22nd AMEU TECHNICAL CONVENTION
PRACTICAL PERSPECTIVE OF THE RED BUSINESS MODEL

PRESENTATION BY

DR WILLIE DE BEER, COO - EDI HOLDINGS

29 SEPTEMBER 2009
Presentation Outline

- Electricity Supply Industry (ESI) Introduction
- Electricity Distribution Industry (EDI) Profile
- EDI Insights
- Future REDs
- Governance of REDs
- Value Proposition
- Readiness Progress to Date
- Conclusion
Electricity Supply Chain

- **GENERATION**
- **Transmission Lines**
  - TRANSMISSION (765/400/275 kV)
- **TRANSMISSION SUBSTATION**
- **DISTRIBUTION** (132/88/66/44/33 kV)
- **DISTRIBUTION SUBSTATION**
- **ELECTRICITY DISTRIBUTION INDUSTRY (EDI) FOCUS**
  - Reticulation Lines & Cables
  - HV Lines 22 and 11kV
  - Distribution Lines
  - LV Lines 380/220V

SERVICE CONNECTION
<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>~ R40 bn</td>
</tr>
<tr>
<td>Customers</td>
<td>~9.2 m</td>
</tr>
<tr>
<td>Staff</td>
<td>~31 000</td>
</tr>
<tr>
<td>Replacement Asset Value (2008)</td>
<td>~R260 bn</td>
</tr>
<tr>
<td>Energy Purchases (ESI-2008)</td>
<td>~224 TWh</td>
</tr>
<tr>
<td>Energy purchases (EDI-2008)</td>
<td>~120 TWh</td>
</tr>
<tr>
<td>Distribution Lines</td>
<td>&gt;400 000 km</td>
</tr>
<tr>
<td>Distribution Cables</td>
<td>&gt;210 000 km</td>
</tr>
</tbody>
</table>
EDI Insights

- Maintenance and Refurbishment backlog is growing at R2.5bn per annum.
- Maintenance plans and implementation thereof is not evident in most municipalities’ electricity departments.
- Maintenance investment is not consistent or in line with NERSA recommendations.
- Average age of asset base 45 yrs.
- Capital investment plans are not clearly defined on a consistent basis.
- Capital investment is < 5% of actual revenue from electricity in a large percentage of municipalities.
- In terms of electricity, municipalities on average achieved approximately 47% of their total electricity budgeted capital investment.
- Recruitment, training and retention of skills are significant EDI sustainability risks.
- Ability to continue to provide affordable electricity is at risk.
- The pockets of good performance are decreasing.
Future REDs

- New companies into which both municipalities and Eskom will transfer their electricity distribution businesses
- Shareholding to be split between National, Local Government and Eskom.
- Service providers of choice to the service authorities:
  - Municipality remains service authority and RED becomes Service provider
  - REDs will collect surcharges in accordance with the Municipal Fiscal Powers & Functions Act on behalf of the municipalities and pay it over to them
  - REDs will pay dividends to shareholders subject to financial performance
  - Relationship between RED and municipalities to be governed through the Service Delivery Agreement as contemplated in Section 81 of Municipal Systems Act
  - Streamlined relationship reducing duplication and creating clear accountability
  - Better regulation with role clarity between service authorities, service providers and the National Energy Regulator of South Africa
Governance of RED’s

The principle legal instruments which will govern the operation of a RED when established will be the Public Finance Management Act (PFMA), the Companies Act, the Shareholders’ Agreement, common law relating to the governance of companies and King III Report on Corporate Governance, the Service Delivery Agreement and NERSA Distribution License

- National government through the executive authority will exercise the role of a majority shareholder vis a vis public entities - Section 63(2) of the PFMA
- Governance issues will also be influenced by a RED’s Memorandum and Articles of Association;
- The REDs will be governed by a Board of Directors and Executive Management, i.e. CEO, CFO etc.
- The SDA will regulate the provision of electricity reticulation services by a RED on behalf of a municipality and also regulate the level of services to be supplied by one party to the other, the technical standards of such service delivery as well as the consequences in the event that the standards are not met, etc.
- RED shareholding must ensure that, once established, REDs continue to implement and adhere to agreed restructuring and national objectives
Future RED End State Operating Model

- The REDs will be value chain driven businesses with a strong focus on the core business components namely Retail (inclusive of customer service & energy trading) and Wires (Engineering).
- The core business components will be supported by a common support function and an integrated business process and systems platform.
- Centralised specialist support will support the geographical deployed operational resources.
- Technology will be leveraged:
  - SMART Grid
  - Work management & customer interface
  - Asset management
  - SCADA etc.
- Strong focus on continuous business improvement:
  - Staff development and retention
  - Benchmarking
  - Introduction of appropriate best practices
- All customers served off the distribution infrastructure will contribute to the RED wires charges.
# Retail Value Chain

## Governance

### Purchase Energy
- Demand and purchases forecast
- Metering and purchasing data
- Commercial
- RED energy balancing

### Retail Planning
- Market & segments development
- Tariffs and prices
- Sales and usage forecasting
- Retail business improvement

### New Connections
- Customer contracting
- Network connections
- Services standards
- Electrification

### Revenue Management
- Customer database
- Billing
- Collections
- Manage non payments
- Manage commercial losses

### Customer Interactions
- Manage customer information
- Execution of services management
- Performance management of channels and services
- Customer Service/Quality Measurement

## Supporting Processes

## Supporting Systems
Wires Value Chain

Planning & Standards
- Ensure strategic alignment
- Data gathering
- Network analysis (including losses)
- Geospatial load forecast
- Refurbishment planning
- Develop network master plans
- Develop CAPEX plans
- DUoS charges
- Develop guidelines standards and procedures
- New technologies
- Process improvement

Design standards
- Basic eng design
- Detailed eng design
- Contract and resources
- Management
- New supplies including Electrification
- Construction
- Land survey
- Lands and rights
- Environmental Management
- Commissioning

Maintenance strategy
- Maintenance planning
- Work Management
- Refurbishment
- Maintenance execution
- Protection (fault finding and maintenance)
- Metering (calibration and maintenance)
- Telecommunication

Network Operation
- Network operation strategy and SCADA
- Network optimization
- System operation and control
- Outage Management
- DSM
- System Metering
- Customers metering
- Data management
- System performance
- Reliability

Supporting Processes (RED & Wires)
- Data gathering
- Network analysis (including losses)
- Geospatial load forecast
- Refurbishment planning
- Develop network master plans
- Develop CAPEX plans
- DUoS charges
- Develop guidelines standards and procedures
- New technologies
- Process improvement

Supporting Systems and data management

Risk management
Current Network Configuration Potential
Potential ESI Trading Model

LEGEND:
A. NEPS rates including approved levies
B. Existing and new NPAs
C. Purchases from embedded generators at approved rates
D. Inter RED and munic purchases in accordance with approved methodologies including levies
E. Payment to RED for wheeling of energy to contestable customers
F. Bundled retail tariffs
G. Purchases from Eskom Retailer at approved rates
H. International sales and purchases
Value Proposition

In line with best practices, the business model for the future REDs will allow for:

- Focused staff development and staff retention
- Focused customer attention
- Effective asset management
- Optimal resource and asset utilisation
- Strategic and Operational flexibility
- RED specific requirements
- Clear accountabilities
- Good governance
Readiness Progress to Date

Enabling Legislation

- On 07 September 2007 the Municipal Fiscal Power and Function (MFPF) Act was promulgated which covers the Surcharge principles which will be applicable to ensure a revenue flow to Local Authorities for services rendered within their area of jurisdiction.

- Significant progress by DoE in terms of the RED Establishment Bill and the framework was tabled at Cabinet on 16 April 2008.

- Asset Transfer Framework promulgated and National Treasury issued the final regulations in August 2008.
Readiness Progress to Date
Staff Transfer to the REDs

- Establishment of the Transitional Labour Relations Structure (TLRS).
- Approval of the retention of the pension tax exemption which are applicable to specific municipal staff.
- Agreement at TLRS level on the following:
  - Regional Transitional Labour Relations Structure
  - Transfer of employees to the REDs
  - Placement and migration of employees within the REDs
Readiness Progress to Date

RED Establishment

- On 25 October 2006 Cabinet reconfirmed the restructuring of the EDI and the establishment of six wall to wall REDs as an end state model
- Business model developed
- Industry financial model developed
- RED establishment framework developed
- Detailed RED viability analyses completed
- Proposed governance, compensation and asset valuation frameworks developed
- DEAL issues identified
- RED establishment governance structures rolled out
- 147 of the 175 electricity distributing municipalities have signed the accession to the cooperative agreement
- 11 municipalities are ringfenced
- Eskom Distribution is 98% ringfenced
- 56 municipalities in the process of being ringfenced
- Business plan and strategy developed to address the distribution asset management turnaround.
Conclusion

- Future REDs will require competent leadership and effective management.
- There is a compelling case for the EDI restructuring and it is essential that the RED establishment programme be accelerated in the interest of the customers, the economy business stability and current employees.
- The EDI cannot be successfully restructured without the support from the key stakeholders, or at the cost of the current asset owners.
- The environment is ready for the EDI restructuring and there is sufficient stakeholder support to move forward with the restructuring programme.
THANK YOU

www.ediholdings.co.za