Department of Energy

2nd National BioGas Conference 2015
Grid Access Policy

05 March 2015
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• Background
  – Overview of changing landscape in the RSA Electricity Supply Industry.
  – Integrated Resource Plan (20 year GX Expansion Plan)

• SA national electricity generation planning process

• Grid Focus
  – Role players in grid planning.
  – Current Grid Planning Methodology
  – Challenges in changing the historical landscape (Bid Window 1 & 2 REIPP)
Overview of a changing landscape

- Vertically integrated structure
- Most electricity is generated from coal (dominated by SoC)
- The country is faced with shortage of both Generation and Grid capacity.
- New Generation Capacity Regulations were promulgated (in 2009) giving legislative framework to Procurement of power from IPPs
- Integrated resource plan (IRP) was promulgated (in 2011) outlining the required generation capacity for the next 20 years
- The IRP 2010 advocates for a 42% renewable energy which includes Wind, Solar-PV, Solar-CSP (storage/no storage), Landfilgas, Biogass and Biomass power (new capacity)
Focus on Grid Planning
The Different Development Plans

Integrated Resource Plan
- The Department of Energy is accountable for the electricity capacity plan (IRP) as per recently published regulations.
- The Integrated Resource Plan (IRP) is intended to drive all new generation capacity development.
- NERSA licences new generators according to this determination.

Strategic Grid Plan
- The Strategic Grid Plan (Eskom) formulates long term strategic transmission corridor requirements
- Plan is based on range of generation scenarios, and associated strategic network analysis
- Horizon date is 20 years
- Updated every 2-3 years

Transmission Development Plan
- Transmission Development Plan (Eskom) presents transmission corridor requirements
- Plan covers a 10 year window
- Updated annually
- Indicates financial commitments required over 10 year period
## Integrated Resource Plan (IRP)

### New build options

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1. Built, owned & operated by IPPs  
2. Commitment necessary due to required high-voltage infrastructure, which has long lead time  
3. Commitment necessary due to required gas infrastructure, which has long lead time  
4. Possibly required grid upgrade has long lead time and thus makes commitment to power capacity necessary
National electricity planning process

IEP

IRP 2010-30

Feasibility Studies

Funding Plan

Allocation decision (either Eskom or IPP)

Designate Buyer

IPP Procurement

PPA

Build

Grid Question (Capacity & Access)
Current Transmission power flow

Current power pool
- Generation exceeds local load
- Other load centres require imports
- Tx designed to feed load centers from power pool

(a) Load Demand Forecast

(b) Capacity Plan

(c) Capital project funnel
RE-IPP BW 1 & 2 Grid Access Problems

- Access through one of the two grid owners;
  - ESKOM (Transmission level, Eskom owned Distribution)
  - MUNICIPALITY (Munic owned Distribution)
    - Only big municipalities (i.e. Metros)
    - Small municipalities simply do not have capacity.

- Challenges:
  - Initial “Connecting Plant” quotes hugely under estimated.
  - Connecting Plant construction timeframes longer than Generating Plant.
  - CoD of Connecting Plant not on schedule.

- Urgent need for coordinated grid planning across the country. Policy directive required.
Contact:

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