Study of Restructuring of the Namibian Electricity Supply Industry

Phase 3: Public Presentation Document

- Stakeholder Comments Received
- Summary of Restructuring Recommendations
- Proposed Implementation Plan

Windhoek

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1. Introduction

This document summarises stakeholder comments on electricity supply industry (ESI) restructuring in Namibia, details recommendations of the final Phase 3 of the restructuring study and presents a proposed implementation plan. The document serves as background to the final Public Meeting on ESI restructuring, to be held in Windhoek on 7 July, 2000.

1.1 ESI Challenges

The electricity supply industry (ESI) in Namibia faces a number of challenges:

- Major investment requirements in the short to medium term – in generation, transmission and distribution infrastructure and operations;
- Increasing access to electricity among the Namibian population;
- Broadening of local and foreign private sector participation in the ESI;
- Impacts on Namibia of electricity sector reform in Southern Africa (particularly South Africa and the Southern African Power Pool);
- Loss of economies of scale due to a fragmented nature of the ESI;
- Proliferation of a large number of electricity tariffs, often not cost-reflective, with resulting efficiency losses and unequal treatment of customers;
- Insufficient customer focus, leading to sub-optimal quality of supply and service;
- Human resource constraints with negative implications for efficiency and delivery;
- Diverse financial performance of electricity distributors, with adverse consequences for financial viability and sustainability; and
- An inability of many of the current distributors to plan, finance and sustain electrification programmes in their areas of supply.

1.2 The ESI restructuring study process

To address the challenges Cabinet, in 1997, instructed the Ministry of Mines and Energy (MME) to launch an in-depth investigation into the ESI. The agreed objective of the study was to make recommendations on possible future structures, which would enable the ESI to continue to be the engine for economic growth, development and prosperity in Namibia in an effective and efficient manner. The White Paper on Energy Policy, released by the MME in May 1998, gave further guidance to the restructuring exercise.

A group of consultants led by SAD-ELEC was appointed to undertake the ESI restructuring study. The study process was designed with the following steps:

- **Phase 1**: Detailed investigation into the current performance of the ESI and relevant international experience. This phase was completed in *March 1998*.
- **Phase 2**: Evaluation of a limited number of possible restructuring options, with particular focus on rationalisation of electricity distribution. Phase 2 was completed in *July 1998*.
• **Consultation Phase:** Sharing of the results and recommendations of the Phase 1 and 2 investigations with as broad a range of Namibian stakeholders as possible to fully inform them of the rationale for change, the restructuring options considered, and the conclusions drawn. This phase was concluded in **April 1999**.

• **Phase 3:** Taking the views and positions of the various stakeholders into consideration, a more detailed and focussed investigation into various restructuring aspects commenced in **June 1999** as Phase 3. Completion is expected by the end of **July 2000**.

• **Approval Phase:** Upon completion of Phase 3, the MME will engage in a process to obtain final government approval of the restructuring proposals, followed by Cabinet approval, and then implement the decisions taken based on an agreed Implementation Plan.

### 1.3 Objectives of Phase 3

The principle objectives of Phase 3 have been to address:

- **Overall electricity market structure**
  Make recommendations on the most appropriate market structure for the Namibian ESI, with any implications this may have for the generation, transmission and distribution components of the industry, as well as for end-users.

- **Distribution industry structure**
  Finalise recommendations for distribution industry restructuring, focusing on addressing the different needs of different parts of the country and the necessary processes to facilitate change.

- **Clarification of key policy issues**
  Development of proposals and recommendations with regard to resolution of key policy issues identified during Phases 1 & 2.

- **Implementation programme**
  Establish proposals for the implementation of ESI restructuring recommendations.

A Draft Phase 3 report was issued in November 1999 and stakeholders were invited to provide their comments to the report. The comments received are summarised in Section 2. Section 3 sets out the recommendations after taking into account stakeholder comments and developments since the Draft Phase 3 report was issued.

### 2. Stakeholder Comments on the Phase 3 Draft Report

Apart from the MME as the Client for the study, comments were received from a number of parties, including NamPower, Northern Electricity, various municipalities and local authorities, MRLGH, the Auditor General and Shell Exploration and Production Namibia. A summary of comments is provided below. These have been considered when preparing the final study recommendations and the proposed Implementation Plan for the ESI restructuring.

#### 2.1 ESI Market Structure

Broad-based support has been expressed for the proposed ‘Single Buyer’ model (SB) as the basic market structure for ESI reform in the medium term (see Section 3.1). However, stakeholders have commented on the need for Namibia to be able to move
to a competitive market structure (initially at wholesale level) in the longer term, to be in line with developments internationally and throughout Southern Africa.

Comments received on the ESI market structure centred on clarifications of aspects of the SB model, such as:

- the need to clearly distinguish the SB and national grid functions from NamPower’s other operations, including transparent ringfencing of NamPower’s transmission business from its involvement in generation and distribution;
- the need for the Electricity Control Board (ECB) to promulgate appropriate regulations to define and regulate the operations of the SB;
- the need to reflect in regulations policy decisions on customer choice, third-party access to transmission networks and transmission pricing principles;
- some clarifications of the role of the SB versus the ECB in making decisions around customer choice, network access and supply arrangements; and
- the need to protect the viability of Namibia’s extensive transmission and distribution infrastructure when moving towards competitive arrangements.

Additional comments received on the market structure relate to NamPower’s role in new generation developments and the trade-off between costs of use of Namibian energy resources for power generation versus sourcing power from sources outside of the country.

It is also generally emphasised that restructuring proposals should not focus on entrenching positions of existing players, but instead stimulate a competitive environment wherever possible.

### 2.2 Private Sector Participation

Promotion and realisation of private sector participation (in generation, distribution and service provision) is seen by many as a key element of the ESI restructuring and reform. Regulatory mechanisms should be in place to facilitate this up-front. Stakeholders emphasised that:

- private participation should be achieved on transparent and competitive terms, with no preference being given to any specific party. This is important to reduce the risk to investors, but also to protect customers when monopoly rights are awarded (e.g. through granting of a distribution licence for a specific area).

Several stakeholders raise the possibility of partial privatisation of NamPower. While this is outside the scope of the restructuring study, stakeholders have proposed that:

- a separate initiative be launched to look into possibilities for NamPower privatisation, either of NamPower as a company or through private participation in various parts of NamPower’s business operations.

### 2.3 Distribution Industry Restructuring

Comments on distribution restructuring include:

- why one common distribution industry solution is not proposed for all of Namibia, e.g. creation of Regional Electricity Distributors (REDs) for the entire country;
- Government’s decentralisation policy must be reflected when arguing specific structural changes to organisation of electricity distribution, particularly related to the role of Regional Councils in a restructured ESI;
• NamPower’s future role in distribution needs more clarification (both in terms of NamPower itself and its subsidiary company Premier Electric), with a particular view to avoid any NamPower domination in the distribution industry;
• distribution operations should be corporatised – independent on whether the activities are undertaken by new companies created as part of the restructuring, or by the existing local authority electricity distributors and NamPower; and
• proposals around continued urban electrification must be included.

The proposed restructuring in the Erongo Region is well received. Specific comments have been provided on the restructuring proposals for Northern Namibia and the Central and Southern parts of the country:

➢ Northern Namibia:
♦ An asset-based solution for the creation of a RED is supported;
♦ Financial viability of the Northern RED must be tested using Generally Accepted Accounting Principles (GAAP);
♦ Principles for ownership and shareholding must be agreed up front. Different types of shares may be considered, including the organisation of ownership by local and regional authorities via a trust;
♦ Initial capitalisation requirements must be addressed; and
♦ Transparent principles and mechanisms for private participation must be established.

➢ Central and Southern Namibia:
♦ Regional distribution arrangements should be pursued for the Central and Southern parts of Namibia – if not in the short term, at least in the longer term;
♦ Windhoek has confirmed an interest in playing an extended role in the Central parts of the country – on transparent commercial terms;
♦ No particular player should be given exclusive rights to take over supply to local authorities, towns, villages and rural areas.
♦ Private participation should be promoted for new supply arrangements, and should be based on competitive tendering and agreed (possibly regulated) terms and conditions for service provision.

2.4 Policy Issues

Comments were also received around necessary policy decisions that should accompany the agreements on ESI restructuring. These include:

• Financing for electrification should preferable be sourced through taxation of the ESI and from external financiers, not through introduction of an electrification levy (to avoid any distortions of price signals etc);
• Regional Councils must be included in arrangements for rural electrification;
• Further initiatives are required to clarify local authority revenue streams in a restructured industry.

3. Summary of Recommendations
Compared to proposals included in the Draft Phase 3 Report (November 1999), the ESI restructuring recommendations have been modified to take account of stakeholders’ comments. The final recommendations are outlined below.

3.1 Electricity market structure

3.1.1 Key market objectives for Namibia

The key objectives for Namibia in contemplating the most appropriate market structure for the country are:

- To source power supplies for Namibian consumers in the most cost-effective manner, including the optimum utilisation of local generating assets;
- To ensure a reliable supply of power that promotes Namibian growth and development; and
- To increase diversity of supply and promote the use of local energy resources.

It seems inevitable that major new generating projects in Namibia will have to be developed with private participation. The size of the Namibian electricity market and the small number of (potentially competing) generating stations make it difficult to develop a competitive wholesale market within the country (although this is possible in the Southern African region). Lastly, it is important for the viability of the transmission system that Namibia should not allow foreign utilities to ‘cherry pick’ large Namibian customers without contributing to the overhead costs of Namibia’s extensive transmission and distribution network.

3.1.2 Recommended route for Namibia

It is proposed that Namibia pursue a ‘Single Buyer’ (SB) model. The model is illustrated in the figure below.

![Diagram of Single Buyer model](image)

The key elements of the SB proposal are as follows:

**IPP development**

- IPP developers should be encouraged to supply the Namibian market and export power to customers outside the country.
• NamPower should not be excluded from participating in IPP developments, and should be encouraged to do so where they can add value.

• The ECB/competition authorities should monitor IPP developments and power purchase agreements to ensure that any NamPower participation in IPPs is not to the detriment of Namibian consumers.

• The SB will procure power generated by IPPs, NamPower generation and imports at the lowest possible cost to meet overall system demand.

• Local generators should have preference over imported power when accessing the market, although not at prices higher than the full economic avoided cost of imported power.

Wholesale power purchase arrangements
All distributors and eligible large users (see below) must purchase their power from the SB, except in the following cases decided by the ECB:

• Where a large user is allowed to purchase power directly from a generator (IPP) or foreign utility; or

• Where a distributor/large user purchases directly from embedded generation in the distributor’s network.

Retail power purchase arrangements
All end-users must purchase power from their local distribution agency, except in the following cases as established by ECB regulations:

• Large individual users, tentatively defined as >5MW at a single supply point, have the right to purchase power directly from the SB; or

• Where the local distributor waives the right to supply.

Third-party access to transmission

• Where an IPP uses NamPower’s transmission system to export power, or where the ECB allows a user to purchase power through imports or from IPPs, the charges for the use of the transmission system should be fully cost reflective.

• Transmission wheeling through Namibia should be allowed and should be consistent with SAPP rules and guidelines.

Notes to implementation of the SB model:
The following notes are relevant to the implementation of the SB model:

• To be fully operational, the SB model requires the development of IPPs in Namibia. Major IPPs in Namibia may have equity involvement by NamPower.

• NamPower transmission, properly ring-fenced (possibly established as a separate grid company), will play a number of roles: it will provide the commercial (market) functions of the SB, be the system operator, and own and maintain transmission infrastructure.

• IPPs wishing to export power shall be entitled access to the transmission system at regulated transmission tariffs. The same applies to users that have been granted the right to buy directly from a generator or a source of supply outside Namibia. If such users are located inside a local distribution network, access to such network shall also be granted on similar principles as access to the transmission system.
• NamPower will have to implement full accounting separation of generation, transmission and distribution operations in order to ensure that transmission charges are appropriately set. NamPower should consider options for corporate restructuring to further increase the transparency of business area separation.

• The ECB will monitor bulk power sales agreements to ensure that NamPower does not use its position as SB to favour purchases from its own generating stations or independent projects where it has a stake. Purchases from IPPs should be at rates competitive with the full avoided cost of import.

• While NamPower and IPPs will take responsibility for bulk sales to neighbouring countries, distributors should have the right to sell to users in neighbouring countries if the supply is at a distribution level voltage (<66kV).

• There should be no limitations on NamPower or distributors having an equity stake in generators, as long as the ECB is satisfied that there is adequate accounting and operational separation between their areas of business.

In the future, it is envisaged that the SB model may evolve towards a competitive market model in line with developments in South and Southern Africa. International experience suggests that the SB model is a transitional state towards a greater degree of competition, usually moving towards wholesale competition.

Summary

In summary, the key elements of the proposal are:

1. **All distributors & large users buy from the SB.**
2. **IPPs can export power using NamPower’s transmission system.**
3. **Large users have the right to choose between the SB or a local distributor.**
4. **The ECB may waive the SB’s right to supply in favour of IPP/imports.**
5. **Embedded generation need not sell to the SB.**

### 3.2 Distribution Industry Structure

The principles for reform of electricity distribution in Namibia are expressed as follows:

• Restructuring proposals will focus on customer base, network characteristics and geographic areas;
• The distribution industry will gradually be moved towards establishment of REDs as the basic distributor structure;
• Financial viability of licensed distributors must be ensured, also taking into account the need for continued electrification;
• Mechanisms will be put in place to safeguard local authority revenue requirements in a restructured distribution industry;
• The rationalised industry must be conducive to private sector participation (through ownership and/or service provision) on transparent terms;
• A defined distribution area will generally only have one supplier (until retail competition materialises sometime in the future);
• With the exception of a limited number of large users, customers in a defined distribution area will take supply from the licensed distributor in that area; and
• As far as possible, distribution industry rationalisation should be voluntary, but will be guided by Government policy and rulings of the ECB.
While a move towards regional solutions for electricity distribution is advocated, the industry structure need to respond to local variations in conditions and challenges, as well as to Government’s policy priorities for electrification. Hence, firm recommendations are made with regard to establishment of REDs for Northern Namibia and the Erongo Region, while elements of a process are outlined for the remaining parts of the country.

3.2.1 Recommendations for Northern Namibia

The rationale for restructuring in Northern Namibia is primarily to improve operating efficiencies, promote electrification, ensure good customer services and to unify tariff structures.

As a result of meetings organised by the MME, stakeholders in the northern parts of Namibia agreed in February 2000 to pursue restructuring to create an asset-based company (along the lines of Option A outlined in the Draft Phase 3 Report, November 1999). The Northern RED to be established will own and operate all distribution assets and to provide electricity supply services to all customers within its distribution area (to be defined).

The stakeholders have established a Working Group under the chairmanship of the MME to further develop the detailed proposal for the creation, establishment and operationalisation of the RED. The objectives and mandate for the Working Group are defined as follows:

Working Group Objectives

- Assist Government in designing and developing a detailed proposal for the creation, establishment and operationalisation of a RED for Northern Namibia.
- Assist Government in communication with stakeholders on the proposed arrangements for a Northern RED in order to ensure a smooth transition from the existing ESI situation to the RED.

Working Group Mandate

The mandate of the Working Group is to investigate the benefits, costs, necessary decisions and issues requiring political approval for a Northern RED to be created and implemented. Subsequent to satisfactory having resolved the various issues identified, the Working Group will elaborate a proposal (a ‘prospectus’) for how the envisaged Northern RED should be implemented.

The Working Group will liaise with stakeholders throughout the process to create proper understanding about the concept of a Northern RED, and will as a minimum address the following issues:

- Determination of the geographical supply area of the Northern RED.
- Financial modelling and analysis of the Northern RED to demonstrate financial viability, commercial attractiveness and risks.
- Principles for determining ownership and shareholding (e.g. different share classes), both for founding shareholders and for participants joining at a later stage, hereunder asset valuation principles.
- Identification of any legal constraints to local authorities and regional councils becoming shareholders in the Northern RED.
- Develop strategy and principles for private sector participation in the Northern RED.
- Propose an approach to initial capitalisation of the Northern RED.
(g) Seek agreement on, and define principles for, the Northern RED’s involvement in rural electrification.

(h) Prepare recommendations about transitional arrangements (from the existing situation to a Northern RED), including transfer of staff, assets, funds and liabilities.

(i) Develop proposals for establishment of necessary business process infrastructure including, but not limited to, accounting systems and customer information/billing systems (metering, billing and revenue collection).

(j) Investigate options for harmonisation of tariff principles and structures in the Northern RED area (in co-operation with the ECB).

(k) Propose a mechanism to ensure local authority revenue from electricity supply operations in local authority areas.

It is recommended that the Government continue to actively support the process initiated in the north and takes a leading role in clarifying key policy issues and enabling legislative changes required to support the creation of the RED.

3.2.2 Recommendations for the Erongo Region

The Phase 2 study recommendation for the coastal Erongo Region to:

(a) further analyse a regional distributor structure; and

(b) that the existing stakeholders manage the transition with support from the government,

was formally accepted by the stakeholders. The Erongo Region Working Group adopted the recommendation to move towards the implementation of a joint-venture RED by a process involving distinct stages.

It is recommended that the Government through the MME gives the Erongo Region restructuring process continued support both by providing institutional assistance and by facilitating any necessary adaptations of legislation that may be required.

Proposed stages for Erongo

The stages are as follows:

- **Review Stage**
  
  A ‘Management Co-ordination Committee’ (MCC) is established that will assess how to co-operate and better run electricity distribution in the region. A wide selection of stakeholders will be given representation on this body. Importantly the MCC must also identify the poor performing local authority distributors and design ways of helping them.

- **Stage 1: Dealing with problems of small distributors**
  
  In this stage successful distributors continue to supply directly, while assistance is now offered by the MCC (via other distributors) to the less successful distributors. This can be achieved in a number of ways, including management contracts, concession arrangements or the leasing of assets. In this way, the MCC will facilitate for a neighbouring local authority, NamPower’s Premier Electric or possibly a private company to provide services for the supply of electricity in the less successful local authority areas.
• **Stage 2: Establish EREDCo**

A separate company (EREDCo) is now established, owned and controlled by existing distributors, to further consolidate electricity supply, especially tariffs and conditions of supply and service. This company would enter into Agency Agreements with successful distributors supplying electricity. The terms of the Agency Agreement will facilitate co-operation, rationalisation of tariffs and consistent quality of supply and service standards.

• **Stage 3: Transfer to EREDCo**

Once the parties agree to move fully to the RED, staff, assets and liabilities of the existing distributors are transferred to the new company, EREDCo. This company is owned and controlled by distributors (local authorities, Regional Council, NamPower and possibly some private sector participation) and supplies electricity to all customers in the Erongo region, with a common tariff system and consistent standards of supply and service.

**Role of stakeholders in Erongo**

The main stakeholders in the Erongo Region are local authorities, NamPower, the Erongo Regional council, the MRLGH, the MME and customers. The phased negotiated restructuring approach agreed for the Erongo region guarantees that transition from one stage to the next will only be undertaken if there is agreement in the MCC/ERDCo Board that the process should be moved to the next stage. It has been agreed that a wide selection of stakeholders have representation on the MCC during the initial phases, while shareholding in the ERDCo and representation on the Board would be limited to stakeholders contributing assets, know-how and/or finance.

**3.2.3 Recommendations for Central & Southern Parts of Namibia**

The recommendations for restructuring in the central and southern parts of the country include:

• Phasing out of MRLGH operational responsibility for electricity supply with either local authorities taking responsibility for distribution in areas in their immediate vicinity or by inviting private operators to tender for service contracts.

• Local authorities to have the option to increase co-operation between existing distributors, franchise their operations to a private entity or to retain operations as they exist at present.

• Encourage existing distributors with resources and experience (e.g. Windhoek) to assist other towns and villages as required.

The long-term goal for the central and southern parts of the country is to establish one or a few regional distribution companies. However, it is at this stage recommended that the process be taken in stages, facilitated by the establishment of a Working Group under the leadership of the MME. The recommendations proposed are shown below.

• **Establishment of a stakeholder Working Group**

The MME will initiate the establishment of a stakeholder Working Group to develop and advance proposals for distribution restructuring. The Group should also facilitate the ring-fencing and corporatisation of electricity distribution operations.

• **Phasing out of MRLGH operational involvement in electricity distribution**
The MRLGH’s involvement in electricity distribution operations (in towns, villages and rural settlements) should be phased out as soon as practically possible. Contracting professional service providers to take over the operational responsibilities should be considered, based on competitive tendering, alternatively seeking assistance from existing distributors on commercial terms.

- **Local authorities to negotiate principles for service provision or franchising**
  Where local authorities are successfully managing electricity distribution services, this remains the prerogative of the local authority. In cases where local authorities are struggling to maintain electricity services, then Government should actively encourage negotiation of franchise agreements with other distribution companies (public or private ones) or service providers, subject to the ECB’s approval.

- **Formation of RED(s)**
  The option of combining assets and operations into one or two REDs for central and southern Namibia should be left open. However, the Working Group should revisit this option as part of its mandate.

**Role of stakeholders**

Stakeholders involved in the central and southern parts of the country include local authorities and regional councils, MRLGH and MME, NamPower and its subsidiary company Premier Electric and customers. It is envisaged that various private players may also become involved. Windhoek Municipality has expressed interest in playing a more active role in electricity distribution outside its local authority area.

### 3.3 Key Policy Issues

It is necessary that a number of key policy issues be clarified at an early stage of the ESI restructuring process. Prominent among these are:

- Arrangements to safeguard local authority revenues;
- Funding arrangements for rural electrification;
- Policy on grant funded assets; and
- Rights of large electricity users.

#### 3.3.1 Local authority revenues

Most local authorities in Namibia that supply electricity directly currently earn surpluses on the sale of electricity in their local authority areas. The surpluses are of critical importance in terms of funding for other local authority services. The recommendation is that:

1. Local authorities be provided with powers to tax electricity sales via an excise tax, within a limit set by Government and regulated by either the Ministry of Finance, or the MRLGH\(^1\); and
2. Local authorities be required to set the tax amount (within the limit) and show the tax separately from the electricity consumption portion of the customer’s bill. Where the local authority is not supplying electricity directly, then the distributor

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\(^1\) The Electricity Control Board should not be the body that regulates the level of local authority taxes since it is not an electricity tax, but rather a local authority tax collected via electricity sales. The Electricity Control Board should only have responsibility for direct ESI matters.
would show the local authority tax separate from the electricity consumption portion of the customer’s bill.\footnote{In such a case the distributor would collect the tax on behalf of the local authority and pay it over to the local authority on some predetermined basis.}

Independent of any restructuring, the ECB will require that local authority taxation of electricity be transparent vis-à-vis end customers as part of a move towards implementation of cost-reflective pricing principles.

Consultations with local government stakeholders identified certain key issues around the local authority tax question that had to be resolved. These were:

1. Should any specific customer segments to be excluded from this tax?
2. Should all local authorities be given the authority to tax electricity sales in their areas or should only those local authorities that are currently supplying electricity (and therefore earning surpluses) be allowed to tax electricity sales in future?
3. Should local authorities that are presently earning unduly large surpluses be required to reduce their dependency on electricity sales over some reasonable period of time?

It is recommended that an inter-governmental task team be established to develop recommendations around local authority taxation of electricity. As a minimum, participation from the MME, MRLGH, Ministry of Finance, the Auditor General and the ECB is recommended.

Furthermore, a decision on the most appropriate taxation mechanism needs to be concluded. The most likely options are: a) a tax per kWh unit sold; or b) a percentage tax on the amount of the bill. However, other alternative mechanisms should not be excluded.

### 3.3.2 Funding arrangements for rural electrification

The annual funding requirement for rural electrification has previously been estimated at N$40 million per annum, of which 75% was expected to be spent in the north of the country. The funding requirements will be updated by a detailed distribution masterplan study undertaken for the MME and NamPower, expected to be completed by July 2000.

The annual level of electrification funding is significantly greater than what has been achieved to date in Namibia and will require substantial effort to manage and implement a programme of this scale.

NamPower expects that up to N$30 million per annum will be directed into rural electrification as a result of their loan agreements for the new 400 kV line to South Africa. These funds will be jointly administered by NamPower and MME and allocated to projects in accordance with the Rural Electrification Distribution Masterplan currently being finalised.

It is recommended that new distribution companies will be required to self-finance electrification investment, with a possible capital contribution being provided by Government (directly or through the NamPower electrification funds), subject to agreements on the policy for grant funded assets (see Section 3.3.3).

### 3.3.3 Policy on grant funded assets

Grant funded assets are large in proportion to revenue generated by those assets. Financial modelling in Phase 2 indicated that for the north (and to a lesser degree the
south) of the country, depreciation charges will be a significant item on any distribution company’s income statement. While a company may post a positive cash flow, it will almost certainly experience large accounting losses for a long period.

Such a situation is undesirable for two reasons: firstly, it indicates that the company’s viability is uncertain as it will be unable to finance asset replacement as assets come towards the end of their lives. Secondly, it makes the company unattractive to private investors as the company will be unable to pay dividends and may ultimately face the threat of liquidation.

The merits and demerits of a number of options for dealing with grant funded assets have been explored. The following recommendations are made:

**In the North**
Depreciation charges associated with grant funded assets are especially large in this region. Establishing the conditions for financial viability of the RED is an important part of the mandate given to the Working Group preparing a proposal for the northern regions. The basic approach agreed at this point in time is to first evaluate the consequences of applying Generally Accepted Accounting Practices (GAAP) rules. It is however likely that to be financially viable, i.e. avoid forced liquidation, it will be necessary especially in the early years to find a specific mechanism to deal with depreciation of electrification assets.

It is recommended that the Working Group independently make recommendations on how to deal with the depreciation burden as the results of the financial modelling becomes available. The use of a NamPower Special Vehicle (NPSV) as outlined below for the Centre and South of the country may be considered.

**In the Erongo Region**
Grant funded assets are likely to be small in absolute and relative terms in this region of the country, and it recommended that the Erongo RED take ownership of the assets and depreciate them according to GAAP rules.

**In the Centre/South**
Grant funded assets are likely to be small in absolute terms, but large relative to a rural distributor’s income stream. It is recommended that the assets be held by NamPower in a special vehicle (NPSV) and depreciated according to normal rules, until a RED/REDs are established. The rationale for using a NPSV (ideally a wholly owned subsidiary company of NamPower) is to:

a) not pre-empt or unduly burden initiatives forthcoming through the recommended stakeholder co-ordination process; and

b) to effectively ring fence this electrification from other NamPower operations until such time when the assets can be transferred.

The NSPV should then charge a lease (or extension fee) to the distributor. Ideally this charge should be equal to the depreciation charge over the lifetime of the asset (GAAP rules), but a discounted fee may be necessary in the early years if the distributor is to be viable. Ultimately, NSPV should transfer assets to the distributor when it is considered that the company can take financial responsibility for the assets.

**3.3.4 Large electricity users**
The overall market structure allows for certain large electricity users to choose to be supplied by the SB instead of the local electricity distribution company. A regulated
transmission tariff will be charged for use of the SB’s transmission system in this case.

Under circumstances when a supplier need access to a local distribution network in order to supply a large customer, the ECB will have to ensure that the local distribution company offers fair and reasonable tariffs for the wheeling of power across its network. These rates should reflect the full costs of providing the service. It is recommended that the ECB treat these cases on a case-by-case basis, rather than developing a rigid set of rules for price setting.

Large users are proposed defined as those customers with a notified maximum demand greater than 5 MW at a single supply point. Today, this would limit the number of customers to four (plus a further two borderline cases), all presently supplied by NamPower.

Unilaterally opening up for customer choice of supplier could be economically detrimental to the Namibian ESI in the short to medium terms due to possible ‘predatory’ pricing by other (larger) supplier. At this stage, it is recommended that this is only possible with the consent of the ECB.

At a later stage, as the Southern African regional market begins to open for competition, Namibia may consider the option of large users and distributors purchasing power either from other Namibian producers, or from generators in neighbouring countries. However, until the regional market is liberalised, this form of customer choice should not be available in Namibia.

3.4 Regulatory issues

While it is not the intention in the ESI restructuring study to detail regulatory principles and guidelines, it is nevertheless useful to identify the regulatory issues that arise from the recommended restructuring, and to outline the key principles that should guide the regulatory response.

3.4.1 Generation contracts

In principle, generators are free to sign power sales agreements without regulatory approval. However, oversight is necessary for the reason that the SB may be tempted to purchase power from generators in which it has a stake at a price higher than alternative sources of supply, i.e. imports.

While Government recognises the importance of developing local resources for electricity generation, it is important that this not be at the expense of Namibian electricity consumers. While import prices from South Africa are currently low, this situation will change as Eskom’s surplus capacity is used up. Thus, while locally generated power may reasonably expect to have the right to sell to the SB, this should be at rates competitive with medium term expectations of import prices.

As a result of these concerns, it is important that power purchase agreements with IPPs, especially those in which NamPower has an equity stake, should be scrutinised by the ECB. It should be recognised that there is a regional dimension to these agreements, since certain projects ultimately aim at export power to the South and Southern African markets. In addition, locally generated power will displace imports of power by NamPower. This regional dimension may require interaction between regulatory authorities in neighbouring countries, particularly South Africa.
In summary, any new generation project should be subject to economic analyses in order to evaluate the net contribution to the Namibian economy.

3.4.2 Transmission pricing principles
Under the proposed system, third party access (TPA) to the transmission system is required. Cases where TPA arises include:

- Where an IPP exports power to another country;
- In cases where a large user imports power or purchases directly from an IPP (with the agreement of the ECB);
- Where the SB negotiates a supply agreement to a customer similar to a TPA deal (e.g. agreement with Scorpion); and
- Where a foreign utility wishes to wheel power across Namibia to a third country.

Under any of these circumstances, the ECB will be required to ensure that the price paid for transmission services reflects the cost of providing these services. Since Namibia has an extensive transmission and distribution system relative to the size of the loads in the country, these costs are significantly higher than found elsewhere.

It is important that transmission pricing provides appropriate signals both to end users as well as the transmission authority. In other words, prices should present appropriate incentives so 1) NamPower has incentive to invest further in transmission where appropriate, and 2) so embedded generation will be financially viable where it is economically beneficial.

The key principles for setting transmission prices are:

- The owner of the transmission system should earn a regulated target return on the provision of the transmission services. This will ensure that other users are not cross-subsidising the use of the transmission system.
- Transmission prices should take account of the risk of surplus transmission capacity during periods of low demand, particularly where load is expected to be cyclical (as with many commodity mining consumers). This means that the transmission charge should stress the capacity component of the price structure.

3.4.3 Distribution pricing principles
TPA to the distribution system occurs in the following cases:

1. Where a large user is on a local distributor’s network and wishes to be supplied by the SB; and
2. Where embedded generation projects supply customers other than the local distributor.

Under these circumstances, similar principles for as for transmission pricing should apply. Where the case concerns a dedicated line, then the costs associated with that line should apply. Otherwise, a price based on the average cost of providing distribution services within that utility should apply.

4. Implementation Plan
The implementation of the recommended ESI restructuring in Namibia will need further discussions with key stakeholders to ensure that acceptance is secured for the decisions that still have to be taken. It is proposed that the responsibility for continued
involvement of stakeholders be made a key task for the entity assuming the lead responsibility for the various activities described in this plan.

While Government in principle wants to pursue the agreed restructuring initiatives as soon as is practically possible, timely implementation requires that the new Electricity Act is signed into force and the ECB becomes operational to facilitate, supervise and monitor the restructuring process. It is expected that the Electricity Act will come into force during August 2000, with the ECB ready to commence its tasks towards the end of the year. According to the provisions in the Act, this implies that the first round of licensing would take place during 2001.

Internal discussions are required within Government to agree and co-ordinate developments (between MME, MRLGH, Ministry of Justice, Ministry of Works Transport and Communication, Ministry of Trade and Industry and Ministry of Finance). Further discussions between the MME, ECB and NamPower are required to prepare for the new market structure and how this will impact NamPower.

The proposed Implementation Plan provides an overall timetable for the restructuring, describes the various steps that should be taken to implement the agreed recommendations and allocates responsibilities.

The MME recognises that overall government leadership will be required for the restructuring to progress as envisaged. Hence, the MME will consider various mechanisms and arrangements for how it can facilitate and guide the agreed restructuring process.