An introduction to the power sector reform programmes in Nigeria, South Africa and Lesotho

Only recently has Africa begun to undertake the reform of its power sector, after many years of under-investment, typically by state-owned vertically integrated monopolies. The ineffectiveness of these companies and the need to attract investment from the private sector, local and foreign, has motivated the reform programmes now ongoing in various parts of the continent. The various reform programmes have also been undertaken to achieve specific local objectives. This article describes the current programmes in Nigeria, South Africa and Lesotho, with which CMS Cameron McKenna has been involved.

In Nigeria, the main problem has been the lack of electricity caused by many years of under-investment, while in South Africa, the reform programme seeks to aggregate the multiplicity of distributors many of which were not viable entities. In Lesotho, the government is motivated by the need to improve access to electricity. This article discusses these reform projects individually before drawing some conclusions from the various experiences.

Nigeria – turning the lights on

The National Electric Power Authority (NEPA) is the state-owned vertically integrated utility operating in the Nigerian electricity supply industry (ESI). For several years Nigeria has been hampered by a highly inefficient power sector caused by many years of under-investment. Only an estimated 36 percent of the population has access to electricity. The basic system requirement is approximately 2800 MW and actual available capacity as at January 2002 was 2846 MW, leaving the system with virtually no reserve margin. This available capacity is less than one half of the nominal installed capacity of 6,000 MW.

Demand projections for power in 2005 and 2010 are 9,780 MW and 20,000 MW respectively. Estimates are that over 1.2 billion US dollars of new investment is immediately required to rehabilitate the existing generation facilities. Further investment is also required to build new generation stations to meet the projected demands.

Significant investment is also required in the transmission and distribution sectors. Overall, transmission and distribution losses are in the range of 30-40 percent of the total power generated. In the transmission sector, almost 2 billion US dollars of new investment is needed over the next 10 years, while in the distribution sector an additional 2.4 billion US dollars is required merely to rehabilitate the existing facilities. The Nigerian Government, with its many responsibilities in the other sectors of the economy, is not in a position to fund the development of the power sector on this scale.

Reform programme

The plans for the reform of the sector are founded on the need to create an environment conducive to private sector investment. The reform plans are outlined in the Government's power policy document, which has been translated into a legal instrument in the form of the Electric Power Sector Reform Bill currently before the legislature. The planned reform of the sector is divided into three phases.

At the beginning of the first phase, a 100 percent state-owned Initial Holding Company (IHC) is created and vested with the assets and liabilities of NEPA. This company co-exists with Independent Private Power generators (IPPs), with whom NEPA has signed Power Purchase Agreements (PPAs).

The new National Electricity Regulatory Commission (NERC) is also created in this stage. The creation of this independent regulatory body is fundamental to the reform programme and the objective of attracting private sector investment. The need for the independence of the regulatory body in order to build investor confidence is recognised in the manner by which the members of the Commission are appointed and dismissed as well as the manner in which the Commission is to be funded under the provisions of the Bill.

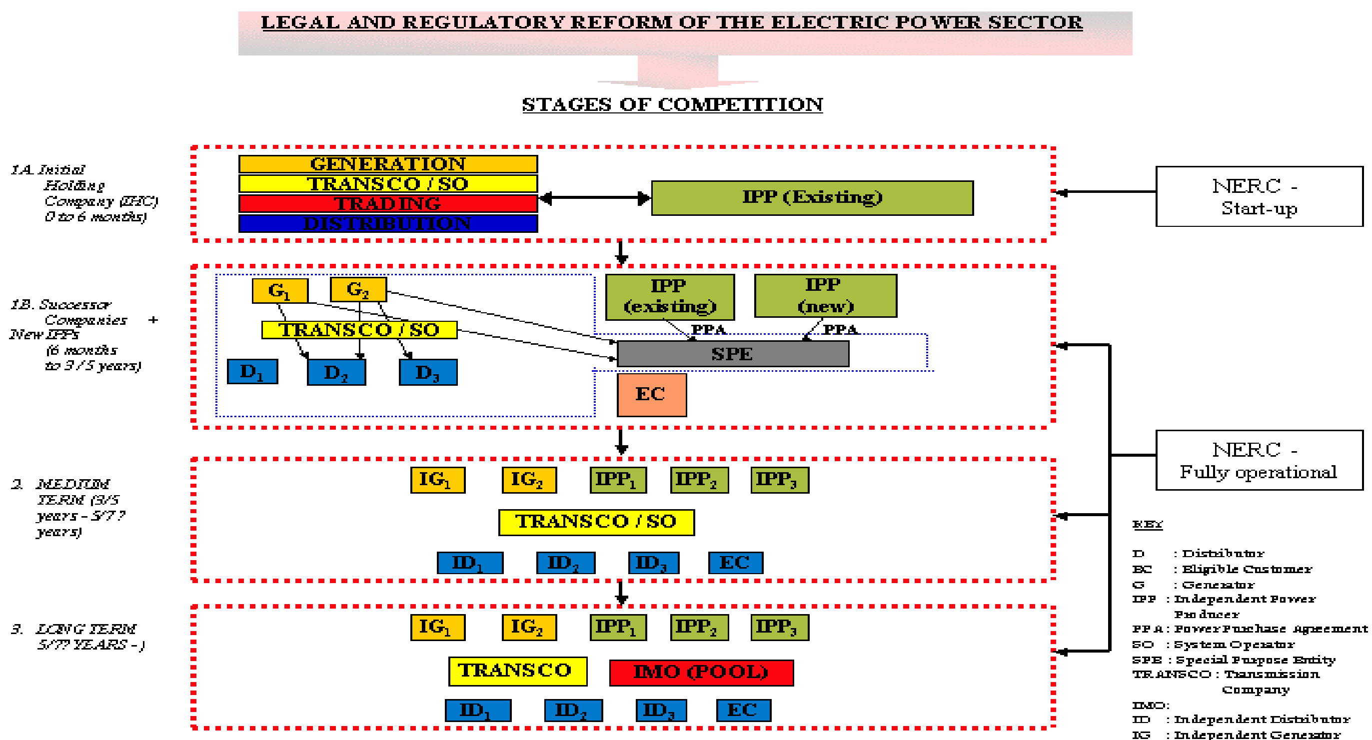
Successor companies are also incorporated in this phase for the purpose of assuming the assets and liabilities of the IHC. These companies will have powers to carry out the functions relating to the generation, transmission, trading, distribution and bulk supply and resale of electricity, and cross-ownership is strictly prohibited. The Federal Government would, initially, hold the shares in the successor companies and these

would gradually be privatised. A Special Purpose Entity (SPE) would also be created for the purpose of procuring the electricity generated by the successor generation companies as well as the IPPs.

In the second, medium-term, phase, the privatisation of the successor generation and distribution companies would have largely been completed, while the successor transmission/dispatch company is left in the hands of the Federal Government. The phase is characterised by competition among generators; by energy trading between generators and distributors, primarily on the basis of bilateral contracts; and by the payment by generators of the full market price for natural gas and other fuels.

The final, long-term, phase involves the establishment of a wholly competitive market, characterised by the economic pricing of electricity to cover the full costs of supply; and by the opportunity for large industrial consumers to choose suppliers in a well-developed wholesale market with formal rules and procedures.

The diagram below graphically illustrates the Nigerian reform programme:



South Africa – rationalising distribution and supply

Distribution of electricity in South Africa is currently carried out by a number of entities. ESKOM, the large, vertically integrated, utility, is a major generator, transmitter and distributor, supplying electricity to an estimated 40 percent of electricity customers in the country. In addition, there are a total of around 250 municipalities, as well as a few private distributors, also undertaking electricity distribution in the country.

Some of the issues that limit the ability of the sector to serve its customers in the most effective and efficient manner have been identified by the government in its Electricity White Paper of 1998. These include the fragmentation of the industry, as over 120 municipalities supply to fewer than 1000 customers and more than 90 municipalities earn less than 1 million Rand per annum (10.07Rand = 1 US dollar as at July 5 2002). Further, there are substantial differences in the financial strength of the municipal distributors. Other problems identified in the White Paper include: a wide disparity in prices paid by the various customer sectors, which cannot be fully explained by the costs associated with supplying electricity to these sectors; the inability of many of the small distributors to capture economies of scale, skill and specialisation; and the incapacity of the poorer regions to fund their electrification needs.

The issues outlined in the White Paper, together with subsequent Cabinet decisions, form the basis of the current distribution sector restructuring policy of the Government of South Africa.

The distribution sector reform programme

The objectives of the reform programme are to:

- ensure agreed-to electrification targets are met;
- provide low-cost electricity;
- facilitate better price equality;
- improve the financial health of the industry;
- improve quality of service and supply;
- foster proper co-ordination of operations and investment capital; and
- attract and retain competent employees.

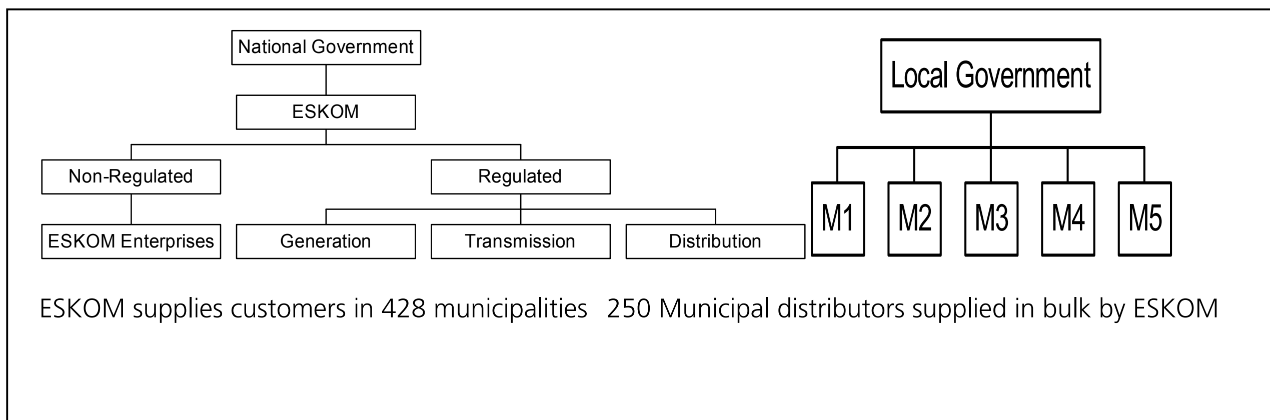
The main policy strategy to achieve the objectives was to amalgamate and consolidate the distribution entities into a maximum number of financially viable Regional Electricity Distributors (REDs). CMS Cameron McKenna was a member of a consortium led by PricewaterhouseCoopers (PwC) chosen to advise the South African government on the detailed policy issues related to the restructuring of the electricity distribution industry and was also responsible for preparing the Electricity Distribution Industry Restructuring Bill (the EDIR Bill) and other legal documents needed to facilitate the policy objectives.

The reform structure chosen was the establishment of a company – the Electricity Distribution Industry Holdings (Proprietary) Limited (EDI Holdings), which would, in turn, incorporate subsidiary REDs created from the amalgamation of ESKOM and relevant municipal distribution entities. EDI Holdings is being incorporated under South African company law as a limited liability company and its shares wholly owned by the national government.

The PwC consortium recommended the establishment of six REDs, which was approved by the South African Cabinet. The proposed REDs were chosen based on the criteria of balance, implementation costs and financial independence. Each RED would have a mix of urban and rural customers, with each RED being anchored on at least one significant urban load centre. There would also be equilibrium of domestic load across the REDs, although industrial load would be more widely dispersed. A balance of income per household is also achieved under this structure. Finally, financial analysis also indicated that the six REDs were capable of independent financial viability in the long term as well as during the first few years of transition.

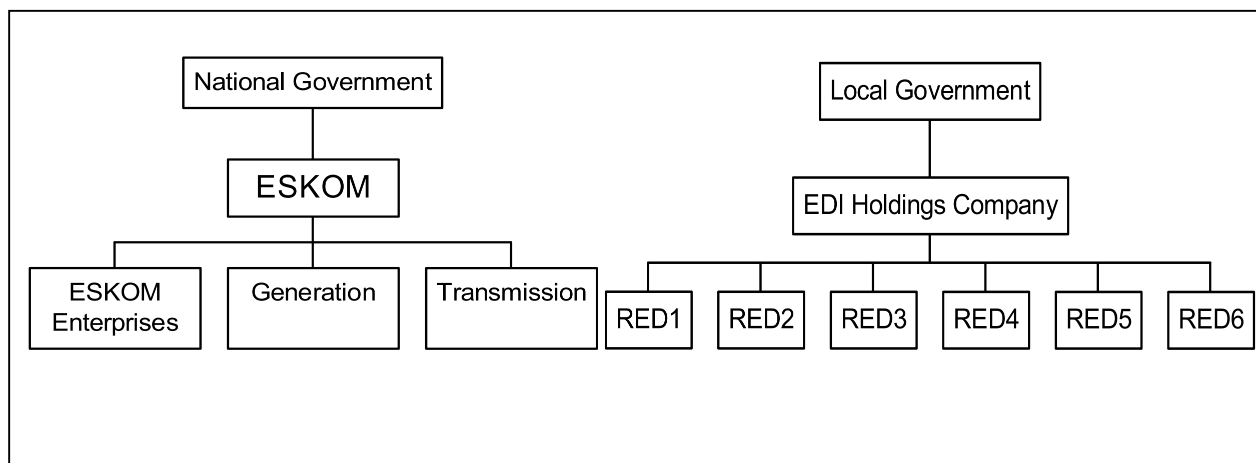
The EDIR Bill provides for the mechanics for the transfer of the employees, assets, liabilities, rights and obligations of ESKOM and the relevant municipalities to the six REDs. It also provides for the introduction of retail competition, or customer choice, for certain customers. In addition, the EDIR Bill provides for: regulation making power for the purposes of customer protection; the conduct of affiliate relationships in the EDI; and the inclusion of relevant tariffs in the licences. The diagrams below show the structure of the South African EDI Pre and Post Restructuring.

Current status of the South African electricity distribution industry



Adapted from "Call For Proposals – The Electricity Distribution Industry Restructuring Project"

South African electricity distribution industry post-restructuring



Adapted from "Call For Proposals – The Electricity Distribution Industry Restructuring Project"

Lesotho – focusing on rural electrification

The Lesotho Electricity Company (LEC) was created under the Electricity Act of 1969, with the power to undertake all tasks related to the generation, transmission, distribution and supply of electricity in Lesotho. Although the LEC has some generation facilities, most of its power is purchased from the Lesotho Highland Development Authority (LHDA) and ESKOM.

In recent years, the operations of LEC have been characterised by: substantial technical and non-technical losses; substantial financial losses as a result of a total collapse of its billing system in 1997; high operating costs and unsustainable investment programmes; lack of accurate data regarding its customer database; inability to expand the network in response to the increasing demand for electricity; and overstaffing (it is estimated that the company employs double the number of staff required for a utility of its size). The effect of the above is that only an estimated 20,000 households out of 400,000 have access to electricity.

Reform

The Lesotho electricity supply industry reform plans are motivated primarily by the need to expand access to electricity in urban and rural areas, and, to a lesser extent, the need to improve affordability, reliability and the quality of service.

CMS Cameron McKenna was chosen as a member of a consortium, led by KPMG Consulting and its principal contractor IPA Energy Consulting, to advise on a privatisation strategy for LEC and to draft and finalise the legal and regulatory documentation required for the effective implementation of the new legal and regulatory framework outlined in the recently passed Lesotho Electricity Authority Bill 2000 (the LEA Act). This Act established the Lesotho Electricity Authority (LEA), which is empowered to regulate and supervise activities within the electricity sector. The Act also makes provision for the restructuring and the development of the electricity sector in Lesotho and for connected matters.

The government has also appointed a private sector management team (the Interim Management Task Force (IMTF)), to manage LEC for 18 months and to bring the performance of the business into line with normal electricity utility principles in the period prior to privatisation.

Privatisation of LEC

As indicated above, the Government of Lesotho had a variety of objectives when it chose to undertake the privatisation of LEC. The first priority objective was to maximise future investments to stimulate access to electricity, which in turn will stimulate GDP growth and alleviate poverty. The second category of objectives included the minimisation of future tariffs, within the constraints of LEC self-sufficiency; the introduction of efficient commercial, financial and technical business practices to ensure safe and secure electricity provision; the reduction of the financial burden on the State; and the improvement of customer service. The final objective, in terms of priorities, was to maximise sale proceeds.

This ranking of objectives is reflected in the unique sale mechanism which the KPMG consortium is recommending, whereby LEC would be sold pursuant to a fixed price bidding process, in which the key bid variable would be the number of connections to be made over a 10 year period.

The privatisation strategy would require the formation of a new company, LEC (Pty) Ltd, the shares of which would initially be 100 percent owned by the Government. LEC's business, including its assets, liabilities and employees would be transferred to LEC (Pty) Ltd. by way of a statutory vesting notice. Subsequently, approximately 70 percent of the shares of LEC (Pty) Ltd. would be sold - the majority to a core/strategic investor, with a small number to be sold to the employees of the company.

In addition, the transmission assets of LHDA would be transferred to LEC (Pty) Ltd., while the National Control Centre (NCC) function would be retained by the Government to foster independent generation. LEC (Pty) Ltd. would operate the NCC under a 10-year concession. A pre-privatisation tariff rise is also planned and, for five years following privatisation, the tariffs would be adjusted for inflation and changes in prices from ESKOM. Subsequently, tariffs would be periodically adjusted by the LEA, to reflect the actual costs and investments made.

Concluding remarks

All of the reform programmes in these countries are relying, to some extent, on international as well as local investors. International investors currently have numerous privatisation opportunities worldwide and the present climate for investment appears unhealthy. The countries that will attract investment are those that offer a climate of stability and security in their legal and regulatory arrangements. Nigeria, South Africa and Lesotho appear to be on their way to achieving this objective.

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