



*Portfolio Committee on Energy
– Briefing on the Electricity
Distribution Industry (EDI)
25 July 2012*



Scope of Coverage

- *Economic Regulation of Transmission;*
- *Regulation of Electricity Distribution;*
- *Regulation of Electricity Supply;*
- *The State of Infrastructure;*
- *The Structure of the Electricity Distribution Industry (EDI);*
- *Energy/Electricity Issues at Municipal Level;*
- *Introducing a Differentiated Approach to Distribution of Electricity;*
- *Investment in Electricity Infrastructure;*
- *Distribution Price Regulation;*
- *Integrated National Electrification Program (INEP);*
 - *Rural Areas*
 - *Urban Areas*
- *Electricity Theft;*
- *Skills Development in the Electricity Distribution Industry; and*
- *Focus on the International Sector*



CROSS-CUTTING MUNICIPAL INFRASTRUCTURES SERVICES ISSUES

The State of Infrastructure

- When municipalities were established and assumed responsibility for various municipal infrastructure services functions, they inherited old infrastructure some of which was way overdue for replacement. In some cases was already more than 30 years old.
- This required huge investments in refurbishment of infrastructure. In a sense municipalities inherited a liability rather an asset because by taking up these functions, they accepted an unalienable responsibility of replacing and refurbishing old infrastructure that was associated with the function.

Recommendation: It is recommended that a National Municipal Infrastructure Fund that will be enough to provide for the rehabilitation of municipal infrastructure at the required scale be established.



CROSS-CUTTING MUNICIPAL INFRASTRUCTURES SERVICES ISSUES (Cont...)

The State of Infrastructure

- A related challenge in respect of the state of infrastructure is lack of data regarding the state of infrastructure especially in sectors such as roads and water services. The figures quoted above are based on estimates rather than field data
- In order to address this, there is a need to establish a national GIS based databases and national programmes to collect data on the state of infrastructure in priority sectors such as roads, water services and electricity

Recommendation: It is recommended that a **National GIS based databases and national programmes to collect data to manage** information on an on-going basis on the state of municipal infrastructure starting with priority sectors such as roads, water services and electricity be established.



Addressing the Dual Regulatory System between NERSA and Municipalities on Supply and Distribution of Electricity

Economic Regulation of Transmission

- For the regulator to regulate the costs of transmission and distribution effectively, a thorough understanding is needed of existing assets, new investment requirements, system operation overheads, constraint costs, connection costs and costs of ancillary services.
- In the transition to a competitive market, NERSA has instituted a new Whole sale Electricity Pricing System which makes transparent the energy and transport components of the tariff.



Addressing the Dual Regulatory System between NERSA and Municipalities on Supply and Distribution of Electricity

Regulation of Electricity Distribution

- NERSA currently regulates retail tariffs through a kind of yardstick regulation; distributors are compared and prices are forced into a narrower band which is closer to the most efficient distributor
- If full retail competition is introduced in the future then NERSA will regulate only the natural monopoly (wires) part of distribution and competitive retail or selling services will be subject to Competition Commission oversight, with NERSA playing a supportive monitoring function and referring any instances of market power or abuse to the Competition Commission.



Addressing the Dual Regulatory System between NERSA and Municipalities on Supply and Distribution of Electricity

Regulation of Electricity Distribution (Cont...)

- The implementation of retail competition will require significant investment in information technology. Competition for end-use customers typically requires half-hourly or hourly meters to be installed. The cost of this metering could be significant and could constitute a barrier to switching suppliers



Addressing the Dual Regulatory System between NERSA and Municipalities on Supply and Distribution of Electricity

Regulation of Electricity Supply

- In the past, Eskom has been the supplier of last resort and has ensured security of supply (although with some economic cost because of the huge over-investments in the 1980s and 1990s).
- In a competitive market, security of supply in the short term is governed by the System Operator who is responsible for balancing supply and demand on a real-time basis.
- In the transition to a fully competitive market, it is important that the System Operator undertake Integrated Resource Planning (IRP) to produce an indicative generation and demand-side plan.



Addressing the Dual Regulatory System between NERSA and Municipalities on Supply and Distribution of Electricity

Regulation of Electricity Supply (Cont...)

Recommendation: It is recommended that: -

- SALGA, NERSA and the Competition Commission play a lead role in advising government on the way forward.
- NERSA should continue to licence all transmission and distribution operators - as well as retail companies.
- NERSA should play a role in ensuring that the current IRP capability in Eskom is transferred to the Transmission Group and becomes a public resource, rather than an exclusive strategic resource for Eskom Generation.
- NERSA should continue to fulfil its statutory mandate to regulate technical standards in the industry and is responsible for ensuring compliance with the Quality of Supply Standard (NRS 048) and the Quality of Service Standard (NRS 047).



ELECTRICITY DISTRIBUTION

The Structure of the Electricity Distribution Industry (EDI)

- The Electricity Distribution Restructuring Blueprint called for the industry to be consolidated, with Eskom distribution business and various municipal electricity utilities being amalgamated into six Regional electricity Distributors, hence the Department of Minerals and Energy established the EDI Holdings (Pty) Ltd to project manage the restructuring process.
- As a result the Department of Minerals and Energy established Electricity Distribution Industry Holdings (Pty) Ltd in March 2003 to facilitate the restructuring of the electricity distribution into Six (6) Regional Electricity Distributors (REDs).



ELECTRICITY DISTRIBUTION

The Structure of the Electricity Distribution Industry (EDI) (Cont...)

- The intention was to create economies of scale and lead to more efficient distribution than the current system of multiple providers, often operating in non-viable areas.
- Cabinet has subsequently taken a decision to discontinue the process of creating the REDs and has recommended that the Department of Energy reviews the whole electricity value chain.

Proposal: It is proposed that an Alternative Approach (to the REDs) be developed to resolve the structural issues facing the electricity distribution industry



ELECTRICITY DISTRIBUTION

Energy/Electricity Issues at Municipal Level

- The apparent disjuncture between incentives towards energy efficiency and electricity as a source of revenue at municipal level needs to be reviewed and remedied. Local government should be incorporated into the system of intergovernmental fiscal relations, where they can share in revenue and grants in order to provide basic services and perform other functions allocated to them of which electricity is one
- Cross-subsidization of services such as water, refuse removal and sewerage through income from sale of electricity ought to be restructured by exploring alternative revenue sources at municipal level. Such may imply a review of formulating Free Basic Services (which includes Free Basic Electricity) fundamentally.
- Government should actively and specifically pursue development of a more spatially compact urban form for cities, by developing and adopting appropriate policies and financing instruments.



ELECTRICITY DISTRIBUTION

Energy/Electricity Issues at Municipal Level (Cont...)

Recommendation: It is recommended that: -

- There should be a much more wider use of development charges in financing infrastructure associated with the land development process extending to electricity provision;
- There should be fiscal incentives for urban land development projects located within the existing urban form;
- Government should conduct a broad-based review of the efficacy of current housing finance arrangements in meeting housing needs (which include electricity provision) within the context of creating sustainable and more compact human settlements.



ELECTRICITY DISTRIBUTION

Introducing a Differentiated Approach to Distribution of Electricity

- The previous restructuring process did not take account of different municipality capabilities in proposing the RED's as an alternative service delivery mechanism for electricity distribution.
- Therefore such must address root causes of the challenge and must follow a differentiated approach that recognises variances in performance of individual municipalities as electricity distributors and that not all municipalities were failing.



ELECTRICITY DISTRIBUTION

Introducing a Differentiated Approach to Distribution of Electricity (Cont...)

Recommendation: it is recommended that: -

- An Alternative Approach (to the REDs) be developed to resolve the structural issues facing the electricity distribution industry (New EDI System as Part of Post-REDS Strategy);
- Legislation and regulatory framework on distribution of electricity should be restructured;
- The social objective of universalising access to electricity is not lost in the process of restructuring the EDIT
- The intensification and the implementation of an Approach to Distribution of Asset Management (ADAM) must be addressed as a matter of urgency;
- Electricity distribution entities at provincial levels must also be conceptualised and piloted as part of post-REDS solution to distribution of electricity according to the constitution of the country and be linked to such efforts with the reform of the electricity sector;



ELECTRICITY DISTRIBUTION

Introducing a Differentiated Approach to Distribution of Electricity (Cont...)

Recommendation: it is recommended that: -

- Electricity distribution entities at provincial levels must also be conceptualised and piloted as part of post-REDS solution to distribution of electricity according to the constitution of the country and be linked to such efforts with the reform of the electricity sector;
- Government must revisit the Blue Print assumptions initially drawn to restructure the EDI;
- A Comprehensive National Infrastructure Maintenance Strategy be introduced— including Energy Infrastructure especially for electricity - with a closer link between Capital Expenditure, Grants and Operating Expenditure should be introduced. Such must be coupled with better benchmarking and performance indicators.



ELECTRICITY DISTRIBUTION

Investment in Electricity Infrastructure

- During the long period of uncertainty regarding future ownership of distribution assets, there has been a significant underinvestment in infrastructure. Municipalities were reluctant to invest in infrastructure in a situation where there was no certainty regarding future of such investment.
- This added to inherited maintenance backlogs that also accumulated as a result of the country's prioritization of extension of infrastructure to the unserved rather than focusing on maintaining infrastructure that served a minority. Study done by EDIH in 2008 estimated that the backlog was R27billion growing at R2, 5 billion per annum.

Recommendation: It is recommended that the implementation of ADAM Phase 2 be supported, however, work on a strategy to address the challenge of Refurbishing the Infrastructure backlog estimated at R27 billion growing at R2,5 billion per annum



ELECTRICITY DISTRIBUTION

Distribution Price Regulation

- NERSA is commended in its efforts to provide relief for the low usage customers. Unfortunately there are many shortcomings with its Inclining Block Tariffs (IBT) version e.g. Eskom data was used to develop a national tariff structure. This data is not relevant to individual municipalities and also does not adequately segment residential customers. The basis of a good tariff design is to use the customer data of the particular utility. T
- he NERSA forced IBT application by Eskom on its conventionally metered customers has had a massive negative financial implication. This has caused the tariff to the rest of Eskom's customer base to increase by a further **4.6%** over and above the average increase granted by NERSA. Unsustainable as the impact might be, when Eskom applies the NERSA IBT it is still able to hedge the impact on the non-domestic customers



ELECTRICITY DISTRIBUTION

Distribution Price Regulation (Cont...)

Recommendation: It is recommended that : -

- The principles, design and implementation of Inclining Block Tariffs (IBT) should be reviewed to come up with a more viable and yet pro-poor tariff structures
- The energy pricing formulae on energy should be reviewed. An intensive research proceeding that reviewable should be commissioned. Such efforts must be linked to the Indigent Policy and Strategy. Policy for the indigent has to be reviewed and be comprehensive enough to cover all forms of energy beyond electricity. Pricing must be viewed as one of the tools to advance social transformation.
- Inclusion of Free Basic Alternative Energy over and above Free Basic Electricity is also essential as part of energy pricing.
- The need to expand from Free Basic Electricity to Free Basic Alternative Energy in a more assertive way is quite essential to ensure economic development always translates into social transformation.



ELECTRICITY DISTRIBUTION

Integrated National Electrification Program (INEP)

- Access to electricity currently stands at about 83%. The Integrated National Electrification Program (INEP) is implemented through Eskom (where Eskom is a distributor) and municipalities in their areas of distribution. The electrification program is also an important means of curbing illegal connections.
- About three quarters of the remaining 17% is in rural areas and this is where most of the backlogs were in the first place. In these areas Eskom is a licensed distributor. However non-licensed municipalities also access money from DoE and Provincial Governments to implement projects in these Eskom areas of supply. On completion of projects they then hand over infrastructure to Eskom for O&M
- About a quarter of the remaining 17% without access to electricity is in urban areas and mainly informal settlements. These are largely areas where 177 municipalities are licensed distributors.



ELECTRICITY DISTRIBUTION

Integrated National Electrification Program (INEP) (Cont...)

Recommendation: It is recommended that the DOE should: -

- Ensure that INEP offices to are points of coordination/ planning alignment between various electrification projects funding agencies;
- Improve the capacity of INEP regional offices to provide technical support to under-capacitated municipalities;
- Allow use of INEP to upgrade of existing infrastructure as may be necessary for electrification projects;
- Fund infill connections;
- Do away with the requirement for 80% occupancy of housing developments before electrification commence;
- Amend the policy to provide the full cost of connections in areas provided by both Eskom and municipalities.



ELECTRICITY DISTRIBUTION

Integrated National Electrification Program (INEP) (Cont...)

Recommendation: It is recommended that : -

- NERSA should make concluding an SDA with a municipality, where Eskom is a distributor, a licence condition and disconnecting electricity as a means of credit control be included in SDAs between Eskom and municipalities
- Provincial Housing Departments should make their approved Multi Year Housing Development Plans and priority development objectives available to the DoE enable the latter to align its electrification programme accordingly;
- The Minister of Human Settlements should adjust the National Housing Programme to include funding for the removal of the existing meters and the re-installation thereof in the new dwellings;
- The Minister of Finance should prescribe the compulsory national norms and standards for imposing municipal surcharges, as required in terms of 8(1) of the Municipal Fiscal Powers and Functions Act, 2007 in order to enable municipalities to charge a surcharge on electricity supply where Eskom is a distributor.



ELECTRICITY DISTRIBUTION

Electricity Theft

- LG experiences huge revenue loss due to electricity theft. For example in the 2009/10 financial year, it was reported that the Cities of Cape Town and Johannesburg lost about R121 million and R250 million worth of electricity due to illegal connections. The impact of electricity theft is devastating for smaller distributing municipalities.
- Unfortunately despite its impact (financial, economic, loss of life, sustainability, quality and stability of electricity supply and future economic growth) electricity theft is still perceived as a minor offence
- In October 2010, SALGA partnered with Eskom, PRIMEDIA, Proudly SA, BUSA, Business Against Crime and Crime Line to launch Operation Khanyisa (An anti-electricity theft campaign aimed at raising awareness about the criminal nature of this act and to establish mechanisms for the public to report and distributors to act on these reports).



ELECTRICITY DISTRIBUTION

Electricity Theft (Cont...)

Recommendation: It is recommended that municipal by-laws be reviewed to introduce more stringent penalties for electricity theft. In addition to that, municipalities must develop systems and processes that will improve their efficiency in acting and reporting their actions against electricity theft based on the tip offs received.



ELECTRICITY DISTRIBUTION

Skills Development in the Electricity Distribution Industry

- The first step in this direction is to transform the Electricity Distribution Industry (EDI) into an independent and self-contained corporation, but formally still under state ownership.
- As the corporate culture takes root, and management becomes used to taking and implementing its own decisions without constantly having to look over its shoulder at government, commercialization should be introduced. Commercialization will impose the discipline of commercial law and responsible regard for what the market expects and tolerates.



ELECTRICITY DISTRIBUTION

Skills Development in the Electricity Distribution Industry (Cont...)

- Some of the critical shortcomings that face the industry and requires attention relates to:
- Poor (financial/technical) performance, resulting in poor quality of supply and service, and an inability to meet growing electricity demand;
- Insufficient managerial and technical skills to do the job;
- Inability to fund expansion or refurbishment, or to attract private sector investment into the Electricity Distribution Industry (EDI);
- Lack of maintenance of existing facilities leading to reliability problems;
- Inappropriate tariffs, often resulting from political interference, with tariffs below marginal costs; and
- Inadequate revenue collection mechanisms, and therefore credit unworthy businesses.



ELECTRICITY DISTRIBUTION

Skills Development in the Electricity Distribution Industry (Cont...)

Recommendation: *It is recommended that: -*

- Skills development in the Electricity Distribution Industry must be integrated in the curricula of every Further Education and Training (FET) college as well as universities and the private sectors;
- The programme for skills development should be extended to the South African Development Community (SADC) region as well;
- Every foreign investment in the industry must integrate skills transfer.



ELECTRICITY DISTRIBUTION

Focus on the International Sector

- There is a need for mutually beneficial regional electricity trade, where all participants can be perceived as 'economic gainers'. To meet the rapidly growing demand, and to improve the continent's prospects for sustained economic growth and development, a commitment from all countries is urgently needed to bring about regionally integrated solutions and significant new investment in energy infrastructure, particularly for interconnections.
- Building on the successes already evident in Africa, increasing cross-border trade in electricity can act as the engine for economic growth and development of the continent for the benefit of her people.



ELECTRICITY DISTRIBUTION

Focus on the International Sector (Cont...)

Recommendation: It is recommended that: -

- Transformation of the Electricity Distribution Industry should also integrate advancement of South-South trade relations especially within the Brazil, Russia, and India, China and South Africa (BRICS) and India-Brazil-South Africa (IBSA) partnerships;
- New policy is required on consolidating the Southern African Development Community (SADC) Regional Power Pooling System as well as strengthening African Energy Strategy and Programme;
- Investment in prescribed assets as a policy of government should be introduced given the strategic and key point that the Electricity Distribution Industry is. Foreign Direct Investment (FDI) must be prescriptive in that a percentage of FDI must be ring fenced for the Electricity Distribution Industry development;
- Government must work towards the integration of policy and legislation in the region;
- FDI must integrate transfer of technology as a compulsory practice



END

Thank You !!!