
C1	District municipalities which are not water services authorities
C2	District municipalities which are water services authorities

**Electricity and Gas Reticulation: Operating
expenditure per 10,000 population**

2011



Challenges at Municipal Level Run Deep

- **Serious leadership and governance challenges including weak responsiveness and accountability to communities;**
- **Financial management of many municipalities is very poor;**
- **Many municipalities are unable to deliver basic services or grow their economies;**
- **The legacy of apartheid spatial development patterns and inequity continues; and**
- **There is inadequate human resource capital to ensure professional administrations,**
- **Lack of positive relations between labour, management and councils.**

Role of Municipalities in Renewable Energy Sector

Embedded Small Generators

- Municipalities allowed to enter Power Purchase Agreement with embedded small generators who generate primarily for own use below 1 MW, can sell excess to Municipality**
- Municipalities must maintain database of all generators <100kw , report to NERSA annually, ensure grid interconnection complies with national standards.**

Role of Municipalities in Renewable Energy Sector

Small IPP Projects - 100 MW allocation

- **Projects greater than 1 MW less than 5MW.**
- **The RFI in July 2012 did not exclude municipalities from being bidders or part of bids through a Public Private Partnership (PPP).**
- **If municipal land needed for project but no PPP arrangement will apply then the land can only be disposed of through the competitive supply chain management policy**
- **Municipality will need to be involved in environmental authorization processes , rezoning applications and provision of basic services to the project site .**
- **The municipality must support the project through its Integrated Development Plan or through a Council Resolution for rezoning applications & capital investments in new infrastructure .**
- **Allow long project lead time for these processes**



MUNICIPAL PPP PROJECT CYCLE

Reflecting Municipal Financing Management Act, Act 56 of 2003
Municipal Public Private Partnership Regulations, and the
Municipal Systems Act, Act 32 of 2000

PROJECT PREPARATION PERIOD

Modules 1-3

INCEPTION

- Identify project
- Notify government (National Treasury, DPLG) and determine scope of feasibility study and applicable process
- Appoint project officer
- Appoint advisor

Module 4

FEASIBILITY STUDY

- Notify/consult stakeholders
- Needs analysis
- Technical options analysis
- Service delivery analysis
- Delivery mechanism summary and interim internal/external recommendation
- Project due diligence
- Value assessment
- Procurement plan
- 60 days prior to council meeting, give public, Treasury, DPLG 30 days to comment

Treasury Views and Recommendations: I

- Council decision whether to procure external option

Module 5

PROCUREMENT

- Prepare bid documents including draft PPP agreement as per MFMA Chapter 11

Treasury Views and Recommendations: IIA

- Pre-quality parties
- Issue request for proposal with draft PPP agreement
- Receive bids
- Compare bids with feasibility study and each other
- Select preferred bidder
- Prepare value assessment report

Treasury Views and Recommendations: IIB

- Negotiate with the preferred bidder
- Finalise PPP contract management plan
- 60 days prior to signing of contract, give public, Treasury, DPLG 30 days to comment

Treasury Views and Recommendations: III

- Council passes resolution authorising execution of PPP contract
- Accounting officer signs PPP agreement

PROJECT TERM

Module 6

PPP CONTRACT MANAGEMENT

- Accounting officer responsible for PPP contract Management
- Measure outputs, monitor and regulate performance, liaise effectively, and settle disputes

Unsolicited Bids to Municipalities

- **Municipalities are not obliged to consider an unsolicited proposal but may consider such a proposal only if it meets the following requirements:**
- **a comprehensive and relevant project feasibility study has established a clear business case; and**
- **the product or service involves an innovative design; or**
- **the product or service involves an innovative approach to project development and management; or**
- **the product or service presents a new and cost-effective method of service delivery.**

Unsolicited Bids to Municipalities

- **If the unsolicited proposal agreement is concluded, then the municipalities must prepare and issue bid documents.**
- **Preparation of a Request for Qualification (RFQ) to test the market for the existence of other private entities capable of providing the product or service;**
- **Preparation of a draft contract for the provision of the product or service should there be no adequate response to the RFQ;**
- **Preparation of a Request for Proposals (RFP) with a draft contract should there be one or more adequate responses to the RFQ;**
- **Conducting a competitive bidding process in terms of the municipalities supply chain management system among the firms qualified in the RFQ and the proponent.**

Conclusions

- **Proposed Carbon Tax – Taxes Scope 1 Direct Emissions – No major incentive to move municipalities to renewable energy as status quo generates significant revenue**
- **Municipalities can be bidders and partners in renewable energy bids**
- **Municipalities play critical role in land acquisition, spatial planning, rezoning and basic services infrastructure**
- **Low capacity municipalities pose risks in deadline driven processes especially where new basic services infrastructure is required.**
- **High capacity municipalities keen to build a greener economy, are resourced to build infrastructure, form PPP's & support planning applications.**
- **Most viable sites for renewable energy facilities may not always be in high capacity municipalities**

THANK
YOU!

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