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RESTRUCTURING SOUTH AFRICAN ELECTRICITY SUPPLY INDUSTRY

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**Submitted to the University of Cape Town in partial
fulfilment of the requirement for the degree of
Masters of Philosophy in Energy Studies.**

University of Cape Town

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DECLARATION

I declare that this dissertation is my own original work. It is being submitted to the University of Cape Town in fulfilment of the requirements for the degree of Masters of Philosophy in Energy Studies. It has not previously been submitted at any other university for degree or examination purposes

EM Tinto

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University of Cape Town

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ABBREVIATIONS AND ACRONYMS

ABSA	Allied Bank of South Africa
ANC	African National Congress
AHI	Afrikaanse Handelsintituut
BEE	Black Economic Empowerment
CC	Competition Commision
CCGT	Combine Cycle Gas Turbine
CEGB	Central Energy Generation Board
CEO	Chief Executive Officer
COSATU	Congress of South African Trade Union
Dishold	Distribution Holding Company
DME	Department of Minerals and Energy
DPE	Department of Public Enterprise
DTI	Department of Trade and Industry
EdF	Electricit'e de France
EDI	Electricity Distribution Industry
EIUG	Energy Intensive Users Group
ESI	Electricity Supply Industry
ESKOM	Electricity Commission
GEAR	Growth, Employment and Redistribution
GWh	Gigawatts per hour
IEA	International Energy Agency
IMF	International Monetary Fund
IPPs	Independent Power Producers
LPG	Liquified Petroleum Gas
MVA	Mega Volta Amperes
ME	Minerals and Energy
NAFCOC	National Federation of Chamber of Commerce
NER	National Electricity Regulator
NFA	National Framework Agreement
NUM	National Union of Mineworkers

NUMSA	National Union of Metalworkers of South Africa
OECD	Organisation of Economic Co-operation and Development
RDP	Reconstruction and Development Programme
RECs	Regional Electricity Committees
REDs	Regional Electricity Distributors
SACOB	South African Chamber Of Business
SAMWU	South African Municipality Workers Union
SMMEs	Small Medium & Micro-Enterprises
SAPP	Southern African Power Pool
SO	System Operator
SOEs	State-Owned Enterprises
Tx	Wires
UNDP	United Nation Development Programme
UK	United Kingdom

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CHAPTER ONE

1.1 INTRODUCTION.

1.1.1 Objectives

The primary objective of this dissertation is to describe and analyse the proposals from different stakeholders since government called for the restructuring of the electricity supply industry (ESI) in South Africa. Secondly, this will also identify areas where there is convergence and divergence between the positions of these stakeholders. Finally, the dissertation will attempt to understand the reasons for the shift in the positions of stakeholders.

1.1.2 Scope

The dissertation begins with the debate between role-players in the ESI, following publication of a Draft White Paper on Energy Policy, and the invitation by the Portfolio Committee on Minerals and Energy for submission of proposals. Subsequent to the debate that was conducted under the auspices of this committee, the Department of Minerals and Energy released a White Paper, on Energy Policy of the Republic of South Africa in December 1998. The White Paper, 1998 created a broad framework for energy policy, including the policy for energy sub-sectors such as electricity which still needed to be developed. The debate still continued and the conventional conviction is that the White Paper was a vision or mission statement about the ESI. After the finalisation and release of the White Paper the debate was about the fulfilment of the vision, especially from the side of government. In simple terms, in the White Paper government declared its vision on energy provision but this declaration was not a detailed plan of action. Only once the White Paper was published did government begin to define the process it envisaged. This dissertation focuses primarily on the supply side of the electricity sector, i.e on generation and transmission. Policy developments in electricity distribution are referred to only to the extent that they impact on general ESI market structure.

This introductory chapter will outline the historical background to policy developments in the ESI, the influence of international trends in ESI policy formulation, the range of stakeholders involved in South Africa's ESI, and the thesis outline.

1.2 HISTORICAL BACKGROUND

The change in the political environment in South Africa from an undemocratic racial minority government to a democratic political climate governed by the will of the majority signalled the beginning of a new era in South Africa's political and socio-economic development. Policy processes were re-oriented to support the newly established political lexicon. The first document to address social imbalances and economic development, an integrated policy framework which emulated Keynesian economic philosophy, was promulgated in 1994 as the foundation of the new era. This policy framework called Reconstruction and Development Programme (RDP) appeared as the basis of the ANC's election platform in 1994 focusing on the economic and social development of the poor or disadvantaged. In 1996, the RDP was supplemented by an investor-friendly macro-economic policy known as GEAR (Growth, Employment and Redistribution). Its primary aim was to create macro-economic conditions that would encourage economic growth. The energy policy therefore was developed in such a way that it would contribute not only to the RDP but also to the aims of GEAR.

1.2.1 Reconstruction and Development Programme

A brief explanation is required to cover the shift in national policy from RDP to GEAR. RDP was an election manifesto of the African National Congress (ANC). It is a document or set of policies focused on redressing social, political and economic inequality in South Africa including class, race and gender. The RDP became official government policy and "was described as an integrated, coherent socio-economic framework which outlined broad policy objectives in a number of sectors including energy" (Van Horen and Simmonds, 1998: 894). The goals of the RDP included *inter alia* provision of 2.5 million electricity connections to low income households

between 1994 and 2000 which would have increased the level of access from 36% to 72%, and secondly, it aimed at the construction of one million low cost houses over the same period.

It was indeed a Keynesian programme: “core to this programme were increases in government expenditure and decreases in taxation – both measures would increase the government deficit” (Le Roux, 1996: 6). One of the key criticisms levelled against the RDP is that it is so silent on many macro-economic issues. Such critics felt that a progressive macro-economic policy was needed to meet South Africa’s development goals. The silence of the RDP is noted by Van Horen and Simmonds (1998: 894) when pointing out that, “in the nature of broad statements of principle, the RDP was relatively silent on questions of detail and practical strategies required to achieve its goals”. For instance the proponents of the RDP, when questioned about financial requirements, would always argue that the RDP will be financed primarily by better organisation and better allocation of existing funds, by the effective mobilisation of the financial sector’s funds for investment and by an improved tax system” (Le Roux, 1996: 8). Critiques of these arguments led to GEAR, which became the defining macro-economic system for the social and economic reconstruction of South Africa.

1.2.2. Growth, Employment and Redistribution

GEAR was a government strategy to restructure and develop the social and economic nature of South African society. GEAR aims to create wealth and employment on the basis of macro-economic stability. The plan included the promotion of new small businesses to also be created by South African entrepreneurs and the plan was to target industries to be the foundation of wealth and job creation. Anthony Ginsberg (1998,10:221) in *South Africa’s Future* appreciates and depreciates the role of GEAR as the weapon to be utilised in the post-apartheid era. It is stated that GEAR’s aim was to create 126 000 jobs in 1996, 252 000 in 1997, 320 000 in 1998 and 409 000 in 2000. However, GEAR has done little to generate jobs. In 1997 and 1998 the formal sector contracted by an average of 100 000 jobs, inflation and interest rates while new investment has been disappointing.

Many critiques have been levelled against GEAR. For example, it is criticised as a neo-liberal policy and as a conservative programme. It is felt that growth must be export led, government expenditure should be cut and that the role the government plays in the economy should be diminished. It was further criticised as being reactive rather than progressive on the grounds that it undermines rather than facilitates the delivery of RDP (Le Roux, 1996:8). Another central element of GEAR is its proposal of privatisation as one of the drivers for South African prosperity. Reasons for privatisation were to:

- reduce the cost of government;
- encourage foreign investment;
- broaden ownership within the economy, empowering blacks in the process; and
- improve the productivity and efficiency of such vital services as communications and transportation through their management by the private sector.

GEAR is based on ideological principles of the centre-right that articulates the liberalisation of markets. "In respect to the direction of change in macro-economic parameters, GEAR often draws conclusions diametrically opposed to some of the proposals from the left. Central to the macro-economic programmes of the left is a rapid increase in government expenditure, an increase in taxation and in government debt, lower real interest rates, the maintenance of foreign exchange controls, a central determination of wages, inward industrialisation and a developmental state, which plays a more active role in the economy etc"(Le Roux, 1998:3). A crucial reason why many economists give serious consideration to a programme of this nature is the conviction that the world has changed dramatically, that new information technology, the power of multilateral institutions, etc impose constraints on the international environment and that countries have to accept those limitations. Implicit in GEAR is the assumption that to some extent the decisions South Africa make regarding its own markets must be on par with the thinking of international institutions such as the World Bank and the IMF.

The South African energy sector was not left uninfluenced by political, social and economic conditions inherited from the apartheid government. Pre-democratic policy construction in this country was characterised mostly by energy security and self-sufficiency. This approach was necessary because of the oil embargo launched against apartheid state. Eberhard and van Horen (1995) argue that "South Africa's energy policy was developed by a minority government behind closed doors, and was founded principally on energy security concerns in the face of international censure of apartheid". The policy formulation was very secretive and exclusive. In the case of the petroleum industry for example, Marquard and Eberhard (2000: 4) point out that "the liquid fuel industry, comprising foreign oil majors and the synfuel manufactures Sasol (wholly state-owned through Industrial Development Corporation until 1979, the state retains a small share), and Mossgas (wholly state-owned), was from the late 1960s beset by a formidable cluster of regulations that made it an offence for anyone to even discuss the source of our oil supplies (punishable by a significant prison term)".

The electricity sector was also influenced by the policies and regulations of the racial state. Most of the white population and only a minority of blacks had access to electricity. The highly sophisticated coal-based technology in this industry rescued South Africa in those years of economic embargo. The NER (2000a: 54) points out that "the business of electricity supply is inherently technology intensive. ESKOM actively seeks out innovative technologies and tries to manage these existing technologies in order to reduce the real price of electricity, protect the environment and improve the quality of supply and customer service over the long term". However, in that endeavour the needs of the majority as well as the challenges of global competition were not addressed until the fall of apartheid when South Africa was re-integrated into the global economy.

Crucial acknowledgement of the movement to democracy is the transparent, non-discriminatory and greater participation of stakeholders in policy debates. The White Paper on Energy Policy released in December 1998 was indeed symbolic of the new

political era, because it had involved an unprecedented number of stakeholders, and the debate was conducted in an open fashion. This was especially evident in the tabling of the draft Energy White Paper on which all role-players commented and made proposals. For the electricity sector these debates undeniably shaped the direction of South African ESI.

1.3. INTERNATIONAL CONTEXT

The South African energy sector is still affected by international pressures, but in a different form and this compels the domestic government to rethink and review their policies. For instance, ESI's are being restructured all over the world and that implies and enables the redefinition and restructuring of the role of the state. World-wide there is a greater emphasis on competition and the introduction of privatisation. South Africa, not immune to these forces, is beginning to respond to these world-wide developments and the South African government is proposing to restructure the ESI. In simple terms, this is about changing the ownership and governance of state-owned enterprises so as to introduce competition and new ownership. This means opening the ESI to local and global competition that will hopefully yield economic and financial benefits, which are not found in the present monopolistic practices in the industry. Moreover, consumers will be protected while productive economic capacity is built. Acknowledging the England and Wales electricity model after radical transformation from a state-owned, state-controlled, integrated structure to being a privately owned, autonomously regulated and unbundled structure, the World Bank (1996: 84) points out some other pioneering countries and actions, including the following:

- Unbundling supply systems, with many wholesalers and retailers serving the power market (Finland, the Netherlands, and Norway).
- Competition in wholesale market (Chile, but cost based rather than price based).
- Competition through periodic bidding for long term contracts to supply distribution companies and large power users through independent power projects developed with limited resource financing (USA).
- Formal sector regulation (USA).

- Private ownership of power supplier (Finland, the Netherlands, Norway, the Phillipines, USA, Venezuela).

1.4 STAKEHOLDERS

This thesis considers the various policy positions of the different stakeholders in the electricity industry in South Africa. The most important stakeholders are the government, state-owned utility (ESKOM), labour, large electricity consumers and business.

Government initiated this reform process. The Department of Minerals and Energy (DME), Department of Public Enterprises (DPE), National Electricity Regulator (NER) and Cabinet broadly represent government's position. The DME and DPE are the two institutions responsible for the development of clear policy guidelines for the restructuring of the ESI. They share the same vision of reform for this industry by introducing the philosophy of managed liberalisation. DME is eager to maintain its goals to deliver social infrastructure (social responsibility) and DPE is doing its best to restructure state-owned assets.

In policy development process within the ambits of the electricity industry, the role of the Cabinet and NER is crucial. For instance, policy proposals are taken to the Cabinet via its Economic Policy Committee, which also includes Treasury and the Department of Trade and Industry (DTI); and final policy proposals are approved by Cabinet. On the other hand, the NER regulates the industry within the government policy guidelines. However, it also has a legal mandate to advise government on policy issues.

Another crucial role-player in the electricity sector is ESKOM. With regard to the ESI ESKOM's position is inconsistent and elusive, in the sense that it is extremely difficult to get hold of ESKOM's standpoint in this regard. It is however premature to state ESKOM's viewpoints because later in this dissertation there will be an analysis of this state utility's proposal. It is important to highlight that in these imminent

reforms, ESKOM is playing a major role and is fully committed to the social and economical upliftment of historically disadvantaged communities. As its chairman Reuel Khoza (2000:12) stated “ we see ourselves as playing a significant role in facilitating the creation of employment opportunities for our people. We support the advancement of entrepreneurship, which creates employment for our communities, thereby creating wealth for our country”.

Labour’s perspective, represented by the Congress of South African Trade Unions (COSATU) is contrary to that of government. COSATU is a large labour organisation with many affiliates - in the context of electricity reforms, relevant affiliates are the South African Municipal Workers Union (SAMWU), National Union of Mineworkers (NUM) and National Union of Metalworkers of South Africa (NUMSA).

In this debate over power sector reforms, business and large consumers of electricity must be considered, as they are stakeholders playing a critical role in this industry. The Afrikaanse Handelsinstituut (AHI) will represent the commercial world and the organisation of large consumers of electricity, and the Energy Intensive Users Group (EIUG) will broadly represent intensive users of electricity.

1.5 DISSERTATION OUTLINE

This dissertation will present and analyse electricity policy areas where there are convergent views and those areas where there are differences. There is a noticeable shift in the position of some of the role-players since the invitation to comment on the draft Energy White Paper. The next chapter will introduce key concepts of the debate including restructuring, competition, privatisation and regulation. The third chapter scrutinises the government’s point of view with regard to ESI transformation. The fourth chapter gives the perspective of ESKOM, and in the same chapter, areas of consensus and divergence will be shown. The fifth chapter presents labour’s view that is COSATU, representing its affiliates NUM, NUMSA and SAMWU. The sixth chapter presents the suggestions from the Energy Intensive Users Group, and part of the business sector is represented by the AHI (other commercial organisations such as

SACOB and NAFCOC are not formally covered). The last chapter presents conclusions.

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CHAPTER 2

KEY CONCEPTS IN THE REFORM OF THE ELECTRICITY SUPPLY INDUSTRY

The objective of this chapter is to identify and elucidate principal concepts which drive the debate about the reform and redefinition of the electricity sector. Unsurprisingly, the major concepts, which are universally considered when anticipating transformation, include restructuring, competition, ownership, privatisation and regulation. It is impossible to by-pass one of these key concepts when a country reforms its public utility electricity industry.

2.1 A BRIEF BACKGROUND

All over the world the electricity industry is undergoing dramatic and rapid changes where the role of the state is redefined. It has been highlighted clearly that the “electricity supply industry world-wide, and in many Organisation for Economic Co-operation and Development (OECD) countries in particular, has been subject to reform and change for more than 15 years. Driven by political and economic considerations, a number of member countries have introduced significant structural, institutional and regulatory changes and have drastically transformed their ESI’s” (IEA: 1994b:13). History has shown that the dilemmas with regard to issues such as structure and ownership, are not unique to the electricity industry alone. Dealing with these dilemmas is an integral part of all network infrastructure industries such as electricity, telecommunication service, natural gas and water pipelines which are perceived as a public good controlled strongly by government regulation. These are enterprises which enjoy certain privileges and rights in exchange for providing a guaranteed supply.

Klein (1999:43) explains the nature of these industries when he points out that “some types of networks, such as water pipelines, railroad tracks and power transmission lines, exhibit technical characteristics which appear to make them natural monopolies. In other words, it would be a waste for society to have several parallel networks of this type compete with each other. In fact if they were competing, only one firm

would eventually survive". The salient fact is that the rights and privileges these industries enjoy, especially electricity, protect them from competition with other suppliers. Although electricity competes with other forms of energy, electricity is differentiated from other forms of energy by the following features, which also affect its production, transportation and sale.

- it is not a primary source of energy – it is produced by the transformation of other sources of energy;
- it cannot be stored economically in large quantities;
- it can be transmitted over fairly long distances, but this requires capital intensive infrastructure; and
- it is a clean form of energy at the end use point, although it has environmental consequences in generation and transport. (IEA: 1994a)

The first challenge for the ESI is to deliver a constant supply of electricity to the consumers. Electricity grids are dynamic and complex systems, which require careful management of the demand and supply. As electricity performs a vital role in modern life, for accessing communication as well as in household and industrial applications, the ESI indeed has an obligation to serve its consumers reliably, cost-effectively and with a very high standard of quality. Although government plays its role of policy setting, regulation and ownership of state owned enterprises, the poor efficiencies of these monopolies became the most questionable aspect of the ESI. Some argue that electricity cannot be put at risk or denied to the poor or to customers in remote areas and therefore it is extremely important that it is protected from competitive and private forces who may set their own agenda. The other view is that although the electricity industry has its own characteristics, it should nevertheless be treated like other energy commodities like oil and gas and be subject to the rules of competitive markets. "The emerging and dominant view is that where market conditions are properly nurtured, competition will bring about economically efficient behaviour in investment and consumption" (IEA, 1994a:13). Recent views articulate the trend towards market liberalisation, which is a challenge not only for electricity but for all traditional utility structures. In this open market system the concepts such as those

mentioned initially, like restructuring, became critical for reforms of the ESI transition.

2.2 STRUCTURE

The ESI has five components as shown in Figure 1.

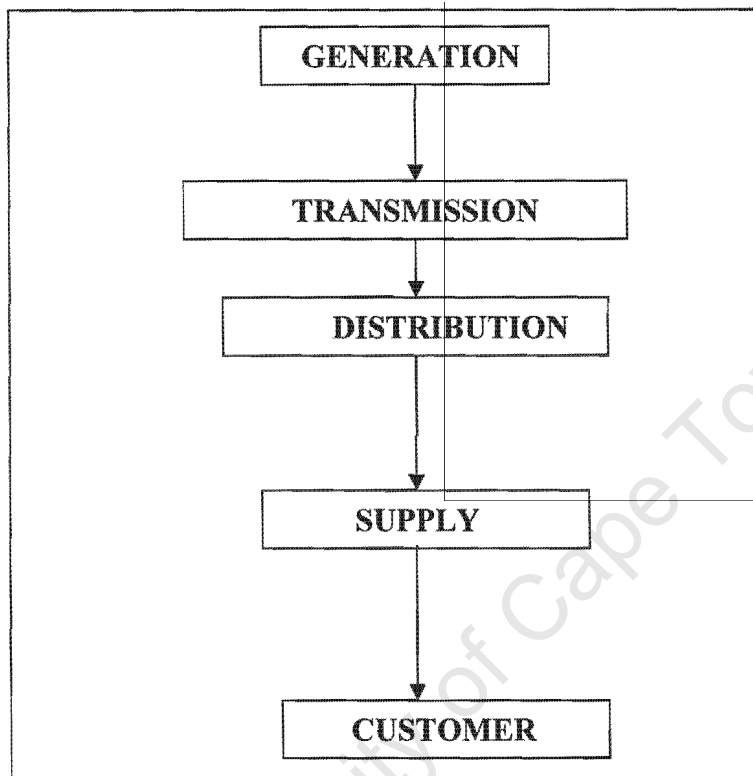


Fig 1: Components of the electricity sector

The ESI is accordingly characterised by the following functions (which are sometimes referred to as components or stages of the value chain):

- *Generation or production:* where electricity is produced in power stations including capacity planning and generation investment planning.
- *Transmission:* where electricity is transported at high voltage over long distances and where the overall system is controlled.
- *Distribution:* Where electricity is taken at lower voltages over short distances to end –users or delivered to the final consumer.

- *Supply (merchandising)*: Where an electricity service is sold to customers.

In the generation sector possibilities of competing generation companies are very high. The same can also be said for the retail/supply of electricity. Transmission and distribution may be considered as natural monopolies. From an economic viewpoint it is more efficient to have only one set of transmission and distribution facilities. "A natural monopoly situation presents a public policy dilemma: we want firms to produce output at minimum costs, but in a natural monopoly situation this implies having only a single firm, which in turn implies that we are unlikely to get competitive price" (Joskow and Schmalensee, 1985:30).

2.2.1 *Vertical integration*

An electricity firm or company is said to be vertically integrated or vertically structured if it is responsible for, owns or controls all the functions of the value chain from generation to delivery to the consumer. Vertical relationships were common to the electricity sector in the past, although there is now a trend to vertical disintegration or unbundling, particularly in the industrialised world. When the structure is vertically disaggregated, generation, transmission, distribution and even retail are the responsibility of different agents who may not own the whole of the supply chain. "At the extreme economies of scale, economies of scope, and economies of vertical integration, combined with economies of scale in an input or output market may make it most sufficient for single firm to serve a particular market or to produce a particular set of products" (Joskow and Schmalensee, 1985:29). The terms "economies of scale", "scope" and "vertical integration" are critical in the vertical integrated electricity utility. Economies of scale means declining average costs when output increases, and economies of scope means different functions can be more efficiently performed by the same organisation. Vertically integrated electricity industries can be found not only in South Africa but in many countries in Africa and also in France.

2.2.2 Horizontal integration

Horizontal integration implies that the same function (e.g generation) is undertaken by a single firm i.e a monopoly situation. If we unbundle horizontally and a number of firms are competing for the production of electricity then we have a competitive electricity market. This trend is seen in countries such as England and Wales. "In the 1989 restructuring of the British ESI, the power stations in the England and Wales previously owned and operated by the Central Electricity Generation Board (CEGB) were divided among three new independent generating companies: National Power, Powergen, and the publicly owned Nuclear electric" (IEA, 1994a:28).

2.3 RESTRUCTURING

It has been stated that the transition of the ESI from state controlled to market- driven enterprise is taking place all over the globe. World-wide, countries are starting to restructure and review their power supply. A point to note is that there appears to be a geographical/political split between fast and slow reformers. The degree and direction of restructuring differs from country to country and are driven by very different objectives and policy considerations. In South Africa, for instance, the government's aims in restructuring are to:

- improve social equity by specifically addressing the energy requirements of the poor;
- introduce competition into the industry, especially the generation sector;
- permit open, non-discriminatory access to the transmission system; and
- encourage private sector participation in the industry (DME, 1998:49).

It is evident from the above objectives that South African ESI restructuring should entail new, creative, diverse strategies to authentically benefit the consumers of electricity and further increase state revenue. Government is fully expressing its determination to improve and modernise the ESI and the entire electricity sector. Structural reform aims to make state owned enterprises (SOEs) play a decisive role in contributing to the realisation of low energy prices, electrification, reliability of electricity supply and energy efficiency.

Restructuring, or changes to the structure of the ESI, can involve vertical unbundling (i.e. separating generation, from transmission, distribution and supply), and horizontal unbundling (i.e. breaking up generation into competing power units).

2.4. COMPETITION

It is now widely accepted that competition is possible in the generation and in the supply/retailing of electricity. On the other hand, the transport of electricity via the transmission and distribution lines is generally regarded as a natural monopoly. Pioneers of this philosophy believe that markets function efficiently when a sufficient number of firms exist for market prices to be determined competitively. In selling electricity it is vitally important that competitive generators are present. "Competition encourages efficiency by allowing consumers to purchase from lowest cost suppliers, it achieves *productive efficiency* by encouraging firms to minimise their costs and *allocative efficiency* by bringing consumers demands in line with the marginal cost of supply" (Kay, 1994:5). This trend of widening the scope of competition is now common in many industrialised countries and developing countries are following this route.

2.4.1 Criteria for competition

In order for a climate for a competition to be created, five conditions need to be in place: vertical unbundling, horizontal unbundling, free entry, a set of electricity trading mechanisms, and regulatory capacity.

2.4.1.1. Vertical unbundling

It was stated in the preceding discussion that the first step in privatising public utilities is to break up the physical chain of supply so that the competitive elements can be separated from the natural monopoly components. This applies at the wholesale level (i.e the generation of electricity) and retail level (i.e the sale of electricity). The vertical unbundling of the ESI represents a major challenge for market participants. Breaking the structure makes open access to the transmission grid possible and the end result is to give consumers a free choice of electricity supplier.

2.4.1.2 Horizontal unbundling

Establishing a sufficient number of competing generation units is a prerequisite for wholesale competition. A sufficient number of companies ensures that none of them exercise market power. “Each will compete to maintain their utilisation by bidding prices to their marginal costs in an attempt to maintain a contribution to their fixed costs” (NER, 2000c: 3). The same applies potentially to retailers who pay the transmission and distribution companies for their electricity, and then compete with other retailers (suppliers) to provide an electricity service to consumers.

2.4.1.3. Free Entry

The entry of new players to the electricity market is another determinant of competition and it is an important factor in minimising or eradicating market power and encouraging competitive behaviour. Regulators must create viable frameworks or conditions favouring the entry of new actors in the generation of power. The market rules should also be transparent so that investments are not risky. Moreover, there should also be open and non-discriminatory access to the national transmission system.

2.4.1.4 Electricity Trading Mechanism

In addition to vertical and horizontal unbundling, the existence of competing generators and open access to the transmission system, a competitive market requires a set of effective electricity trading mechanisms including a market for bilateral and future contract, a day-ahead spot market and a real time balancing market to make a competitive electricity market.

2.4.1.5. Regulatory Capacity

Regulatory authorities play crucial roles in establishing and maintaining a competitive environment. Monopoly activities in transmission and generation should be prevented by incentive regulation like cost of service which acts as an inducement and contributes to cost efficiency in operation and investment. The regulator should

monitor and be able to intervene in all market-based competitive activities, especially if there are still outstanding and unresolved market mechanisms or market power.

2.5 OWNERSHIP AND PRIVATISATION

2.5.1 Ownership

There is an international trend for ownership patterns to change from integrated state-owned companies to diversified private companies. Changes in ownership can be important in the reform of the ESI. The implication is that the role of the government changes dramatically. Three types of ownership can be identified: wholly public owned systems, a mixture of private and publicly owned systems and wholly privately systems. Public owned electricity enterprises like South Africa's Eskom dominates electricity generation (95%) and transmission and shares distribution and retailing functions with local municipalities. Both are directly controlled by the state. In France the electricity sector is dominated by a state-owned integrated national monopoly, Electricité de France (EdF). Secondly, there are mixed systems as in Belgium, Spain and Norway where there is a mixture of private and public ownership. Finally there are private systems. "The U.K electricity industry has a high proportion of the private ownership though a significant part of the industry remains under public ownership. In the United States 200 out of 3 200 utilities are investor owned, as in Japan, they provide about 75 % of the electricity sold, with remaining 255 coming from 2000 municipal systems, 1000 systems that are co-operatively owned by rural customers they serve, and fewer than ten systems that are under federal or state ownership and control" (IEA,1994a:34).

2.5.2. Privatisation.

Privatisation is the transfer of government owned assets to private investors; it also refers to any policies, processes and activities that introduce the private or business sector or market forces into the sector or into services that were previously under the direct control of the state. Although publicly owned integrated utilities directly or indirectly owned by the state have certain advantages in contributing to public policy objectives, the driver of privatisation is the need to tackle evidence of inefficiency in

areas such as pricing and operation. As Kay notes (1994:8) |“one of the striking consequences of privatisation is the extent to which it has made the behaviour and performance of privatised companies more transparent”.| Electricity market privatisation can play a critical role in promoting foreign direct investment and capital flows, which are vital to a country’s development this was the case in UK in the 1990’s. However, privatisation can also counteract social development and there are situations where it could lead to increases in electricity tariffs. This eventually limits access to those who can afford to pay high service charges.

It is unusual for privatisation to succeed if the electricity sector is non-competitive. Competition is a prerequisite for privatisation. Hunt and Shuttleworth (1996:12) argue that “privatisation is the end point of changes in ownership/management dimension, competition is the end point in the structural dimension”. It could be disastrous to privatise a monopoly if monopoly profits would accrue to private owners. Selling a strategic equity stake in a monopoly situation could also be disastrous as the private partners would in all likelihood block moves towards competition.

2.5.3 Forms of Private Sector Participation

Privatisation of utilities is becoming an increasingly common feature of government policy formulation. Davis (1996) and Eberhard (2000) illustrate various categories of private sector reform. Firstly, the encouragement of independent power producers (IPPs) is a common form of privatisation. These independent companies, often foreign firms, bid for the right to construct and operate new capacity. Incentives to invest usually depend on the signing of long-term power purchase agreements in order to provide the security required for such large-scale investment. Secondly, private sector participation can be through management contracts, where ownership of utility assets remain with the state, but management of these assets is transferred to a private company. Finally, there is commercialisation and corporatisation which is about adopting private sector models or criteria, incentives, and financial objectives without the alteration of utilities ownership. “Government could start treating them like any other commercial enterprise and emphasis then turns to maximising shareholder

value. Corporatisation involves defining shareholding and share capital – often, in the beginning, still owned by the state” (Eberhard, 2000: 6). This initiative is the process assisting the creation of a level playing field and after that restructuring and full privatisation occurs.

2.6 REGULATION

Regulation is a state mechanism to correct market failure. It consists of government laws, rules, licences, agreements and other instruments that control or guide the operation of an economic enterprise. The IEA (1994a) recognises the basis for government intervention when they state that “the absence of competition in monopoly industries has prompted governments to intervene in order to ensure that monopolies do not abuse their power at the expense of customers they serve”. But the role played by government goes far beyond the protection of customers from monopolistic practices; government can also regulate to impose safety, environmental, and other standards.

When reforming the ESI, regulatory intervention is changed so as to be compatible with the prevailing environment. In the South African electricity supply industry’s proposed transformation, it is highlighted that regulation strategies must be changed to incorporate competitive markets. However, regulation cannot be neglected simply because there is competition; regulation is needed to keep that competition in existence.

Lewis (2000), delineates different categories of regulation:

- Competition regulation, which looks at the structure of markets, controls anti-competitive behaviour and reviews mergers.
- Economic regulation which is about codes of conduct that stimulate the behaviour of a company. It implements measures to control monopoly pricing and to ensure appropriate levels of consumer protection through regulatory mechanisms such as cost of service regulation (e.g rate of return) or incentive regulation, which could

involve price or revenue caps, or yardstick or performance-based franchise regulation.

- Technical regulation sets and monitors standards so as to assure compatibility and to address safety and environmental protection and similar concerns.
- Public interest regulation addresses distribution and equity imbalances.

Summary

This chapter has highlighted various key concepts in the transformation of ESI. It is important to note that it is difficult to divorce concepts such as structure, restructuring, competition, privatisation and regulation when redesigning the ESI.

These key concepts are the cornerstone in ESI restructuring because when countries shift from state-owned and vertically integrated utilities to autonomous and unbundled structures one cannot ignore these concepts. Therefore, to any electricity sector restructuring agenda, concepts such as competition, regulation, privatisation, structure and ownership are vital.

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CHAPTER THREE

GOVERNMENT PERSPECTIVE

In the last chapter it was shown that governments are redefining their role because of problems they are encountering in SOEs electricity sector. There is an increasing realisation by governments that national goals can be achieved through ensuring that services are delivered not necessarily by themselves. Government has repeatedly made it clear that emphasis in this juncture must be placed on commercialisation, incorporation and, in some cases, on privatisation. The primary objective of this national agenda is to encourage greater competition in all the industries, like electricity and natural gas that have been regarded for decades as natural monopolies. Global economic development undoubtedly play an important role in these initiatives hence the global reorganisation of electricity markets. This is also one of the reasons the government contemplates the restructuring of the South African ESI.

The post-apartheid era is characterised by a desire to reconstruct the social and economic spheres of South African society, and the ESI undoubtedly plays an important role in that vision. Reforming the structure, introducing a competitive electricity market and changing ownership have been considered by the government. These changes could have direct implications for the economic functioning of the industry and the distribution of economic value generated by it. Government's aim is to increase economic growth simultaneously with accelerating social delivery, and that must be done through upgrading, improving and restructuring key sectors in the economy of which the ESI is one.

This chapter looks at the government's position with regard to the restructuring of the ESI. Government is comprised of various structures in the energy sector, including the Department of Minerals and Energy (DME), Department of Public Enterprises (DPE), Cabinet, and the National Electricity Regulator (NER). Government's position on the ESI was first formulated with the promulgation of the Draft White Paper on the Energy Policy in 1998 and was fleshed out in subsequent White Paper developments, particularly with regard to the ESI. Both the Draft White Paper and the Final White Paper are documents declaring a vision or foundation for the sector, rather than a plan

of action. The developments after the announcement of White Paper on Energy includes further explanations of how to make that vision a reality.

3.1 Present South African Electricity Sector

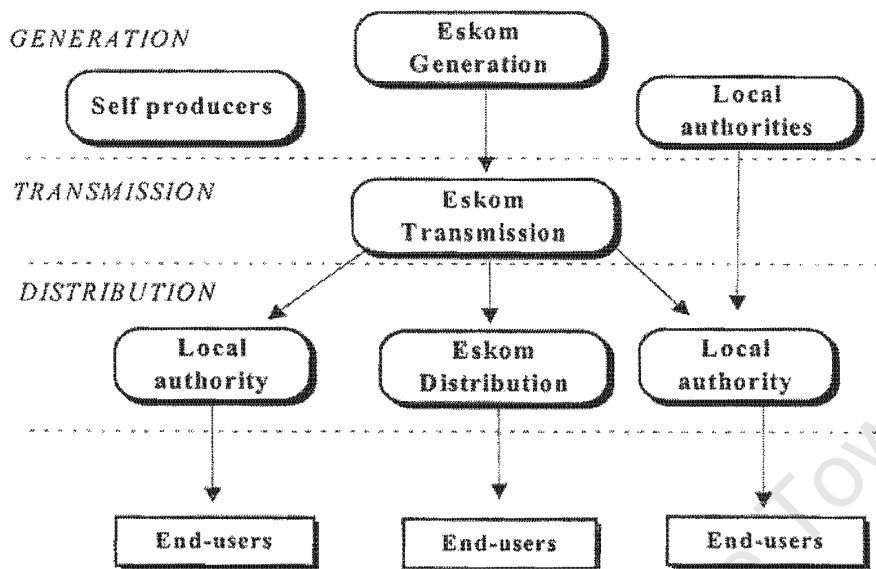


Fig.2: South Africa's Electricity Supply Industry Structure (Winkler et al: 2000:3)

The structure and present situation of the South African ESI looks exactly like the controversial and debatable traditional monopoly model (see Figure 2). Restructuring the ESI is not only justifiable, but critical for social and economic development which is a long-term objective of the new democratic state. Structural changes in the ESI, specifically adopting a trend towards market-based mechanisms is, aimed at improving productive economic efficiency and the equitable distribution of resources to the local population. Current situation will render it extremely difficult for ESI to ensure its anticipated contribution to social and economic development. The Deputy Minister of Minerals and Energy (2000: 1) paints the following picture of the ESI: "The South African Electricity Supply Industry is dominated by a state-owned and vertical integrated utility, ESKOM, which ranks among the five largest in the world. It generates 95% of South Africa's electricity, it owns and controls the entire high

voltage transmission grid and it supplies directly about 40% of electricity to customers. The remainder of electricity distribution is undertaken by 368 municipal departments, all these municipal departments buy bulk electricity from ESKOM, with some generating small amounts for sale in their jurisdiction. A few industries have private generation facilities for their own use, accounting for 2.9% of total electricity produced.”

92 % of South Africa’s electricity is produced from coal, with nuclear accounting for 6% and hydro-electricity together with emergency gas turbines, making up the remaining 2%. South Africa’s generating capacity in 1999, was 43.1 GW, of which ESKOM owned 39.9 GW. ESKOM owns about twenty-five power stations : about 13 of the 25 are coal fired stations. They dominate generation and are situated mainly near coal mines in Mpumalanga. There is a nuclear station with 1840MW capacity situated at Koeberg, 30 kilometres north of Cape Town (Western Cape). 632 MW of hydro capacity is on the Orange River (Northern Cape), located on two dams, and there are two large pumped storage schemes totalling 1400MW. Finally, municipalities own 22 small power stations, but these total only 5% of generation capacity. Private generators comprise the remaining 2% of capacity (Deputy Minister of ME, 2000:1).

The South African ESI is characterised by an oligopoly in the production/generation sector, monopoly in the transmission sector and a distribution sector which is highly fragmented. This situation is the cause of inefficiencies and is one of the reasons the government initiated reforms of the power sector. “While ESKOM has performed reasonably well in the 1990’s in practically all important respects, its monopoly position, organisational, financial framework, and structure of corporate governance has remained unchanged since the apartheid years” (Deputy Minister, ME, 2000: 2). The entire South African ESI is in public hands and the electricity price are among the lowest in the world, quality and supply are very reliable and the industry has performed very well in its national electrification programme. Steyn (2000:3) interestingly argue that “ESKOM’s recent low prices and exemplary electrification

programme has left an impression that it is highly efficient and that there is no need to for reform, but unfortunately the reality is that low prices do not necessarily mean low costs". Low cost electricity and the ability to fund the electrification programme emanates, in the past, from very low coal prices, financial subsidies and ESKOM's tax and dividend exempted status.

3.2 Reasons for Restructuring.

3.2.1 1998-1999

The draft and final White Papers on Energy Policy in June and December 1998 contained government's strategy and vision for reforming the ESI. The DME White Paper (1998:49) stated a minimum of five main government energy policy objectives:

- increasing access to affordable energy services;
- improving energy governance;
- stimulating economic development;
- managing energy-related environmental and health impacts; and
- achieving security of supply by ensuring diversity of sources.

Further, the White Paper stated a variety of options that will be considered as part of the ESI reform process:

- giving customers the right to choose their electricity supplier;
- introducing competition into the ESI, especially the generation sector;
- permitting open, non-discriminatory access to the transmission system; and
- encouraging private sector participation.

Ongoing and rapid political and economic reform of the electrical supply industry internationally is indeed influential on South Africa to reform its monopolistic electricity supply industry to meet customer needs and efficiency. The White Paper on Energy calls for a competitive market system which is in accordance with the global trend. The government considers that competition and privatisation may benefit industrial and residential consumers. These reforms can be initiated if ESKOM's vertical integrated structure can be unbundled by separating generation from transmission and distribution. The DME (1998: 64) points out that "for future

restructuring, government intends to separate the power stations into a number of companies. Such a step will assist the introduction of competition into electricity generation. This will increase the opportunity for private sector and Black Economic Empowerment investment opportunities in the generation sector”.

3.2.2 1999-2001

The White Paper of 1998 represented government's preliminary thinking about the ESI. It was a first phase which was not a deep analysis of the subject. Further developments are about mechanisms and strategies to make that vision materialise. From the government's perspective the overall objective is to orchestrate the industry in such a way that it is financially viable, technically healthy and manageable so that eventually it will be able to contribute to the growth, development and prosperity of South Africa.

In 1999, the Department of Public Enterprise Minister, Jeff Radebe, announced the restructuring of SOEs including ESKOM, Telkom, Transnet and Denel. In his presentation on an “accelerated agenda towards the restructuring of state owned assets” Radebe (2000:1), argued that “there is an unambiguous need for the state to play a developmental role in South Africa to deal with the legacies of apartheid, widespread poverty and unemployment. SOEs in South Africa represent massive financial, investment, labour, technology and infrastructure resources”. The minister stated that it is the goal of restructuring to contribute meaningfully to economic and social development, creating the kind of economy that is responsive to market incentives within the framework socially integrative institutionally mechanisms. All in all, as far as the DPE is concerned, restructuring is aimed at the integration of public, private and social capital and expertise to ensure developmental goals. Achieving this aim is extremely difficult if the efficiency and effectiveness of SOEs is not scrutinised through measuring productivity, profitability, innovation and levels of investment.

A joint session between the DME and DPE (2000:1) highlighted some additions to the White Paper and accentuated their further objectives for the restructuring of the electricity supply industry. They argued that these social and economic objectives include:

- achieving universal access to electricity;
- promoting integrated rural development with the aid of appropriate energy provision, especial electricity provision;
- promoting industrial development, through competitive electricity prices;
- reducing government debt, and meeting other public purpose objectives, through unlocking value state assets;
- widening the participation of and ownership of Black South Africans in the economy through well designed economic empowerment initiatives around state assets;
- attracting foreign direct investment;
- promoting the African Renaissance through active involvement of South Africa infrastructure providers; and
- ensuring security of supply.

These added objectives originate from the fact that “over the past few years there has emerged greater pressures for improving infrastructure to support *industrial policy* and to facilitate *regional and international trade*. We also have to take to account the impending crises in several SOEs arising from debt, adverse economic conditions, under-investment and un-manageable structures, all this has made it imperative to revisit our objectives, priorities and plans” (DME, 2000a: 4).

3.3 PRIMARY OBJECTIVES

Within this policy context the government again identified four primary objectives for reforming the institutional structure of the ESI. It is understandably important that the success of the reforms of the ESI are gauged by their ability to result in economically efficient behaviour and the extent to which the distribution of benefits is fair and equitable. These primary objectives as stated by DME (2000a:4) and Steyn, 2000, 13

include: Increasing economic efficiency, optimising financial returns to the state, promoting economic empowerment, and promoting public benefits

3.3.1 Increase economic efficiency in investment decisions and operations

In this regard, the government's conviction is that regional and national economic growth, and social delivery are enhanced through increased economic efficiency, particularly in its investment practice and operation.

3.3.2 Optimise financial and economic returns to the state

The state received little or no financial returns from the public resources that were invested in ESKOM, nor did it receive a taxation income from ESKOM in the past. In the proposed restructuring by government it is stated that this will maximise the value of the industry and the financial returns to the state. There are strong possibilities that these financial receipts could contribute to the electricity fund and electrification programme and other public objectives, such as reducing state debt.

3.3.3 Promote economic empowerment

Reforms of the South African ESI will allow an opportunity to extend economic participation to the historical disadvantaged groups in South Africa. As the Minister of Public Enterprise stated: "government's policy objectives on restructuring SOEs will entail new, creative, diverse strategies for genuine empowerment so that SOEs more effectively spread the benefits of restructuring" (2000a: 4).

3.3.4 Protecting public benefits

These benefits include the national electrification programme, energy efficiency, research and development and, finally, improvements in environmental sustainability.

3.4 DRIVERS FOR CHANGE

For proponents of market-based models in electricity restructuring the above-mentioned objectives are really impossible unless a competitive climate is put in place. The government contends that, although this is a world-wide trend, local

factors must be taken into account whenever a country restructures its electricity utility; its domestic environment must be the foundation for the ESI. The following drivers for change in South Africa were mentioned by the NER (2000c:4), the Deputy Minister of Minerals and Energy (2000: 2) and the Deputy Director of Electricity Policy: DME (2001):

- There is a need to demonstrate economic efficiency both in terms of allocative efficiency (for example, investment in a new generation plant), or operational efficiency in terms of lower costs.
- There is a push to use state-owned enterprises to reduce South Africa's debt burden and to reduce the share of the budget, which is siphoned off in interest payments. This would free up fiscal resources for promoting economic and social development. One way of achieving this is to maximise the economic returns from ESKOM through effective tax and dividend regimes for well performing assets.
- A wider range of primary energy resources for electricity generation are now available to South Africa. Political stability in the Southern African region makes possible greater imports of hydro electricity. Similarly, the development of natural gas fields in Mozambique and Namibia provides new options for power generation.
- New technology such as information and communication technology makes it possible to organise the electricity industry in ways that were not possible a decade ago. The generation of electricity is no longer regarded as a natural monopoly. New players can be accommodated in information technology dependent power pools and exchanges coupled with sophisticated control and metering systems.
- South Africa needs to widen the participation of the majority of its people in the economy – and new ownership opportunities in the electricity sector could promote black economic empowerment;
- Increasingly, South Africa's energy-intensive exports (such as mineral beneficiated products like aluminium and steel) are facing environmental trade conditionalities with Northern markets arguing that competitive prices are dependent on low electricity prices which are low because of inadequate

environmental controls. It is unlikely that we can build coal-fired plants as ESKOM has done in the past.

- Finally, there is a need to continue improving customer service, which can be enhanced by introducing customer choice.

It can therefore be concluded that in the world and South Africa the driving force behind the restructuring of ESI is the desire to improve allocative and operational efficiencies, to widen customer choice, technological change, financing needs and markets and environment pressures.

3.5. BENEFITS TO BE PRESERVED IN THIS INITIATIVE.

There are three groups who benefit from the current vertically integrated structure of ESKOM, ESKOM employees and electricity consumers. Consumers benefit from ESKOM's low electricity tariffs. Small electricity consumers benefit through the national electrification programme. The second beneficiary of ESKOM is its workforce of about 30 000 people. "International experience suggest that the benefits flowing to ESKOM *workers* is likely to come under pressure with privatisation while the *position* of many of its workers and managers is likely to be threatened. Less is known about the likely effects of strategies which separate the introduction of competition from privatisation" (Steyn, 2000: 11). However, these beneficiaries can engage this reform process and this will be discussed later in this thesis.

Government has clearly delineated how the benefits that are discussed above will be protected when competition and privatisation is phased in. Dr Enos Banda, the NER's previous Chairman (2000c: 4) and the Deputy Minister of Minerals and Energy (2000: 3) have detailed the advantages of the present system which must be protected during and after privatisation. These advantages include:

- the highly successful electrification programme, and continuing the need to make impressive strides in widening access to affordable electricity for the majority;
- the maintenance of internationally competitive electricity prices;
- the maintenance of good management, technical and research and development efficiencies that exists in the ESI;

- maintenance of good security of supply;
- the potential for demand-side management and energy efficiency investment;
- the maintenance of national regulatory monitoring and control;
- sensitivity to employment impacts of restructuring; and
- positioning of South African ESI to globally competitive business in the pursuit of the African Renaissance.

3.6. THREE MODELS FOR COMPETITION

In its plan to shift the ESI from a traditional monopolised industry to a more open, competitive electricity market, government has disclosed some models, which are not put forward as alternatives to the current system but rather as logical steps in a reform process. It is suggested that government should not choose between these three models. The first one is currently in process. The next step will be to create independent transmission directly controlled by the state and the establishment of a power exchange (South African Power Exchange). Final steps would be to reduce ESKOM's market power completely and to create competition in the production component through putting in place generation companies (gencos).

3.6.1 Single-Buyer Model (Phase 1)

Figure 3 diagram illustrates the first of the three models to be discussed.

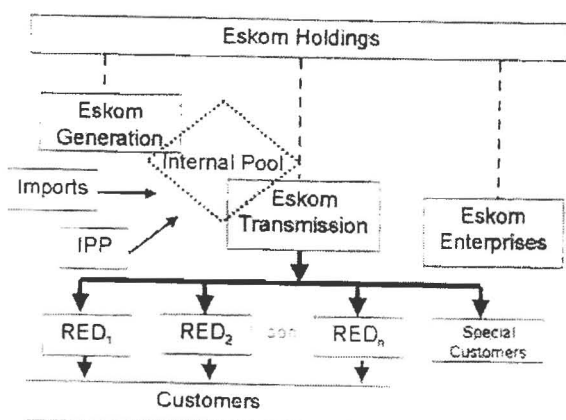


Fig: 3 Single-Buyer Model (DME&DPE, 2000, 5)

3.6.1.1 ESKOM Corporatisation

The first phase of the three models is the corporatisation of ESKOM, i.e. it will shift from parastatal status into a company. There would be “the establishment of an ESKOM Holding Company and subsidiaries for ESKOM Generation, ESKOM Transmission and ESKOM Enterprise (ESKOM Distribution will be folded into the EDI Holdings company and then into REDs)” (DME & DPE, 2000: 5). It is assumed that the electricity price will rise, as government will now require tax payments and dividends. The price will also increase because of the funding of new investments in new generation. ESKOM’s internal pool will continue, whereby individual generators “bid” a price and quantity of electricity to be produced for each hour and quantity of electricity to be produced for each hour for the day ahead-and then ESKOM system control dispatches power stations in merit order according to the lowest price (Eberhard,2000:17). This is essentially a single-buyer model as new independent power producers (IPPs) would have sell to ESKOM.

NER and DME (2000b: 5) put the basic steps for this model as follows:

- Pass the ESKOM Conversion Bill into law.
- ESKOM Limited forms a Holding Company (ESKOM Holdings) and three wholly owned subsidiary companies, namely ESKOM Generation, ESKOM Transmission and ESKOM Enterprise.
- Assets and liabilities, rights and obligation are transferred by agreement to the respective subsidiary companies. Staff transfers are effected in the same way.
- ESKOM Generation will “ringfence” its power stations into sensible clusters to introduce internal competition.
- ESKOM Transmission will ringfence its operations into transmission wires business, a system operator, and electricity market operator.

Government has now passed the ESKOM Conversion Bill into Act (Act no.13 2001). The state is now formally the shareholder and ESKOM will pay tax and dividends. However it is not clear that ESKOM will put its generation, transmission and distribution assets into subsidiary companies.

3.6.1.2 Disadvantages of this model

Firstly, ESKOM would still own and control most of generation and all the transmission (and the pool). By doing so it would still enjoy dominant market power. Secondly, “government will struggle to attract new investment into the industry as the investors will not be comfortable with the inherent conflict of interest of ESKOM, as the owner of Transmission, potentially favouring its own generation plants at the expense of the new comers” (DME&DPE, 2000b: 5). It is further stated that non-discriminatory and open access to transmission system is not guaranteed. Thirdly, in this scenario it is also argued that, it will be difficult to realise full economic value of state assets or to obtain private equity participation because investors would fear this is not the end state of the reform process. Beyond that, the customers would be prejudiced if any monopoly privatisation takes place because they may be the victims of private monopoly profits and rents. It would be unwise to phase in private participants unless competition is introduced. What is interesting about this model is that ESKOM wants to keep ownership of transmission, which would make them able to participate in the new coming national telecommunications network.

3.6.2 Open Access/ Oligopoly Model

Figure 4 illustrates the second model, for open access.

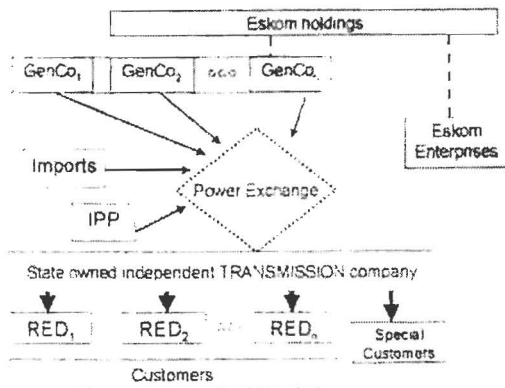


Fig: 4 Open Access Model (DME&DPE, 2000:7).

In this model transmission is no longer in ESKOM's hands and an independent state-owned transmission company is established to facilitate non-discriminatory open access to generators. NER and DME (2000b:5) summarise this model as follows: "ESKOM Generation is corporatised by converting the 'ring-fenced' internal generation into separate companies under ESKOM. In addition, in this model, the generation units, clustered into a different portfolios, compete with each other and bid independently as portfolios into the power exchange/pool". This model involves the creation of an external, open power exchange, and trading arrangements. An autonomous Independent Transmission and Power Exchange with very transparent market measures is intended to inspire confidence among potential investors.

According to the NER and DME (2000b: 6) this model includes the following aspects:

- ESKOM Generation would create a number of subsidiary generation companies (GenCos).
- Assets and liabilities, rights and obligations of ESKOM Generation would be transferred by agreement into the respective GenCos. Staff would be transferred in the same way.

- Government would establish a state-owned transmission company, with three divisions (wires, market operations and system operator).
- By agreement, the assets and liabilities, rights and obligations of Eskom Transmission would be transferred to a state-owned transmission company. Staff will also be transferred in the way.

3.6.2.1 Disadvantages of this model

This is an oligopoly model as Eskom would still dominate the market and have enormous power through controlling most of the power generation. Investors would be wary about Eskom Holdings, which would be able to exert undue market power through its subsidiaries and through price manipulation. “The problems associated with (the model), around optimising financial and economic returns to the state, promoting black economic empowerment, attracting inward investment and supporting the African Renaissance, also apply to this model. On the other hand this approach allows for experimentation in order to create potentially competitive generation portfolios” (DME & DPE, 2000: 7).

3.6.3 Competitive Model and Privatisation.

Figure 5 illustrates the competitive model.

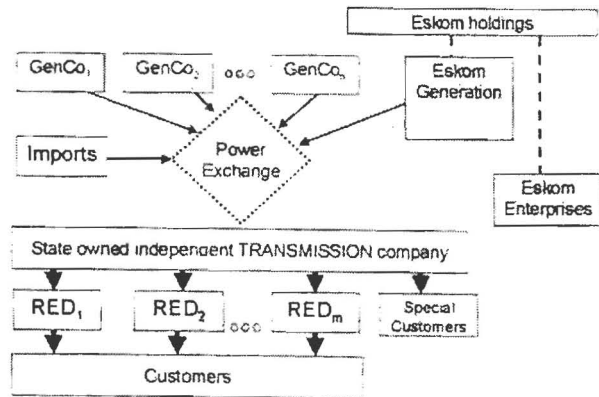


Fig: 5 Competitive Model (DME&DPE, 2000:7).

The third model is where a competitive electricity supply industry is realised, followed by phased privatisation. It is highlighted by DME and DPE (2000:7) and Eberhard (2000: 19) that “the final model accepts the logical conclusion that competition requires a dilution of ESKOM market power and significant entry of new players. ESKOM would ultimately be left with a third, or less, of generation (as well as ESKOM Enterprises) and the remainder of generation would be separated into as many competitive independent companies as is economically feasible”. It is further added that these could be privatised through black economic empowerment provisions, private equity participation or a public offering.

Through the participation of a number of industry players in the different trading arrangements, which includes short-term power exchange and balancing the market, as well as longer term bilateral and future contracts, an electricity market is created. This is called a multi-market model and is the model increasingly seen in the international ESI. All the government policy objectives are realised in this model. Competition could result in improved efficiency and lower prices, and there is less market power to manipulate prices. Other positive aspects include the black empowerment participation that is achieved as well as fiscal revenue for debt reduction. This model also results in significant investment. Financial and economic returns to the state are optimised. ESKOM is forced to compete. The management culture and practice which is established puts ESKOM in a better position to

contribute to the African Renaissance. In his commentary on the maturing of competitive electricity markets in countries such as UK, USA, Australia and New Zealand, Eberhard (1999) suggests the possibility of “electricity generator and suppliers bidding into a spot market, competing for the best electricity price and hedging their risks through an electricity futures market and other financial derivatives” This seems exactly the coming scenario in the South African electricity supply industry. The NER has expressed strong support for the competition model.

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3.7. COMPARATIVE ANALYSIS

The merits and drawbacks of the single-buyer, open access and competitive models are summarised illustrated below.

Policy objective	Single-buyer model	Open access model	Competitive model
Electrification and rural development	Possible	Possible	Enhanced through equity proceeds to electrification fund
Price increase as low as possible	No Few efficiency incentives	No Few efficiency incentives	Yes Many efficiency incentives
Least cost next power investment	not guaranteed	Not guaranteed	More likely
Optimise financial returns to state	No Investors are wary	No Investors are wary	Yes Investors are keen
Black economic empowerment	Some Under-performing assets	Some Under-performing assets	More Potential global competitive business
Attract foreign direct investment	Some Investors are wary	Some Investors are wary	More Investors are keen
Promote African Renaissance	Less likely	Less likely	More likely Competitive ESKOM

Table 1. Comparative analysis of the three models (Eberhard, 2000:21)

It is evident from the comparison of the models that the social, economic and political objectives of the state are probably best realised in model three. This model is severely criticised by labour, who strongly argue that competitive electricity and privatisation will result in the suppression of workforce interests in the industry. If government can complement and integrate alternative views then a single and unique version of ESI restructuring can eventually be introduced into the world arena.

3.8. COMPETITION COMMISSION AND NATIONAL ELECTRICITY REGULATOR

When the competitive environment is in place, the role of the regulator must be reviewed and redefined to meet the objectives of a market -based electricity system.

Competition does not simply mean the eradication or the termination of regulation; regulation will tend to focus on the natural monopoly component of the ESI and, even if there is competition, regulation must be in place to ensure that generation companies are not abusing it. As stated by Steyn (2000: 21), “the major change in the orientation of the regulatory regime relates to the regulatory approach adopted to the new competitive parts of the business. In this area the main objective of regulating activities now becomes to ensure that sufficient competition exists in the market”. New activities include intense scrutiny of the newly created power and the bilateral contracts.

The Competition Commission (CC) was established to ensure that competition exist in South Africa. It has a different role from that of the NER. The CC as another regulatory body will ensure that a competitive electricity market is maintained. There is some overlap in these responsibilities of the two bodies. The NER will be responsible for monitoring and ensuring competitive behaviour especial in the generation sector and in those sectors that are prone to natural monopolies, that is transmission and distribution. The NER must also ensure fair pricing, efficient investment in network expansion, and the minimisation of system losses or Network operation must be regulated by the NER. Efficient and effective regulation methods are the critical components of the well functioning competitive electricity industry and their absence can mean significant abuse, especially when the private sector players take part in the modernised electricity supply industry. The respective roles the NER and CC needs to be clarified.

3.8.1 Competition Commission

Eberhard (2000: 23) points out that Section 21 ((1) of the Competition Act provides that the Competition Commission is responsible to-

- negotiate agreements with any regulatory authority to co-ordinate and harmonise the exercise of jurisdiction over competition matters within the relevant industry or sector, and to ensure the consistent application of this Act.
- participate in the proceedings of any regulatory authority;
- advise, and receive advice from any regulatory authority;
- Over-time, review legislation and public regulations, and report to the Minister concerning any provision that permits uncompetitive behaviour”.

3.8.2 National Electricity Regulator

The NER should play a more pro-active and professional role to support the CC to monitor and control competition. Other roles include the following according to Eberhard (2000:24):

- The first role is to get the structure of the industry correct.
- Entry to the competitive elements of the industry should be largely unrestrained (although licences are still required for compliance with technical standards and environmental and local planning requirements).
- Prices in the competitive components of the electricity industry should also be unregulated except where market power and abuse prevails.
- The NER has an important governance role in ensuring that market codes (for example, grid code) and rules are constructed in such a way that efficiency is encouraged.
- The NER in conjunction with the Market Operator has the role of monitoring the pool price, the balancing of markets and bilateral contracts, and referring anti-competitive behaviour to the CC.

3.9 COMPETITION AND PUBLIC POLICY

The government firmly believes that the creation of a competitive market-based electricity model for the country does not mean the state loses its authority and its ability to pursue public policy, but merely that in certain instances policies will be pursued in different ways. It has stated clearly that if market mechanisms in the reform process are well conceived and executed, and are combined with good strategies for pursuing social policies (designed to be consistent with market-based system) there is no reason why social policies cannot be delivered better than before.

3.10. NEW DEVELOPMENTS ON GOVERNMENT POSITION

Recently, the government substantially shifted from its initial position of breaking down the generation sector into different companies that will compete amongst themselves and subsequent privatisation of the ESI. Strong lobbying from ESKOM has made government shift gradually from its original proposals, reach compromises, and taking on some of ESKOM's positions.

Firstly, ESKOM has been skillful in projecting itself through the media as a major instrument for government to achieve its social and economic objectives, particularly in providing electrification for the poor, but ignoring the fact that government already decided that distribution of electricity would be handled by Regional Electricity Distributors (REDs) in the future. Secondly, they played their strategic game plan by arguing that they want to control transmission and distribution for at least the next 4-5 years. Finally, ESKOM has responded to Thabo Mbeki's vision of the African Renaissance. ESKOM's Chairman Reul Khoza (1999:9) highlighted this when he argues that "in the spirit of African Renaissance we have crossed many rivers and flown over many mountains, hills and valleys, in search of partnerships with our African counterparts". Khoza further argues that, ESKOM wants to cement long-lasting and meaningful development ventures to make a difference and improve the provision of electricity in Africa.

The new government strategy for ESI reforms is that ESKOM must retain 70% of generation while 30% is to be sold to new companies who are eager to invest in

generation. The reason given by government for this move is that ESKOM has played a huge role in socio-economic development, exemplified by the national electrification programme. However, as already pointed out, it will not have this role in the future as distribution will become the responsibility of the REDs.

Government still maintains that the ESI must be restructured, and that the only change is its strategy. The liberalisation of the electricity sector remains government's objective, but whereas the preliminary proposal was a full-blown liberalisation of the industry, the current proposal gives far more power to ESKOM. Now the government is calling for ESKOM to continue to have market power in generation as well as for a reduction in the number of private actors. The time, energy and resources spent in developing and spreading the government vision of ESI reform seems partly wasted. There has been a lack of consistency from government which makes it extremely difficult for those unfamiliar with the industry to comprehend the precise government standpoint.

The Minister of Minerals and Energy released Cabinet's approved reform strategy for the ESI. The Minister stated that:

- in order to meet Government's developmental and social objectives, ESKOM maintains a dominant role in the existing electricity generating market sector;
- a limited private sector participation within existing electricity generating sector will be introduced;
- the involvement of black economic empowerment (BEE) within the generation sector should be about 10% of the existing capacity by not later than 2004;
- to ensure a non-discriminatory and open access to the transmission lines a separate state-owned transmission Company will be established, independent of the generation and retail businesses, with ring-fenced transmission system operation and market operation functions. Initially this transmission company would be a subsidiary of ESKOM Holdings and would be established as a separate state-owned transmission company before any investment is made in generation capacity.

- over time a multi-market model electricity generators, traders and power purchasers may take place on variety of platforms, including bilateral deals, future markets and day-ahead market.
- a regulatory framework will be in place that would ensure the participation of IPPs, and ensure that diversified primary energy sources were developed within electricity sector without hindrance.
- the planning and development of the transmission system would be undertaken by the transmission company subject to government policy guidelines;
- over time and taking cognisance of the strategic objective of the region, the Southern African Power Pool (SAPP) must develop into an independent system operator for the Southern Africa regional grid system, where public and private generating companies could participate in the pool.
- The regulatory system would be adopted to include the reform of the legal framework defining the role of NER, the development of a new framework for licensing, the adaptation of price setting routine, and the creation of capacity to monitor the effectiveness of the reformed ESI and to ensure the security of supply. (Minister Phumzile Mlambo-Ngcuka, May 2001).

Summary

This chapter focused on government's perspective of restructuring. This perspective includes an analysis of the Draft White Paper on Energy in June 1998, the final White Paper on Energy released in December 1998 and post Energy White Paper developments pertaining to ESI transformation. It is clear that government has taken a step towards the liberalisation of the electricity sector, which will bring about a sophisticated and modernised ESI. The gist of restructuring as presented by government is balancing commercial needs against developmental and social policy objective. Social and economic objectives include introducing competition, foreign direct investment, privatisation, achieving universal access to energy services, and ensuring the affordability and diversification of energy sources.

Theoretically, this is an extremely difficult agenda to accomplish and it is not unusual to see economic objectives take precedence over social responsibilities. In the light of recent changes from government strategy about ESI reforms, it is clear that the ESI vision from government's point of view is inconsistent and fluctuating. This gives rise to doubt and uncertainty about the future of the ESI. Labour's perspective will be discussed in chapter five, a discussion where some of government shortcomings will be highlighted. Chapter four will deal with ESKOM's response to government's initiatives. Here there are areas of convergence and divergence, which makes the entire debate on restructuring vigorous and fascinating.

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CHAPTER FOUR

ESKOM

The objective of this chapter is to outline the views of ESKOM as far as the restructuring of the South African electricity supply industry is concerned. In the first part, a profile of ESKOM is presented, followed by ESKOM's proposals regarding ESI restructuring. The last part of the chapter will attempt to draw areas of convergence and divergence in government and ESKOM's interests in ESI restructuring. Cementing divergent views between the two parties can allow a way forward towards realising government's vision of a competitive electricity supply industry. Another factor which should be taken into account is the role of the utility in contributing to the socio-economic programme as outlined by government in 1994 in its vision for the national transformation and human development of South African society.

4.1 ESKOM'S VIEW OF ITSELF

ESKOM 2000 Annual Report gives a concise profile of this South Africa's electricity utility by their own measurement of their performance. ESKOM:

- has 24 power stations with a nominal capacity of 41 281 megawatts;
- is among the top seven utilities in the world in of terms size and sales;
- has 312 939 kilometres of power lines and cables (all voltages), spanning the country and also carrying power to neighbouring countries;
- supplies approximately 95% of the country's electricity generation requirement, which equals more than half of the electricity generated on the African continent;
- has exceeded the target to electrify 1 750 000 homes from 1994 to 2000 ahead of schedule. Since the start of the electrification programme in 1991, ESKOM had electrified 2 391 684 homes by end of 2000;
- earned revenue from electricity sales of 178 192 GWh, amounting to R23 569 million ;
- had sales growth of 2.8% compared to last year's growth of 1.1% ;
- had a peak demand of electricity on the national ESKOM system of 29 188 MW;

- sees itself as a responsible corporate citizen and is working towards environmental sustainability and socio-economic improvement;
- supports the development of the Southern African transmission grid to encourage co-operation and accelerate economic growth in the region;
- supports the African Renaissance vision.

4.2 ESI RESTRUCTURING

In 1998 ESKOM welcomed government's initiative of reforming the ESI as contained in the Energy White Paper. One important point made by ESKOM is that the benefits from the present structure should not be prejudiced in any way when reforming the industry. It should be stressed that ESKOM views itself as a well performing electricity utility and opposes any evaluation any of it as being dysfunctional. However, there is a strong sentiment that there is a need to transform the industry. As ESKOM's chairman Reuel Khoza in the ESKOM Annual Report (1999: 9) pointed out, "this year was far from plain sailing, and we witnessed times of economic recession, ESKOM can never be immune from a global economic downturn, which this year had a negative effect on many countries, including our own". Khoza articulates the same vision as that of the government: that because of the world of rapid change and intense competition, ESKOM fully acknowledges the fact that the electricity industry is becoming dynamic and will face competition in the future. In response to this changing environment, management is "positioning the organisation as a competitive multinational African and related services business, vigorously promoting economic growth and development in South Africa, the Southern African region and the rest of the continent" (ESKOM Annual Report, 1999:9).

ESKOM proposed that the ESI be restructured systematically in a phased process. The first step in this phased approach must be the establishment of ESI Holdings as a holding company. The second would involve the incorporation of a single distribution subsidiary, and the third step would be for the remainder of ESKOM to be incorporated as a separate subsidiary, ESKOM Incorporated. For ESKOM "the Holding company mechanism, it is submitted, has certain advantages in that it is a

basis for good corporate governance and accountability, facilitates equitable allocation of resources, and therefore facilitates the electrification programme, and allows existing established structures and benefits to be extended to the industry” (ESKOM, 1998: 4). As far as ESKOM is concerned, this model allows for the orderly introduction of taxes and dividends, as well as levelling the playing fields for the competitive model. They claim flexibility is a noticeable feature of this mechanism as it can also accommodate Black Economic Empowerment. “One of the important advantages is that it allows for further unbundling without too much disruption” (ESKOM: 1998: 4).

4.2.1 Competition

In the reform of the electricity sector, competition is a key concept. This is because competitive electricity and energy markets are an evolving world trend. In principle, ESKOM supports the progress towards competition. The then CEO Alan Morgan (1999:15) argues that “the changing environment in which we operate shows clearly that we will continually be faced with new competitors”. This view is in line with the government Energy White Paper, which proposes to shift the electricity sector towards a competitive electricity market. ESKOM in their submission always maintained that the transformation should not in anyway impair or paralyse their existing strength. In their proposal it is pointed out that “ESKOM supplies the lowest cost electricity in the world, and it is difficult to understand the need to adjust electricity market structures to achieve effective forms of competition, as a medium-term policy priority, when it is not clear this will yield the benefits of lower prices or other efficiency” (ESKOM, 1998:5). It is further pointed that the benefits of unbundling generation must be demonstrated before such an initiative is embarked upon. They argue that the national electrification programme is *enabled* by low prices, engendered by state protection probably below economic value ESKOM sees the ESI reform process as a contradiction.

From that premise ESKOM asks “to what extent the proposed intermediate objectives are appropriate within a competitive environment?” For instance, government in their

pricing policy suggested that a balance could be attained between meeting equity, economic growth and environmental goals, and a move to cost-reflective (cost-based) electricity pricing. Eskom in their proposal contested this position and contended that “a more important consideration is whether increasing access to energy services, managing energy related environmental impacts and securing supply through diversity can be met through introducing competition, the point being made is not that competition is inappropriate, but that it needs to be justified in terms of the stated objectives” (ESKOM,1998: 5). Eskom’s point is that one should research competitive market structures, decide on an appropriate end state, develop rules of transformation and only then allow competition within a structured framework. Debates about ESI restructuring in the White Paper have in some ways adhered to this Eskom perspective in adopting a phased approach, with three industry models, as the route towards full-blown competition.

In an interview with Eskom News, Ehud Matya, Eskom’s Executive Director for generation, stated that “Eskom has the same end state in mind as government, but that the timetable differs”. His view is that the Group should remain a unit for at least the next three years, Matya goes on to argue that an end state incorporating competing generators is the way to go, but Eskom believes that breaking up the generation business before the restructuring of distribution and transmission will be inappropriate” (2000:2) The management’s view is that it is time to consolidate and globalise generation, and breaking the business up suggests exactly the opposite.

The critical point in Eskom’s proposal is that restructuring of the ESI is not easy, and indeed the industry cannot be transformed in the twinkling of an eye. “The effects of the restructuring on a number of key interest groups will also have to be kept in mind. These include the institutions lending money to Eskom, employees, and organised labour, major customers such as Alusaf and Mozal, major suppliers of coal and water and the National Electricity Regulator” (ESKOM News, 2000:2)

ESKOM's position sometimes is unclear, or they do not make their official position known. They are strategic with regard to this subject. "ESKOM supports government's vision for the ESI as outlined in the White Paper for Energy policy which advocates a move to competition" (ESKOM CEO Gcabashe's response to DME on 4 April 2000). The Chairman of ESKOM, in a letter to Minister Radebe (April 2000) accepts that, "at an appropriate time in the future the transmission business should be moved out of ESKOM and established as a separate company" (DME&DPE: 2000: 6). Recently, however, it was stated that ESKOM need the retention of transmission assets in order to participate in a new international telecommunication network. "ESKOM Enterprises executive manager Ron Coney said the utility had already started work on rolling out a full phone network which ESKOM could undertake very quickly" (Business Day, 30 April 2001). Therefore one could argue strongly that ESKOM lacks consistency, presenting sometimes contradictory and partial points of view.

Although there is ambiguity in ESKOM's proposal for revamping the ESI certain points are clear. Firstly, they support a competitive electricity market strategy in principle. This means that competition and privatisation must be a long-term goal and should coincide with the end of over-capacity in generation. Over-capacity is one of the justifications for reforming the ESI, as the costs of poor investment decisions were simply passed to the consumers. The introduction of new capacity will be a golden opportunity for introducing new players, possibly through the participation of IPPs. In the short-term ESKOM is suggesting internal restructuring and possibly the introduction of BEE when the mothballed plants are brought back into service. Secondly, ESKOM argues that the transmission system (including systems operation) should remain part of ESKOM, with a separate power exchange (or markets) being established later when competition is introduced. Finally, in the distribution sector, the government's proposed amalgamation of the electricity distribution industry (EDI) and 400 municipal distributors to form REDs is resisted by ESKOM. ESKOM argues that this model can be achieved by first establishing an ESKOM Distribution Holding Company (Dishold), which will subsume all but the "Big 5" municipal distributors.

This move would allow for the existing ESKOM infrastructure, capabilities, standards and processes to assist the restructuring (NER&DME&: 2000a:4).

The crux of ESKOM's perspective is contained in the document presented by ESKOM to the DME in April 2000, which argues that "the risks of forming these state-owned generating companies without a comprehensive understanding of the ultimate competitive market structure, the various factors that would impact on these companies ability to influence market prices and the consequences for ESKOM's fuel supply and other agreements should not be underestimated" It is further suggested that the final timetable should find the best possible balance between the many objectives, taking into account the following need:

- to achieve industry restructuring in a way which will optimise sustainable shareholder value;
- for quality and cost of supply of electricity not to be negatively impacted in the process;
- for investor confidence, credit, worthiness and ratings to be maintained and enhanced further; and
- for human resource stability to be maintained throughout the process.

4.3 DIVERGENCE BETWEEN GOVERNMENT AND ESKOM

ESKOM and government's position on ESI restructuring are neither wholly divergent nor wholly convergent. A two day workshop between ESKOM, the DME, DPE and the NER, held in Pretoria in April 2000 identified all areas of consensus and difference. The objective of this ambitious meeting was to enable DME, DPE, and ESKOM to share their points of view and proposals on ESI restructuring, to agree on expediting decisions in respect of priority issues and to discuss implementation of restructuring. The following key differences between the government and ESKOM is in the reform objectives, in the degree of state protection and the process of instituting competition are noted.

4.3.1 Goals

While ESKOM's proposals are based on the *enterprise level* perspective of "optimising shareholder value" the DME is concerned with developing policy that maximises national economic and social development.

4.3.2 State Protection

While ESKOM's proposals are based on continued use of soft public financing for their risk incurring commercial investments (ESKOM Enterprise), the DME favours the use of public funds for public policy objectives (e.g. electrification and the reduction of state debt), while commercial power generation investments should be subjected to the scrutiny of capital markets.

4.3.3 Competition

ESKOM's proposals differ from those of government on when and how competition should be introduced. DME (2000:4) notices the following differences:

4.3.3.1 Timing of Reforms

While ESKOM proposals are based on a strategy of delayed restructuring and competition and early partial privatisation, DME's emerging proposals are based on early restructuring, open competition and full privatisation at a later stage. The "government" model assumes that a competitive electricity market can be set up in the short-term (2-3 years), while ESKOM has excess capacity. The ESKOM model, however assumes that competition should only be introduced in the long-term (7-10 years) when new capacity is needed.

4.3.3.2 Structure Reforms

(i) Generation

The government model assumes a rapid move to a competitive generation sector by 'clustering' and disposing of ESKOM's power stations (but leaving ESKOM with a significant ($\pm 30\%$) stake in generation). The ESKOM model on the other hand foresees competition being introduced through the introduction of a strategic equity

partner (SEP), or an initial public offering (IPO) for a percentage of ESKOM's generation, and with IPPs servicing a percentage of market growth and replacement capacity beyond 2010.

(ii) Transmission

The government model for reforming the ESI removes transmission responsibilities from ESKOM by placing it in a separate, state-owned company to avoid a situation where ESKOM the owner of transmission, could favour its own generation plant at the expense of newcomers. In the ESKOM model, ESKOM retains ownership of transmission as an enabler of multiple infrastructure development both locally and regionally.

(iii) Distribution

The government model argues that ESKOM's distribution business should be merged with that of 400 municipal distributors to form six REDs as from January 2002. ESKOM's model has a different perspective, namely that the restructuring of the distribution sector must be through the establishment of ESKOM Dishold which will gradually absorb all other municipal distributors, eventually incorporating the "Big Five" into REDs at some stage in future.

4.4 CONSENSUS

There is consensus between government and ESKOM that competition is to be introduced. There is also consensus on the end result of generation and distribution models. These consensus views amongst the participants represented the way forward for ESI reforms.

4.4.1 Generation

There was agreement that the end-state should be a competitive model, to be introduced in phases. This would be achieved by ESKOM progressively reducing its market share locally, while expanding internationally. A timetable for the short-term was agreed as follows:

- 2001-2002: ESKOM would introduce internal competition by requiring its individual stations or clusters of power stations to compete with each other;
- 2003: Opportunities for BEE would be created through the recommissioning of mothballed power stations (representing 10% of ESKOM's capacity); and
- 2003-2004: Opportunities for the sale of one of generation clusters (15-20% capacity) through foreign direct investments plus BEE.

4.4.2 Transmission

Agreement was reached that the wires (Tx) and Systems Operator (SO) should be in one entity with a separate and independent power exchange. There was no consensus on whether it is wise that ESKOM Generation retain ownership of transmission. In fact, ESKOM still insist that this is possible, but DME and NER argue against this. Agreement was made that transmission should be separated out under ESKOM Holdings when the ESKOM Corporatisation Act is passed into law.

4.4.3 Distribution

There was agreement that REDs are the end-state model, but there were disagreements on how to put this into practice. A close scrutiny of these agreements shows clearly how powerful and strong ESKOM is. Government ultimately compromised to take into account many of ESKOM's proposals, Although the DME is reluctant to admit that they shifted their position to accommodate ESKOM. DME argues that ESKOM's latest documents/submissions reveal an encouraging shift towards government's position, but in reality it is government who is gradually shifting towards the ESKOM position.

Summary

ESKOM continues to quietly resist the decisions made by Cabinet in May 2001 on the future of the ESI (outlined in the previous chapter), and they would be happy to delay restructuring for as long as possible.

CHAPTER FIVE

LABOUR'S VERSION OF THE RESTRUCTURING OF ESI

This chapter aims to give the perspective of labour, an important energy stakeholder on the reform of ESI. In 1998, the Congress of South African Trade Unions (COSATU) submitted its proposal to the Portfolio Committee on Minerals and Energy Affairs and responded to the Draft Energy White Paper. COSATU represented their affiliates organising within the energy sector the National Union of Mineworkers (NUM), South African Municipal Workers Union (SAMWU), National Union of Metalworkers of South Africa (NUMSA), and Chemical Workers Industrial Union (CWIU). The unions falling under the electricity sector are the NUM, SAMWU and NUMSA. COSATU looked carefully at the role of electricity within society and how the social goals articulated in the RDP can best be met. Their line of thinking is opposed to that of government and in part converges with ESKOM's proposal. Firstly COSATU's opposition to government's proposal for market-related restructuring is based on the fact that despite government concern with the unacceptably high unemployment levels, its policies will lead to job-shedding. Secondly, COSATU is concerned because the restructuring process may have serious repercussions for the poor, in terms of affording the possibly exorbitant electricity tariffs that may result once the process is implemented.

5.1 RESPONSE TO THE DRAFT AND FINAL ENERGY WHITE PAPER

5.1.1 ESKOM Restructuring

ESKOM is recognised by COSATU as a vital player both in South Africa's economic development and in social upliftment through meeting the people's basic needs. The considerable success of ESKOM in giving the poor electricity and the fact that its electricity is by international standards very cheap makes ESKOM's current position desirable for COSATU. Access to electricity is important for many reasons, including industrial development, the growth of SMMEs, and improving people's productivity and quality of life. Therefore if ESKOM is forced to compete with private producers, it will find it difficult or even impossible to deliver on its social obligations. Even if government funds electrification, it will no longer be part of ESKOM's duties to

ensure adequate service and affordability. Essentially, COSATU's position can be summed up as asking why we should restructure something which appears to be delivering very well.

5.1.2 Structure

COSATU (1998:3) stated in their vision of the ESI that "the role and structure of ESKOM should be tailored to advancing the aim of universal access to affordable electricity both for household and industry, within an overall policy of cross subsidisation from the rich to poor. In order to advance this aim legislation should clearly outline that ESKOM is owned and controlled by the state and that in its external and internal programmes ESKOM should be accountable to government RDP objectives."

COSATU has made it absolutely clear that the current structure of ESKOM is satisfactory. In their submission to Parliamentary Portfolio Committee on Minerals and Energy (1998:4) COSATU made the following recommendations:

- In line with the submission made by ESKOM management, it is COSATU's view that ESKOM should remain responsible for all generation and transmission.
- A national distributor should be established to consolidate all electricity distribution, including private sector concerns which are presently engaged in distribution.
- The national distributor should have the power to set up regional and district distributors of electricity so as to ensure efficient distribution. Local government structures will be represented in the regional and local distribution structures.
- The whole ESI should be under a single governance structure with a small management team to provide technical backup.
- ESKOM must remain responsible for providing future expansion of generation and transmission capacity and maintain cheap electricity supply at lowest possible costs.
- No private sector participation in the industry must be allowed.
- The industry must be restructured to promote economic growth and job creation.

5.2 CONSOLIDATION OF THEIR PROPOSAL (2000)

After the submission of their proposal in June 1998 in response to the Draft Energy White Paper, COSATU again showed their rejection of the trend taken by government in the power sector reforms. In a workshop organised by DME on the 14 September 2000, organised labour under the tutelage of COSATU, made an input, which was closely linked to their submission of 1998.

The key areas of concern highlighted by COSATU in their presentation include government understanding of the functioning of the market, the kind of consumers favoured by deregulation, and impact of government's proposal on the regional grid as well as on human resource management. COSATU once again queried the value of deregulation in terms of social and economic upliftment in South Africa.

- The underlying assumption that markets will inevitably ensure efficiency ignores the importance of market imperfections in the electricity sector. In particular the time-lag and economies of scale involved in changing production capacity to meet evolving needs mean that co-ordination and forward planning are critical. In many countries, deregulation has left these decisions purely to the private sector, resulting in systematic under-investment and ultimately shortfalls in electricity production.
- The massive inequities in the distribution of income mean that markets tend to focus on meeting the needs of the rich minority, neglecting the poor who cannot pay. That is, the market outcome may be lower-cost production and no shortages, but still not provide satisfactory social outcomes.
- In the context of electricity production, the critical issue is how shifting to a market framework will affect developmental outcomes. Electricity has two implications for longer-term economic and social development: it can cut the costs of industrial production, and it can raise household productivity, ensuring both safer and more efficient communities and provide a basis for micro-industry. The danger is that rushing into competitive frameworks, given market imperfections, effectively privileges industrial consumption over household consumption, without adequate understanding of the longer-term impact of development.

- This problem emerges in the proposal to increase the number of contestable customers, that is customers who buy directly from producers or for whom the REDs compete. This strategy will increase the cost of electricity to households; reduce the cost of energy to some business; and possibly remove electricity revenues from the public to private generators.
- Labour is concerned that these implications have not been linked clearly to longer-term developmental aims through proper social cost-benefit analysis. In particular there is a need to study the implications for government revenue, taxation, employment creation in both the formal and informal sectors, and impact on social development and security in poor communities.
- A final concern about competition is the impact on the regional grid. South Africa runs a substantial balance of payment surplus with neighbouring countries. Electricity is one area where imports from our neighbours seem possible and desirable. The restructuring of the electricity industry should not be shaped to make such trade impossible. Untrammelled competition in generation could rule out the long term, large-scale investments required to that end.
- Methodologically, the focus on competition makes it impossible to discuss distribution separately from production and transmission. This issue relates strongly to the proposal to set up separate REDs, rather than labour prefer a national distributor with regional divisions for administrative purpose. The insistence on wholly separate regional distributors appears to arise primarily from the call for competition in electricity production.
- Regarding tariffs, there is agreement on the need for lifeline tariffs. However, COSATU points out that there is still the need to discuss the level of the lifeline amount. It must be enough to meet long-term developmental aims, both economic and social.
- Experience in rationalising other state structure points to the need to ensure agreements on achieving common conditions should be in place before the new entity is established. If this is not achieved, two problems may emerge. As in local government, discrepancies in conditions may persist, causing on-going conflict and unrest. Alternatively, as in the public service, the new organisation may rush

to equalise conditions, leading to inefficiencies and unnecessarily high costs. To reach agreements, a bargaining forum for the distribution industry should be established urgently, which can immediately begin to identify who would be transferred to the electricity distributor from local government.

- There has been no study of the impact of the rationalisation of electricity distribution on employment. Such a study must be carried out as soon as possible, especially given the national unemployment crisis. Labour expects some guarantees for the jobs of local-government employees transferred to the electricity distribution. (DME, 2000b:1).

5.3 FURTHER DEVELOPMENTS (2001)

5.3.1 ESKOM Conversion Bill

In May 2001, COSATU made a submission on the ESKOM Conversion Bill to the Public Enterprise Portfolio Committee, and in June 2001 COSATU made a briefing to MPs on the same topic. COSATU was against the Bill because it essentially seeks to corporatise ESKOM. The reason for the objection to the Conversion Bill is based on two main concerns:

- The Bill opens the way for the privatisation of ESKOM through selling shares.
- The taxation of ESKOM will impinge on its developmental role and will result in upward pressure on electricity prices. (COSATU: 2001a:2)

COSATU's briefing to MPs and the DPE Portfolio Committee on 9 May 2001 on the ESKOM Conversion Bill points out that "ESKOM has clearly stated in the past that taxation will raise electricity prices. DPE has also clearly stated that, while the effects of taxation will be buffered in the short term, after about four years it will definitely contribute to electricity price hikes. Government's own consultants have projected electricity price increases up to 50%, for a range of reasons which would make it more difficult to provide electricity to all the people, and would lead to disconnection for households currently using electricity. While the DME had requested R1.2 billion for electrification for this year, only R600 million was allocated for this critical task".

Given its opposition to the proposed corporatisation of ESKOM, COSATU wanted the Bill to be withdrawn. COSATU (2001a:2) proposed the following:

- the amendment of section 2 of the Bill to ensure that any change of ESKOM's shareholding structures or selling of ESKOM shares or assets is subject to approval by Parliament and the National Framework Agreement (NFA);
- the exemption of ESKOM, from taxation enabling it to fulfil its developmental responsibilities;
- the expansion of ESKOM's powers and duties as laid out in the Bill so that they are not just technical but set out a clear developmental role for ESKOM in extending access to affordable electricity;
- the setting out of a clear role for parliament, allowing stakeholder inputs in the determination of ESKOM's memorandum and articles of association as well as regulation in terms of the Act;
- the removal of the power of the courts to increase the price of electricity; and
- the provision of protection for ESKOM employees in the Act as well as reaching agreement for their jobs.

Considering the seriousness of the proposed ESKOM Conversion Bill, government met COSATU officials to discuss the major demands of COSATU. COSATU (2001a: 3) recorded agreements between them and the government on ESKOM's ownership, ESKOM's powers and duties, the determination of the memorandum and articles of association, regulation, and taxation.

5.3.1.1 ESKOM Ownership

The Department agreed to insert a clause into the Bill ensuring that, should the executive intend to dispose of ESKOM shares, such intention would need to be tabled in Parliament and the Portfolio Committee would hold public hearings on the issue, and consequently make recommendations to the executive. Furthermore, it was agreed in principle to include a similar procedure for the intended disposal of ESKOM assets. So long as "assets" could be adequately defined to refer to substantial assets.

5.3.1.2 Powers and Duties of ESKOM

At an earlier stage in the engagement the DPE had agreed to insert a clause in the section on powers and functions that recognises the developmental role of ESKOM and the need for universal access and affordable electricity to all people.

5.3.1.3 Determination of Memorandum and Articles of Association

DPE agreed to include a requirement that articles of association must be gazetted for public comment by stakeholders and must be tabled in Parliament.

5.3.1.4 Regulation

DPE agreed to include a requirement that regulations must be gazetted for public comment by stakeholders and must be tabled in Parliament, an improvement although falling short of COSATU's concerns.

5.3.1.5 Taxation

COSATU'S concerns on the taxation and funding of electrification were not accommodated. Still briefing the MPs on the ESKOM Conversion Bill, COSATU announced that it had simultaneously adopted a programme of action, both specifically against the ESKOM Conversion Bill and against privatisation more broadly. COSATU warned that if these issues were not satisfactorily addressed they would lead to a two-day general strike. For COSATU there was still a possibility of political intervention to rescue the situation. They called on the Selected Committee on Labour and Public Enterprise to follow one of the following routes:

- reject the Bill and initiate the repeal of the ESKOM Amendment Act of 1998;
- delay the processing of the Bill to facilitate proper political engagement;
- introduce changes to the Bill, which will meet COSATU's concerns;
- given the impact on the people in the provinces of the measures which may adversely affect the accessibility and affordability of electricity, COSATU proposed public hearings both nationally and provincially, to allow for the proper consideration of this matter. For COSATU, it will be a serious blow to our democracy if the Bill were rushed through Parliament, after such a problematic

process, particularly given its significance in terms of government's commitment to extend affordable electricity (COSATU: 2001a:4).

The above submission conspicuously indicates COSATU's and labour's discontent with the manner in which government proposes to handle electricity sector reforms. The accusations have been made that, although government consults, there is nevertheless a huge lack of appreciation of other stakeholder visions about the sector. Accusations of this nature need to be carefully verified, as COSATU sees consultation as a mere formality because their viewpoints are not incorporated into the overall government perspective on the electricity sector. This disharmony between the two parties culminated when COSATU mobilised for a national strike against the whole process of privatisation conducted by DPE and the government. Two COSATU affiliates, SAMWU and NUM, complained strongly about government's behaviour and the two interviews given below show how COSATU'S position has developed over time.

5.4 INTERVIEWING SOME OF THE COSATU AFFILIATES

In an interview conducted with SAMWU National Co-ordinator on Energy, Henry Assure (11 June 2001) and NUM Provincial Secretary (Western Cape), Noel Coetzee (15 June 2001) the following remarks were made about the government's proposed reforms:

5.4.1 About the entire process of restructuring.

About the whole process of transformation of electricity sector SAMWU fully believes that the industry must be transformed, for instance, the distribution industry is very fragmented, the services associated with it must be redefined. Restructuring, as far as NUM is concerned, must contribute significantly to the poor through lower prices and electrification, but if ESKOM is taxed and privatised this vision cannot be attained.

5.4.2 About consultation.

Both unions argued that government is far from being transparent to labour about restructuring and the unions link the whole process to GEAR. They argued that when government introduced this macro-economic system they promised that it would not cause any danger to the labour force, but that on the contrary it has been catastrophic. This lack of transparency can be seen in the fact that all government proposals regarding ESI restructuring rely on breaking up ESKOM, which labour is completely opposed to. Coetzee even pointed out that, no matter with whom government consults, they do not waver from their original path, showing little regard for ESI proposals from labour which, in a sound transformation process, must be accommodated.

5.4.3 About international events in the electricity sector

Organised labour, understands the change in the electricity sector which is sweeping across the globe and which is centred around privatisation. According to them the experience of countries which introduced competition and privatisation tells a different story. At the start of the deregulation process, tariffs are typically down by 20% but after three to four years they escalate, rising by 50%. Coetzee argues that, despite competition dominating the globe, if it affects the poor through higher electricity bills and job losses it must be rejected. Both union leaders reject the concept of cost-reflective tariffs, arguing that the poor both in urban and rural areas cannot afford the costs incurred in generation, transmission and distribution of electricity in a privatised electricity sector.

5.5 ESKOM CONVERSION ACT

Although COSATU made briefings to MPs on the ESKOM Conversion Bill in June 2001 and to the Public Enterprise Portfolio Committee on the same issue, government went ahead with its plans to corporatise ESKOM. The ESKOM Conversion Bill became an Act, which was effected on the 03 August 2001 which means that, when COSATU mobilised the anti-privatisation strike, the Act was already in place. Allegations by COSATU to government about the lack of transparency and consultation seems untrue when one thoroughly reads the Act, for government they did accommodate some of the concerns of COSATU about the corporatisation of ESKOM. The ESKOM Conversion Act (2001:2) section 4.3 states clearly that the conversion of ESKOM does not:

- affect the continued corporate existence of ESKOM as from the date of its establishment;
- affect the any rights, liabilities or obligations acquired or incurred by ESKOM, or on ESKOM's behalf at anytime before its conversion; nor
- affect the terms and conditions of service of its employees.

With regard to the memorandum and articles of association of ESKOM, the ESKOM Conversion Act in section 6 (5) points out that when entering into the shareholder compact as well as in determining the articles of association, the minister must take into account the following:

- the development role of ESKOM Holding Limited;
- the promotion of universal access to, and the provision of affordable electricity, taking into account the cost of electricity, financial sustainability and competitiveness of ESKOM.

5.6 COSATU GENERAL STRIKE

On the 30 and 31 August 2001 COSATU marched to parliament in protest against the government's plan to privatise state assets. COSATU handed over a memorandum to the Minister of Public Enterprises, Jeff Radebe, in which it said it would continue to campaign against privatisation. It demanded that the restructuring of state assets be negotiated with labour and community organisations. NUM general secretary Gwede

Mantashe warned at a rally in Johannesburg that “COSATU would continue its campaign against privatisation by staging another general strike in April and May 2002. He further said that the ANC should not take the support of workers for granted, it must listen to the working class and get its support or listen to big capital and lose their support” (Business Day: 30 August 2001).

5.7 A FURTHER SUBMISSION BY COSATU ON RESTRUCTURING OF ESI

COSATU’s vision for the electricity sector is strongly grounded in the way in which South Africa has been shaped by race, class and gender. It supports the RDP, the national electrification programme and the need improve access of the poorer communities to energy services. On the 19 September 2001 COSATU made another input on the restructuring of the power sector, which was presented to the Minerals and Energy Portfolio Committee. COSATU, although they are accused of intransigence by government, repeated their initial proposal rejecting with contempt the government’s proposed electricity sector restructuring. COSATU argued that, “in this context the democratic movement argued that we need a strategy for electricity that will help link growth and redistribution: that means electricity must both improve living standards and contribute to employment and productivity” (2001b:4). Specifically, it should:

- support home-based production through higher levels of electrification;
- reduce the burden of household labour, which falls heavily on women and children;
- raise living standards in general and improve the conditions for study at home;
- continue to provide cost-effective electricity for industry, if possible biasing production towards labour intensive activities; and
- develop a regional grid that will support development throughout Southern Africa.

For COSATU any electrification strategy must ensure that all have access to electricity at the level that can best support the use of equipment, including stoves as well as productive machinery such as sewing machines and welding equipment. Moreover, genuine access must ensure that electricity is affordable for poor

households. In these circumstances ensuring affordable electricity requires careful structuring of tariffs and therefore COSATU opposes government's vision of cost-based tariffs. "COSATU supported the ANC's lifeline tariffs, which would ensure every household a supply of free electricity, this minimum amount should be enough to support both lighting and cooking" (COSATU, 2001b: 4). The current proposal from the state will not make access to electricity broadly attainable. According to COSATU, it will, instead, bring about disastrous consequences for South African society, especially the poor. For COSATU, it is an illusion to state that the problem of the ESI is the absence of a market (in the sense of multiple buyers and suppliers interacting through the price mechanism). Furthermore, COSATU argues that the government objective is not to contribute to social and economic development, but is driven by an ideological desire to establish an electricity market. All government's objective plans to ensure a successful ESI, such as eliminating monopolies in the generation market, encouraging customer's right to choose a supplier, creating an electricity market, introducing competition in the industry, and permitting open and non-discriminatory access to the transmission system are criticised as unsubstantial. COSATU (2001b: 8) argued that "in reality, mass poverty and unemployment mean that:

- competition will likely only ensure good service for the rich, while the poor faces higher costs and worse access; and
- market prices would end cross-subsidisation of households by industry, which could actually reduce employment in the long run".

In the Portfolio Committee; hearing on 19 September 2001 on the restructuring of ESI, COSATU presented their position as follows:

- integration of municipal sector into a national distributor;
- vertical integration between generation, transmission and distribution, under continued public ownership;
- a stronger regulation regime;

- accelerated implementation of the lifeline block tariffs model, with cross-subsidisation as required by region, by sector (industry to household), by income groups;
- increasing levels of electrification (quantities per household) to adequate amounts of electricity for full household use and basic economic activities;
- raising finance through ESKOM bonds where necessary to fund the increasing of supply;
- increased focus on renewable sources of energy;
- movement towards a national Energy Summit, which would facilitate an inclusive and comprehensive approach to restructuring of the energy sector.

5.7.1 Taxation

The above viewpoints show how COSATU differs from the government in its proposals for restructuring the ESI and there were further concerns which visibly draw the line of demarcation between the two role-players. Taxation is another key concern. COSATU argues that the question of the taxation of ESKOM requires detailed investigation and it is premature for parliament to pass the legislation without the benefit of detailed research. COSATU argues that there are negative effects in taxing ESKOM (COSATU, 2000: 4) such as:

- increases in electricity prices and tariff levels;
- a reduction in human resource development and community programmes; and
- a reduction in resources for extension of services to historically disadvantaged communities, particularly in far-flung rural areas.

Summary

The position of COSATU on the ESI clearly illustrates the complexities involved in the restructuring process. Their position will also undoubtedly be a stumbling block in attaining the vision outlined by government. COSATU is diametrically opposed to the breaking down of ESKOM and to the introduction of private participants and privatisation. Corporatisation and commercialisation and the taxation of ESKOM as outlined in the ESKOM Conversion Act are rejected by COSATU due to the

likelihood that they will result in higher electricity tariffs and the delay of electrification of poor communities. COSATU believes that in order to have the ESI active in social and economic upliftment, it is necessary to preserve ownership in government hands, with stakeholder control. COSATU is convinced that the progressive restructuring of the ESI must create the balance between social upliftment and market related objectives.

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CHAPTER SIX

ENERGY INTENSIVE USERS GROUP AND AFRIKAANS HANDELSINSTITUUT

This chapter gives the perspective of Energy Intensive Electricity Users (EIUG) and the commercial world Afrikaans Handelsinstituut with regard to the imminent reforms of the ESI. In June 1998, these two groups submitted their proposals, responding like other stakeholders to the Parliamentary Portfolio Committee on Minerals and Energy's call to comment on the Draft Energy White Paper. In their submissions, the AHI and EIUG urge the government to hear the tone and content of their vision about the electricity sector. In addition to that, the vital role the government is playing in balancing social and economic development in its vision for the electricity sector was appreciated with great spirit by both stakeholders. However, in a number of their submissions, there is a call on government to give direction because of the divergent views and agendas between the stakeholders. This chapter is divided into two. First attention will be given to the AHI, and secondly EIUG in order to present their concerns about this transformation.

6.1. AFRIKAANSE HANDELSINSTITUUT

The AHI does not represent the entire business sector of South Africa. However, they were chosen because they made a submission in the 1998 Draft White Paper on Energy Policy. Other business views are not very different from their views on electricity sector reforms. The AHI argues that energy in various forms can make an important impact on economic success. Any envisaged reforms must be handled with a great deal of care because energy is a very important national priority. The AHI articulated in their submission the fact that they will support the DME in every possible way to achieve their objectives in this important sector. Key areas of concern that will be explored are their views on the process of the restructuring of ESKOM proposed by the government, the role of privatisation and the impact on the labour force. It should be pointed out that although in some instances EIUG and AHI present different viewpoints, both commercial stakeholders give the go-ahead for restructuring the ESI.

6.1.1 Transformation of ESKOM

Before proceeding to AHI's standpoint on the transformation of ESKOM, it is extremely important to mention the corporates or companies that forms AHI. Companies that are members of AHI include ABSA, Barlows Ltd, BP South Africa Ltd, Caltex South Africa Ltd, First National Bank of South Africa Ltd, Genbel Securities Ltd, Gencor, Iscor Ltd, KWV, Nationale Pers Ltd, Nedcor, Old Mutual, Rembrandt Group Ltd, Sanlam, Sasol Ltd, Standard Bank South Africa Ltd, Transnet and Vodacom. All these corporates made by the collective voice represented by AHI on restructuring of ESKOM, because, they also play important role in the economy of South Africa.

The AHI welcomes the government initiative of transforming ESKOM through the creation of economically viable independent generation companies to compete with ESKOM for the production of electricity. It is argued by AHI (1998:3), like government, that "the initial form of ESKOM should be a holding company in government control, to manage the whole restructuring process, since no other entity in South Africa has comparable depth and skills". Government will be the facilitator of the process, however and once restructuring has been completed the holding company must be phased out so as to avert too long-term governance of the whole electricity sector by state. In that sense, AHI favours transformation that will change the ownership from public to private player and is certain that separate competing power generating companies will yield economic efficiency. The important point made by AHI is that "the electricity market should then be structured in such a way so as to allow wheeling of electricity across the transmission system, as is the case in several overseas countries. Any customer can purchase from any generating company even on a daily spot market" (AHI, 1998:3).

6.1.2 Payment of Tax and Dividends

AHI is of the view that restructuring of ESKOM must be taken to its logical conclusion, which is full privatisation. In order to do that the AHI, like government,

requires that its form of governance must be that of a company and that entails the payment of income tax and dividends for electricity.

6.1.3 Electrification

AHI supports fully the national electrification programme, the drive to provide energy to the disadvantaged communities to contribute to social stability, development and markets for AHI members. AHI even speaks about the programme of rural energisation where alternatives to electricity are utilised like LPG, natural gas and solar energy. The following considerations offered by AHI (1998):

- Minimal transparent cross-subsidisation and successful recovery of bad debt.
- Electrification should rather be funded by the fiscus from a central electrification fund and not by large consumers paying hidden subsidies.
- Tax and dividends should only be payable after the whole industry has been restructured, and should be derived from more efficient and profitable operations.
- The reduction of company tax should be a continuing objective in the view of stimulating effect on economic activity.
- Taxing output is preferred to taxing electricity as an important input cost factor.

6.1.4 Employment

The AHI believes that restructuring for greater economic efficiency and productivity can bring about job losses. The fear of job losses by labour must be addressed so as not to debilitate a process of this nature. It is pointed out that restructuring normally requires higher skills and training of existing employees in good time, for more rewarding careers. It is for AHI, a prerequisite for success. Therefore it is suggested that “unskilled workers with insufficient potential for high technology posts should, nevertheless, be retrained to become artisans with business skills obtained, *inter alia*, from the Small Business Development Corporation” (AHI, 1998: 2). These fears from labour are justifiable for the AHI and indeed, if not adequately addressed, can delay the reaping of the fruits of privatisation and will be detrimental to much needed economic growth of this country.

6.1.5 Privatisation

AHI firmly believes that the restructuring of state assets in South Africa is something untenable if there are vast resources locked up in it. It is pointed out that, the ESI restructuring should be used for the benefit of whole South Africa. In comparing South Africa to European power industries the AHI argues that “the restructuring of some of Europe’s electricity industries yielded vast benefits for the taxpayer and the assets at ESKOM amount to R96 billion at replacement costs in 1996” (1998: 3). The government, it is argued, must not ignore the European example in its deliberations on restructuring ESKOM. It is only through the application of the philosophy of competition, adapted however to the needs of the country, that an adequate policy framework can properly unlock such resources. As privatisation is inevitable, the AHI differs around the question of the institution to accomplish this process because they have suggested that only DPE should deal with restructuring not DME. DPE deals with state-owned enterprise and must play a role in transformation of state assets including ESKOM.

6.2. ENERGY INTENSIVE USERS GROUP

6.2.1 Who Constitutes EIUG?

“Membership of the association consists of South Africa’s largest energy users, though this is not restricted to within one country alone. These members, which collectively employ more than 400 000 people, consume two thirds of the electricity supplied to the industrial and mining sector in South Africa and represent one third of the country’s electricity sales” (Ruffin, 2000:33). It is stated unequivocally that the major requirement of the EIUG members is internationally competitive electricity costs, an appropriate quality and reliability of supply and the ability to negotiate mutual beneficial contracts with the electricity supplier/s. EIUG is a voluntary, non-profit association of large energy users established mainly due to the uncertainty regarding imminent changes in South Africa’s ESI. Its objectives are to promote and protect the interest of these users for the benefit of economic growth, prosperity and the development of Southern Africa.

The key issue for the EIUG is the option of choice of supplier for large industrial customers. The Chamber of Mines, which is a member of EIUG, (1998:2), argues that the definition of contestable customers as “those having an annual electricity consumption of >100GWh and a demand of >10 MVA”, is too limited. It is recommended by the Chamber of Mines that the following categories of customers be allowed a choice of supplier:

- Industrial customers which are large base load electricity consumers, with annual energy consumption of more than 100GWh on a single site resulting in electricity bills in excess of R1 000 000 per month.
- Industrial customers with a maximum of demand on a single site greater than 5 MVA with own generation of at least 10 MVA.
- Industrial customers whose electricity costs represent more than 25% of their variable costs.
- Industrial customers who are able to shed significant load during national peak hours on a daily basis.
- Industrial customers who would experience major health and safety problems from interruptions in electricity supply.
- Underground mines.

“Underground mines are included in this definition because of the critical importance of electric power in such operations. Electricity is used to power winders for hoisting personnel, material and rocks, pumps, ventilation equipment, and refrigeration plants for air cooling” (Chamber of Mines,1998:2). In addition, ventilation, air-cooling and pumping are important for the safety of underground personnel. Therefore, underground mines, regardless of their electricity consumption, are dependent on electricity, not only because it is a convenient source of power, but also because for health and safety reasons.

6.2.2 On Restructuring of ESKOM

Intensive electricity users strongly support the restructuring of ESKOM as this will be a necessary ingredient for the introduction of a competitive electricity market into the generation sector and the eventual full commercialisation of the ESI. However, it is asserted that there is high necessity to determine and evaluate the potential consequences of each restructuring step before it is implemented so as to avoid deleterious effects on the ESI, society and the economy. This is similar to the concerns that COSATU raised in its proposal that: when reforms are put in place they must not have negative effects on the workforce, consumers and the entire economy.

6.2.3 Tariffs

In principle, the intensive energy users favour the introduction of tariffs based solely on the cost incurred in the generation, transmission and distribution of electricity i.e cost-reflective tariffs. Although there is this convergence point, EIUG is opposed to the cross-subsidisation suggested by government and supported by COSATU especially for consumers who are not paying their accounts. However, "the EIUG supports the government's initiative for using electricity for social and economic development" says EIUG chairman Mike Rossouw. "For that reason the EIUG supports the government in securing funding for less advantaged electricity consumers" (Ruffin, 2000: 33). For EIUG the costs and procedures in undertaking this should be transparent and there is the concern on the part of EIUG that government has not demonstrated its capacity in certain spheres to manage subsidisation issues.

6.2.4. Taxation of ESKOM and Taxing of Electricity

For large electricity users, it is extremely important that government intentions of taxing ESKOM be investigated thoroughly and more crucially its implications for the ESI. The submission by EIUG stated its concern at a "tax upon tax, specifically with regard to taxation of ESKOM and the electrification programme. At present consumers pay for the electrification programme, and it has been our position that if ESKOM were to be taxed and consumers were still to pay for electrification we will be confronted with a 'tax upon tax' dispensation" (EIUG, 1998:6). Therefore, EIUG

suggested that the best means of resolving the ambiguity is to conduct an enquiry to find efficient means for funding electrification, its effects on consumers and on job creation.

In principle, the EIUG seems opposed to taxing electricity and is concerned about internationally competitive electricity cost. "In meeting these requirements the EIUG has highlighted a few issues relating to the restructuring of the ESI, which it would like to see well thought out and debated as comprehensively as possible. In principle the EIUG believes that taxation of industrial inputs diminishes competitiveness of South African industry in a globalised environment" (Ruffin, 2000: 33).

6.2.5 Privatisation

In the second chapter of this thesis it was stated that there are different modes of privatisation that a country can contemplate and put in place depending on its conditions. This is exactly the point made by large electricity consumers and in reality they are agreeing with the government when this applies to the ESI not the EDI. For EDI restructuring, privatisation is not on the table because there is too much to do to normalise the distribution industry before any cogitation is done about private participants. On the ESI, EIUG argued that "our view with regard to the larger Electricity Supply Industry is that we (at national level) ought to explore modes of privatisation best suited to the requirements of our society and our economy, in this regard we have eschewed the privatisation model of the British Electricity Supply Industry". The reason for not emulating the British model as far as EIUG is concerned is that employment levels of the post-privatisation era are about one third of those before privatisation. EIUG believe that the best model introduces real competition and electricity trading mechanisms in line with those Australian states of New South Wales and Queensland. It is further pointed out that the imperatives that existed in the United Kingdom do not exist in South Africa and EIUG firmly believe our own model must meet the imperatives of providing lifeline tariffs for indigent consumers and electrification for a sustainable ESI.

6.2.6 Key Aspects of Concern in EIUG's Proposal

Several issues were pointed out in this chapter as the position of the EIUG, for instance taxation of ESKOM, taxing of electricity and the privatisation model suggested by this association. There are some facets forming the backbone of the EIUG proposal. "EIUG believes that any changes contemplated by government, regulators or role players in the ESI must seek to achieve the following objectives" (Ruffin, 2000: 33):

- All domestic and light industrial customers should have access to affordable, reliable and cost-competitive electricity supply (NB. competitive in relation to alternative energy sources such as gas, fuel and coal, etc).
- Customers who need special quality of electricity or reliability of supply to secure production or safety of people must be able to negotiate an appropriate and cost reflective supply arrangement.
- Energy intensive customers who extract and benefit from South Africa's natural wealth must receive a supply of electricity that would ensure their sustainable competition in relation to similar industries outside South Africa.

The intended shift from a vertically structured and state-owned electricity supply industry to a more liberalised power sector is where all these aspects can be feasible. Therefore, reforming the ESI is where all the stated concerns of EIUG can be attained, especially the idea of the choice of electricity supplier.

Summary

The chapter showed that the AHI and EIUG supports wholeheartedly the initiative by government to renovate, restructure and create a competitive electricity model for the ESI, and the AHI, to begin with, congratulates the whole post-apartheid energy policy formulation. Dealing specifically with the ESI, this commercial organisation recommends that the DME must be supported by all possible stakeholders, including organised business. They also argue that labour's fear of job losses must be addressed adequately to expedite the process. Restructuring of electricity and privatisation,

which for AHI is inevitable, must not be delayed because it is an international phenomenon. Countries all around the world are creating competitive power market and are privatising. Finally and importantly, although not stated, AHI supports the idea of freedom of choice of supplier-which is also the position of government and the EIUG.

In its vision, the EIUG is opposed to any role-player who will retard this process of reform. However, it is of the opinion that government must ponder and be sensitive about its proposals. Infallibility is not a possibility for any stakeholder accomplishing a mission of this magnitude, but EIUG contends that government must be vigilant enough not to put in place a model which will put the industry in a precarious position that may lead to social upheaval and an ailing economy. For intensive energy users, a perfect model for ESI reforms is one which is attentive to the local environment. It is stated very clearly that the model used in the U.K, for example, might not be applicable to South Africa. It is important that the transformation model of the electricity sector should not be imported, but should develop out of local conditions.

CHAPTER SEVEN

CONCLUSIONS

This thesis has explored different positions of the various stakeholders with regard to the restructuring of the ESI. Their initial positions were developed when the draft White Paper on Energy Policy was published in July 1998 and all the role-players were invited to comment by the Parliamentary Portfolio Committee on Minerals and Energy. Stakeholders scrutinised in this study were the government, ESKOM, organised labour, intensive energy users, and business.

The objectives of this chapter are to give the overall conclusion of this thesis based on the author my independent analysis of the South Africa electricity reform path. Firstly, the dissertation will examine the degree to which government's vision for the ESI is consistent with, and is shaped by, overall commitment to social and economic transformation within a context of globalisation. Secondly, it will look at the risks and benefits of restructuring the electricity sector. Finally, it will compare and contrast the position of the various stakeholders and examine the degree to which their views have been incorporated by government.

7.1 GLOBAL AND NATION CONTEXT OF ESI REFORMS

7.1.1 A Vision for Transformation

The South African government in its first years in power gave itself the mammoth task of transforming a racially divided society. The South African state and society had to change fundamentally if they were to move from oppression, extreme poverty and inequality to substantive democracy and people-centred development. Change has to be effected beyond the political sphere in order to deal with economic and social marginalisation. Transformation has to be implemented and understood across all sectors of government, business and civil society, to ensure that the benefits of democracy are shared by the toiling poorest people of South Africa. A UNDP (2000: 4) pointed out that "transformation should deal with economic, political and social relations and should result in fundamental freedoms and improvements in the lives of

all, especial those of the poorest people". Moreover, it was also asserted that any transformation process must take account of the fact that societies are not homogeneous. One could even argue that there are different interpretations of transformation shaped by social location, social experience and social interests.

The benchmark for the new government's economic and social transformation was contained in the Reconstruction and Development programme (RDP) and later the Growth, Employment and Redistribution (GEAR) plan. In these government committed itself to:

- creating productive employment opportunities for all citizens at a living wage;
- alleviating poverty, low wages and extreme inequalities in wages and wealth;
- meeting basic needs and ensuring that every citizen enjoys a decent living standard and economic security;
- democratising the economy and empowering the historically oppressed, particularly workers and their organisations;
- removing racial and gender discrimination in the workplace;
- developing regionally in Southern Africa, based on the principle of equity and mutual benefits. These commitments constituted government's yardstick for social transformation (UNDP, 2000: 12).

Reforms in the electricity sector will depend in part on the pace at which other economic reforms are implemented. In other words, reforms in the power sector proceed in parallel to reform programmes in other related sectors and it is not easy to divorce electricity sector reforms from other overall macro-economic reforms. Macro-economic reforms, it must be reiterated; are hugely influenced by global developments.

7.1.2 Globalisation

Globalisation plays a major role in influencing the economic policies of developing countries. The restructuring of the ESI is based on economic principles that are embedded in this phenomenon, like creating a competitive market system in the electricity sector, privatisation and seeking greater foreign direct investment.

Globalisation supports commercial objectives rather than non-commercial objectives. It is also based on a minimal directive role for the state, and the removal of all obstacles that impede the free flow of commodities, investment and finance. Every day international capital markets decide which country of the world is worth investing in and it seems as if countries of the developing world must comply with market principles if they want to gain investment, economic growth and an improvement in the quality of life of their citizens. "Transforming the state within a global system that increasingly sets the pace of development has created new tension and modes of engagement between the state, civil society and the business sector. The central challenge is whether South Africa's transformation will attain the objectives of human development for the majority of those who have been excluded from mainstream society" (UNDP, 2000: 5).

The World Bank (1993: 2) made several propositions to developing countries when restructuring their electricity utilities. It stated that:

- governments of developing countries should rethink their roles to improve the performance of their power sector;
- state-owned power utilities should be commercialized and made accountable to the international standards of capital markets;
- competition should be introduced into the power sector to improve sector performance;
- regulation of the power market in developing countries should be incentive-based and applied transparently by an independent agency; and
- developing countries should use private sector investment, technology, and expertise to develop and reform their power sectors.

While South Africa's ESI restructuring is consistent with these propositions, the greatest challenge, however, remains to devise mechanisms where social concerns about the supply and the use of electricity are made compatible with commercial pressures. This is the reason for the constant shifts by the government in its ESI reform proposals. They find it extremely difficult to balance commercial and non-

commercial pressures. This presents immense challenges in policy selection and implementation because governments, private sector participants, multilateral agencies, labour and large energy users may not share a common set of policy goals. Therefore, it will be difficult to reach consensus on policy choices unless all parties exercise some spirit of compromise.

7.1.3 Government Choices

The national priority of social and economic transformation and the role global forces play in transformation, provides the context for electricity restructuring and highlights the extent to which electricity is an essential contributor to modern social and economic development. The success of electricity restructuring depends significantly on how effectively electricity provision supports socio-economic development, as defined in the government policy. In its reform process government has no choice but to restructure. But restructuring has to cope with important trade-offs in economic and social development, such as attracting foreign direct investment, creating competition, attracting private sector participants and widening access to affordable electricity. COSATU argues that this “has worked reasonably well in countries where infrastructure is well established, most of the population is relatively well off, and government has great skills and resources. It has not worked well in South Africa or indeed in virtually any developing country faced with the challenge of substantially improving infrastructure in very poor communities” (2001c: 1). The South African government argues clearly that it will be possible to maintain and advance the electrification programme while restructuring the industry. It has put in place an electrification fund, and the REDs will be required to meet electrification targets.

Despite the difficulties stakeholders have in reaching consensus around ESI reforms, the ESI faces certain objective pressures to restructure. The reality is that government faces the pressure of general economic reform. The power sector is one of the most significant infrastructure industries in the economy. The state has huge economic value locked in the ESI and there is the imperative of ensuring economic efficiency.

Furthermore, government has a role to expose the non-monopolistic components of electricity supply to competition and is an inescapable fact.

Competition can bring about many benefits in the ESI. It is a key element of the new approaches to sustain an economic and reliable supply of electricity. It makes market-determined prices prevail in the competitive components of the power sector and prevents anti-competitive pricing. The South African government is, in its ESI reforms, facing the greatest challenge: to make sure that the benefits of competition and privatisation are also transferred to the consumers, especially the poor. The movement towards a competitive electricity market, like giving customers the right to choose their supplier and introducing competition in the generation sector, is indeed desirable, but it must be scrutinised so as to meet its stated objectives. EDRC (1998: 1) pointed out that “while competition certainly has the potential to put downward pressure on costs, it is questionable whether this would lead to price reduction. Since competition would require private capital, it would require a raising of the rates of return currently seen in the industry”. It is thus vital that efficiency improvements are substantial and that the benefits are equitably shared between producers and consumers. Restructuring is tantamount to creating a liberalised market structure, and competition must have a role to play, but it is imperative that the nature of competitive framework be carefully designed and thoroughly investigated.

7.2 RISKS AND BENEFITS OF ESI RESTRUCTURING

Before moving to the advantages and disadvantages of the ESI restructuring process, it is important to re-state the reform path used by South Africa. It is clear that government restructuring has two key elements. Physical changes in the organisation of power sector are commonly called the “structural reform path” and the transfer of public ownership of public utility is termed the “ownership reform path” Typically, structural reforms call for the separation of vertically integrated power utilities, common in less developed countries, into separate functional units where generation is separated from transmission, and transmission from distribution” (Chiwaya, 1999:

36). Government objectives in these reforms is to improve allocative and operational efficiencies in order to lower costs and prices

Government, in its objectives, even argues that the reorganisation of the ESI will unlock its economic value, meaning that it can lower debt and interest, and free fiscal resources for social expenditure.

“The ultimate aim of the ownership reform path is to transfer ownership and control of power supply entities from state monopoly to popular participation and ownership through market competition” (Chiwaya, 1999: 39). It is argued that the rationale behind this approach is the perception that there are limits to what governments can do, and that certain economic issues can be handled more efficiently by the private sector. At a certain point then, a need to reduce government intervention in economic activities arises; this point is when this intervention takes up too much space, and consumes too many resources. It is in this context that government in its stated objectives argued that there can be an increase in foreign direct investment and black economic empowerment. Therefore, to accomplish this, government has to set up a privatisation programme which limits government participation in the ESI.

When ownership switches from the public to the private sector, certain risks are posed, along with potential benefits that accrue to society. Many governments consider power production of strategic importance to their national economies. In South Africa for instance, it has been used as an instrument for employment creation and the pursuit of other social objectives such as the programme of national electrification. The government currently has control over the power sector in order to pursue national policy objectives. It is also argued that the potential risk of power supply failure is the reason for the reluctance of many governments to entrust ownership to private participants. There is perhaps still insufficient evidence that private competitive markets respond adequately to the need for investment to ensure security of supply.

Another potential advantage of the transfer of ownership to the private sector is to bring greater efficiency improvements through cost-cutting measures. "Among other things this is accomplished through job cuts and streamlining the organisation and to focus on its core business activity of generating electricity" (Chiwaya, 1999: 41). This could be problematic and is the reason why COSATU is resisting this reform process in South Africa. If government fails to take into account labour views with regard to the ESI, this might eventually trigger political unrest. Animosity between labour and government could be avoided by putting a moratorium on job losses (as was done in Chile and Argentina). Otherwise, South African could benefit from ESI reforms if careful thought is put into devising appropriate privatisation models that suit the country's history. Most economist believe that privatisation and competition will result in improved efficiencies, and finally lower prices to consumers. There is always the risk, however that the benefits of cost reduction are not passed to consumers, but result primarily in profits for investors

In summary, while there are many risks associated with ESI reform, such as potentially higher prices, employment losses and a reduction in social investment such as the programme of national electrification, there are also potentially many benefits. These include increased efficiencies, lower costs, and, in the long run, lower prices, reduced public debt and interest repayment, greater fiscal resources for social expenditure, black economic empowerment and widened economic ownership. The greatest challenge for government will be to manage the reforms such that the risks are minimised and benefits maximised.

7.3 STAKEHOLDER ANALYSIS

This section will contrast the stakeholder responses to the initiative by government to introduce a new model for the ESI guided by *interlia* restructuring to introduce commercialisation and corporatisation, competition, changes in ownership and regulatory regime (in particular the NER and business). This emerging government model to reform the ESI was welcomed by other stakeholders but it was challenged considerably by organised labour. For instance, in the ESKOM Conversion Bill, all

stakeholders agreed that ESKOM must operate on a commercial basis except for COSATU. On the question of horizontal and vertically unbundling all the stakeholders agreed in principle with government, but COSATU disagreed and strongly opted for the current structure. ESKOM has strongly resisted unbundling and has argued that transmission should only be separated out later. ESKOM has also persuaded government that its market in generation should remain dominant and that only 30% should be divested.

Government made a significant step by inviting ESI stakeholders to submit their proposals and this showed how the electricity reform process can be democratised, introducing the principle of openness. Stakeholders indeed have a direct role to play in electricity policy formulation; however, some stakeholders turn out to be more reactive rather than pro-active, and in that situation the process can stagnate. Examining the debate about South Africa's ESI restructuring reveals the fact that the reason why there is discontent among some stakeholders is because this restructuring process in the ESI affects the interested parties quite differently. This process of reforms was initiated by government and they have adopted an emerging model, which is used internationally when reforming power sectors. Belief in a market philosophy is a cornerstone of this model; hence the call for the introduction of competition as the bases for success in South Africa's ESI. There is a core belief that new investment in generation capacity will be more efficient in a competition market structure rather than a vertically integrated structure.

However, this new vision has been resisted by other stakeholders particularly ESKOM and organised labour, who benefit from the current situation. ESKOM challenged the new trend through engaging government to rethink its initiatives. As was shown in chapter four, they want to remain dominant in the industry, as opposed to government's proposal of breaking generation into different competing companies. Furthermore, while ESKOM is entertaining the establishment of an independent transmission company, they want to continue to control this component of the electricity sector for as long as possible. ESKOM representatives managed to

persuade the government to review its initial electricity reform proposal. It is at this point that we come across government's shift of position.

ESKOM's challenge to the government exposes the dilemma government has in balancing economic and social concerns. This state-owned utility managed to make sure that people do have access to electricity and they fulfilled government's agenda of national electrification. They have used this fact to argue that government should make sure that ESKOM should remain in a dominant position so that it can continue to fulfil government developmental objectives. However, there is a contradiction and misunderstanding as the consequences of restructuring will be the responsibility of REDs who will be responsible for electrification, not ESKOM. Government has also set up an electrification fund to support an ongoing programme of electrification.

Because of the elusiveness of ESKOM's position in this electricity reform debate, one can even argue that ESKOM's proposal intertwines with that of government and ESKOM has the most influence ultimately. Implicitly, ESKOM wants to be autonomous as long as possible and that is the one of the principles behind the government's position. It is at this point where we discover that ESKOM and labour have a slightly different position, and COSATU feels that making ESKOM independent will pave the way for privatisation and, more importantly, impinge the on its developmental role and put pressure on electricity prices.

COSATU is vehemently opposed to the whole reform process, as it is articulated by the government and they still support the dominant model of a vertically-integrated, government-owned monopoly. They are opposed to the split of ESKOM; they are more comfortable with an integrated structure and uncomfortable with the new model which involves reorganising the electricity sector around privatisation and competition. Furthermore for COSATU, no private participants must be allowed and ESKOM must not operate like a company. This position led to their defiance of the ESKOM Conversion Bill. However, notwithstanding this rejection, the commercialisation of ESKOM is moving forward as government has planned.

Furthermore it must be stated clearly that with regard to the ESKOM Conversion Bill, COSATU misinterpreted and distorted the objective of the Bill. It was stated that “the main aim of the Bill is not to privatise ESKOM but to bring it in line with the type of business entity more acceptable and well understood internationally” (InSession, 2001:4). However, COSATU must be congratulated because ultimately the developmental role of ESKOM and the promotion of universal access and the provision of affordable electricity were taken with great consideration when the Bill was finalised.

AHI and EIUG on other hand share government’s perspective of the ESI reform process and both stakeholders seem not opposed to any government opinion in this matter.

In this dissertation it was discovered that the tension and delay in reaching consensus about ESI restructuring lies in the existence of a public and private dichotomy which makes very clear that ideology is playing a huge role in determining the outcomes of restructuring. A key issue is the different ideological assumptions that are made. Adherents of competition and privatisation believe that efficiency improvements will result in lower costs, which results in lower prices to consumers. Other stakeholders, such as COSATU, argue that private owners require higher rates of return on their investments than a publicly owned utility, and because of higher profits, consumers will not benefit. The evidence from ESI reforms is still a mixed situation because of ideological differences and conflicting trends. Government has thus to devise policies to ensure that the benefits of reform are equitably distributed.

Of all the stakeholders mentioned in this dissertation on the restructuring of ESI ESKOM remains the dominant stakeholder by leading and driving the process to their own advantage. There is a combination of reasons for this:

- they occupy a key position in the decision-making process because of their monopolisation of relevant knowledge (institutional factor);

- there is little capacity in government to engage Eskom equally. For instance, DME, DPE and Cabinet have different agendas although they are all the organs of the state and Eskom has contacts and can lobby all these departments.
- meeting social objectives, e.g. the national electrification programme, gave political credibility to Eskom. That eventually makes government unsure about these power sector reforms and this is to the advantage of Eskom;
- Eskom's contribution to the New Partnership for African Development is about improving local, regional and continental electricity infrastructure and therefore playing a role in the African Renaissance, creating a positive image for Eskom. This huge advertisement by Eskom of itself became influential in moving not to break up Eskom.
- Black elite in the top management of Eskom has a powerful political network. This is the result of significant project by Eskom of skilling black people and with that, they have same inspiration as government. Eskom is unique in the South African energy markets because of putting blacks in their top management and that is a significant step in its transformation agenda, as compared to oil markets which are strongly controlled by whites.

Summary

It is evident from this thesis that South Africa's electricity sector reforms will be contested by various stakeholders. The debate between the stakeholders mentioned here shows that there are two broad contending models. The one is the model of a vertically integrated, government owned monopoly, which organised labour supports strongly. On the other hand there is an emerging model which suggests the creation of markets for the electricity sector centred around privatisation and competition. Government and business are the proponents of this model. In this ideological battle, Eskom is floating; they support the power sector reforms as they are taken as part of a broader framework of macro-economic restructuring by government, and at the same time they want to maintain their dominance in generation and transmission. Ultimately, the reform model should be carefully tailored to the country's context and respond to the

problems facing the country. For instance, the marginalisation of most communities in the pre-democratic era led people to struggle for access to affordable the electricity.

In conclusion, we can make certain observations about the process of policy-making in the South African energy sector. We can observe four dimensions to the process:

- Strategy- the process that ones uses to pursue one's interests within a particular context;
- Interest- the perceived parameters for judging the success of one's actions;
- Analysis- the process of mapping out the costs and benefits of a particular course of action; and
- Capacity- the ability to develop and pursue/undertake any of the above.

This provides a framework to understand the unfolding of the policy process around ESI restructuring, and to situate what we have found in a broader context of policy theory. The capacity problem comes into sharp focus in a developing country context. There are three challenges that a government faces in the policy realm:

- How to define the broad aims and values of government?
- How to decide what government wants in a particular context?
- How to get it?

The first challenge, which is more important to the policy process than initially imagined, is dependent on the well-being and sophistication of the political system. A complex and stable political system creates a consensus on values with sufficient legitimacy. The second challenge is the one that traditional policy analysis concentrates on. It was assumed that once the right policy had been arrived at, implementation was assured. For this reason, strategic aspects of the policy system were never emphasised. We now know, especially in the developing world, that an implementation strategy is equally important if not more so than the analysis process. Both of these rest on adequate capacity. Analytic capacity is well-defined, mainly

because it depends on expertise that fairly easy to recognise. In this case of ESI restructuring, government was able to on expertise to sketch the outline of what it wanted to achieve. What has not been adequately recognised, however, is that strategic capacity is equally important. It seems evident from the above analysis that government did not possess strategic capacity, whereas ESKOM did possess significant strategic capacity, and was able to deploy this very effectively. None of the other players could match this, which meant that once government had outlined the broad policy objectives, other players such as organised labour were simply shut out of the process, whereas ESKOM could easily and effectively pursue its own within this framework.

This does not mean that government will not achieve its restructuring goals; in fact, ESKOM's partial acquiescence has helped to legitimate these goals. What is important in this analysis is that the strategic level of the policy process is crucial, and neglected by policy theorists, especially in developing countries. Unlike in the analytical realm, goals in the political realm are by their nature contestable. It is this contestability that makes the process of legitimation more important than the process of verification, and this in turn is what gives the strategic sphere its importance.

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