ESKOM PERSPECTIVE: EDI BRIEFING

Presentation to the Energy Portfolio Committee
Eskom has three NERSA Licensed businesses – Generation, Transmission and Distribution

Eskom has three Licensed Businesses
• Generation (Gx)
• Transmission (Tx)
• Distribution (Dx)

Strategic and Support Businesses
• Customer Services (part of Dx License)
• Group Capital (performing construction on behalf of Gx and Tx)
• Finance
• Human Resources
• Procurement
• Legal
• Corporate Affairs Division
• Security

Ring-fenced and licensed Business
Regulated by NERSA
Electricity Supply Chain

**Power Stations Generation**
Electricity is generated by burning of fossil fuels (coal, oil, or natural gas), use of nuclear technology and hydro capability.

**Transmission (400/275 kV)**
High Voltage electricity is carried between Generation and required Distribution through Transmission networks (or Transmission grids).

**Transmission Lines**

**Distribution Substations**
The voltage levels of electricity are further transformed to meet Distribution requirements.

**Reticulation HV Line**
(11 & 22kV)

**Reticulation LV Line**
(380/220V)

**Distribution**

**Service Connection**
Customer consumption is measured at the point of supply in KWh. This information is used to measure and bill consumption levels utilised/sold.

**Municipalities**
The distribution networks collect 'stepped down' electricity from the transmission networks and deliver it to Redistributors/End Users.
1. Orientation on the Electricity Value Chain

2. Distribution, Customer Services and EDI

3. Concluding Remarks
Overview of the Distribution Division

Scope and mandate

Distribution’s role is to service the customer through building, operating and maintaining Distribution assets, while also acting in the national interest by actively partnering with the wider industry in resolving Distribution industry issues and enhancing stakeholder relations.

Asset base

1 25 011 km 132kV and higher  
23 794 km 33 to 88kV  
296 188 km 22kV and lower (reticulation lines)

Distribution provides electricity directly to 45% of all end users in South Africa (including bulk supply to Municipalities).

Organisation structure

- 5.9 Million customers  
- 9 Operating Units – Provinces  
- 15 213 employees  
- 305 Customer Network Centres

Highlights and output

- Network interruption performance in terms of frequency and duration has improved.  
- Build and Strengthen network to accommodate growth in customer base and to enable IPP  
- Electrified a total of over 1 million household since 2012.  
- Industry skill developer in support of learnership programmes  
- Partnering with the Distribution industry in addressing industry issues

Key challenges and priorities

- Zero harm to employees and customers  
- Energy theft escalates due to illegal connections, equipment theft and vandalism  
- Limit Energy losses to industry norms  
- The ability to sustain technical performance in a constrained environment  
- Identifying opportunities to extract efficiencies from operations

Note: ¹Data from the Annual Integrated Report March 17
Distribution Capital Expenditure

- **Capital investment is a priority for Distribution over the next five years.**
  - Reducing investment backlogs and keeping the asset base in a condition that supports sustained network performance.
  - Refurbishment and strengthening of existing networks
  - Building new networks for customers and enabling IPP connections

- **Expenditure is prioritised in accordance with the Network Development methodology**
  - Enabling Distribution to sustain network performance
  - Comply with regulatory and license conditions
  - Satisfy demand growth.
Distribution CAPEX Investment Profile over the next few years ….

- Investment leads to improvement in network performance.
- 2017 onwards investment to target on:
  
  i. Aging networks (refurbishment)
  
  ii. Strengthening for future and existing customer demand (electrification and other categories)

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>FY13/14</th>
<th>FY14/15</th>
<th>FY15/16</th>
<th>FY16/17</th>
<th>FY17/18</th>
<th>FY18/19</th>
<th>FY19/20</th>
<th>FY20/21</th>
<th>FY21/22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual (R m)</td>
<td>R 7 477</td>
<td>R 6 073</td>
<td>R 5 003</td>
<td>R 5 155</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forecast (R m)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R 5 783</td>
<td>R 6 227</td>
<td>R 7 575</td>
<td>R 8 326</td>
<td>R 9 838</td>
</tr>
</tbody>
</table>
Electrification – There has been two distinct eras of installation: pre-2000 and post-2000, moving towards universal access.

Number of annual grid connections ‘000

Cost per connection R ‘000

Self-funded and managed programme
• Eskom exceeded the government's target of 1.75M connections between 1994 and 2000
• Connection every 30 seconds, pole every 10 seconds, 200M cable every minute due to prior investment on infrastructure
• Connection costs steadily came down due to pre-investment

Total investment from 1994 – 2020 to date: R17.1 bn

Future Programme
• Universal Access achieved by 2020/21
Eskom Distribution’s maintenance regime includes both preventative and corrective maintenance.

Distribution’s Preventative Maintenance Objective ensures that:

- Regulatory and statutory requirements are met (Safety, health and environment).
- The technical performance is accordance with the design of the equipment.
- The design life of assets are maximised.
- Asset life extension is supported through timeous refurbishment identification triggered by maintenance feedback.
Distribution has delivered significant operational performance improvements since 2012.

### SAIDI YEAR 12MMW (OHD)

<table>
<thead>
<tr>
<th></th>
<th>FY11/12</th>
<th>FY12/13</th>
<th>FY13/14</th>
<th>FY14/15</th>
<th>FY15/16</th>
<th>FY16/17</th>
<th>FY17/18</th>
<th>FY18/19</th>
<th>FY19/20</th>
<th>FY20/21</th>
<th>FY21/22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Customer Hours</td>
<td>42.6</td>
<td>40.5</td>
<td>37.4</td>
<td>36.2</td>
<td>38.6</td>
<td>38.9</td>
<td>39.0</td>
<td>39.0</td>
<td>39.0</td>
<td>39.0</td>
<td>39.0</td>
</tr>
</tbody>
</table>

### SAIFI YEAR 12MMW (OHD)

<table>
<thead>
<tr>
<th></th>
<th>FY11/12</th>
<th>FY12/13</th>
<th>FY13/14</th>
<th>FY14/15</th>
<th>FY15/16</th>
<th>FY16/17</th>
<th>FY17/18</th>
<th>FY18/19</th>
<th>FY19/20</th>
<th>FY20/21</th>
<th>FY21/22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Times / Year</td>
<td>22.1</td>
<td>21.4</td>
<td>20.3</td>
<td>19.7</td>
<td>20.5</td>
<td>18.9</td>
<td>20.0</td>
<td>20.0</td>
<td>20.0</td>
<td>20.0</td>
<td>20.0</td>
</tr>
</tbody>
</table>
Customer Service mandate and purpose

Eskom CS Mandate

“To put the customer at the centre of our business and guide Eskom towards the overall objective of delighting our customers so that they consistently rate us in the top quartile and also to promote Eskom as a company”

Primary purpose of Customer Services

- Connect/Sell
- Collect
- Delight

Optimal Business Model
Appropriate Systems, Processes, Policies and Procedures
Focused and Energised Employees
Customer Service Overview

Scope and mandate

To sustain and grow profitable sales by putting the customer at the center of our business and guide Eskom towards the overall objective of delighting customers.

Customer Profile

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>15,838,754</td>
</tr>
<tr>
<td>Commercial</td>
<td>50,956</td>
</tr>
<tr>
<td>Industrial</td>
<td>2,706</td>
</tr>
<tr>
<td>Mining</td>
<td>1,012</td>
</tr>
<tr>
<td>Agricultural</td>
<td>81,806</td>
</tr>
<tr>
<td>Rail</td>
<td>510</td>
</tr>
</tbody>
</table>

Organisation Structure

- 5.9 Million customers
- 7 Customer Service Operations
- 2506 Employees

Key Priorities

Customer Services will manage a program of **customer experience improvement** to embed **customer centricity** in Eskom.

- Enable GDP growth targets in support of the NDP
  - Becoming a customer-centric organization
  - SA industrial demand stimulation
  - Reliable supply (new and existing) and stable tariffs

- Lay the foundation for the **Eskom of tomorrow** through:
  - Decarbonisation of the grid
  - Establishing new businesses
  - Capturing value from data and analytics

Key Challenges

- Evolving energy market, increases customer choice.
- Evolving energy market, increases customer choice.
- Current Tariff Trajectory is not affordable for SA consumers
- Optimisation of Revenue Collection

Note: 'Data from the Annual Integrated Report March 17
Customer Services

- Total electricity sales of 214 121 GWh and R175Bn in Revenue as at 31 March 2017.
- Approximately 5.9m customers, across SA (CS) and Cross Border (Tx). Supported by channels including personalised service (Top 50 customers), contact centres, hubs and online channels.
- Payment levels of average 95% of bills rendered, notwithstanding challenges in the municipalities (FS, MP and NW) and Soweto.
- The Top Customer Segment comprising of key industrial and mining customers, with consumption of 100GWh and above, consists of 150 customers and contributes to 33% of revenues;
- Municipalities contribute 41% to revenue and the rest including residential billed and prepaid at 8%
- Customer satisfaction indicators show Top Customers rate us at 108 (out of 120); The rest od customers at rate 96%.
- Eskom is a member of the Southern African Power Pool (“SAPP”)

Key figures for 31 March 2017

- Sales Split Total: 214 121GWh
  - Residential 2%
  - Traction 1%
  - Agricultural 2%
  - Mining 14%
  - International Sales 7%
  - Industrial 23%

- Gross Electricity Revenue Split Total: R175 815m
  - Residential 3%
  - Traction 2%
  - Agricultural 4%
  - Mining 15%
  - International Sales 6%
  - Industrial 18%

- Number of customers Total: 5.7 million
  - Residential 98%
  - Other 0%
  - Agriculture 1%
  - Commercial 1%
Steady decrease in debt since the implementation of PAJA

Total overdue debt as on End July 2017 (Rm)*

- Total municipal debt overdue at the End July 2017 at R11.074bn
  - Reduction of R380m from End June high of R11.454bn
  - Top 10 overdue municipalities are overdue by R7.301bn
  - Top 20 overdue municipalities are overdue by R8.692bn
  - There are 69 municipalities that are overdue by more than R10M
  - 99 municipalities have overdue debt in excess of R500k
  - Three Provinces contributing R8.788bn:
    - FS R5.156bn
    - MP R2.536bn
    - NW R0.848bn
  - First Interruptions planned for 13 September 2017
Various challenges impacting effectiveness and efficiency in municipalities have been identified.

Main issues/ drivers underlying the municipal debt situation  
(from an Eskom perspective)

- **Skills competency**
  - Inadequate skills/ resources in Municipalities
  - Separation of financial and technical duties within Municipalities,
  - High turnover in management and key staff and prolonged acting positions in Municipalities

- **Revenue Management**
  - Municipal Billing system not always functional
  - Losses and ineffective revenue collection
  - Penalties when exceeding NMD due to bad load management

- **Cash Flow**
  - Municipality electricity revenue not ring-fenced
  - Ineffective sales forecasting and budgeting processes
  - Eskom billing dates vs Municipal billing dates to their customers

- **Funding**
  - Municipal equitable share payments to municipalities have reduced and are no longer able to cover municipal arrear debt
  - Dependency on funding to settle outstanding municipal debt

- **Tariffs**
  - Municipality tariff structure not always cost reflective
  - Inadequate capacity within municipalities regarding electricity tariffs practices and philosophies

- Provincial & National Treasury and CoGTA have recognised that, due to local economic circumstances, certain municipalities are not financially viable.
- Root causes are systemic in nature and cannot be tackled by Eskom alone to reduce municipal debt
To ensure a sustainable solution Eskom is considering initiatives to address the top 5 issues raised by the municipalities.

**Initiatives proposed to address municipal issues**

1. Eskom is proposing the Rationalisation of Municipal Tariffs to reduce tariff options from 11 to 3
2. Eskom to decrease the Interest Rate charged on overdue balances from Prime plus 5% to Prime plus 2.5%
3. Eskom to change the payment period on Municipal Bulk accounts from 15 Days to 30 Days
4. Eskom to change its payment allocation policy to allocate payments to capital first and then interest
5. Allowing municipalities to pay connections charges over a 20 year period at relevant interest rate in stead of Cash up Front

In addition to Board approval, the proposals may require the following approvals:

1. PFMA approval
2. Competition Commission opinion on selective benefit of 15 days to 30 days offered to municipalities only (not the other Large Power Users)
3. Acceptance of installation of smart and secure prepaid, as part of the revenue enhancement strategy

Note: The first four proposals were approved by Eskom Board to enable implementation by 1 July 2017.
The electricity distribution industry is characterised by two key role players, Eskom and municipalities.

Electricity Distribution Industry ("EDI") is characterised largely by two key role-players:

- **Electricity Supply Industry**
  - **Municipalities**
    - Generally confined their areas of supply to their municipal boundaries
  - **Eskom**
    - Historically responsible for areas not supplied by the municipalities in the country as a whole.
    - Traditionally responsible for supplying a bulk supply to the municipalities
A legislative framework governs the supply of electricity.

Stipulates powers and functions of municipalities. Section 156(1) grants executive authority and not exclusive authority.


- Electricity Regulation Act, of 2006
- Municipal Systems Act, No 32 of 2000
- Municipal Structures Act, No 117 of 1998
- National Energy Regulator Act of 2004

Stipulates that other licensees are permitted to distribute and supply electricity within the municipality boundaries.

Implies Eskom may be appointed as a service provider. In that capacity, it will be supplying electricity on behalf of the appointing municipality in areas outside its supply area.

Issues licenses that permit Eskom and Municipalities to reticulate electricity within the municipal areas, but in different geographical areas.

Section 84(1) (c) states “bulk supply of electricity, which includes for the purposes of such supply, the transmission, distribution and, where applicable, the generation of electricity” is a function and power of a district municipality. Eskom’s right to supply not excluded.
There are currently different views between Eskom and Municipalities on certain matters

<table>
<thead>
<tr>
<th>Matters to be resolved</th>
<th>Eskom view</th>
</tr>
</thead>
</table>
| 1. Do municipalities have exclusive authority to reticulate (supply) electricity within a municipal boundary | - Municipalities do not have “exclusive” executive authority to reticulate electricity within its area of jurisdiction  
- Municipalities current financial viability and health does not support their legal position that they have exclusive executive authority to provide electricity within municipal boundaries |
| 2. Does the license issued to Eskom by NERSA authorise Eskom to reticulate electricity within municipal areas | - Within a municipality's geographical area of jurisdiction, both the municipality and Eskom can distribute and supply electricity to consumers. |
There is misalignment between interpretations of Section 156 of the Constitution concerning reticulating electricity within municipal boundaries

**Eskom’s interpretation**

- While a municipality has executive authority in respect of electricity reticulation, this is not an exclusive local government function, and is accordingly subject to national legislation.

- Part B of Schedule 4 of the Constitution, affords Eskom the power to reticulate electricity within a municipal jurisdiction.

- The power to supply and reticulate given to Eskom in terms of the national legislation supersedes the municipalities’ executive authority and the right to administer matters listed under Part B of Schedule 4.

- Section 156 of the Constitution is not to be read in isolation.

- Eskom exercises its right to supply power and reticulate electricity within a municipal area pursuant to its distribution license issued to it in terms of the ERA.

- Municipalities have similar rights in terms of their distribution licenses issued to them in terms of the ERA. The respective rights co-exist in terms of the ERA.
The unacceptable state of the wider electricity distribution industry (EDI) is not debatable.

The industry is in need of a transformational type overhaul. Incremental fire fighting fixes will not address the underlying issues.

Applying system thinking, we understand that the industry issues are all interrelated and in the end they become your issues, regardless of which side of the fence you reside.

A well functioning distribution industry is in the national interest.

Industry engagements and collaboration have been ongoing for a while.

Eskom developed an Active Partnering approach as a vehicle toward resolving some of the operational issues.
The license issued to Eskom by NERSA authorises Eskom to reticulate electricity within municipal areas.

In terms of Section 156(1) of the Constitution, municipalities have **executive authority (not exclusive)** in respect of electricity reticulation.

- **National government**
- **Provincial government**
- **Municipal government**

Municipalities have functions and executive authority over matters that have been legislated upon and assigned for administration by municipalities in terms of Section 156(1) of the Constitution.

Eskom exercises its right to supply power and reticulate electricity within a municipal area pursuant to its distribution license issued to it in terms of the ERA.

Eskom’s and the Municipalities rights co-exist in terms of the ERA.
The industry needs a different approach in dealing with issues within the current policy dispensation, all stakeholders need to resolve this to ensure service delivery.

The unacceptable state of the EDI requires that industry players apply system thinking towards resolving these issues.

This provides us with an opportunity to influence alternative solutions to address industry issues.

We have identified and developed an active partnering approach that we believe will address issues within the current industry structure.

We need to partner within the industry in defining an industry operating approach that addresses industry operational issues.

A different approach is required

- An approach that focusses more on resolving industry issues than on the institutional form of the industry.
- An approach that will foster a shared commitment towards resolving industry issues.
- An approach that effectively utilises the strengths and capabilities within the industry to assist those players that lack these strengths and capabilities.
- An approach for the industry that effectively heals from within.
- An approach that allows for some consolidation within the industry where this make sense.
- An approach where own interests are suspended and the national interest dominates.

Current Perspective on Industry Issues: Reporting, Data Sharing, Provision of Free Basic Electricity, Tariff Parity, Credit Control and Debt Management, Public Lighting all affects Service Delivery to all Stakeholders

Effective Distribution Industry Strategic Alliances and Partnerships throughout South Africa are providing accessible and sustainable electricity services.
From an industry perspective working towards a common vision must continue, to build a sustainable industry going forward.

Eskom continues to partner within the Industry and Industry Stakeholders, with the aim of meeting the Customer’s interests.
### Collaboration efforts with SALGA on Industry and Operational Issues

<table>
<thead>
<tr>
<th>Stakeholder Engagement</th>
<th>Revenue Management</th>
<th>Technical/Operational Intervention</th>
<th>Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signed MOU agreements</td>
<td>Facilitating review on Credit Management burning issues (payment periods, interest rate charges, connection charges…)</td>
<td>OU Partnerships and engagements ongoing</td>
<td>Sharing Training programmes with SALGA.</td>
</tr>
<tr>
<td>Technical Workgroup Engagement</td>
<td>Municipal Tariff Parity workshop</td>
<td>Points of Supply engagements and Intervention (Ekurhuleni discussions)</td>
<td>Training workshop engagement SALGA and EDF</td>
</tr>
<tr>
<td>Legal Work group (In Progress)</td>
<td>Debt Management workshop discussions with SALGA</td>
<td></td>
<td>Draft Training Agreements</td>
</tr>
<tr>
<td>AMEU Workshops</td>
<td></td>
<td></td>
<td>Phumelela Munic (Vrede/ Warden in the Free State) has requested Eskom to assist with training in their revenue Department</td>
</tr>
<tr>
<td>Ongoing Steering Committees</td>
<td></td>
<td></td>
<td>New Energy Loss Management Module</td>
</tr>
</tbody>
</table>

....thus prompting Eskom to work on other actions in dealing with industry challenges.

### Other

- Distribution is currently engaging with other Industry Stakeholders and working with CoGTA
- Further stakeholder interventions will be required to ensure Eskom plays a pivotal role in the industry.
1. Orientation on the Electricity Value Chain

2. Distribution, Customer Services and EDI

3. Concluding Remarks
Concluding Remarks

- We continue to respond to the changes in the social economic and political environment.
- In reference to our operational performance; we are collaborating with all critical stakeholders throughout the industry whilst leveraging on our stakeholder relationships.
- Customer Satisfaction remains the cornerstone for our business in ensuring positive customer experience.