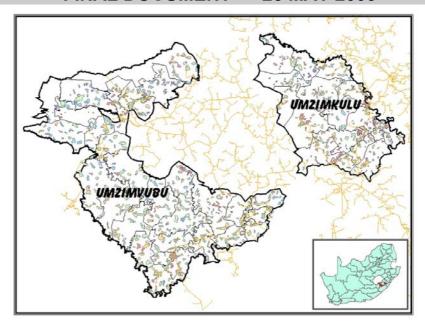
# ALFRED NZO DISTRICT MUNICIPALITY Eastern Cape Province



## **ELECTRICITY SECTOR PLAN**

#### FINAL DOCUMENT 25 MAY 2003



**COMPILED BY:** 

NETGroup

## **Document History**

#### 1. Revision History

Revision No	Revision Date	Author	Summary of Changes
0	25/04/2003	A.M.Theron	Document Framework
1	23/05/2003	A.M.Theron	Draft Document
2	23/05/2003	A.M.Theron	Final Document

#### 2. Approval for Release

Name	Designation	Signed
G. Mpumza	Municipal Manager	

#### 3. Distribution

Designation	Name	Date

Copies : Eskom 3 Copies

DME 2 Copies

MIIU 1 Copy

Alfred Nzo 7 Copies

Umzimkulu 3 Copies

Umzimvubu 3 Copies

## **CONTENTS**

1		BACKGROUND	1
	1.1	Introduction	1
	1.2	Purpose of the Electricity Sector Plan	2
	1.3	Drafting Team	
	1.4	Approach	
	1.5	Data Gathering	
	1.6	Prioritization	
	1.7	Development of Electrification Plan	
	1.8	Load Forecast	
	1.9	Technical Evaluation	
	1.10	Scope and Costing of Projects	
	1.11	Participatory Process	
	1.12	Compilation & Approval of Sector Plan	
	1.13	Alignment with other Sector Plans	
	1.14	Planning Tools	
2	1.17	IDP VISION, GOALS & OBJECTIVES	
_	2.1	IDP Vision	
	2.2	Electricity Goals	
	2.3	Electricity Objectives	
	2.4	Electricity Priorities	
	2.5	Role of Electricity Sector Development	
3	2.5	PHYSICAL AND SOCIO-ECONOMIC PROFILE	
J	3.1	Topographical Profile	
	3.2	Socio-Economic Profile	
	3.3	Current Consumer Profile	
	3.4	Present Population Profile	
	3.5	Household Income	
4	3.5	ELECTRICITY SERVICE LEVEL PROFILE	
_	4.1	Types of Service Available in Rural Areas	
	4.2	Domestic Load Parameters	
	4.2	Non-Domestic Loads	
	4.4	Cost of Service	
	4.5	Implementation of Grid and Non-Grid Electrification Services	
5	4.5	ELECTRICAL SERVICES INFRASTRUCTURE PROFILE	
J	5.1	Electrification Status Quo	
	5.2	Existing & Planned Bulk Electrical Infrastructure	
	5.2	Future Medium Voltage Reticulation Infrastructure	
6	5.5	ELECTRICAL SERVICES INSTITUTIONAL ARRANGEMENTS PROFILE.	
U	6.1	Impact Of Legislation On Electricity Services	
	6.2	NRS047 & NRS048 Compliance	
	6.3	NRS 047	
	6.4		
	6.5	NRS 048	
		Electricity Institutional Arrangements	
	6.6	Preparation For REDs	
7	6.7	Institutional Capacity	
1	7 4	BASE ELECTRIFICATION PLAN	
	7.1	Short Term Plan	
0	7.2	Long Term Plan	
8		SCENARIOS	

9 EST	TIMATED BUDGET	37
9.1 U	Jmzimkulu	37
9.2 U	Jmzimvubu	38
10 CON	NCLUSION	39
	TABLES	
Table 1: Table 2:	Data Sources	3
Table 2. Table 3:	Current consumer Profile	
Table 3.	Present Population Profile	
Table 5:	Household Income	
Table 6:	Types of service available in rural areas	
Table 7:	Domestic Load Parameters	
Table 8:	Non-domestic Load Parameters	
Table 9:	Cost of Service – Grid and Non-Grid	
Table 10:	Cost Breakdown of typical grid connection	
Table 11:	Electrification Status Quo	24
Table 12:	Sub-transmission bulk infrastructure Projects for the region	
Table 13:	Quantity of MV Network required	
Table 14:	Impact of Legislation on Electricity Services	
Table 15:	Scenarios to accelerate Electrification Plan	36
	FIGURES	
Figure 1:	Flow Diagram of Approach to Planning Process	3
Figure 2:	Prioritization Overlap	
Figure 3:	Locality of Local & District Municipality LED Projects	
Figure 4:	Locality of Electrification Projects Prioritized by Local Municipalities	
Figure 5:	Locality of Areas Prioritized by Eskom ('03/'04 &'05 Rolling plan)	
Figure 6:	Distance Contours From Existing Electrical Infrastructure	
Figure 7:	Integration of Electricity Sector Plan with IDP	
Figure 8:	Map of current situation	15
Figure 9:	Non-Grid Concessionaire areas within the region	19
Figure 10:	Grid connection costs as a function of density	
Figure 11:	NRS047 & NRS048 Overview	
Figure 12:	NRS047 Breakdown	30
Figure 13:	NRS048 Breakdown	31
APPENDIX A	A LOCAL ECONOMIC DEVELOPMENT PROJECTS	
APPENDIX I		
APPENDIX (		
APPENDIX (		
APPENDIX I		
APPENDIX I		
APPENDIX (	G IMPACT OF LEGISLATION ON ELECTRICITY	

#### **ABBREVIATIONS**

IDP Integrated Network Development Plan

NDP Network Development Plan

DME Department of Minerals and Energy

EDI Electricity Distribution Industry

RED Regional Electricity Distributor

LED Local Economic Development

NEP National Electrification Program

MV Medium Voltage

SHS Solar Home System

EBSST Electricity Basic Services Support Tariff

INEP Integrated National Electrification Planning Unit

DM District Municipality

LM Local Municipality

## **EXECUTIVE SUMMARY**

Municipalities have a legal obligation to ensure that sustainable basic services are planned and provided within their area of jurisdiction. Municipalities are also obliged to participate in provincial and national development programs. Electricity is included in the schedule of services for local government and the Alfred Nzo District Municipality has therefore identified the need to establish an Electricity Sector Plan which will support their IDP.

The approach taken to compile this Electricity Sector Plan was:

- Gather Information and establish a data set;
- Carry out a situational assessment and establish backlog;
- Compile a base electrification plan within current budgetary constraints;
- Establish scenarios to accelerate the base electrification plan;
- Identification of areas suitable for non-grid electrification.

In the absence of any new datasets this plan is based on the original HELP database captured in 1995/6. Although this database is now dated it can still be used for macro planning. For this panning exercise the number of households in the HELP database has been scaled up by 15% to make provision for a 2% annual growth rate. A new dataset should be established to improve integrated planning and accuracy of project scope.

The situational assessment is summarised as follows:

- Alfred Nzo has been identified as a nodal development area;
- There are approximately 112 500 Households and over 600 Schools in the Alfred Nzo District Municipality;
- There is an electrification backlog of 69% in the Alfred Nzo region. As at the end of 2002 approximately 35 200 households and under 200 schools have been connected;
- The Eskom sub-transmission network capacity is generally good in the Alfred Nzo region. Capacity constraints near Umzimkulu are being addressed through the establishment of a new substation expected to be operational by the end of 2004;
- The electrification budget allocated to the Eskom Eastern region (kwaZulu-Natal and northern part of Eastern Cape Region) is approximately 40 000 connections per annum. The equitable share for Alfred Nzo translates to approximately 2000 connections per annum after 2005;

At this rate it is projected that the backlog will only be cleared in 30 years from now.

This electricity sector plan focuses on the following:

- Establishing the priorities of the community (sequence in which electrification should proceed);
- Review the Eskom 3-year plan factoring in community priorities while taking into account short-term technical constraints;
- Developing a 'base' electricity sector plan within the current electrification budget of 2000 connections per annum after 2005;
- Establish scenarios to accelerate the program and clear the backlog in a shorter time;
- Identify strategies to accelerate the electrification program through strategic interventions for more funding from DME and local economic development projects that will trigger projects to electrification;
- Institutional capacity needed to effectively and adequately deal with the Municipality's responsibility on electricity services;
- Identifying suitable areas where the non-grid concessionaire may market their services without jeopardising the grid electrification program;
- High level recommendations for preparing for the RED's.

The estimated cost to clear rural electrification backlog in the Alfred Nzo District Municipality region is:

LM	HOUSE HOLDS	COST PER CONNECTION	COST FOR VILLAGE INFRASTRUCTURE	BULK SUPPLY LINES (TO VILLAGES)	TOTAL COST
Umzimkulu	21,459	R 4,311	Rm 75.1	Rm 17,4	Rm 92.5
Umzimvubu	60,188	R 3,780	Rm 195.9	Rm 31.6	Rm 227.5
TOTAL	81,647	R 3,920	Rm 271.0	Rm 49.0	Rm 320.0

#### **BACKGROUND**

#### 1.1 Introduction

Recent legislation passed has placed a legal obligation on local government to follow a process of Integrated Development Planning. These IDP's must address issues of service delivery, local economic development, institutional transformation and spatial integration.

This has coincided with changes in the governance of the National Electrification Program which has resulted in the macro planning and funding components of the electrification process transferred from licensed local authorities and Eskom to the DME. An important aspect of this change is the government's commitment to non-grid electrification as a means to achieving universal access to electricity for all in areas where conventional electrification proves to be prohibitively expensive.

The IDP of Alfred Nzo District Municipality was completed in 2001. As part of the year 2002 IDP Review Process, Alfred Nzo District Municipality and its two local municipalities; Umzimvubu and Umzimkulu identified electricity services as one of the themes underlying priority issues in the IDP, hence it was a requirement that Electrification Sector Plan be compiled to form part of the IDP.

Also, the imminent restructuring of the EDI and the formation of the REDs will further impact on the electrical services sector. The Alfred Nzo District Municipality will have a stake in this restructuring process and a strategy must be formulated to be fully prepared.

The need for a Sector Plan was therefore identified and the Alfred Nzo District Municipality appointed Netplan to assist in the preparation of such a plan which would be integrated into the IDP to facilitate the preparation of the electrification sector plan, which will form part of the municipality's IDP.

This Electricity Sector Plan focuses on achieving a co-ordinated approach to achieving access for all in the Alfred Nzo region while also focusing on stimulating economic development through LED projects.

#### 1.2 Purpose of the Electricity Sector Plan

The Electricity Sector plan is a business plan setting out the electricity services plan and the way in which electricity services will be delivered to households and businesses in Alfred Nzo District Municipality's area of jurisdiction. It describes and analyses the current and future consumer profile, electricity infrastructure status core and requirement, electricity service levels, and institutional and financial arrangements. The Electricity Sector Plan serves as a monitoring tool for the DME for implementation of the NEP.

This Sector Plan focuses on establishing the need for electricity services in the Alfred Nzo region. Its primary goal is to document an electrification plan which will be integrated into the IDP and clearly indicate the following:

- o Community priority for grid and non-grid electrification;
- o Prioritisation of establishing supplies to institutions (i.e. schools & clinics);
- o Proactive identification of future development (LED's) in the commercial, industrial and agriculture sectors.

This Sector Plan deals with the demand-side planning of electrical services in this region. It does not attempt to intervene with the supply-side planning of electrical services in this region by Eskom as the view has been taken that this responsibility remains with the licensed supply authority and non-grid concessionaire.

#### 1.3 Drafting Team

The Task Team responsible for compilation of the Electricity Sector Plan was established at the IDP Review Representative forum. The Task Team was composed of Heads of Infrastructure Development departments of the Alfred District Municipality and its two local municipalities of Umzimvubu and Umzimkulu. The Department of Minerals and Energy (DME) and ESKOM were identified as stakeholders that formed part of the task team. The task team was complemented by NETGroup Solutions (Pty) Ltd as Electricity Sector Plan specialist, co-opted to handle electrification sector-specific technical issues in the planning process.

#### 1.4 Approach

The following approach was taken to prepare this Electricity Sector Plan for the Alfred Nzo Municipality.

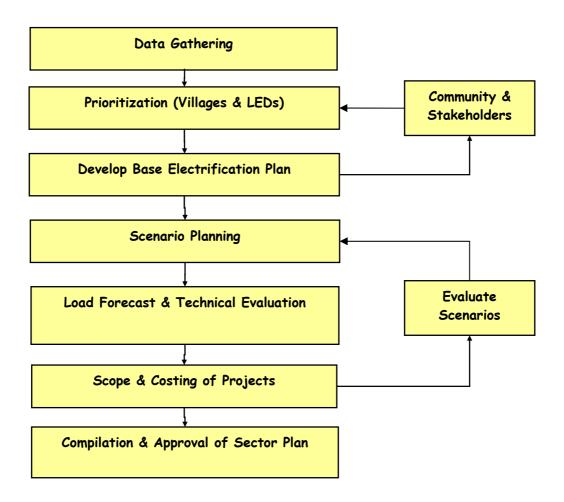


Figure 1: Flow Diagram of Approach to Planning Process

#### 1.5 Data Gathering

Data used for this project has been sourced as follows:

INFORMATION	SOURCE
Electrification Priority List	Local Municipality (Umzimkulu & Umzimvubu)
LED Listing	Local & District Municipality
Eskom Networks	Eskom Eastern Region – Margate Office
Eskom Electrification completed	Eskom Eastern Region – Margate & PMB Office
Eskom Electrification 3 Yr Pan	Eskom Eastern Region – Margate & PMB Office

Table 1: Data Sources

In the absence of a credible updated database, the HELP database captured in 1995/1996 was used for this planning exercise. The number of households captured in the original database has been inflated by 15% to make provision for growth (2% growth PA).

Other data sources are available:

- UWP Dataset (Modified HELP Database);
- o Change Detection information available from ESI GIS (Captured 2002);
- Aerial Photography from Eskom (Captured 2001/2002).

A brief comparison of the UWP and Change Detection information against the recent aerial photography indicates that these two data sets are not reliable. This comparison also indicated that the original HELP database is also dated with changes including among others:

- Changes in villages shapes (smaller or larger);
- New villages have been established;
- In some cases Villages have disappeared.

A new and more reliable dataset should be established from the aerial photography which has recently become available. This updated dataset could then be used for integrated planning for all services.

#### 1.6 Prioritization

The electrification priority list provided by the local municipality were politically prioritised but not necessarily technically feasible i.e. in some cases villages were either far from existing electrical infrastructure or in an area where the existing network capacity is limited.

The Eskom 3-Year electrification plan was based on achieving approximately 9000 connections over the 2003 / 2004 / 2005 period. The settlements identified in the Eskom list were technically feasible but not politically prioritised.

Both the local and district municipality have identified LED projects which also require electricity supplies. The electrical infrastructure to these LED's will be funded by the municipality and it is expected that these projects will extend the grid network into the rural areas thereby acting as a catalyst to the rural electrification program by:

- Improving its viability;
- Accelerating the pace of clearing backlog.

A prioritisation process was then followed taking the following factors into consideration in order of priority:

- LED projects identified by the District Municipality;
- LED projects identified by the Local Municipalities;
- Eskom planned electrification projects (Technically feasible within network capacity constraints);
- Local Municipality prioritization lists in accordance to the adopted IDP;
- Distance of settlements relative to existing MV networks.

Prioritisation has been determined through a scoring process determined through the above criteria pertaining to each individual settlement i.e. a decrease in the number of the above criteria will mean a decrease in prioritisation.

LED projects are categorized as having the highest priority as these projects are expected to trigger economic growth in and around a settlement. Economic development will enable the communities to afford a sustainable electrification service.

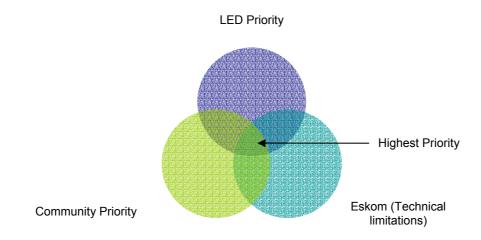


Figure 2: Prioritization Overlap

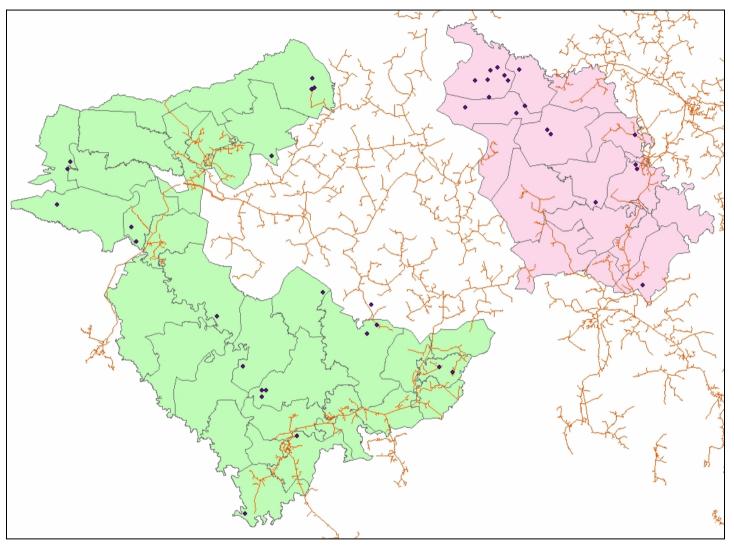


Figure 3: Locality of Local & District Municipality LED Projects

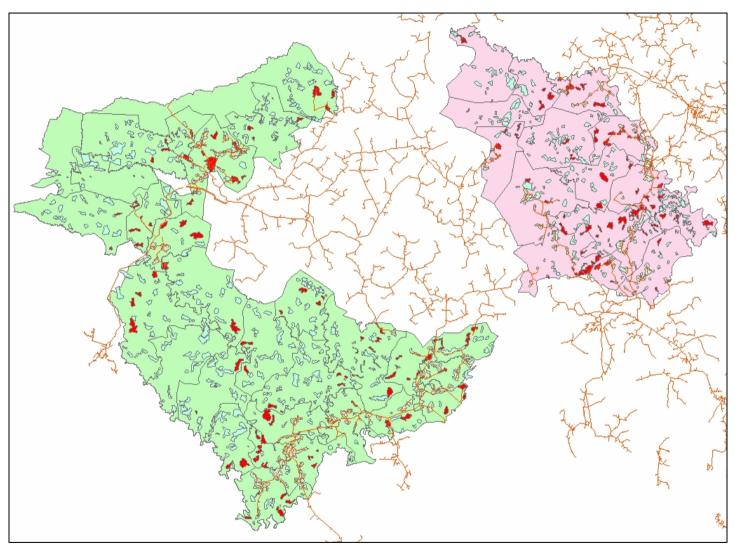


Figure 4: Locality of Electrification Projects Prioritized by Local Municipalities

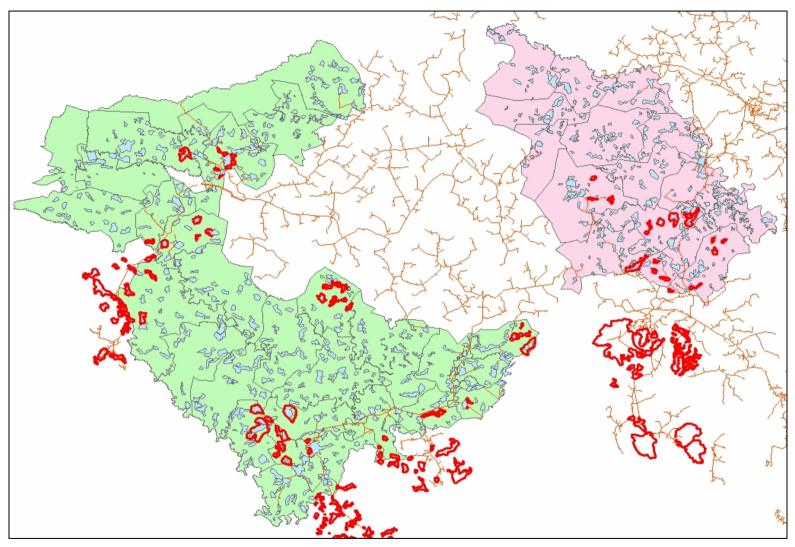


Figure 5: Locality of Areas Prioritized by Eskom ('03/'04 &'05 Rolling plan)

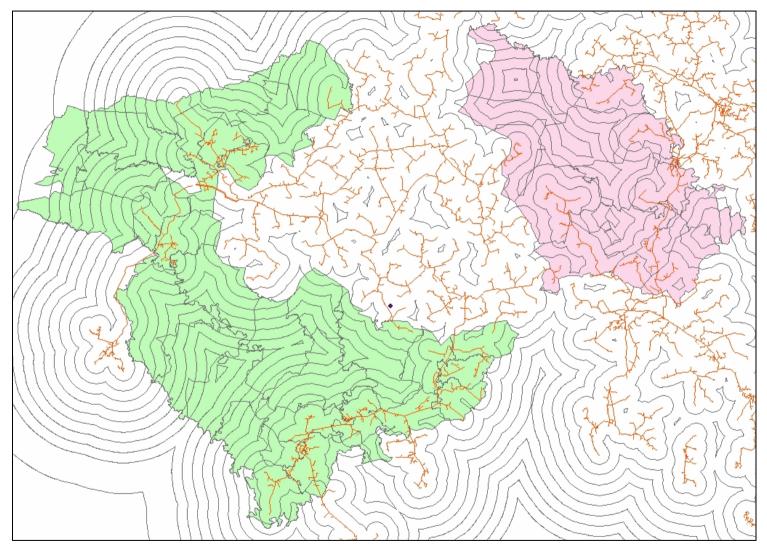


Figure 6: Distance Contours From Existing Electrical Infrastructure

#### 1.7 Development of Electrification Plan

An electrification plan was then developed based on the following criteria:

- Political priorities were merged with that which is technically feasible;
- The approved 3-year rolling budget of approximately 3000 connections per annum for the 2003-2005 period;
- o An estimated budget of 2000 connections per annum until the area is saturated;
- o Non-Grid was also factored in.

#### 1.8 Load Forecast

Once the electrification plan was achieved and agreed upon by all stake holders a load forecast was established. This load forecast is dependant on the following factors:

- Rate of electrification i.e. year in which each village is connected;
- Electrification Technology applied i.e. Grid or Non-Grid;
- Other services requiring supplies i.e. LED projects, water pump schemes, schools and clinics.

#### 1.9 Technical Evaluation

The technical evaluation process involved the modelling of existing and future networks to assess what bulk infrastructure is required to meet the load demand as electrification develops. This evaluation does not review the Eskom Network Development Plan (NDP).

#### 1.10 Scope and Costing of Projects

Rural electrification projects were scoped and cost estimates prepared for budgeting purposes. It is important to note that all up stream network strengthening necessary to supply electrification projects must be budgeted for by the National Electrification Program. The identification of these projects will come from the Eskom NDP's which focuses on the supply side management and takes a wider view of the sub-transmission network in the region.

#### 1.11 Participatory Process

A copy of the sector plan will be circulated for comment to all stakeholders and the IDP Review Representative Forum for comments. Comments received will be assessed and the plan reviewed where necessary.

#### 1.12 Compilation & Approval of Sector Plan

Final documentation of the Alfred Nzo Electricity Sector Plan will be circulated for comment and adopted by the Alfred Nzo Executive Committee.

The electricity sector plan is closely integrated with the IDP process as illustrated below:

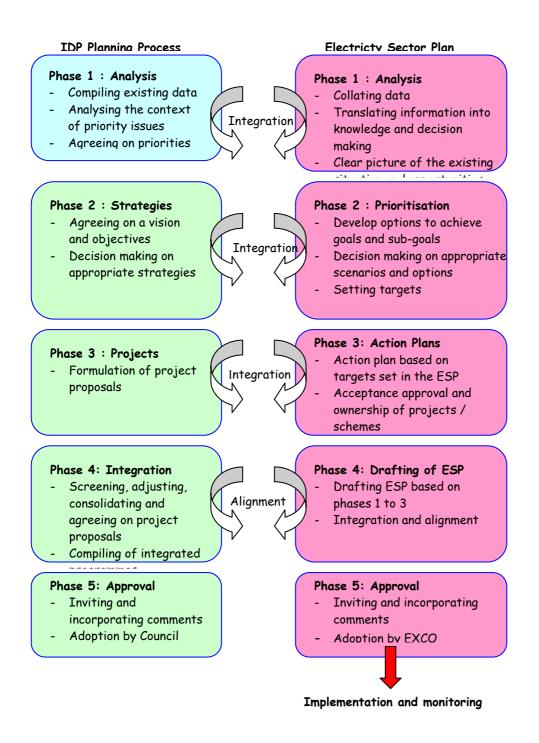


Figure 7: Integration of Electricity Sector Plan with IDP

#### 1.13 Alignment with other Sector Plans

The electricity sector plan has been aligned with other sector plans through the IDP.

The following sector plans have been included:

- o LED projects;
- o Water Services Development Plan;
- o Housing Sector Plan.

#### 1.14 Planning Tools

The following planning tools were developed to support the planning process:

- o GIS;
- o Load Forecast model;
- o PowerBase Database of network model.

All mapping and co-ordinates provided are in the Transverse Mercator LO29 WGS projection.

### 2 IDP VISION, GOALS & OBJECTIVES

#### 2.1 IDP Vision

"To create self-sustainable municipalities and livelihoods of the people through maximum utilisation of natural resources; improvement of human capacities and skills in an integrated manner, that coordinates government people's programmes which ensure meaningful participation".

#### 2.2 Electricity Goals

Achieve universal access to electricity for all constituents of the Alfred Nzo District Municipality.

#### 2.3 Electricity Objectives

The IDP lists the following objectives for electricity services:

- Provision of access to community facilities and existing projects;
- o Forming linkages with Eskom in the implementation plan;
- o Provision of access to make job creation possible;
- o Improve local economic development;
- Irrigation schemes to be electrified;
- o Ensure affordability of the service.

#### 2.4 Electricity Priorities

- To establish electricity supplies to the prioritised list of LED projects;
- o To establish electrification to the prioritised electrification lists provided by Local Municipalities, including Villages, Schools and Clinics.

#### 2.5 Role of Electricity Sector Development

The IDP identified the need for an electricity sector plan. The integrated planning approach adopted ensures that electricity planning process is not a 'silo' approach focusing only on electricity development in isolation to other sectors. Instead, this planning approach is an issue-driven approach taking a wider view of development in all sectors and establishing synergy between

projects and focusing on achieving maximum return on capital invested. Cross cutting issues include:

- Local Economic Development Electrification will be a catalyst for local economic development through opportunities that will be created when low cost, clean and reliable electrical energy is easily accessible for people in the rural areas i.e. cooling and heating processes;
- Electricity is not only a beneficial for heating and cooling but it also gives access to the digital and communications world. Computers (internet), radios, television and telephones are mediums that will have a profound impact on the development of opportunities for people in the rural areas. Establishing electrical supplies to schools will not only create opportunities for the education department to establish modern teaching mediums for children but also create a more comfortable and improved learning environment;
- Electricity is a cheap and reliable energy source well suited to driving electric pumps on water schemes. Access to electricity will enable the water authority to establish reliable running water schemes which will greatly improve the quality of life and improve health conditions for the people in rural areas;
- Electricity is a clean source of energy and health problems associated with traditional thermal heating methods will be overcome. Establishing electrical supplies to clinics will create opportunities for the medical authorities to install more sophisticated medical equipment thereby improving the quality of medical care.

Establishing electrical supplies to institutions such as clinics, schools and LED's compliments electrification projects in that the cost component of the bulk supply line is then removed from the cost per connection sometimes making settlements that may have previously exceeded the cost per connection limit viable. On the other hand establishing electrification projects opens the way for electrical supplies to be established at LED's, schools and clinics. It follows that an integrated planning approach is vital if the full potential of capital investment is to be realised in all sectors.

## 3 PHYSICAL AND SOCIO-ECONOMIC PROFILE

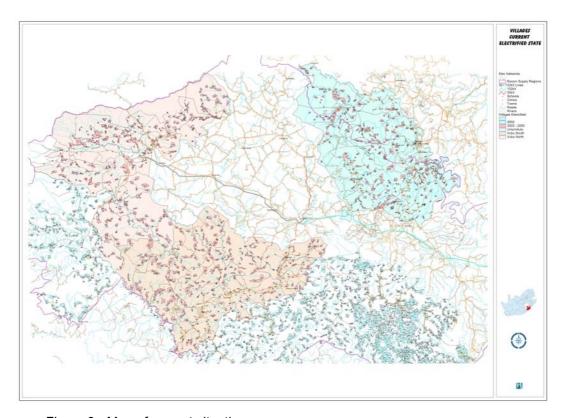


Figure 8: Map of current situation

#### 3.1 Topographical Profile

The Alfred Nzo District Municipality area consists of two sub-areas

- o A central plateau with relatively good soils and intermediate rainfall supporting a mixed agriculture with a lower population density;
- o A high plateau leading up to the Drakensberg Mountains with relatively good soils, a high rainfall supporting a mixed agriculture with a lower population density.

#### 3.2 Socio-Economic Profile

Magisterial District	No. of Villages	No. of Households
Umzimkulu	348	30 913
Umzimvubu	680	85 126
Alfred Nzo	1028	116 039

Table 2: Socio-Economic Profile

#### 3.3 Current Consumer Profile

Magisterial District	Unemployed Persons	Unemployment Rate %
Mt Frere	16 231	73
Mt Ayliff	14 916	86
Maluti	18 524	74
Umzimkulu	21 525	72
Alfred Nzo	71 196	76

Table 3: Current consumer Profile

Unemployment is the most significant problem estimated at 76% for the whole district of Alfred Nzo. Mount Ayliff has the largest rate of unemployed persons. This has a significant impact on poverty levels.

#### 3.4 Present Population Profile

Magisterial District	Total Population	Area (km²)	Average Population Density
Umzimkhulu	165 426	5 477	30
Umzimvubu	378 681	2 436	155
Alfred Nzo	544 107	7 913	69

Table 4: Present Population Profile

The Alfred Nzo District Municipality has a population of 544 107, 165 426 for Umzimkulu and 378 681 being Umzimvubu. Of these 55% are females and 45% males.

Population densities indicate that Umzimvubu is more densely populated than Umzimkulu. According to the Eastern Cape Provincial Spatial Development Plan the district has an average population density of 69 persons per km².

46% of the population is still dependent being below the age of 15, whereas 48% fall between ages 15 and 65, being potentially economically active. 6% is over the age of 65, being economically inactive.

#### 3.5 Household Income

Magisterial District	R0-6000	R6001-18000	R18000-42000	R42 000 +
Mt Ayliff	51	27	9	13
Maluti	55	24	13	8
Mt Frere	50	27	11	11
Umzimkhulu	44	34	11	11
Alfred Nzo	50%	28%	11%	11%

Table 5: Household Income

Income levels are low. The majority of households (78%) earn between R0 - R18 000 per annum and only 11% with R42 000 per annum and above. Maluti has the highest percentage of people living in the lowest income category.

#### 4 ELECTRICITY SERVICE LEVEL PROFILE

#### 4.1 Types of Service Available in Rural Areas

Supply Option	Connection Fee	Energy Cost	Level of Service
Non-Grid (50W Peak)	Capped at maximum R100	R58/month R18month (EBSST)	SHS: Lights (4), small B&W TV and small Radio
Non-Grid (Large Systems)	Capped at maximum of capital difference between this system and a 50Wpeak SHS plus the capped R100		
S1 Grid - Basic supply (2.5Amp)	No Charge	43.5 cents/kWh 1 <sup>st</sup> 50kWH free under EBSST	Low energy users
S1 Grid - 20 Amp	Capped at maximum R150	43.5 cents/kWh	Most electricity requirements; may have to balance load
S1 Grid - 60 Amp	Capped at maximum R1000	48.9 cents/kWh	All electricity requirements - Suitable for small businesses
Land Rate	Full cost of installation – no subsidy under NEP	Basic charge + Energy Charge	All electricity requirements for 100KVA or less

Table 6: Types of service available in rural areas

The 2.5-10A supply is the basic grid electricity service where grid extension is feasible. Its availability allows settlements of sufficient density to be electrified by maximising the number of connections, thereby bringing the average cost per connection within the accepted norms. As such these options represent a "poverty safety net" qualifying for the highest level of subsidy. Progression to higher levels of applicable service would be available to households on application and payment of an appropriate connection fee.

The higher the capacity required, the less supply will be subsidised and higher capacity supplies will pay more than lower capacity supplies. This means that as demand increases customers will pay tariffs and charges that are more cost reflective of the level of supply and services provided.

The average monthly S1 consumption figure ranges between 45-65kWh (R17 - R25).

Up until January 2002 municipalities could apply for grant funding directly from the NER for electrification. This mechanism has now been terminated and replaced by the INEP business planning unit. Changes to the national electrification process are detailed in Appendix G.

The Non-grid Solar Home System should be seen as the basic service to rural households that cannot be connected to the grid within acceptable cost parameters.

In September 2001 the NER approved the subsidy, tariff and connection fee of the non-grid programme. This follows the NER's development of regulations that will ensure that non-grid concessionaires are to be regulated in such a way that they provide a comprehensive service, which is linked to the local economic needs of the non-grid communities.

The tariff for the basic 50Wp SHS service was set at R58 (incl. 14% VAT) per month (R18 after EBSST implementation) and the connection fee at R100. The subsidy, paid to assist in covering the costs associated with the supply of off-grid basic electricity services to households, was set at R3500 subsidy per connection.

Also in September 2001, the Minister of Minerals and Energy approved the non-grid programme. This led some of the consortia, the NER and Eskom to start signing an Interim Non-Grid Agreement. The Interim Non-Grid Agreement will be followed by a Service Providers Agreement (concession agreement) in 2003. Pilot projects will be implemented over 2002/2003 and inform on the contents of the final agreement.

Alfred Nzo District Municipality falls under Shell/Eskom JV concession area.

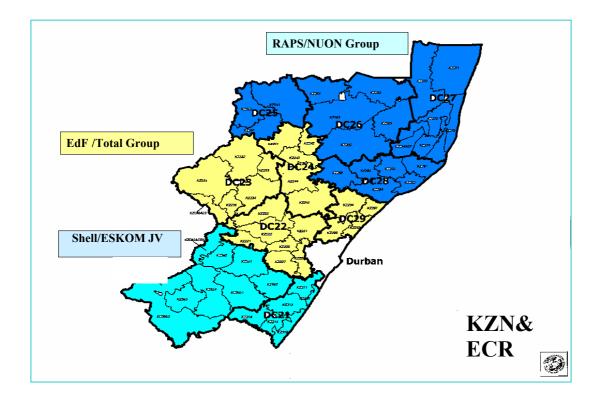


Figure 9: Non-Grid Concessionaire areas within the region

#### 4.2 Domestic Load Parameters

The expected loading for domestic loads used for planning are tabled below.

1	2	3	4	5	6	7	8	9	10
Туре		Load Parameters – Year 7			Load Parameters – Year 15				
Consumer load class	Income range [R/hh/month]	Alpha	Beta	CB [A]	ADMD [kVA)	Alpha	Beta	CB [A}	ADMD [kVA]
Rural settlement	0 to 750	0.32	1.93	20	0.65	0.36	1.68	20	0.80
Rural village	750 to 1100	0.36	1.68	2	0.80	0.39	1.42	20	1.00
Informal settlement	100 to 1900	0.73	8.06	60	1.15	0.86	7.61	60	1.40
Township area	1900 to 3800	0.96	7.29	60	1.60	1.14	6.72	60	2.00

Table 7: Domestic Load Parameters

#### 4.3 Non-Domestic Loads

Туре	Size	ADMD (kVA)
Clinic – Small	0 to 200m²	1.80
Clinic – Medium	200 to 400m²	2.50
Clinic – Large	Above 400m²	4.00
School – Small	Less 1000m²	10
School – Medium	1000 to 2000m²	20
School – Large	Above 2000m²	30
LED	N/A	10

Table 8: Non-domestic Load Parameters

#### 4.4 Cost of Service

The cost per connection for grid electrification is dependant on the settlement density as illustrated below.

Туре	Density (hh/km²)	Cost per connection
Non-Grid	N/A	R3 500
Grid	>125	R 3 250
	75 - 125	R 3 500
	<75	R 5 250
	Infill Connections	R 1 250

Table 9: Cost of Service - Grid and Non-Grid

Component	Cost
Medium Voltage (Bulk)	R750
Low Voltage	R 1500
Service Connection	R 1 250
TOTAL	R 3 500

Table 10: Cost Breakdown of typical grid connection

This breakdown illustrates the following:

- The Medium Voltage cost component of electrification connections can be reduced if MV infrastructure is established through other sector projects or limiting the allowable distance of electrification projects from existing infrastructure;
- The Low Voltage cost component can be reduced by limiting the density of settlements electrified;
- The Service connection cost is essentially fixed and not a greatly influenced by any of the above factors.

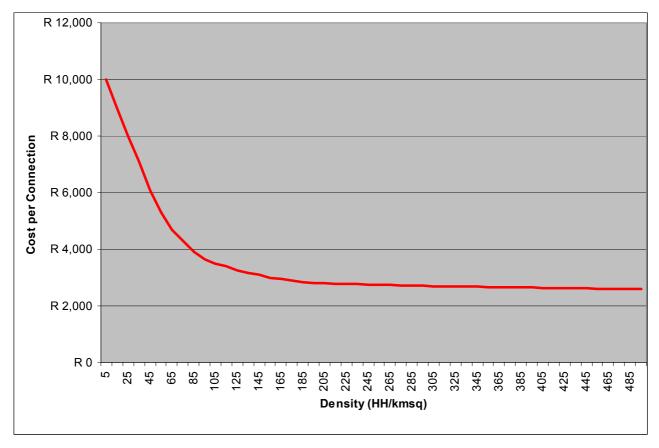


Figure 10: Grid connection costs as a function of density

Infill connections are defined as new Households established within a village which has already been electrified now requiring a connection. The cost per connection is significantly lower as the bulk infrastructure has already been established.

#### 4.5 Implementation of Grid and Non-Grid Electrification Services

Rural households are free to choose either a grid or non-grid service connection under the National Electrification Program. The cost of implementing non-grid service connections is not affected by how far the settlement is located from the grid network or density of the settlement whereas grid electrification is.

Grid electrification projects therefore have to be carefully selected each year with the focus on settlements that have a density exceeding approximately 50 households/km² and as close to the existing grid network as possible. Care is also taken not to bypass any settlements while electrifying adjacent communities as this generally causes political problems and even vandalism of the network passing through the communities not electrified.

It follows that those communities located far from existing grid networks may have to wait a number of years before the grid network extends to their settlements. For those at the extreme limits it would prudent for them to consider non-grid electrification for the interim. Currently DME have agreed to the following arrangement for replacing non-grid with grid connections:

- o The non-grid concessionaire must agree to relocate the SHS to another household,
- The cost of removal, refurbishment and re-installation must be added to the cost of the new grid connection (replacement of non-grid connection),
- The total cost of the new grid connection (including relocation of previous SHS) must not exceed the subsidy amount laid down under the NEP at the time (currently R3500 per connection).

The scenario where non-grid electrification is implemented in an area which will be reached by grid electrification a year or two later must be avoided at all costs. Eskom have proposed a 2km 'no-go' buffer around existing grid networks to avoid this problem.

Alfred Nzo Municipality have taken the following view regarding grid and non-grid implementation:

- o Exclusive 'no-go' areas for grid and non-grid electrification will not be considered;
- Settlements which are far from the existing grid network have been zoned as areas where the non-grid concessionaire may market their services;
- Communities in these areas must be informed of the possible time frames before grid electrification reaches their area and the decision where or not to take a non-grid supply then rests with them.

Individuals located far from existing grid networks that choose not to take a non-grid connection and also do not want to wait for grid electrification under the NEP have the option of applying for a Land Rate connection directly with Eskom. This does not qualify for subsidy and the individual will be liable for the full cost of establishing the necessary infrastructure from the grid.

Page 24 of 40

#### 5 ELECTRICAL SERVICES INFRASTRUCTURE PROFILE

#### 5.1 Electrification Status Quo

The status quo of electrification in the Alfred Nzo district may be summarised as follows:

Area	Existing Households	Electrification Completed up to & incl. 2002	% Backlog as at end of '02	3-Year Electrification Plan ('03/'04/'05)	Backlog as at '05	% Backlog as at '05
Umzimkulu LM	30 300	11 500	62%	2 750	16 050	53%
Umzimvubu LM	82 200	23 700	71%	6 550	51 950	63%
Alfred Nzo (DM Total)	112 500	35 200	69%	9 300	68 000	60%

Table 11: Electrification Status Quo

The backlog as at 2002 exceeds the national and provincial averages of 54%. By the end of 2005 the backlog in Umzimkulu will have improved against the national averages but Umzimvubu will still be lacking.

#### 5.2 Existing & Planned Bulk Electrical Infrastructure

The existing bulk electrical infrastructure is illustrated in the accompanying plan book.

In 1997 Eskom prepared NDP's for this region. Three NDP's cover the Alfred Nzo region area These NDP's assumed an electrification plan which was based on the entire region being electrified over a 15-20 year period. These plans also focused on the sub-transmission requirements needed to meet the supply requirements for the region. The majority of the projects identified in these plans which affect supply capacity to the Alfred Nzo region have either been completed or are currently in project phase. These include:

Project	LM Affected	Status
132kV Substation at Umzimkulu	Umzimkulu	Project – Complete Dec '04
Re-rating of Eros-Kokstad 132kV Line	Umzimvubu	Complete
Kokstad 132kV Capacitor Banks	Umzimvubu	Complete
Re-Configure Eros-Kokstad 88kV system	Umzimvubu	Project – Complete Dec '05
Franklin 33/22kV Transformer Upgrade	Umzimkulu	Plan Phase – Need date 2005
Kokstad-Mt Frere 132kV Line	Umzimvubu	Complete – In Service
Mt Frere 132kV Substation	Umzimvubu	Complete – In Service
Eros-Dumasi 132kV Line	Umzimvubu	Project – Complete Dec '04
Kokstad-Maluti 132kV Line	Umzimvubu	Complete – In Service
Maluti 132kV Substation	Umzimvubu	Complete – In Service
Sibi 33/22kV Substation	Umzimvubu	Project – Complete Dec '05
Maluti-Mt Fletcher 66kV Sub-system	Umzimvubu	Plan Phase – Need date 2010

Table 12: Sub-transmission bulk infrastructure Projects for the region

The existing infrastructure and that planned up to 2005 will provide sufficient capacity to supply electrification projects for the foreseeable future.

#### 5.3 Future Medium Voltage Reticulation Infrastructure

The future MV reticulation infrastructure needed to supply electrification projects has been modelled to determine quantity and line routes. The line routes for these networks are illustrated in the accompanying plan book.

Project	MV Line Length (km)
Umzimkulu	434
Umzimvubu	789
TOTAL	1 223

Table 13: Quantity of MV Network required

## 6 ELECTRICAL SERVICES INSTITUTIONAL ARRANGEMENTS PROFILE

#### 6.1 Impact Of Legislation On Electricity Services

The impact of legislation on electricity services is summarised below. A detailed version has been included as Appendix G.

#### THE CONSTITUTION

- The constitution grants municipalities the right to administer electricity and street lighting. This is not an exclusive right but obliges municipalities to ensure that these services are provided.
- Places an obligation on municipalities to, among others, ensure:
  - o Planning & provision of sustainable basic services,
  - o A safe and healthy environment,
  - o Participation in national and provincial development programmes.

#### MUNICIPAL STRUCTURES ACT

 Stipulates that the bulk supply of electricity falls within the powers and functions of a district municipality (Category B municipalities cannot be licensed to distribute electricity)

#### MUNICIPAL SYSTEMS ACT

- Prescribes the process to be followed by a municipality to employ a mechanism for service delivery in its area;
- If the municipality wishes to utilise any entity other than a national or provincial organ of state, another municipality or a municipal entity for service delivery in its area of jurisdiction, this may only happen after a process of competitive bidding.

#### **ELECTRICITY ACT**

- Provides for the establishment of the National Electricity Regulator (NER);
- Provides measures for the issue, transfer and cancellation of electricity distribution licences and compensation of net value of the assets and perspective profits of the undertaking when ownership is transferred;
- Acknowledges the authority of municipalities in respect of electricity supply in their areas of jurisdiction but also protects the existing rights of third parties in this regard;
- The bill does not acknowledge the role municipalities in respect of electricity

supply, as contemplated in either the Constitution or the Municipal Structures Act.

#### **ELECTRICITY REGULATION BILL**

- · When enacted, it will replace the existing Electricity Act;
- Will establish a national regulatory framework for the electricity supply industry, provide for the NER and issuing of licences relating to the generation, transmission, distribution and retail of electricity and the provision of certain services in connection therewith.

#### THE WHITE PAPER ON ENERGY

- Promotes access to affordable energy services particularly for disadvantaged households, small businesses, small farms and community services;
- Promotes management of energy-related environmental and health impacts;
- Promotes research and development of alternative and renewable energy sources;
- Places greater emphasis on transparency, commercialisation and competition;
- Envisages restructuring of the Electricity Distribution Industry (EDI) and proposes a Regional Electricity Distributor (REDs) model that moves away from control by local authorities over electricity pricing and distribution towards a more centralised system;
- Acknowledges municipalities' need to earn income through electricity supply accommodated via the imposition of excise taxes on electricity, collected on behalf of the municipalities by the REDs;
- Acknowledges that a mix of grid and non-grid electrification may be necessary in rural areas to achieve universal household access to electricity.

#### RESTRUCTURE OF THE ELECTRICITY DISTRIBUTION INDUSTRY (REDS)

- Government has blueprint for EDI restructure 6 REDs most likely;
- Municipalities compensated by way of shares in proportion to assets contributed to REDs;
- Municipalities exercise constitutional governance role through service delivery agreement with Service Provider (RED);
- Municipalities must proactively prepare for REDs.

#### INTEGRATED NATIONAL ELECTRIFICATION PROGRAM

- Integrated National Electrification Program (INEP) business planning unit has been established;
- All electrification funding goes via INEP Business Planning Unit;

- 3-year rolling plan and 1-year capital plan;
- Mechanism for funding electrification directly to municipalities via NER has been terminated (now via INEP Business Planning Unit);
- Utilities may only apply for areas in which they are licensed to supply.

#### ELECTRICITY BASIC SERVICES SUPPORT TARIFF (EBSST)

- Government initiative aiming to supply the first 50kWh of electrical energy free to all grid connected customers or R40 per month for non-grid electricity;
- Free basic energy pilot studies are being implemented in 16 locations nationally and based on findings, policy proposals on BEST will be made to Cabinet by mid 2003;
- Indications are that local government will play an active part in the EBSST mechanism, including re-imbursement of the utilities who provide the free service.

Table 14: Impact of Legislation on Electricity Services

#### REVIEW OF ANALYSIS AND IMPACT ON ALFRED NZO MUNICIPALITY:

- Municipalities are protected by the constitution, Municipal Structures Act, Municipal Systems and the Electricity Act. This legislation places an obligation on the Municipalities to ensure that sustainable electricity services are provided;
- Future legislation minimises the role of municipalities with respect to electricity supply (legislation does have contradictions though);
- The restructuring of the EDI (REDS) is gaining momentum and municipalities must prepare to establish:
  - o Service delivery agreements with licensed distributors,
  - o Revenue streams for the municipality from the sale of electricity within their region;
- The INEP Business planning unit has been established;
- Eskom is licensed to distribute electricity throughout the Alfred Nzo district and will therefore make application for electrification funding to the INEP business planning unit;
- Alfred Nzo Municipality must assist with the demand side planning of electrical services in the region and communicate the needs and priorities of the people via their electricity sector plan which forms part of the IDP;
- Non-grid electrification must be considered in sparse, deep rural areas located far from existing
  infrastructure to achieve sustainable universal household access to electricity.

#### 6.2 NRS047 & NRS048 Compliance

NRS047 and NRS048 are two national rationalised specifications developed by the industry to provide the NER a basis on which to evaluate the quality of service and quality of supply delivered to customers by licensed utilities.

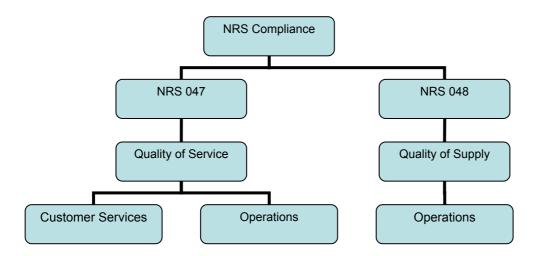


Figure 11: NRS047 & NRS048 Overview

These two specifications also provide the following:

- Minimum standards which all licensed utilities must meet to comply with their license requirements;
- o A means to measure the key performance indicators.

### 6.3 NRS 047

The NRS047 specification focuses on customer service and specifies key performance indicators as detailed below:

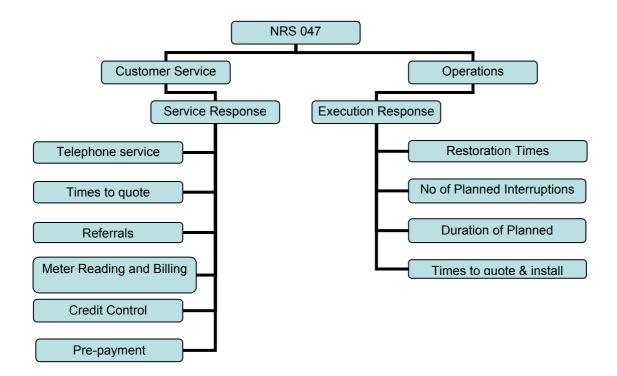


Figure 12: NRS047 Breakdown

These KPI's are summarised below:

- Telephone Services Provision of telephone services; business hours; telephone answering response times; duration of calls; and management of telephone answering centres;
- Restoration Times After forced interruptions the supply should be restored as follows: 30% within 1.5hours; 60% within 3.5hours; 90% within 7.5hours; 98% within 24hours;
- Times of Quote Within 10 working days where existing infrastructure can be utilised; within 1 month where network extensions are required; the period shall be negotiated between the customer and licensee if new networks are required;
- No of Planned Interruptions not applicable for rural overhead;
- Duration of Planned not applicable for rural overhead;
- Meter Reading and Billing Meters of customers that consume less than 50kVA per month should be read at least once every three months;

- Times to Quote and Install Within 30 working days where existing infrastructure can be utilised; within 2 month where network extensions are required; the period shall be negotiated between the customer and licensee if new networks are required;
- Credit Control This includes: meter reading and billing; account queries; payment methods and venues; special and checking of meter readings; disconnections and re-connections; nonpayment and theft penalties; calibration and meter auditing;
- Pre-payment All information to be provided to the customer; vending stations; meter accuracy audits; frequency of meter inspections; disconnections and reconnections.

#### 6.4 NRS 048

The NRS048 specification focuses on the quality of supply and specifies key performance indicators as detailed below:

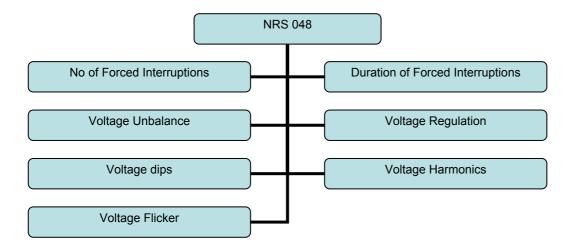


Figure 13: NRS048 Breakdown

These KPI's are summarised below:

- No. of forced Interruptions (Outages): Occasions where the utility may switch off the supply to work on the network – Limited to 60 per year;
- Duration of Forced Outages Limited to 200 per year;
- Voltage Unbalance Specifies the maximum tolerance between three phase voltage;
- $_{\odot}$  Voltage Regulation The ability of the steady-state voltage to remain between the upper and lower limits. These limits are  $\pm$  5% at for supply < 500V supply and  $\pm$  10% for supply > 500V;
- Specifies the max/min voltage at the customer;

- Voltage Dips Maximum number of dips;
- Voltage Flicker Maximum flicker of voltage.

### 6.5 Electricity Institutional Arrangements

The following institutional arrangements are necessary:

### **Short Term**

- Establish and finalise planning framework;
- Engage DME to accelerate the program;
- Interact and review Eskom's 3-year plan;
- o Interact with non-grid concessionaire on 3-year plan;
- Monitor & report on electrification progress;
- Draw up service delivery agreements with Eskom.

### Long Term:

- Review electricity sector plan annually (at least bi-annually);
- Monitor & report on electrification progress;
- Interact with RED including Service Delivery Agreements;
- Interact with INEP.

### 6.6 Preparation For REDs

Recent communiqué from the EDIR project office has indicated that all licence holders are to complete the asset valuation and ring fencing exercise before September 2003, to fall in line with the proposed EDI Restructure Time Table, making way for the establishment of the RED, targeted for October 2003 to September 2005.

Alfred Nzo DM does not have a licence to distribute electricity and are therefore not affected.

However, Alfred Nzo DM must make provision for the following in their 2004 budget:

- o Investigation and establishment of Service Level Agreements with the future RED;
- o Investigation of appropriate levies which could be imposed the sales made by licensed utilities within the municipal boundaries;

o Legal documentation.

## 6.7 Institutional Capacity

The Alfred DM must make provision for capacity (internal or external) to deal with the following responsibilities in terms of electrical services:

- Maintain and update electricity sector plan;
- Monitor and reporting on electrification program;
- Liaison with Eskom & DME;
- o Management of EBSST (national policy still be finalised);
- Establish and ongoing management of Service Level Agreements (SLA's) with licensed utilities;
- Management of income through levies which could be imposed on sales made by licensed utilities within the municipal boundaries.

## 7 BASE ELECTRIFICATION PLAN

A base electrification plan has been established. This plan was based on the following:

- o Prioritisation list according to the adopted IDP, received from local municipalities;
- o The Eskom prioritised areas which conforms to their 3-year rolling plan;
- Network capacity constraints;
- o Influences of other sector projects such as LED, water projects, clinics and schools;
- The current NEP budget of 2000 connections per annum for the Alfred Nzo DM.

This base plan is further divided up into two components:

- Short Term Plan which focuses on the next 3 years (2003/2004/2005);
- Long term Plan which focuses on the period necessary to electrify all households in villages in the Alfred Nzo region.

This plan is based on the following:

- Infrastructure to supply LED projects will be funded by local government (DM & LM);
- o The electrical infrastructure to these projects can be used as a catalyst for electrification;
- These projects are essentially still at a preliminary stage and it is expected that they will only realise in 2004/2005.

The detailed base plan is listed in Appendix D, E & F.

#### 7.1 Short Term Plan

The short term plan focuses on electrification projects which will take place over the 3-year period of 2003-2005. The short term plan is based on the following criteria in order of importance:

- Eskom electrification plan (which focuses on short-term technical feasibility);
- Local and District Municipality LED projects;
- Local Municipality prioritization lists;
- Settlement locality with respect to existing MV infrastructure.

Where proposed Eskom electrification planning coincides with District/Local Municipality LED projects and/or Local Municipality prioritized settlements, it has been determined that these

settlements will receive a greater priority for electrification and thus be categorised first in line to be electrified. Restrictions on electrification priority has been influenced by the limitation of a maximum of 3000 connections to be electrified for each year in the 3 year short term plan.

### 7.2 Long Term Plan

The long term plan focuses on the electrification which will take place after the 3-year short term plan and continuing until electrification of all households in the entire Alfred Nzo region is achieved.

The long term plan is based on similar criteria to the short term plan, with a maximum of 2000 connections to be electrified annually. The criteria in order of importance are as follows:

- Remaining proposed Eskom electrification plan not electrified in short term plan;
- Local and District Municipality LED projects not electrified in short term plan;
- Local Municipality prioritization lists;
- Settlement locality with respect to existing MV infrastructure;
- Settlement size and density.

As with the proposed short term plan, where remaining proposed Eskom electrification planning coincides with District/Local Municipality LED projects and or Local Municipality prioritized settlements, it has been determined that these settlements will receive a greater priority for electrification and thus be categorised first in the long term electrification plan.

It has also been determined that the closer the settlement location is to existing MV infrastructure, the sooner the electrification of the settlement will occur. A planning tool used to determine the distance of villages to existing networks (illustrated in figure 6) shows how each contour represents a 3-4 year gap.

Village size and density has also been taken into consideration as electrification costs decrease with an increase in density and quantity of connections within a settlement i.e. the closer the proximity of households to each other the lower the electrification costs.

Areas suitable for marketing of non-grid electrification services have been identified based on the following criteria:

- o Expected grid electrification to take place in the final 5 years of the electrification plan;
- o Low density villages (specifically quantities below 25 households per village);
- o Small and isolated villages and those which generally have poor access;
- Settlements which do not have LED projects planned nearby;
- Settlements which do not have major institutions nearby i.e. schools, clinics etc.

Page 36 of 40

## 8 SCENARIOS

Scenarios have been investigated to accelerate the electrification program for Alfred Nzo. These include:

- Once-off grant funding to catch up a portion of the backlog
- o An increased rate of electrification in the Alfred Nzo region due its Nodal status.

Scenarios have been investigated to accelerate the electrification program for Alfred Nzo. These include:

Scenario	Connections Per Annum	No. Years To Clear Backlog	Backlog Completed By
1	2 500	27	2030
2	3 000	23	2026
3	5 000	14	2017
4	10 000	7	2010
5	Once-off Grant	23	2026

Table 15: Scenarios to accelerate Electrification Plan

Scenario 5 is based on a special once off grant to electrify 10 000 connections is made available to Alfred Nzo DM within the short term 3-year plan (before 2005) over an above the 3000 connections already planned. It assumes that the rate of electrification will revert to approximately 2500 connections per annum thereafter.

The base plan is should remain valid for either of the scenarios above as the sequence of electrification should not be affected by the rate at which the backlog is cleared. The only variable should be the phasing (year) in which each settlement will be electrified.

## 9 ESTIMATED BUDGET

The estimated budget to clear rural electrification backlog is tabled below.

### 9.1 Umzimkulu

WARD	HOUSE HOLDS	COST PER CONNECTION	COST FOR VILLAGE INFRASTRUCTURE	BULK SUPPLY LINES (TO VILLAGES)	TOTAL COST
1	1,669	R 4,097	R 5,755,500	R 1,081,600	R 6,837,100
2	1,285	R 3,633	R 4,059,760	R 608,400	R 4,668,160
3	1,783	R 4,034	R 5,908,604	R 1,284,400	R 7,193,004
4	455	R 4,081	R 1,518,850	R 338,000	R 1,856,850
5	1,001	R 3,771	R 3,166,500	R 608,400	R 3,774,900
6	2,112	R 4,590	R 7,462,650	R 2,230,800	R 9,693,450
7	1,274	R 3,924	R 4,188,350	R 811,200	R 4,999,550
8	716	R 5,751	R 3,306,250	R 811,200	R 4,117,450
9	2,314	R 3,696	R 7,133,710	R 1,419,600	R 8,553,310
10	869	R 5,866	R 4,015,530	R 1,081,600	R 5,097,130
11	3,242	R 4,225	R 11,603,410	R 2,095,600	R 13,699,010
12	482	R 4,096	R 1,433,670	R 540,800	R 1,974,470
13	403	R 5,367	R 1,554,550	R 608,400	R 2,162,950
14	810	R 4,390	R 2,542,270	R 1,014,000	R 3,556,270
15	1,567	R 5,746	R 6,841,140	R 2,163,200	R 9,004,340
17	1,477	R 3,601	R 4,643,068	R 676,000	R 5,319,068
TOTAL	21,459	R 4,311	R 75,133,812	R 17,373,200	R 92,507,012

The average cost per connection for Umzimkulu generally exceeds the current cost limit of R3500 per connection. It is therefore important to focus on other sector projects to establish MV networks in this area and reduce the MV cost component of electrification connections where possible.

## 9.2 Umzimvubu

WARD	HOUSE HOLDS	COST PER CONNECTION	COST FOR VILLAGE INFRASTRUCTURE	BULK SUPPLY LINES (TO VILLAGES)	TOTAL COST
1	1,521	R 3,471	R 4,602,950	R 676,000	R 5,278,950
2	848	R 3,491	R 2,757,200	R 202,800	R 2,960,000
3	585	R 3,587	R 1,828,050	R 270,400	R 2,098,450
4	2,708	R 4,679	R 10,304,150	R 2,366,000	R 12,670,150
5	458	R 4,348	R 1,585,850	R 405,600	R 1,991,450
6	793	R 3,611	R 2,457,600	R 405,600	R 2,863,200
7	691	R 3,640	R 2,041,998	R 473,200	R 2,515,198
8	4,126	R 3,829	R 13,431,100	R 2,366,000	R 15,797,100
9	2,674	R 4,244	R 9,997,400	R 1,352,000	R 11,349,400
10	2,449	R 3,994	R 8,295,280	R 1,487,200	R 9,782,480
11	3,341	R 3,635	R 10,723,660	R 1,419,600	R 12,143,260
12	1,293	R 4,122	R 4,315,840	R 1,014,000	R 5,329,840
13	914	R 3,957	R 2,873,378	R 743,600	R 3,616,978
14	965	R 3,900	R 3,290,010	R 473,200	R 3,763,210
16	958	R 3,752	R 3,121,400	R 473,200	R 3,594,600
17	2,874	R 3,997	R 10,270,252	R 1,216,800	R 11,487,052
18	3,238	R 4,029	R 10,816,670	R 2,230,800	R 13,047,470
19	2,733	R 3,901	R 9,377,950	R 1,284,400	R 10,662,350
20	3,005	R 3,986	R 9,207,060	R 2,771,600	R 11,978,660
22	302	R 4,085	R 1,098,400	R 135,200	R 1,233,600
23	303	R 4,148	R 1,054,000	R 202,800	R 1,256,800
24	1,319	R 3,809	R 4,280,400	R 743,600	R 5,024,000
25	4,788	R 3,415	R 14,592,034	R 1,757,600	R 16,349,634
26	738	R 3,693	R 2,117,170	R 608,400	R 2,725,570
27	1,758	R 3,459	R 5,539,900	R 540,800	R 6,080,700
28	2,177	R 3,282	R 6,333,190	R 811,200	R 7,144,390
29	1,892	R 3,420	R 5,861,380	R 608,400	R 6,469,780
30	3,811	R 3,355	R 11,299,360	R 1,487,200	R 12,786,560
31	3,924	R 3,770	R 12,968,750	R 1,825,200	R 14,793,950
32	3,002	R 3,564	R 9,482,950	R 1,216,800	R 10,699,750
TOTAL	60,188	R 3,780	R 195,925,332	R 31,569,200	R 227,494,532

The average cost per connection for Umzimvubu is marginally higher than the current limit of R3500 per connection.

## 10 CONCLUSION

The municipality has an obligation to provide safe, clean and sustainable services within its jurisdiction. It is also accountable for demand-side planning of electricity services. Utilities licensed to distribute electricity in the area are required to make applications to the INEP business planning unit to secure funding for electrification on behalf of the municipality.

The municipality, through this electricity services development plan, is now in a position to clearly communicate to all stakeholders what the requirements and priorities of the community are regarding electricity services.

This electricity sector plan addresses the objectives set out in the IDP as follows:

Provision of access to community facilities and existing projects

A base plan has been established based on economic, technical and political priorities. The time frame in which this plan will be executed depends on the amount of additional funding made available by DME to clear the backlog in rural electrification in nodal areas. This plan is the first step towards negotiating such funding with DME.

Forming linkages with Eskom in the implementation plan

This plan will serve as a means to communicate the priorities of the municipality and its people to Eskom.

Provision of access to make job creation possible

Universal access to electricity will improve job creation possibilities. Access to electricity also gives access to the digital and communications world which are expected to improve both educational and job creation opportunities.

Improve local economic development

The extension of grid network into the rural areas will make access to low-cost, clean and reliable electrical energy possible. This is an important factor for the establishment and maintaining of viable and self-sustaining economic development.

o Irrigation schemes to be electrified

This electricity sector plan has been linked to the water sector plan as it currently stands.

Ensure affordability of the service

Electricity services will be affordable through the EBSST initiative which makes provision for free basic energy (approximately R40 per month) to both grid and non grid customers.

It is important to note that this electricity sector plan is subject to change as influences such as priorities, funding grants, legislation and technology changes. It should therefore be seen as a "live" plan and should be reviewed at least bi-annually. Any revision to the electricity sector plan will impact on the demand-side of the plan and must be communicated to Eskom who in turn can review their supply-side of the plan.

# Appendix A

# LOCAL ECONOMIC DEVELOPMENT PROJECTS

# 1.1 LOCAL ECONOMIC DEVELOPMENT PROJECTS REQUIRING SUPPLY PROPOSED BY UMZIMKHULU LOCAL MUNICIPALITY

Project	Location	Ward
Entsikeni Eco-Tourism	Elubhukwini	02
Sewing, Knitting & Crafting	Kwafile	10
Sewing, Knitting & Crafting	Emakhenceni	05
Grain & Vegetable Production	Uitkyk (Kwamemeka)	12
Grain & Vegetable Production	Delamuzi (Kayeka)	01
Woodwork (Carpentry)	Lourdes	06
Women's Bakery	Malenge	03
Grain & Vegetable Production	Emambulwini	09
Women's Bakery	Delamuzi / Mangeni	01
Grain & Vegetable Production	Kwasenti	08
Poultry & Crafting	Elukhasini / Lucingweni	02
Crafting & Pottery	Emarhambeni	03

# 1.2 LOCAL ECONOMIC DEVELOPMENT PROJECTS REQUIRING SUPPLY PROPOSED BY UMZIMVUBU LOCAL MUNICIPALITY

Ward	Village	Type of Project	Implementation Date
12	Nxabaxha	Veg / Prod	2002 / 2003
13			2002 / 2003
14	Ncunteni	Agric	2002 / 2003
15	N/A	N/A	2002 / 2003
16	Ntenentyana	Fosjeru	2002 / 2003
17	Lwandlana	SMME	2002 / 2003
18	Pamlaville	SMME	2002 / 2003
19	Tafa	SMME	2002 / 2003
20	Black Diamond	Agric	2002 / 2003
21	Motsekowa / Skiti / Tholang	SMME	2002 / 2003
22	Dikhutlwaneng	SMME	2002 / 2003
23	Nchodu	Agric	2002 / 2003
24	Mafube	Agric	2002 / 2003
25	Andries & Sabasaba	Agric	2002 / 2003
26		SMME	2002 / 2003
27	Lupindo	Cluster	2002 / 2003
28	Makomoreng & Pontsheng	Agric & Bakery	2002 / 2003
29	Qhobosheaneng	Agric	2002 / 2003
30	Thabachicha	Agric	2002 / 2003
31	Zibimeyer	Cluster	2002 / 2003
32	Lukholweni	Agric	2002 / 2003

# 1.3 LOCAL ECONOMIC DEVELOPMENT PROJECTS REQUIRING SUPPLY PROPOSED BY THE ALFRED NZO DISTRICT MUNICIPALITY

Project Project Name Description		Start / End Date	Project Funding	Comments / Progress on Project Implementation	Intervention / Resources Required
Maluti Hiking Trails Umzimvubu (Gladstone Farm)	Trails Umzimvubu (Gladstone  Ward 6		LED	Application made: Ref No. 1/3/10601 Eskom waiting for detailed locality information	Funding for connection required
Ntsikeni Eco- Tourism Umzimkulu (Eskihewini)	Electrification to Ntsikeni Eco- Toursim in Tsikeni Reserve – Ward 3	2003	LED	Application made: Ref No. 1/3/10625 Eskom waiting for detailed locality information	Funding for connection required
Umzimkulu Feedlot (Ebutha Farm)	Electrification to Umzimkulu Feedlot in Ebutha Farm – Ward 17	2003	LED	Application made: Ref No. 1/3/10633 Eskom waiting for detailed locality information	Funding for connection required
Goxe Cut- Flower Umzimvubu (Gugela)	Electrification to Goxe Cut Flower Project in Puffudershoek, Gugela – Ward 4	2003	LED	Application made: Ref No. 1/3/10737 Eskom waiting for detailed locality information	Funding for connection required
Fruit Project Umzimkulu (Emfulamhle)	Electrification to Fruit Project in Mfulamhle – Ward 7	2003	LED	Application made: Ref No. 1/3/10636 Eskom waiting for detailed locality information	Funding for connection required
Vegetable Project Umzimvubu (Mdum- ndum)	Electrification to Vegetable Project in Ndum- ndum, Welakabini, Mbumbane – Ward 4	2003	LED	Application made: Ref No. 1/3/0643 Eskom waiting for detailed locality information	Funding for connection required
Msukeni Enterprise Umzimvubu	Electrification to Msukeni Enterprise in Msukeni – Ward 2	2003	LED	Application made: Ref No. 1/3/10647 Eskom waiting for detailed locality information	Funding for connection required
MPCC Umzimvubu (Colana)	Electrification to MPCC in Colana – Ward 10, Siphambukeni –	2003	LED	Application made: Ref No. 1/3/10664 Eskom waiting for detailed locality	Funding for connection required

	Ward 8			information	
Ntenetyane Dam Fishing Umzimvubu (Mpola)	Electrification to Ntenetyane Dam Fishing at Ntenetyane Dam – Ward 8	2003	LED	Application made: Ref No. 1/3/10673 Eskom waiting for detailed locality information	Funding for connection required
Xesibe Tourism Umzimvubu (Ntlavini)	Electrification to Xesibe Tourism in Mnqwane – Ward 2	2003	LED	Application made: Ref No. 1/3/10678 Eskom waiting for detailed locality information	Funding for connection required

# **APPENDIX B**

# **HOUSING PROJECTS**

## 2.1 HOUSING PROJECTS TO BE INCLUDED ON THE PRIORITY LIST TO DME

NAME OF PROJECTS	NUMBER OF HOUSEHOLDS	YEAR OF IMPLEMENTATION
UMZIMVUBU HOUSING PROJECTS		
MT AYLIFF MIDDLE INCOME HOUSES	450	2004
TYOKSVILLE	700	2003
SANTOMBE	450	2003
MT FRERE EXT 7	341	2003 / 2004
MT FRERE EXT 8	500	2003
MT FRERE MIDDLE INCOME	350	DEC 2003
BANTUBONKE MT FRERE	941	2003 / 2004
RAMOHLAKOANA (MALUTI)	900	2004
UMZIMKULU HOUSING PROJECTS		
RIVERSIDE	1000	2003
UMZIMKULU LOW COST HOUSING EXT 5 & 6	709	2003
CLYDESDAL HOUSING PROJECT	900	2003
RIETVLEI	500	2005
UMZIMKULU LOW COST HOUSING NEXT TO EXT. 6	1000	2004

# **APPENDIX C**

# WATER PROJECTS

DESCRIPTION	LM	WARD	X_COORD	Y_COORD	YEAR
Corinth Water Project	UMZIMKULU	5	69260.29853	-3332801.232	2003
Group Water Supply to 3 Villages in Umzimkulu	UMZIMKULU	2	56931.49761	-3330050.63	2003
Tabankulu Water Supply Project	UMZIMVUBU	7	15639.42865	-3410257.582	2003
Umzimkulu Water Supply Scheme	UMZIMKULU	11	76970.71957	-3360484.868	2003
Water Supply to Antioch Village	UMZIMKULU	5	78194.30176	-3330726.144	2003
Mnkangala Water Supply Scheme	UMZIMKULU	4	52658.16034	-3345916.776	2003
Hangwini Water Supply & Sanitation	UMZIMVUBU	14	-5204.55586	-3412226.143	2003
Disaster Intervention in the Mount Ayliff/Taban	UMZIMVUBU	6	24209.96234	-3412389.215	2003
Mwaca Water Supply Scheme	UMZIMVUBU	4	24804.63166	-3391103.454	2003
Toleni Water Supply Project	UMZIMVUBU	16	-4045.2451	-3417832.058	2003
Masakala Community Water Project	UMZIMVUBU	22	-14074.24058	-3353629.097	2003
Siyazakha Dundee Water Project	UMZIMVUBU	2	42131.04625	-3400521.644	2003
Matatiele Presidential Lead Project	UMZIMVUBU	7	15118.95097	-3416467.786	2003
Maluti Water Treatment Works Rehabilitation	UMZIMVUBU	23	-20557.72058	-3349018.148	2003
Delamuzi Spring Protection	UMZIMKULU	2	55808.54675	-3330312.418	2004
Ngqokozweni Water Project	UMZIMKULU	7	81098.5823	-3342049.388	2004
Liketlane Water Supply Project	UMZIMVUBU	30	-38775.46511	-3359908.155	2004
Malongwe Water Supply Scheme	UMZIMVUBU	8	-2735.15949	-3406389.358	2005
Water Supply to 3 Villages in Malenge	UMZIMKULU	3	58421.90428	-3337381.43	2005
Lugangeni Water Supply Project	UMZIMVUBU	14	-6135.79121	-3411639.201	2005
Ntenetyana Water Supply Project	UMZIMVUBU	8	-6653.69996	-3407456.981	2005
Brooksnek Water Supply Study	UMZIMVUBU	1	46884.21002	-3392968.431	2007
Ngqwarha Village Water Supply Scheme	UMZIMVUBU	17	-12428.71893	-3413762.129	2007
Madlangala Extension Water Project	UMZIMVUBU	25	-36856.90598	-3345791.062	2008
Xhokonxa Water Supply Project	UMZIMVUBU	17	-15630.27842	-3417059.589	2008
Saint Faith Water Supply	UMZIMKULU	11	68995.3846	-3366128.7	2009
Mount Frere District Water Supply Projects	UMZIMVUBU	17	-20823.90649	-3417542.315	2009
Water Supply to the Villages of Lugangeni, Nten	UMZIMVUBU	8	-5547.54851	-3408349.466	2009
Silindini Village Project	UMZIMVUBU	24	-25267.95608	-3359337.336	2012
Nkosana Water Project	UMZIMVUBU	24	-28399.41196	-3345497.639	2013
Vukani/Fountains Water Supply	UMZIMKULU	17	87633.52398	-3356169.091	2014
Mount Fletcher District Water Supply	UMZIMVUBU	21	-53216.02212	-3391189.659	2018
Masakhane Gxwaleni Water Supply Project	UMZIMVUBU	1	49272.61717	-3398536.983	2019
Matatiele Presidential Lead Project : Comprisin	UMZIMVUBU	28	-53129.90393	-3346573.771	2025
George Moshesh Water Supply Scheme Phase 2	UMZIMVUBU	25	-44188.52496	-3348390.326	2026
Makomareng Madlangala Water Project	UMZIMVUBU	25	-41663.54855	-3338624.758	2027
Koebung /Thaba Chicha Water Supply Scheme	UMZIMVUBU	30	-59379.11652	-3364365.525	2035
Ntsimangweni Water Scheme	UMZIMVUBU	8	5863.67592	-3394385.079	2035
Mjikelweni Village Water Supply Scheme	UMZIMVUBU	11	-7426.31391	-3397074.065	2037

# **APPENDIX D**

# **3 YEAR PLAN**

## **ALFRED NZO PROPOSED 3 YEAR PLAN - 2003**

VILLAGE	LM	LM	ESKOM	LM LED	DM LED	X_CORD	Y_CORD	ESTIM. HOUSE	PLAN
		PRIORITY	PLANNED	PRIORITY	PRIORITY			HOLDS	YEAR
LUKHASINI	UMZIMKULU			1		58302.46074	-3327806.603	100	2003
RIVERSIDE	UMZIMKULU	1	1			67874.20649	-3329417.424	1	2003
LUKHANYWENI	UMZIMKULU	1	1			73815.80324	-3331212.942	174	2003
EDJERTON	UMZIMKULU	1	1			63769.94228	-3331863.236	98	2003
NGWAQA	UMZIMKULU	1	1			63240.83895	-3335682.953	390	2003
NGWANGQA	UMZIMKULU		1			62757.23526	-3338976.895	172	2003
NYANISWENI	UMZIMKULU		1			86766.3709	-3341725.244	25	2003
EMFULAMHLE	UMZIMKULU	1			1	87848.66928	-3343585.505	120	2003
BUTHA	UMZIMKULU				1	88254.32545	-3352081.324	34	2003
NZIMANKULU	UMZIMKULU					78952.98968	-3359389.981	168	2003
ROCKY MOUNT	UMZIMKULU	1	1			64558.72218	-3359257.249	93	2003
MAMBULWINI	UMZIMKULU	1		1		77664.15667	-3360319.008	299	2003
MAGWALA	UMZIMKULU	1				71310.49531	-3368527.862	205	2003
MACHUNWINI	UMZIMKULU	1	1			77577.81961	-3373098.808	43	2003
MACHUNWINI	UMZIMKULU	1	1			75569.6095	-3375190.142	122	2003
MACHUNWINI	UMZIMKULU	1	1			74139.59394	-3376315.797	110	2003
MACHUNWINI	UMZIMKULU	1	1			73384.02398	-3376708.886	62	2003
PONTSENG	UMZIMVUBU	1	1	1		-38592.56648	-3369762.23	247	2003
COLANA	UMZIMVUBU				1	8712.35194	-3382197.312	24	2003
GOGELA	UMZIMVUBU	1			1	22403.67904	-3390177.307	129	2003
MDUMNDUM	UMZIMVUBU				1	19958.91232	-3392444.039	98	2003
NDAKENI	UMZIMVUBU	1				21885.24198	-3392967.798	62	2003
SIDAKENI	UMZIMVUBU	1				36245.04508	-3393192.311	79	2003
SIDAKENI	UMZIMVUBU	1				38118.73632	-3394197.091	85	2003
NTLAVINI	UMZIMVUBU	1			1	38185.6136	-3400566.108	200	2003
DANTEE	UMZIMVUBU				1	41496.28726	-3401728.812	428	2003
DUTYENI	UMZIMVUBU	1	1			28977.99711	-3411906.444	289	2003
DUTYINI	UMZIMVUBU		1			26301.85334	-3412110.464	281	2003
LONG	UMZIMVUBU	1	1			-4601.09387	-3412729.603	160	2003
MHLOKWANA	UMZIMVUBU	1	1			-7127.50608	-3417272.174	299	2003
BHUWA	UMZIMVUBU	1	1			-7908.2667	-3419792.656	152	2003
XOLO	UMZIMVUBU		1			-7495.42391	-3420807.552	48	2003
ZIBOKWANA	UMZIMVUBU	1	1			-6606.54918	-3423593.196	154	2003
LWANDLANA	UMZIMVUBU	1		1		-10950.8117	-3436458.86	111	2003

### **ALFRED NZO PROPOSED 3 YEAR PLAN - 2004**

VILLAGE	LM	LM	ESKOM	LM LED	DM LED	X_CORD	Y_CORD	ESTIM. HOUSE	PLAN
		PRIORITY	PLANNED	PRIORITY	PRIORITY			HOLDS	YEAR
KAYEKA	UMZIMKULU			1		54684.78006	-3329169.564	103	2004
KAYEKA	UMZIMKULU			1		55554.66328	-3330321.657	414	2004
ST MICHAELS	UMZIMKULU		1			80909.08429	-3332726.216	49	2004
NDIMAKUDE	UMZIMKULU		1			79823.79137	-3333912.085	87	2004
NDABA	UMZIMKULU	1	1			77937.5035	-3335519.794	336	2004
GEMESTON	UMZIMKULU		1			80593.04163	-3335560.352	125	2004
NONGIDI	UMZIMKULU		1			81926.13268	-3337347.936	150	2004
MAKHANVA	UMZIMKULU		1			77751.33489	-3338552.691	98	2004
NYAKA	UMZIMKULU		1			75899.49194	-3338213.987	26	2004
MABOYANE	UMZIMKULU		1			79681.05345	-3339314.303	117	2004
MYEMBE	UMZIMKULU		1			74942.39772	-3340373.406	156	2004
GUDLINDABA	UMZIMKULU	1	1			84029.78236	-3341884.655	195	2004
SAYIMANE	UMZIMKULU	1	1			77177.09099	-3342174.321	94	2004
GUDLINDABA	UMZIMKULU	1	1			81090.37121	-3342508.27	195	2004
MARWAQA	UMZIMKULU	1	1			76947.20925	-3344129.666	95	2004
FOUNTAINS	UMZIMKULU	1	1			87527.90043	-3356792.539	168	2004
HIGHLANDS	UMZIMKULU	1	1			89790.25769	-3358313.885	265	2004
TEMBENI	UMZIMKULU	1	1			88987.89938	-3360596.747	147	2004
WASHBANK	UMZIMKULU	1	1			91408.74447	-3360529.714	266	2004
MCAKACWENI	UMZIMKULU		1			90242.17615	-3362098.742	155	2004
KWA JAMES	UMZIMKULU	1	1			84393.62155	-3364485.997	353	2004
SIHLONTLWENI	UMZIMKULU	1	1			80580.7213	-3365093.95	234	2004
BONTRAND	UMZIMKULU	1	1			77790.50006	-3365420.956	28	2004
BONTRAND	UMZIMKULU	1	1			78267.80095	-3366223.943	38	2004
BONTRAND	UMZIMKULU	1	1			77302.88012	-3367691.902	64	2004
MEMEKA	UMZIMKULU		1	1		89516.34535	-3380638.699	55	2004
PAMLAVILLE	UMZIMVUBU	1		1		6618.09883	-3332076.037	292	2004
JABAVU	UMZIMVUBU	1	1			-22328.07848	-3347406.153	65	2004
MHLOLOANENG	UMZIMVUBU	1				-38734.89467	-3359944.322	240	2004
MHLOLOANENG	UMZIMVUBU	1				-40240.08839	-3360150.056	36	2004
QHOBONHEQNENG	UMZIMVUBU	1		1		-39757.58088	-3366207.894	199	2004
EMATOLWENI	UMZIMVUBU		1			-38376.46835	-3373964.083	234	2004
BROOKSNEK MISSION	UMZIMVUBU	1	1			46296.06297	-3390512.349	236	2004
MHLOTSHENI	UMZIMVUBU	1				8593.67618	-3407774.032	178	2004
BHUWA	UMZIMVUBU	1	1			-8877.9319	-3416040.899	145	2004
BHUWA	UMZIMVUBU	1	1			-9008.7354	-3422104.626	139	2004

### ALFRED NZO PROPOSED 3 YEAR PLAN - 2005

VILLAGE	LM	LM	ESKOM	LM LED	DM LED	X_CORD	Y_CORD	ESTIM. HOUSE	PLAN
		PRIORITY	PLANNED	PRIORITY	PRIORITY			HOLDS	YEAR
MANGENI	UMZIMKULU			1		52991.75499	-3327310.343	90	2005
MANGENI	UMZIMKULU					50901.53415	-3328008.315	111	2005
ECINGWENI	UMZIMKULU		1			61136.52156	-3330112.284	40	2005
MNCEWEBA	UMZIMKULU		1			57049.59464	-3331100.412	68	2005
BOMVINI	UMZIMKULU		1			58631.26056	-3331971.11	424	2005
TRUSTY FARM	UMZIMKULU		1			60944.15501	-3332298.17	22	2005
KWADEKA	UMZIMKULU		1			60575.66242	-3335508.994	123	2005
BRIDGE	UMZIMKULU		1			58479.41459	-3337256.616	32	2005
MALINGE	UMZIMKULU		1			59429.2206	-3337447.932	71	2005
ESIKHEWINI	UMZIMKULU		1		1	57804.99819	-3338450.829	41	2005
MATSHITSHI	UMZIMKULU		1			60414.70555	-3339753.837	35	2005
MOUNTAIN	UMZIMKULU		1			81245.7089	-3346771.196	144	2005
MOUNTAIN HOME	UMZIMKULU		1			80011.85274	-3348034.604	31	2005
MVUBUKAZI	UMZIMKULU	1	1			84894.78933	-3348715.951	20	2005
ELUSIZINI	UMZIMKULU		1			79611.66333	-3350156.787	150	2005
NIGEL	UMZIMKULU		1			81220.84874	-3349949.284	21	2005
ZWELITSHA	UMZIMKULU	1	1			85668.12534	-3350620.539	109	2005
KWABALA	UMZIMKULU		1			81371.69739	-3351165.587	253	2005
CHANCELE	UMZIMKULU	1	1			79030.23943	-3353240.728	443	2005
CABAZI	UMZIMKULU		1			81130.62129	-3352674.485	98	2005
TEEKLOOF	UMZIMKULU	1				88991.61046	-3366490.758	39	2005
TEEKLOOF	UMZIMKULU	1				89763.31156	-3367118.538	30	2005
MDYNDOM	UMZIMKULU	1	1			93086.82843	-3369068.015	75	2005
RIETVLEI	UMZIMKULU	1	1			79986.79496	-3374383.229	248	2005
MACHUNWINI	UMZIMKULU	1				73746.10013	-3374946.192	14	2005
UNKNOWN NAME	UMZIMVUBU					7542.35343	-3380831.505	139	2005
UNKNOWN NAME	UMZIMVUBU					6472.38705	-3381376.533	117	2005
UNKNOWN NAME	UMZIMVUBU					4384.60501	-3379949.574	83	2005
TSITA A	UMZIMVUBU		1			-29596.59835	-3348761.558	122	2005
BLACK DIAMOND	UMZIMVUBU		· ·	1		-4208.13909	-3348988.213	32	2005
GERMISTON	UMZIMVUBU		1			5443.48181	-3380327.953	67	2005
MDUMASI	UMZIMVUBU		1			-43418.22563	-3381562.443	443	2005
MVENYANA	UMZIMVUBU	1	1			2895.52166	-3380903.389	109	2005
GWADANA	UMZIMVUBU		1			1813.76407	-3383793.835	176	2005
MDENI	UMZIMVUBU	1	1	1	1	6762.92232	-3384018.231	110	2005
SITHIWENI	UMZIMVUBU		1	1	1	3918.11862	-3384948.692	104	2005
MADLANGENI	UMZIMVUBU	1	1	<del> </del>	<del> </del>	-40062.14996	-3389435.286	285	2005
MAHLAKE	UMZIMVUBU	'	1	<del>                                     </del>	<del> </del>	-40002.14990	-3387898.275	134	2005
MPOLA	UMZIMVUBU		<del>  '</del>	<del> </del>	1	-6642.39637	-3406174.119	47	2005
NTENETYANA	UMZIMVUBU		<del> </del>	1	<del>  '</del>	-6738.21581	-3407786.603	96	2005
CENTULI	UMZIMVUBU	1	1	<del>  '</del>	<del> </del>	-6292.98769	-3411366.196	401	2005
NCUNTENI	UMZIMVUBU	1	'	1	-	1863.62554	-3411366.196	173	2005

## **APPENDIX E**

# **ELECTRICITY PROJECT SCHEDULE - UMZIMKULU**

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
01	LED	KAYEKA	2	55651.13605	-3330395.747	2016	1
		MANGENI	3	51224.31735	-3327939.175	2021	1
	SCHOOL	DELAMUZI J S	3	56001.7273	-3331054.441	2004	1
		INDAWANA J S	4	43501.47344	-3319148.113	2014	1
		LENFORD BALENI J P S	3	50876.65409	-3328372.542	2005	1
		MANGENI P J	4	51457.99692	-3327146.952	2005	1
		SANGWENI S P	3	47533.47598		2027	1
		ST PATRICK'S P J S	3	54866.6317	-3328159.932	2004	1
	EL ECTRIFICATION	TSWULE S P	3	46082.02108		2027	1
	ELECTRIFICATION	EMAKHAMBULENI	4	49130.29014		2027	6
		KAYEKA	1	49652.00947 54684.78006		2027	118
		NATERA	'	55554.66328		2004	476
		MANGENI	4	50701.38612		2027	8
			·	47182.21905		2027	26
				50264.26557	-3330234.3	2027	20
			1	50901.53415		2005	128
				52991.75499	-3327310.343	2005	104
		NDAWANA	3	43646.79085	-3319818.71	2014	276
				42997.41056	-3319232.859	2015	93
				42351.38613	-3318581.689	2015	78
		SIGWA	3	50050.42396	-3326978.625	2008	147
		SITSAWULA	4	46128.66533	-3326300.474	2027	53
		UNKNOWN NAME	3	45454.30066	-3318258.31	2014	108.1
		NDAWANE	4	41128.41207	-3318370.398	2021	269
02	LED	LUKHASINI	1	58393.06564		2003	1
	SCHOOL	BOMVINI S P	3	59475.778	-3332151.895	2005	1
		EDGERTON J S	3	63978.24786		2003	1
		ENGWAQA PJ	3	63325.64538		2003	1
		ENGWAQA S S	3	63696.14753		2003	1
		ENYANISWENI J S	3	65421.1049	-3333066.11	2000	1
	WATER	LUKASINI J S S	4	58493.59194		2003	1
	WATER	Group Water Supply to 3 Villages  Delamuzi Spring Protection	4	56931.49761 55808.54675	-3330050.63 -3330312.418	2016	1
	ELECTRIFICATION	BOMVINI	1	58631.26056		2005	488
	LLLOTKII IOKTION	ECINGWENI	1	61136.52156		2005	46
		EDJERTON	1	63769.94228		2003	113
		GOSO	3	55711.73099		2008	23
		KWADEKA	1	60575.66242		2005	141
		LUKHASINI	1	58302.46074	-3327806.603	2003	115
		MNCEWEBA	1	57049.59464	-3331100.412	2005	78
		NGWAQA	1	63240.83895	-3335682.953	2003	449
		TRUSTY FARM	1	60944.15501	-3332298.17	2005	25
03	CLINIC	MALENGE CLINIC	1	59923.86604	-3337126.435	2007	1
		RICHMOND TOWN BOARD	4	51275.88068	-3338300.697	2023	1
	LED	ELUBUKWINI	1	44689.71454		2005	1
		Ntsikeni Eco-Tourism	1	57804.99823	-3338450.829	2006	1
	0011001	Malenge	1	59927.57936		2007	1
	SCHOOL	DULATI P J	4	53737.45254		2021	1
		ENSIKENI J S	1	56449.78969		2006	1
		ENTSIKENI S S ST BERNARD J S S	3	57258.2581 62683.79258	-3334267.742 -3338875.905	2006	1
	WATER	Water Supply to 3 Villages in Malenge	4	58421.90428		2019	1
	ELECTRIFICATION	BRIDGE	1	58479.41459		2005	37
	ELECTRIC TO ATTOM	DULATI	4	54034.67936		2021	139
		EKEWINI	4	52900.38182		2023	44
				51746.01678		2023	18
		ELUBUKWINI	1	44860.20334		2027	9
		ESIKHEWINI	1	57804.99819		2005	47
		ESINDENI	4	54660.39246	-3338565.795	2021	414
		MALINGE	1	59429.2206	-3337447.932	2005	82
		MATSHITSHI	1	60414.70555	-3339753.837	2005	40
		NGWANGQA	2	62757.23526	-3338976.895	2003	198
		NQABENI	4	46725.35591	-3339915.009	2027	20
I				47663.1813	-3338666.384	2027	12

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
		NTSIKENI	2	57069.01788	-3335742.966	2007	256
				56622.30954	-3335383.668	2006	503
		ZAMAZELA	4	50832.08048	-3339757.538	2023	58
		UNKNOWN NAME	4	57647.83558	-3337237.301	2027	9.2
				51690.98461	-3337604.318	2027	36.8
				53009.96568	-3335060.989	2025	127.65
		Malenge	1	59929.1696	-3336690.368	2007	1
04	WATER	Mnkangala Water Supply Scheme	4	52658.16034	-3345916.776	2007	1
	ELECTRIFICATION	MARAMBENI	4	57577.15208	-3341054.907	2023	85
				56935.72854	-3343240.186	2023	41
		MARANJANA	4	52315.58072	-3342827.036	2015	192
		MAREWINI	3	54140.03868	-3341838.664	2015	105
		NQABELWENI	4	54748.51504		2015	100
05	CLINIC	RIVERSIDE CLINIC	1	68160.7127	-3329413.371	2003	1
		SPHAMANDLA CLINIC (SITE ONLY)	1	79490.97637	-3335919.386	2004	1
	SCHOOL	BUNGENDE J S S	2	77182.15155	-3335459.267	2004	1
		KUKHANYENI J S	2	74006.06595	-3331338.547	2003	1
	WATER	Water Supply to Antioch Village	4	78194.30176	-3330726.144	2007	1
		Corinth Water Project	4	69260.29853	-3332801.232	2007	1
	ELECTRIFICATION	ENGWANGWANE	3	75405.85336	-3327871.054	2012	29
		GEMESTON	1	80593.04163	-3335560.352	2004	144
		LUKHANYWENI	1	73815.80324	-3331212.942	2003	200
		NDABA	1	77937.5035	-3335519.794	2004	386
		NDIMAKUDE	1	79823.79137	-3333912.085	2004	100
		NONGIDI	1	81926.13268	-3337347.936	2004	173
		RIVERSIDE	1	67874.20649	-3329417.424	2003	1
		ST MICHAELS	1	80909.08429	-3332726.216	2004	56
		UNKNOWN NAME	4	79092.86322	-3337890.111	2018	62.1
06	CLINIC	LOURDES CLINIC	2	65279.45031		2011	1
	LED	Lourdes F S	2	66482.60225	-3343517.32	2010	1
	SCHOOL	DUMISA J S S	4	71954.82432	-3347073.27	2016	1
		LOURDES J S S	2	65810.82917	-3342636.958	2010	1
		LOURDES S S S	2	65632.27634		2010	1
		ST ALOIS J S S	3	66946.92533		2010	1
	ELECTRIFICATION	CALADU	3	67407.09153		2011	72
		DIPHINI	3	67952.8859	-3344445.236	2010	136
		DUMANEMNU	4	69686.92127	-3349177.415	2016	167
		DUMISA	4	72182.54669		2016	55
		ELALINI	3	71113.02591		2010	84
		EMAPLAZINI	3		-3346445.426	2013	14
		EMATYENI	3	69302.7333		2011	139
				68748.67056		2010	48
		EMOYENI	4	60944.74757		2020	25
		EVUKA	4	60346.01525		2020	108
		GUDLINTABA	3	69753.73954		2010	104
				71385.73857	-3348337.389	2016	107
		HOLANDI	3	72131.61492		2014	72
		LOURDES F S P	2	66606.76628		2010	28
			3	65695.07044		2010	5
		MAFABELA	3	64654.01305		2011	45
				65467.21942		2011	7
		MAKHANVA	1	77751.33489		2004	113
		MAKHOLWENI	3	66427.22343		2011	102
		MAPLASINI	4	61043.08578		2020	23
	1	MYEMBE	1	74942.39772		2004	179
		MZIMKHULU	4	60723.09451		2027	1
	1	NQOZANA	4	66237.92976		2018	82
	<del> </del>	+		67255.16147		2018	1
	1			68219.13236		2027	13
	1	NYAKA	1	75899.49194		2004	30
	1	SIBOVINI	3	73057.00487	-3346154.483	2014	85
		SIPHANGENI	4	64475.36492		2018	189
	1		3		-3345964.537	2013	67
	1	SNEEZEWOOD	4		-3347787.718	2027	1
		UNKNOWN NAME	4	68752.19161		2027	32.2
I	ĺ	1	3	73939.32673	-3344032.248	2010	39.1

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
		MAWUSI	4	73717.28526	-3349158.483	2021	256
07	CLINIC	MVOTI CLINIC	1	83305.28996	-3341158.972	2000	1
	LED	Fruit Project	1	87752.46372	-3343700.989	2006	1
	SCHOOL	MARANJANE S P S	1	85157.12389		2006	1
		MFULAMHLE J S S	3	87909.23693	-3343424.755	2003	1
	WATER	Ngqokozweni Water Project	4	81098.5823	-3342049.388	2007	1
	ELECTRIFICATION	EMFULAMHLE	3	85557.76023	-3343440.703	2006	97
		5.13.43.116.14.53.11	1	87848.66928		2003	138
		ENYANISWENI	3	86986.71789		2009	24
		GUDLINDABA	1	81090.37121	-3342508.27	2004	224
		MAROVANE	1	84029.78236 79681.05345	-3341884.655	2004	224
		MABOYANE MARWAQA	+		-3339314.303	2004	135
		MAUS	1 4	76947.20925 76047.14065	-3344129.666 -3349373.44	2004	109
		NOLANGENI	4	77067.06043		2019	138
		NYANISWENI	1	86766.3709	-3340309.009	2003	29
		SAYIMANE	1	77177.09099		2003	108
		ST BARNABAS	3	79786.87024		2004	238
08	CLINIC	GOWAN LEA	1	67593.66209		2000	230
00	SCHOOL	DRIEFONTEIN J S S	2	64421.91828		2009	1
	COLICOL	ENGUNJINI J S S	3	60878.38365	-3356280.347	2013	1
		MNCEBA J S S	1	68760.87561		2008	1
		VULAMEHLO J S S	1	64801.01189		2003	1
	ELECTRIFICATION	DOKEDEKENI	3	63739.00782	-3355750.233	2009	13
		DRIFTFONTEIN	2	64952.6094		2009	104
		MPHURHU	3	57222.31905	-3355607.65	2013	1
		NCAMBELE	2	69047.53245		2008	186
		NGUNJINI	3	59806.48395		2013	35
		NGWINJINI	3	62111.67683		2009	59
				60607.54086		2013	39
		PHELANYENI	4	70527.03559	-3356404.008	2020	82
		ROCKY MOUNT	1	64558.72218		2003	107
		SINOYINI	3	63410.75813		2009	15
		TAIKO	3	60142.71732		2013	163
		UNKNOWN NAME	3	65754.3429		2013	20.7
09	CLINIC	LADAM IRENE CLINIC	4	75695.30283	-3355294.946	2024	1
		MVUBUKAZI CLINIC(SITE ONLY)	4	82068.39941		2005	1
	LED	MAMBULWINI	1	77798.49233	-3360304.758	2003	1
	SCHOOL	EZIMPUNGENI J S S	2	78353.57517	-3360686.081	2003	1
		LADAM S S S	2	78410.16914	-3353472.523	2005	1
		MANDLAZI J S S	1	79632.90294	-3359394.405	2003	1
		MHLABA'S J S S	2	78410.16914	-3353472.523	2005	1
		NDLOZANA J P	2	73390.24111	-3354127.649	2027	1
		UPPER IBISI J S S	2	69805.32125	-3352636.821	2023	1
		VUKANI J S S	3	71402.27803	-3351165.43	2023	1
		VUKAZI S P S	3	74445.48384	-3350892.006	2023	1
		ZIZAMELE S P S	1	81587.49139	-3346750.867	2005	1
	ELECTRIFICATION	CABAZI	1	81130.62129	-3352674.485	2005	113
		CHANCELE	1	79030.23943	-3353240.728	2005	509
		ELUSIZINI	1	79611.66333	-3350156.787	2005	173
		GOXE	4	76550.20341	-3356258.59	2024	170
		JABULA	4	76051.43296	-3355115.395	2024	85
		KWABALA	1	81371.69739	-3351165.587	2005	291
		KWAMBUMBULWANA	4	73841.76428	-3354009.449	2027	154
		MAGCAKINI	4	70986.70172	-3351123.789	2023	145
		MAMBULWINI	1	77664.15667	-3360319.008	2003	344
		MASHAWENI	4	72259.69403		2027	16
		MOUNTAIN	1	81245.7089	-3346771.196	2005	166
		MOUNTAIN HOME	1	80011.85274		2005	36
		NIGEL	1	81220.84874	-3349949.284	2005	24
		NOMEVA	4	74097.12398	-3351462.117	2023	60
		NZIMANKULU	1	78952.98968		2003	193
		NZOMBANE	4	69262.04003		2023	53
					-3352544.307	2023	35
		NZOMBANI	4	67327.47638		2027	12
	•	UNKNOWN NAME	4	72370.31391	-3353920.135	2025	29.9

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
				75518.79793	-3351322.78	2026	31.05
		MVUBUKAZI	1	84894.78933	-3348715.951	2005	23
10	CLINIC	SIHLEZA CLINIC	1	69633.76551	-3370554.362	2000	1
	SCHOOL	BOMBASI J S	1	75812.32642	-3375764.827	2003	1
		TEX NYBERT J S S	1	71438.05153	-3371299.998	2008	1
		VICTORY J S S	2	73262.76728	-3366939.229	2022	1
		ZIMEMA S P	1	73133.41029	-3376394.993	2003	1
		ZWELONKE J S S	1	71693.51664	-3368844.015	2003	1
	ELECTRIFICATION	FLAKSTIN FARM	3	66001.24251	-3368757.779	2008	31
		GAYBROOK FARM	4	66415.86998	-3374772.069	2025	1
				66142.4535	-3374063.856	2025	10
				66065.3124	-3375251.733	2025	10
		GAYBROOK N0 2	4	66959.86173	-3376349.684	2020	54
		MACHUNWINI	3	73746.10013	-3374946.192	2005	16
			1	75569.6095	-3375190.142	2003	140
				77577.81961	-3373098.808	2003	49
				73384.02398	-3376708.886	2003	71
				74139.59394	-3376315.797	2003	127
		MAGWALA	1	71310.49531	-3368527.862	2003	236
		MTHALENI	3	71699.13315	-3372359.606	2008	102
		NCAMBELE	3	65028.5798	-3367268.696	2008	30
		RASFONTEIN	3	63990.16215	-3373504.67	2010	54
		UNKNOWN NAME	3	64631.21822	-3377298.999	2006	19.55
		KLIPSPRUIT	3	64935.46016	-3377590.586	2006	47
11	CLINIC	IBISI CLINIC	1	85806.78622	-3366123.778	2000	1
	SCHOOL	ESIHLONTLWENI J S	1	79914.0109	-3365346.561	2004	1
		GEWENTSA J S S	4	74173.14062	-3363837.054	2022	1
		MT HOREB S P S	2	74585.76038	-3365580.668	2022	1
		ST FAITHS J S S	1	69069.11026	-3366236.994	2009	1
		VIERKANT P J	1	83738.22102	-3363655.006	2004	1
	WATER	Umzimkulu Water Supply Scheme	4	76970.71957	-3360484.868	2010	1
		Saint Faith Water Supply	4	68995.3846	-3366128.7	2007	1
	ELECTRIFICATION	BONTRAND	1	77302.88012	-3367691.902	2004	74
				78267.80095	-3366223.943	2004	44
				77790.50006	-3365420.956	2004	32
		BUSHFONTEIN	2	88536.09152	-3363500.351	2006	63
		KWA JAMES	1	84393.62155	-3364485.997	2004	406
		KWA JUDA	3		-3363154.209	2011	22
		LONDIVANI	4		-3371616.455	2020	23
		LUKHALWENI	3		-3371529.762	2006	23
		MBUMBANE	4	76639.43645		2024	7
					-3369639.472	2024	16
			_		-3371774.566	2024	13
		MPINDWENI	3		-3362731.901	2019	45
		MTONJENI	4		-3361396.97	2024	108
		NKAMPINI	3		-3364469.812	2011	44
		SIHLONTLWENI	1	80580.7213	-3365093.95	2004	269
		SPITSKOP	4		-3369960.358	2025	17
				80252.81003	-3368653.28	2025	13
		MCEBA	4		-3362378.182	2019	26
		MISA	4	74928.81458	-3366201.213	2022	162
		CWENTSA	4	74468.95806	-3363762.906	2022	155
		ESIKHULU	3	68708.18211	-3365855.045	2009	248
		MCAKACWENI	1		-3362098.742	2004	178
10	CLINIC	GREEN HILL	4	72368.93709	-3365464.8	2016	76
12	CLINIC	RIETVLEI HEALTH CENTRE	1	1	-3374172.192	2005	1
	SCHOOL	EMBUZWENI J S	1	77866.4352	-3375174.794	2000	1
		RIETVLEI G I J P	1	80061.70214		2005	1
		RIETVLEI HOSPITAL	1		-3374324.868	2005	1
	EL EOTOLEIO : TIOI :	RIETVLEI J S	1	1	-3374692.596	2005	1
	ELECTRIFICATION	EASTLANDS	1	78735.81477	-3376662.653	2008	12
		GROOTVERLANGER	4		-3377852.342	2020	22
		HOPEVALE	2		-3379025.866	2006	81
		MBULUMBA	1		-3378718.778	2007	49
		MEHLOMANE	2	1	-3377085.839	2008	92
I	I	RIETVLEI	1	79986.79496	-3374383.229	2005	285

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
		UNKNOWN NAME	3	78341.28192	-3376190.458	2008	12.65
		PETER & STEPHEN TIMBERS	3	75468.08972	-3377113.233	2008	1
13	WATER	Mfundweni Water Supply Scheme	4	86837.70942	-3368987.182	2007	0
	ELECTRIFICATION	MAYALULENE	4	90844.23836	-3366660.055	2020	52
		MFUNDWENE	3	85836.05166	-3368885.733	2014	3
		ROND - DRY	4	89300.71826	-3369126.645	2025	23
		TEEKLOOF	1	88991.61046		2005	45
				89763.31156		2005	35
		TEMBENI	1	88987.89938		2004	169
		VAALKOP	3	91637.65375		2017	68
		MAHOBEMDENE	4	88704.11835		2025	22
14	CLINIC	ENGUDWINI GUGWINI CLINIC	3	90778.55463 89962.54394		2012	47
14	LED	Me,eka	1	89662.7241		2004	1
	ELECTRIFICATION	DOVEDALE	2	83286.61288		2007	72
	LLLO II (II IO/(II OI)	HALA	4	90664.50266		2020	20
		HLANZENE	2	95405.4239		2007	39
		HLAZENI	4	97497.40544		2025	38
		KEMSHAZO	4	91511.64733		2019	78
		KHULUMELUKHAKHE	3	92327.89337		2007	6
		LONGKLOOF	4	97550.46584		2027	145
		LUKHETHENI	4	92972.29355		2019	61
		MASAMENI	3	92270.11106		2007	45
		MDYNDOM	1	93086.82843	-3369068.015	2005	86
		MEMEKA	1	89516.34535	-3380638.699	2004	63
		NDLOVU	4	95236.81638	-3374011.036	2025	48
		NKAPA	3	93303.22663	-3372251.592	2015	154
		THORNBUSH	4	94558.42981	-3366762.522	2024	66
		UNKNOWN NAME	4	87585.54565	-3380209.814	2020	10.35
15	SCHOOL	KESWAS J S	2	93648.02097	-3362647.284	2017	1
		L MTIMKULU J S	2	95357.17316	-3360079.973	2023	1
		NOMPUMELELO S S	2	95518.22171	-3360139.962	2023	1
		STRANGERS REST J S S	3	93583.06655		2016	1
		SUMMERFIELD J S	4	99025.61153		2026	1
	ELECTRIFICATION	BEDFORD	4	100534.1351	-3364763.43	2026	3
		BOMBO	4	97807.31415		2026	72
		BONY RIDGE	4	105155.8036		2016	70
		CHAMTU	3	93888.60262		2017	74
		DADANE	4	100179.8418	-3365793.596 -3364750.948	2027	15
		EMONTI	4	97431.68666		2023	22
		EMOUNT	4	96415.1351		2023	15
		EMOYENI	4		-3361118.814	2017	115
		ESIGANGQA	4	95764.4551		2018	16
		GCEBENI	3		-3364509.853	2016	135
		IRON LASH	4	101890.7105		2024	87
		KROOMOOK	4	96248.49051		2023	130
		KWANGQIKA	4	97647.43824		2018	17
		MAGQAGQENI	4	99240.50312		2023	67
				98135.03145	-3358699.298	2018	48
		MAMGCINI	4	96855.95693	-3358036.888	2018	38
		NGCENI	4	100995.9822	-3366149.406	2027	98
		NTSHABENI	4	95869.96467	-3362108.918	2023	82
		SAMAN FIELD	4	97770.21953	-3361614.262	2023	15
		STRANGERS - REST	3	93547.10543	-3358134.65	2011	38
		SUMMERFIELD	4	99765.01304	-3364283.217	2026	58
				99882.5452		2026	58
				98506.55118		2026	58
				99952.25275		2026	58
		ZWELITSHA	4	97318.85135		2026	116
		UNKNOWN NAME	3	106853.1272	-3367060.656	2009	87.4
		NGUDWINI	4	92624.39822	-3363988.592	2017	37
		EDIPHU HIGH LENS	3	92042.99118		2012	22
		HIGH - LENS	4	94267.38039		2016	55 54
		ECOOLMOOK BRINGDALE	3		-3360375.688 -3356917.829	2016 2011	43
1	I	15		00000.01240	5555517.529	2011	1 40

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
7	LED	Butha	1	88323.05579	-3352081.667	2003	1
		Umzimkulu Feedlot	1	87848.76227	-3351006.907	2007	1
	SCHOOL	HIGHLANDS J S S	1	90022.04131	-3357850.709	2004	1
		NTLAMBAMASOKA J S S	2	85635.01709	-3350467.024	2005	1
		WASHBANK J S	2	91636.03964	-3360363.571	2004	1
	WATER	Vukani/Fountains Water Supply	4	87633.52398	-3356169.091	2007	1
	ELECTRIFICATION	BREMOR	3	85165.2802	-3360559.461	2013	67
		Butha	1	88254.32545	-3352081.324	2003	39
		FOUNTAINS	1	87527.90043	-3356792.539	2004	193
		HIGHLANDS	1	89790.25769	-3358313.885	2004	305
		STRAALHOEK	3	83793.39475	-3358237.748	2013	62
		TEMBENI	1	86807.40438	-3362231.082	2009	127
		WASHBANK	1	91408.74447	-3360529.714	2004	306
		ZWELITSHA	1	85668.12534	-3350620.539	2005	125
		UNKNOWN NAME	3	87659.8306	-3356180.241	2014	8.05

## **APPENDIX F**

# ELECTRICITY PROJECT SCHEDULE – UMZIMVUBU

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
01	SCHOOL	BROOKSNEK J S S	1	46192.79239	-3390684.295	2004	1
		GOBA J S S	1	44973.88818	-3392785.093	2007	1
		LOWER BROOKSNEK J S S	1	47115.35803	-3392593.992	2007	1
		TEMBENI J S S	1	47842.55473	-3391004.879	2007	1
	WATER	Masakhane Gxwaleni Water Supply	4	49272.61717	-3398536.983	2010	0
		Brooksnek Water Supply Study	1	46884.21002	-3392968.431	2007	0
	ELECTRIFICATION	BROOKSNEK MISSION	1	46296.06297	-3390512.349	2004	271
		CABAZANA	3	44578.26867	-3392937.701	2007	307
		MJIKWENI	3	49499.17668	-3392532.73	2019	56
		NCAWAYI	2	48160.6021	-3390444.295	2007	56
		NEW LOOK	2	47184.64614	-3392899.04	2007	417
		PEPENI	2	50591.26944	-3393982.834	2023	109
			3	49344.86628	-3395608.097	2019	261
		SIDAKENI	1	38118.73632	-3394197.091	2003	98
				36245.04508	-3393192.311	2003	91
		NQUDU	2	50776.21206	-3395072.367	2023	82
02	CLINIC	DUNDEE CLINIC	1	40985.83522	-3402448.712	2003	1
	LED	DANTEE	1	41604.16833	-3401847.812	2005	1
		Xesibe Tourism	1	38185.61361	-3400566.108	2005	1
	SCHOOL	MANZANA J S S	3	43997.59241	-3401594.438	2017	1
		NTLAVINI J S S	1	38369.71339	-3400433.488	2003	1
	WATER	Siyazakha Dundee Water Project	4	42131.04625	-3400521.644	2007	0
	ELECTRIFICATION	DANTEE	1	41496.28726	-3401728.812	2003	492
		NTLAVINI	1	38185.6136	-3400566.108	2003	230
		MANZAMA	3	44198.57944	-3401016.516	2017	253
03	SCHOOL	SIGIDINI J S S	3	39385.87002	-3409369.637	2006	1
		TELA J S S	3	43674.33278	-3404316.155	2016	1
	ELECTRIFICATION	SIGIDINI	3	39133.13548	-3410238.968	2006	212
		SINGENI	3	37575.81279	-3408732.956	2013	106
		TELA	3	43722.06029	-3406830.102	2010	120
				43170.34319	-3404503.691	2016	236
04	CLINIC	MWACA CLINIC	4	26457.63319	-3391094.791	2000	1
	LED	Vegetable Project	1	19958.91224	-3392444.039	2010	1
		GOGELA	1	22384.85978	-3390312.168	2007	1
	SCHOOL	GOGELA J S S	1	22580.70126	-3390982.822	2003	1
		MAPELENI J S S	3	24528.96555	-3406008.723	2015	1
		NATALA J S S	3	20949.95332	-3403626.429	2024	1
		NDARALA J S	3	17896.57343	-3392768.656	2013	1
		NDUMNDUM J S S	2	19733.10985	-3392570.98	2003	1
		NOMKOLOKOTO	4	10673.10501	-3390736.926	2026	1
	WATER	Mwaca Water Supply Scheme	4	24804.63166	-3391103.454	2007	0
	ELECTRIFICATION	DAMBENI	4	24490.75802	-3397874.499	2031	94
		GUBUZI	4	16954.17031	-3401938.711	2031	44
		HLOMBE	4	17991.78615	-3396422.07	2016	22
		LATANA	4	20898.71325	-3403998.731	2024	77
		MAPHELENI	3	24851.69743	-3405855.736	2015	229
		MAUONTSINI	4	10119.2376	-3398282.648	2038	63
		MBUMBAZA	3	20260.01001	-3395373.869	2013	53
		MDUMNDUM	1	19958.91232	-3392444.039	2003	113
		MGHOKWENI	4	16465.74882	-3398307.166	2039	15
				16073.9379	-3397568.934	2039	18
		MPOZA	4	10766.69956	-3397167.673	2038	100
		MQHEKEZO	4	20126.40842	-3396624.838	2016	137
		MQHEKEZWENI	4	22891.75804	-3402090.393	2024	60
				19948.88575			25
				20817.36016		2039	20
				20017.30010	0 100 100.01 E	2000	

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
	1	MQOKWENI	4	15544.8238	-3399979.579	2039	4
		MVUBINI	4	21827.04444	-3402866.336	2031	5
		MWACA	4	23256.99005	-3397321.637	2020	4
		NATALA	3	22005.89067	-3407188.912	2014	31
		NDAKENI	1	21885.24198	-3392967.798	2003	7
		NDARHALA	3	17867.3926	-3392760.526	2013	4
		NGXAKAXA	4	15766.89589	-3393675.483	2031	2
		NOMKHOLOKHONTHO	4	11417.45532	-3391540.688	2030	9
		NOMKHOLOKHONTO	4	10486.59807	-3390785.751	2026	26
				11019.64497	-3389342.95	2026	17
		SFOLWENI	4	11265.04281	-3394434.995	2030	11
		SILINDINI	4	16728.00302	-3395522.76	2020	4
		SIQHINGENI	4	11627.91867	-3396132.983	2030	15
		SIQINGENI	4	12027.1869	-3398261.056	2038	6
		UNKNOWN NAME	4	18313.37042	-3398602.247	2039	29
				17553.46459	-3400074.704	2039	4
			3	24641.71252	-3392570.292	2013	48
		GOGELA	1	22403.67904	-3390177.307	2003	14
		TYIWENI	2	7926.75673	-3386278.811	2007	20
)5	CLINIC	LUBALEKO CLINIC	3	35162.00661	-3397217.197	2008	
		NTSIZWA CLINIC SITE	4	23462.78717	-3401951.974	2024	
	SCHOOL	DALUHLANGA S S S	1	35462.51308	-3397309.723	2006	
		LUBALEKO J S S	3	35462.51308	-3397309.723	2006	
		MGANO J S S	1	29531.73645	-3402491.616	2008	
	ELECTRIFICATION	LUBALEKO	3	34801.52312	-3397030.242	2008	19
		LUBALEKO FARM	3	35445.85437	-3397294.899	2006	
		MDENI	3	29588.58107	-3402588.606	2008	5
		MFALAMKHULU	4	26867.19158	-3399628.113	2020	3
		NKANJE	4	27099.64414	-3397322.514	2020	5
		SIKROQOBENI	3	25665.93611	-3401599.644	2019	19
06	SCHOOL	DUTYINI J S S	1	25676.16249	-3412482.8	2003	
	WATER	Disaster Intervention Mt Ayliff/Taban	4	24209.96234	-3412389.215	2007	
	ELECTRIFICATION	DUTYENI	1	28977.99711	-3411906.444	2003	33
		DUTYINI	1	26301.85334	-3412110.464	2003	32
		NTSHIKAZI	4	32266.00981	-3412952.31	2020	8
		NTSIZWA	3	25201.49123	-3410893.179	2007	
		SIKEMANE	4	31026.98016	-3414148.822	2020	7
		ESIKHUMBENI	4	27933.86965	-3415328.121	2020	9
07	SCHOOL	LOWER MNCEBA	3	17879.7322	-3422535.142	2007	
		MADADIYELA J S S	4	13310.02147	-3405868.179	2019	
		NTSHAMANZI SP	4	16247.32663	-3418013.955	2031	
		ZWELAKHE SP	1	7198.06972	-3413673.266	2012	
	WATER	Matatiele Presidential Lead Project	4	15118.95097	-3416467.786	2007	
		Tabankulu Water Supply Project	4	15639.42865	-3410257.582	2007	
	ELECTRIFICATION	KWAVENI	3	7259.88825	-3413927.018	2012	4
		MADADIELA	4	13322.70621	-3405426.166	2019	13
		MADIDEELA	4	13349.28966	-3406149.273	2019	6
		MANZAMNYAMA	3	15616.62694	-3415729.395	2012	11
		NTSHAMANZI	4	16409.89188	-3417971.025	2031	11
		MJELWENI	3	18769.53578			12
		MCEBA	3	18728.67563	-3422572.875	2007	19
08	CLINIC	MHLOTSHENI CLINIC(NEW SITE)	1	8326.18218		2004	
		MKEMANE CLINIC	4	2875.14557			1
		MPOZA CLINIC	4	6512.38201		2032	
	LED	Ntenetyana	1	-6709.03069			
		BETHANY	4	-3707.721			
	SCHOOL	DETHANT					

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
		LUTSHIKINI JSS	2	9160.70579		2023	1
		MALONGWE JPS	2	-4051.91827	-3409501.81	2009	1
		MGANU	3	-6326.84715	-3407181.079	2005	1
		MGODI JSS	2	-170.51089	-3407577.815	2020	1
		MGUNGUNDLOVU PJS	4	1154.07091	-3403161.128	2028	1
		MHLOTSHENI JSS	2	8522.62219	-3407814.232	2004	1
		MPOLA	1	-5394.45082	-3406148.646	2006	1
		NOBUSA	3	2900.29357	-3394178.332	2037	1
		NOLUTANDO JSS	3	9860.356	-3401897.055	2031	1
		NOLUTANDO S P	3	9781.32072	-3401836.506	2031	1
		QANQU JSS	4	6913.44681	-3406595.487	2023	1
		SIHLAHLENI JSS	4	-1775.7003	-3407935.328	2021	1
		SINYAOA SP	4	2656.64916	-3407423.354	2020	1
	WATER	Supply to the Villages of Lugangeni	4	-5547.54851	-3408349.466	2013	0
		Ntenetyana Water Supply Project	4	-6653.69996	-3407456.981	2019	0
		Ntsimangweni Water Scheme	4	5863.67592	-3394385.079	2021	0
		Malongwe Water Supply Scheme	4	-2735.15949	-3406389.358	2013	0
	ELECTRIFICATION	BETHANI	4	-3640.79152	-3402198.612	2039	74
		EHAGWINI	4	-2461.44034	-3410509.902	2031	35
		ELUQOLWENI	4	-6187.51	-3404690.67	2015	77
		EMALONGWE	3	-4870.69316	-3409138.029	2009	156
		LUTATENI	4	4603.2373	-3402964.997	2028	419
		MACHELENI	4	5684.13425	-3408168.147	2031	69
		MAFUSINI	4	9160.69654	-3405396.319	2023	71
		MAQABANIHI	4	13439.58816	-3402668.744	2031	20
		MAWUSHENI	4	2862.67352	-3394305.453	2037	123
		MKHANGISA	4	9605.20319	-3402078.556	2031	75
		MNTSILA	4	6075.29444	-3398394.519	2034	122
				8355.93908	-3397841.397	2038	75
		MPOLA	4	-5666.23057	-3406223.375	2006	79
			1	-6642.39637	-3406174.119	2005	54
		MPOZA	4	6145.39021	-3401274.171	2032	238
		MUVNUVNBLOVO	4	1081.68512		2028	492
		NDAKENI	3	12567.00079			105
		NDOKENDIBONE	4	9640.51071			84
		NGOGUDLINTABA	4	15500.16289			59 
		NGROZANA	4	-3202.10276		2031	77
		NGWEKAZANA	4	13787.70773		2031	25
		NTEDENI	4	12000.11205	-3401441.538	2031	98
		NTEBENI	4	1595.78656	-3398032.584	2037	116
		Ntenetyana	4	-6738.21581	-3407786.603	2005	110 99
		NTIBANE NTSIMANUWENI	4	2527.51958 7440.7174	-3398756.953 -3395827.316	2038	137
		INTSIMANOWENI	4	6214.62199	-3394491.42	2035	178
		QANQU	4	6737.99092	-3406469.836	2023	197
		SIHLAHLENI	4	-2517.79181	-3408093.502	2023	191
		OII IEAI IEEIVI	7	508.9192	-3407522.957	2020	83
		SINYAQA	4	2461.79356	-3407830.89	2020	98
		SIQHINGENI	4	7036.60038		2030	204
		TSENI	4	2717.00069	-3395788.85	2037	170
		TYENI	4	3869.64844	-3397510.501	2034	332
		MHLOTSHENI	1	8593.67618		2004	205
09	CLINIC	LUYENGWENI CLINIC	4	-21378.31609	-3390307.358	2032	1
		MACHIBINI CLINIC(NEW SITE)	4	-27104.81896	-3400519.624	2039	1
	SCHOOL	CWEBENI JSS	3	-16176.4247	-3392932.351	2039	1
		MVUMELWANO J	4	-25923.97513			1
		ST MARKS JSS	4		-3392473.518		1
•	•	•	•		•	•	•

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
		ST MATTHEWS JSS	3	-32469.81354	_	2030	1
		TSHISANE JSS	4	-30814.896		2033	1
		ZIGADINI JSS	4	-25153.7666		2038	1
	ELECTRIFICATION	EMBIZWENI	4	-15678.93224	-3392899.004	2039	87
		KWA MABLAZEKO	4	-30729.2293	-3406864.468	2040	30
		LUYENGWENI	4	-22173.31542	-3392884.23	2035	428
		MAGONTSINI	4	-17438.42579	-3396639.479	2039	78
		MANDLENI	4	-29676.81295	-3409910.683	2038	150
		MPOFINI	4	-16581.22157	-3392246.541	2039	75
		MVUMELWANO	4	-26425.04996	-3396462.659	2038	128
		NCOME	4	-21554.01527	-3396934.469	2035	375
		NCOME SPRINGS	4	-31669.10256	-3394391.117	2030	210
		NTABETSOLO	4	-31045.18117	-3405857.292	2040	25
				-31039.82728	-3404719.353	2040	14
		QAQENI	4	-24973.27551	-3397319.367	2038	87
		ROMA	4	-23723.39344	-3396152.405	2038	86
		SIVUMELA	4	-23502.21106	-3398762.677	2038	78
		TSHISANE	4	-30274.4341	-3391415.774	2033	184
		ZIGADINI	4	-25100.69563	-3399604.912	2038	179
				-26541.18581	-3400698.217	2039	68
		UNKNOWN NAME	4	-35181.49216	-3402536.02	2031	71.3
		MNDINI	4	-19238.43154	-3398239.9	2037	252
		LOWER MNYANUNA	4	-21818.36081	-3390016.568	2032	469
10	CLINIC	MVENYANE CLINIC	1	3550.54957	-3381306.216		1
		NTLOLA CLINIC(NEW SITE)	1	7866.18129		2005	1
	LED	MPCC	1	8712.35194		2003	1
	SCHOOL	COLANA	1	5588.15171	-3391078.185	2032	1
		DINGEZWENI JSS	3	-266.33412		2032	1
		GWADANE J S S	2	2068.62203		2005	1
		MABHELENI J S S	2	7862.56016		2024	1
		MDAKENI	4	5271.3076		2027	1
		MDENI J S S	1	6820.65165		2005	1
		MVENYANE S S S	1	2157.61366		2005	1
		NCINIBA	4	1389.91943		2037	1
		SITIYWENI J S S	1	3933.08991	-3385030.288		1
		TEMBENI	3		-3390088.083		1
	ELECTRIFICATION	COLANA	4	5423.78427	-3391344.673	2032	260
			1	8712.35194		2003	28
		EPIPHANY	4		-3385807.623		176
		GERMISTON	1	5443.48181		2005	77
		GWADANA	1	1813.76407	-3383793.835	2005	202
		LOWER MVENYANE	4		-3389921.104	2031	105
		MADLANGENI	4		-3386252.628	2032	75
		MDAKENI	4	5449.09253		2027	266
		MDENI	1	6762.92232		2005	127
		MENYANE	3		-3378301.573	2014	68
		MKHALATYE	3	7892.87459		2024	93
		MVENYANA	1		-3380903.389	2005	125
		NCINIBA	4		-3390497.083	2037	128
		NCQUMANE	4	355.946			84
		SITHIWENI	1	3918.11862		2005	120
		UNKNOWN NAME	4		-3387487.255		146.05
			3	3332.28908			159.85
					-3378290.866		103.5
	1				-3379232.862		85.1
	İ		1		-3381376.533		134.55

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
WAILD	I KOJEOT TITE	IVAIVIE	I Idoldi i	4384.60501	-3379949.574	2005	95.45
11	CLINIC	NTLABENI CLINIC	4	-7660.86442	-3401929.289	2017	1
	SCHOOL	LOWER MKEMANE PJS	4	207.82669		2035	1
		MHLUTA JSS	4	-3204.17472	-3393883.225	2039	1
		MOUNT WHITE	3	-7640.49361	-3401687.594		1
		MPOFINI J S S	3	-6208.10742			1
		NYOSINI JSS	4	-2980.53755			1
		TSEWU JPS	4	-2824.03991	-3392205.853		1
		UPPER MKEMANE J S S	4	-9237.1531			1
	WATER	Mjikelweni Village Water Supply	4	-7426.31391	-3397074.065		O
	ELECTRIFICATION	EGUBHUZI	4	-3307.50253	-3389322.946	2032	183
		EMANQILWENI	4	-1574.35128	-3400540.031		97
				-7150.61681	-3397258.248	2037	176
		EPIPHAMY	4	-9214.99389	-3391907.666	2034	86
		EPIPHANY	4	-9224.03024	-3390804.927	2034	362
		ESIBIKIBINI	4	-8832.78768	-3398692.042	2039	72
		LWANDLANA	3	-11425.12633	-3400294.779	2018	92
		MATYENI	4	-11427.66711	-3403794.966	2037	193
		MHLUTA	4	-2836.5637	-3393984.11	2039	82
		MKHALATYE	4	-9899.1016		2038	44
		MKIMANE	4	-8868.17348		2028	436
		MPAMBA	4	-4488.66246	-3396641.111	2037	187
		MPUNGUTYANA	4	-3103.55314	-3397526.263	2036	245
		NGQUMANE	4	-6056.55849	-3386485.01	2028	130
		NTLABENI	4	-7807.38823	-3401692.339	2017	223
		NYOSINI	4	-2942.77096	-3392175.447	2036	297
		PHALANE	4	-10397.8059	-3393968.444	2035	374
		SMALL LOCATION	4	-10804.08425	-3384848.468	2025	116
		XHAMENI	4	120.15433	-3394326.519	2035	268
		UNKNOWN NAME	4	-10404.9286	-3401588.132	2018	121.9
				-9313.6681	-3395347.865	2039	57.5
12	CLINIC	TSHUNGWANA CLINIC	1	2579.99817	-3428424.086	2000	1
	LED	LWANDLANA	1	-11044.37426	-3436456.432	2003	1
	SCHOOL	BARKERVILLE	2	-5794.35901	-3432250.201	2011	1
		CABANE	4	-2602.85005	-3431109.978	2012	1
		LWANDLANA JSS	1	-10819.52341	-3435496.993	2021	1
		MADHAKAMA JSS	1	2598.04829	-3430633.542		1
		MAJUBA JSS	3	-3033.58661	-3435165.825	2025	1
		NGWEKAZI	2	-5259.22947	-3432265.571	2011	1
	ELECTRIFICATION	BLACK HILL	4	-10835.61766	-3435664.755	2021	23
		CABANE	4	-269.36131	-3432457.253	2020	117
		DANGWANA	4	-11459.86925	-3432413.952	2021	28
		EMVA KWESIKOLO	3	-6366.2246	-3433029.871	2011	294
		ESSEC	3	-8276.72562	-3430311.102	2009	38
		ESSECK FARM	3	-9054.77024	-3431027.278	2009	26
		LWANDLANA	1	-10950.8117	-3436458.86	2003	128
		MAGCAKINI	4	-4699.0074	-3432865.475	2018	194
		MAJUBA	4	-3599.33197	-3434175.609	2025	58
			3	-1986.67315	-3431152.911	2012	167
		MAWUSHENI	4	-9631.22027	-3437733.17	2020	89
		MGUGA	3	2594.8169	-3430784.268	2013	40
		МРЕМВА	4	-2833.22775	-3435280.339	2025	112
		QOKOLWENI	4	-2994.48178	-3433700.331	2025	24
	<u>                                      </u>	UNKNOWN NAME	3	-9835.58922	-3431822.8	2010	149.5
	CLINIC	MNTWANA CLINIC	2	4490.44477	-3428202.539	2013	1
13	CLINIC						
13	LED	NCUNTENI	1	2128.84528	-3417336.174	2005	1

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
		HLANE JSS	3	5005.23367	-3421622.595	2008	
		QUMRA JSS	3	5602.66443	-3424111.194	2009	
		SIJIKA	1	5118.03089	-3418325.297	2031	
	ELECTRIFICATION	BAGQAZINI	3	15286.46644	-3422109.708	2008	6
		GIQEKA	4	5062.94976	-3418198.218	2031	3
		HLANE	3	4444.35812	-3421867.336	2008	11
		MAXHEGWENI	3	6585.85293	-3420064.863	2008	3
		MGQUMANGWE	4	11935.34485	-3418688.102	2031	4
		MNGAZANA	3	15063.34515	-3420407.106	2008	4
		NCUNTENI	1	1863.62554	-3417470.268	2005	19
		QUMRHA	3	5732.63111	-3423694.473	2009	16
		SKHULU	4	9786.90431	-3419318.677	2031	10
		UNKNOWN NAME	3	4751.45139	-3428140.17	2013	66
				-628.96588	-3424810.93	2016	178.2
14	CLINIC	LUGANGENI CLINIC	1	-6409.7722	-3411574.015	2005	
	SCHOOL	SIBAZWENI JSS	1	3895.17163		2013	
		UMZIMVUBU JSS	1	5197.86239		2012	
	WATER	Hangwini Water Supply & Sanitation	4	-5204.55586			
	_	Lugangeni Water Supply Project	4	-6135.79121		2013	
	ELECTRIFICATION	CENTULI	1	-6292.98769		2005	46
		EKUTSHENI	3	4579.35123		2012	15
		GUBUSI	4	-1832.04675			
		LONG	1	-4601.09387		2003	18
		MAFUSINI	3	4371.64446		2013	1.
		MPENDLA	3	7728.40391		2013	,
		THWA	4	-9314.28742		2013	
16	SCHOOL	MNGCISANE JSS	2	-6994.10808		2003	`
0	SCHOOL	MVUZI		-6478.56767		2003	
			1				
		ZIBOKWANA SSS	1	-6310.70367	-3423988.095	2003	
	WATER	ZWELITSHA JSS	2	-8791.90279		2004	
	WATER	Toleni Water Supply Project	4	-4045.2451		2007	4-
	ELECTRIFICATION	BHUWA	1	-7908.2667	-3419792.656	2003	17
				-9008.7354			16
		DADAMANA.		-8877.9319			16
		PAPANANA	4		-3419410.917	2020	2
		XOLO	1		-3420807.552		
		MHLOKWANA	1	-7127.50608			34
		ZIBOKWANA	1	-6606.54918			17
17	SCHOOL	BUFFALO NEK JSS	2	-13563.20458			
		KUYASA SPS	3	-12224.5971			
		LUSIZINI JSS	3	-14062.29089			
		MABOBO JSS	4	-14929.51817	-3419905.479	2017	
		MPINDWENI JSS	3	-15652.09698		2015	
		NJIJINI JSS	3	-17104.93637	-3411602.891	2033	
		QAIZANA JSS	2	-13011.79013	-3423151.696	2009	
		UPPER BUFFALO NEK J S S	2	-13640.75815	-3411261.901	2009	
	WATER	Mount Frere District Water Supply	4	-20823.90649	-3417542.315	2021	
		Xhokonxa Water Supply Project	4	-15630.27842	-3417059.589	2016	
		Ngqwarha Village Water Supply	2	-12428.71893	-3413762.129	2019	
		BISLANE	3	-11867.85052	-3423126.011	2009	38
	ELECTRIFICATION		4	-14413.2521	-3419181.726	2017	14
	ELECTRIFICATION	MABHOBHO	4				
	ELECTRIFICATION	MABHOBHO MAGQOGQENI	4	-18739.33041	-3416000.149	2030	
	ELECTRIFICATION						:
	ELECTRIFICATION	MAGQOGQENI MANZAMNYAMA	4	-18739.33041 -11001.02311	-3419126.58	2032	
	ELECTRIFICATION	MAGQOGQENI MANZAMNYAMA MBIZENI	4 4 4	-18739.33041 -11001.02311 -16608.96021	-3419126.58 -3421495.414	2032 2015	-
	ELECTRIFICATION	MAGQOGQENI MANZAMNYAMA	4 4	-18739.33041 -11001.02311	-3419126.58 -3421495.414 -3415561.182	2032 2015 2007	7 36 22

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
WARD	I KOSEOT TITE	NGQABAWANA	4	-17965.42452	-3411797.588	2033	516
		NGQWARHA	2	-12319.83587	-3413837.194		127
		NTLANGOMO	4	-16541.69			83
		NUSHWINI	4	-14770.37049	-3423519.81	2015	61
		UNKNOWN NAME	4	-20777.81726			37.95
			3	-14587.33182	-3417211.877	2008	135.7
		HOFISI	4	-20151.808		2039	131
		MTHONJENI	2	-13472.24883	-3410942.682	2009	522
		NTSIMBINI	4	-19720.02614	-3413085.322	2033	177
		BUFFALO NECK	2	-10748.25616		2007	168
18	CLINIC	MDYOBE CLINIC	1	4818.68809			1
	LED	Pamlaville	1	6618.54503		2004	1
	SCHOOL	ELUFEFENI P J S	3	10113.54419	-3333746.8		1
		ESIFOLWENI P J S	2	1530.73604			1
		HLANGWINI S S S	1	6813.33786	-3332809.916		1
		MAVUNDLENI S P S	4	2638.59516	-3331941.228	2020	1
		MNGENI J S S	4	8758.38563	-3330689.301	2016	1
		NGCWENGANA J P	4	-888.2406	-3328049.024	2030	1
		NKAULWENI J P S	2	4152.66393	-3326093.35	2024	1
		PAMLAVILLE J S S	1	6117.54304	-3332865.115	2006	1
		ZWELITSHA J S S	1	8610.4639	-3336220.413	2006	1
	ELECTRIFICATION	BOVINI	4	-554.43939	-3327143.326	2030	48
		CIBINI	4	2758.82887	-3337523.631	2017	133
			3	4527.19637	-3338853.582	2010	75
				7345.0537	-3339225.788	2010	147
				5528.86729	-3338954.496	2010	124
				5567.33233	-3338507.043	2010	28
				4236.06753	-3338299.739	2010	106
				6262.1503	-3339221.45	2010	106
		EKHOHLWENI	4	7144.90141	-3327451.609	2018	129
		HILLSIDE	3	4931.47903	-3330043.317	2013	202
		KHOHLWENI	4	5550.71632	-3326777.619	2018	87
		KWA MANZI	4	4353.10223	-3326115.135	2024	127
		KWA MATIAS	4	1900.34576	-3336468.486	2017	35
				212.63268	-3334682.638	2023	106
				1440.03743	-3335761.048	2017	94
				411.5039	-3335425.541	2023	187
		LUFEFEIN	3	10536.89567	-3332872.136	2013	261
		MAMPOLA	4	3474.23123	-3326596.399	2024	24
		MATIASE	4	-173.14371	-3333262.928	2023	40
		MATIYASE	4	-488.38729	-3331607.487	2025	78
		MAVUNDLENI	4	2406.96585	-3331653.48	2020	60
		MNGENI	4	9173.40371	-3330184.847	2016	213
		MNQAYI	4	-429.89409	-3334277.418	2023	36
		NCWENGANA	4	-1067.99042	-3328339.233	2030	91
		Pamlaville	3	5876.88639	-3332662.573	2006	247
				6079.94255	-3329880.114	2011	1
			1	6618.09883	-3332076.037	2004	336
		POTE	4	1679.12381	-3326027.677	2024	76
		SFOLWENI	4	470.67503	-3329672.676	2024	121
				2091.37247	-3330685.183	2020	23
		UNKNOWN NAME	4	-1560.91176	-3329890.151	2030	109.25
		BOTIN	4	10486.77988	-3330278.698	2016	70
		GOXA	3	9187.18531	-3336320.628	2006	204
19	SCHOOL	EMTONJENI SPS	3	-12814.32432	-3410570.246	2009	1
		PONDOMISE JSS	4	-23416.37067	-3412722.7	2034	1
		QUKANCA JSS	4	-26210.3188	-3410901.926	2036	1

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
		QWIDLANA JSS	4	-27673.66341	-3409697.309	2036	1
	ELECTRIFICATION	BHUKAZI	4	-17906.34762	-3399880.27	2037	72
		DAYIMANI	4	-23220.33592	-3413525.2	2034	374
		ESIKOLWENI	4	-16941.26327	-3400940.498	2034	490
		KHALANKOMO	4	-15247.86777	-3405525.118	2038	129
		LUBOMVINI	4	-19339.70442	-3404058.242	2039	74
		MBIZENI	4	-26191.84783	-3407659.494	2038	54
		MDENI	4	-24149.58816	-3410712.627	2039	46
		MGWETSHENI	4	-14334.47275	-3406673.192	2036	296
		NGOJINI	3	-13316.38119	-3399204.174	2019	316
		NIYONA	4	-20814.28976	-3402974.482	2039	136
				-19959.60412	-3403816.811	2039	182
		NIYONAI	4	-18544.27081	-3404174.616	2039	72
		NQALWENI	4	-11841.48993	-3396228.939	2040	20
		PITSHINI	4	-26437.99306		2036	294
		QOXE	4	-12216.41237	-3407394.24	2036	178
		QWIDLANA	4	-27178.49828		2036	202
		SDUMELA	4	-10866.16534		2039	74
		SINGGEZU	4	-27683.91641	-3408421.872	2038	133
	01.15.110	NTSIMBINI	4	-19137.19393	-3411371.867	2033	1
20	CLINIC	AFZONDERING	4	-5585.32396	-3339846.485	2025	1
	LED	BLACK DIAMOND	1	-4289.83212	-3348955.277	2005	1
	SCHOOL	GUGU S P S	2	-7443.74088	-3339206.356	2019	1
		LAMEKA J S S	2	1405.94129	-3339398.87	2017	1
		MOSA SIBI S S S ST MATTHEWS J S S	3	-14191.27347 -4254.23351	-3343282.187 -3340258.262	2012	1
		THOKOZANA J P S	2	-4234.23331	-3343673.41	2031	1
	ELECTRIFICATION	AFZONDERING	4	-4897.07951	-3339537.418	2025	135
	LLEGINITIOATION	BLACK DIAMOND	1	-4208.13909	-3348988.213	2005	37
		D S	4	-7269.72599	-3335811.862	2025	43
		DRESINI	4	-4375.98311	-3344046.575	2031	14
		EDRAYINI	4	-6492.68303	-3335830.117	2025	190
		EDRESINI	4	-1147.08264	-3339691.253	2031	49
		GOBIZELA	3	-1275.99686	-3346140.024	2012	53
		GUDLINTABA	3	-9668.05092	-3343837.63	2011	91
		HLAHLWENI	3	-11723.65805	-3340934.913	2011	62
		KHASHOLE	3	-10408.78228	-3341292.731	2008	205
		LUBALEKO	3	2495.71098	-3339033.796	2017	86
				1530.66631	-3339251.175	2017	85
		MACHANGANENI	4	-10446.59364		2016	210
		MAGAYAZIDLELE	4	-7016.64946		2026	52
		MAKGWASENG	4	-11301.59966		2017	275
		MAKHOBA	4	-288.4262		2019	186
				-197.86492		2031	26
		MAKOBA	4	-8081.61576		2019	24
		MAKOTIKOTING	3		-3341101.931	2012	168
		MANASE	4	-3801.37082		2031	64
		MANDERSTONE	4	-2721.86624		2031	118
		MKOMTHI	4	-13950.55102		2020	82
		MOYENI	4	-3960.77325		2020	17
		NEW HOUSE	4	-6254.82598 -3604.38827		2026	81 43
		NEW STANCE NKALI	4	-3694.38827 -7468.48248		2031	43
		INVALI	"	-7468.48248		2019	120
			<u> </u>		-3339630.682	2019	117
					-3339030.082	2019	35
1		NQUTHU	3		-3342878.501		

-	PROJECT TYPE	NAME	PRIORITY	_	Y_COORD		CONNECTIONS
	1	NURESH	4	-8941.80649	-3337138.636	2019	86
	1	CHENNE	4	-7747.28777	-3337956.481	2019	43
	1	SHENXE	4	-4637.00262	-3342843.029	2031	61
		SIPHO LA	4	-4797.38794	-3337812.353	2025	53
		VIKIINDUKU	4	582.53541	-3339801.479	2019	69
		VIKINDUKU	4	335.98467	-3340026.341	2019	75
		UNKNOWN NAME	4	-939.90438	-3338927.425	2031	57.5
				1233.8308		2020	33.35
				-7527.03894		2025	14.95
				-1642.59529	-3340474.856	2020	10.35
				-4766.6185	-3334038.848	2030	8.05
21	WATER	Mount Fletcher District Water Supply	4	-53216.02212	-3391189.659	2007	0
22	SCHOOL	MANASE J S S	2	-11984.61534	-3350456.97	2017	1
	WATER	Masakala Community Water Project	4	-14074.24058	-3353629.097	2007	0
	ELECTRIFICATION	GOBIZEMBE	4	-12373.67423	-3350233.546	2017	198
		KHOLHONG	3	-12172.02139	-3353340.681	2013	150
23	SCHOOL	TSITSONG J P S	3	-19396.26778	-3343660.395	2008	1
	WATER	Maluti Treatment Works Rehab	4	-20557.72058	-3349018.148	2007	0
	ELECTRIFICATION	JABAVU	1	-22328.07848	-3347406.153	2004	75
		TSITSONG	3	-19647.36516	-3342939.986	2008	178
	<u>                                      </u>	UNKNOWN NAME	3	-25628.52992	-3347868.308	2013	95.45
24	CLINIC	MAGADLA CLINIC (NEW BUILDING)	1	-30292.32941	-3356514.954	2010	1
	SCHOOL	MAFUBE J S S	1	-26030.22633	-3343625.085	2000	1
		NALEDI J S S	1	-29500.44425	-3348702.63	2005	1
		NCOME S P S	1	-25184.29239	-3358635.315	2012	1
		SIBI S S S	1	-28207.1081	-3341849.481	2014	1
	WATER	Nkosana Water Project	4	-28399.41196		2007	0
		Silindini Village Project	3	-25267.95608	-3359337.336	2007	0
	ELECTRIFICATION	BEDFORD	3	-27048.04989	-3340269.171	2006	105
		BRAMWEL	3	-28335.9858	-3341577.814	2014	17
		DESCUUR	3	-29190.64029	-3342672.508	2014	75
		HLOMEDLINI	3	-25154.43331	-3357387.331	2011	12
		KWALUNDA	3	-29761.53646	-3357587.738	2017	368
		KWAZICWALILE	3	-31556.95017	-3356353.194	2010	408
		MATEWU	4	-29868.72146		2020	47
		SILINDINI	3		-3359281.449	2012	67
		UNKNOWN NAME	3	-28102.77752		2012	169.05
		ON NOW NAME		-27221.74308		2013	94.3
				-28535.82794		2013	155.25
25	CLINIC	QUEENSMERCY CLINIC	3	-40228.48106		2021	1
20	SCHOOL	KGAOLA J P S	3	-41395.6332		2021	1
	GCHOOL	LERATO S P S	3	-45981.9638		2027	1
		LINKWE LENKOE	3	-38687.07103		2021	1
		MOSHESH J S S	3	-44392.92992		2027	1
		MOSHESH S S S	3	-43736.30024		2027	1
		MT ZION S P S	3	-42280.3787		2026	1
	1	NKAU J S S	3	-42200.3767 -45616.98311	-3346874.143	2026	1
	1	NOLOYISO P J S S	3	-40776.44863		2026	1
	1	PONTSENG J S S	3	-39597.29972		2037	1
	1				-3347190.305		1
	1	QUEENS MERCY J S S	3	-44348.09368		2027	1
		THOTANENG J S S	4	-40292.82272		2027	1
	1	TLOPO J P S	2	-35104.08732		2008	1
	LAVA TER	TSIKARONG J S S	3	-43559.15618		2026	1
	WATER	George Moshesh Supply Phase 2	4	-44188.52496		2021	0
	1	Makomareng Madlangala Water	4		-3338624.758		0
	I	Madlangala Extension Water Project	4	-36856.90598	-3345791.062	2019	0

WARD	PROJECT TYPE	NAME	PRIORITY	X COORD	Y_COORD	YEAR	CONNECTIONS
		DIAHOS PONTSENG	4	-40322.97909		2021	377
		DIGHOHLONG	4	-46704.41525	-3343671.563	2040	52
		DIKOTOBANG	4	-44018.86893		2026	1078
		DRESINI	4	-41240.27512		2037	200
		KAPOTLO	4	-46898.75737	-3342488.458	2040	10
		KUMETSWENG	4	-41156.01742		2021	219
		KWAMADLANGALA	4	-39077.45358		2027	122
		LEHATA	4	-40561.10351	-3343346.482	2030	89
		LIKHOHLONG	4	-48381.19473	-3344824.55	2040	22
		LOKISHINI	3	-31706.40714		2012	141
		MABULA	4	-38094.40141	-3342887.832	2021	247
		MAGOGOGWENI	3	-31924.77966		2008	284
		MALOTO	3	-35270.16088		2008	191
		MOPENG	3	-35695.81862	-3346865.695	2011	480
		MUQUBI	4	-44708.05028		2037	129
		SKEPANENG	4	-36094.46476		2021	139
		SPRINGKAAN	3	-37349.64832	-3349313.875	2013	84
		THUTHANENG	4	-40745.87539		2027	187
		TSENULA	3	-33187.53368		2013	247
		UNKNOWN NAME	4	-41954.96245		2040	35.65
				-44277.57446		2040	71.3
				-41083.37019		2025	101.2
				-46310.08761	-3347493.416	2039	25.3
		TSITA A	1	-29596.59835		2005	140
		KGUBETSOANA	4	-44855.93872	-3349405.432	2027	762
26	LED	GLADSTONE FARM	1	-55158.97669		2027	1
	SCHOOL	SEKONG J S S	4	-54828.46786		2025	1
	ELECTRIFICATION	GLADSTONE FARM	4	-55883.44813		2025	1
				-55285.97176	-3350467.273	2025	409
		MFOLOZI	4	-59677.75576	-3352706.59	2040	17
		MGUNGUNDLOVU	4	-59355.24994	-3354039.966	2040	7
				-56676.86299	-3353207.705	2040	1
				-58777.35509	-3352709.368	2040	14
		MNGUNGU	4	-58766.65606	-3355294.385	2038	159
				-55649.72228	-3356406.447	2035	1
				-58561.8564	-3356800.028	2037	239
27	CLINIC	MOUNT HARGREAVES	4	-27868.46599	-3364268.695	2008	1
	SCHOOL	BETHESDA J S S	1	-31905.51921	-3375455.269	2000	1
		EMBIZENI J S S	4	-23032.64599	-3369165.786	2016	1
		MOUNT HARGREAVES	2	-28126.14703	-3365065.487	2008	1
		MPLILALANGA	2	-23614.42062	-3367530.41	2009	1
		MPUTEKANE J S S	2	-27791.10895	-3371797.649	2016	1
		MSI J S S	2	-25009.54331	-3367164.127	2009	1
		SIBONGILE J S S	2	-29851.37145	-3365874.865	2017	1
		TSHISA J S S	1	-34248.28757	-3373519.789	2000	1
	ELECTRIFICATION	BUKELA	4	-29620.76536	-3366443.42	2017	208
		EMBIZENI	4		-3369552.506	2016	230
		ENKALWENI	2	-27611.12785	-3368909.118	2010	110
		KWAMASHU	3	-32243.06693	-3364869.168	2011	305
		KWAMGOBO	1	-23994.71699	-3367602.345	2009	560
		KWANGWE	1	-27406.66216	-3364630.236	2008	246
	I	UNKNOWN NAME	4	20650 50207	-3371899.744	2016	106.05
		UNKNOWN NAME	4	-20030.39367	-331 1099.144	2010	106.95

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
28	CLINIC	MARIALINDEN CLINIC	4	-47826.35775	-3349371.934	2029	1
	SCHOOL	KUTLOANONG J P S	3	-48699.72317	-3351079.222	2029	1
		MPHARANE J S S	4	-50378.07969	-3349400.71	2029	1
	WATER	Matatiele Presidential Lead Project	4	-53129.90393	-3346573.771	2027	0
	ELECTRIFICATION	AVORIANE FARM	4	-52942.28339	-3353725.225	2040	1
				-50852.23284	-3353133.81	2033	1
		DELAMOTTE FARM	4	-39903.66359	-3352944.145	2028	1
		DENTSA FARM	4	-52584.04244	-3354040.028	2040	1
		ESBI FARM	4	-37688.2266		2028	1
		KHOLOKWE	4	-53543.32814	-3347574.306	2039	67
		MAHARING	4	-48536.06126	-3351301.193	2029	319
		THAKANELO	4	-54277.40765	-3346651.432	2039	58
		UNKNOWN NAME	4	-52868.39823	-3355367.718	2038	90.85
		KGUBETSOANA	4	-47203.58713		2029	436
		KUNTLOKOVANG	4	-51996.33091	-3348797.178	2029	624
		EZIKAMERENI	4	-50022.49825	-3350132.842	2029	904
29	LED	Qhobonheqneng	1	-39720.37701	-3366197.399	2004	1
		PONTSENG	1	-38508.31573		2003	1
	SCHOOL	CABA J S S	3	-33380.20608		2011	1
		IKAHENG	1	-38481.16382	-3369880.049	2003	1
		MAGADLA J S S	1	-28917.55365	-3359201.11	2012	1
		MAHLUBINI J S S	1	-30617.30169	-3361688.8		1
		MEHLOLOANENG	2	-36677.50391	-3359172.017	2014	1
	ELECTRIFICATION	CABA	3	-32686.27531	-3359910.895		419
		EMHLOLWANENI	4	-36901.07149			227
		LOWER MDENI	3	-31779.28017	-3361874.156	2015	316
		MAGOGQOLWENI	3	-29104.09676		2012	278
		MAHLOBATHINI	3	-35745.5104		2014	163
		MAPOLENI	3	-38025.94656		2013	81
		QHITSI	3	-36701.9565 -39757.58088		2014	179
		Qhobonheqneng PONTSENG	1	-38592.56648		2004	229 284
30	CLINIC	DIKGETLANE CLINIC	4	-45186.58116		2003	204
30	CLINIC	PABALLONG CLINIC	4	-48330.69803			1
		SHEPHERD'S HOPE	4		-3358757.223		1
		TABACHICHA CLINIC	4		-3360512.108		1
	LED	THABA CHICHA	4	-58492.12265		2037	1
	SCHOOL	KHOARAI SP	3	-49346.13544		2030	1
	00.1002	LEKHAHLA JNR	3	-53008.56032			1
		MATELENG JNR	4	-54483.78945		2036	1
		MECHACHANENG	3	-48442.22775		2030	1
		MOEANENG	4	-44530.53945	-3362289.537	2020	1
		MOKETSI SS	3	-47520.34324	-3367037.077	2028	1
		PABALLONG	4	-47646.56646	-3366795.301	2028	1
		SEMONKONG	4	-43706.62613	-3366307.627	2023	1
		SKETLANE	1	-39221.26449	-3359112.996	2004	1
	WATER	Koebung /Thaba Chicha Supply	4	-59379.11652	-3364365.525	2027	0
		Liketlane Water Supply Project	4	-38775.46511	-3359908.155	2007	0
	ELECTRIFICATION	EZASINI	4	-48790.4742	-3364881.426	2028	163
		FATIMA	4	-55863.53033	-3365387.287	2038	135
		FRYSTAT	4	-45766.46511	-3370589.539	2025	75
		KWEQANA	4	-52562.52983	-3358636.397	2034	294
		LEKHALONG	4	-52983.75141	-3362058.843	2033	155
				-50539.12487	-3362501.357	2033	92
		MAPOLISENG	4	-58196.16097	-3363549.831	2035	490
		MATELENG	4	-54923.56475	-3358473.359	2036	110
		MHLOLOANENG	1	-38734.89467	-3359944.322	2004	276

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y COORD	YFAR	CONNECTIONS
With	TROOLOT TITL	TV WIL	I I I I I I I I I I I I I I I I I I I	-40240.08839	_		41
		MNGUNGU	4	-60462.36254			191
		MOPENG	4		-3361479.526		209
		MOYANENG	4	-43833.59161			156
				-44891.27968	-3362729.9	2025	46
		PABALLONG	4	-46977.90449	-3366190.124	2028	490
		QALABENI	4	-62129.456	-3361917.316	2039	120
		SEMONKONG	4	-44218.59181	-3366987.674	2023	383
		ТНАВА СНІСНА	4	-58400.48618	-3360957.598	2037	253
		UNKNOWN NAME	4	-52264.96649	-3356739.987	2038	96.6
				-52020.96204	-3365202.019	2039	66.7
		BLOCK A	4	-46204.57929			424
		KHWARAI	4	-49129.84034			115
31	SCHOOL	EMITSHATSHANENI	1	-38505.6751			1
		GXAKU JNR	4	-34257.35621	-3398110.002	2031	1
		LINOTSING JNR LOWER EMTHUMASE	3	-36061.67435			1
		LOWER MNYAMANA JSS	3	-34898.94367 -26878.7036			1
		MADLANGENI SP	1	-40049.1769		2005	1
		MAHLAKE JNR	1	-36064.18092			1
		MANCEDANE ADULT	3	-36061.67435			1
		MANGOLONG	2		-3376868.533		1
		MAQHATSENG JNR	3	-38293.19283			1
		MORITING JNR	2	-40709.52285		2018	1
		MVUZI JNR	3	-34529.43985	-3401632.556	2031	1
		SOLOANE HILL JNR	2	-36188.34913	-3386861.161	2031	1
		UPPER MTUMASI ADULT	2	-36061.67435	-3384370.186	2024	1
		UPPER MTUMASI JNR	2	-43521.89681	-3383001.821	2005	1
		ZIBI MEYER J S	2	-40536.12826	-3389194.425	2005	1
		ZIBIMEYER S S	2	-40530.60191	-3388718.408	2005	1
	ELECTRIFICATION	FUBANE	3	-34570.30626	-3377022.666	2006	327
		GOOD HOPE	4	-30965.0513	-3382367.147	2025	95
				-30595.85426			26
		GXAKU	4	-33438.43847			28
					-3401638.627	2031	110
		LALCA DI L			-3397560.218		144
		JAKADU	3		-3378654.261		122
		LUDONDOLO	4	-34591.25677		2020	164
		LUDONDOLO MADLANGENI	1	-40906.38352 40062.14006		2015	76 328
		MAHLAKE	1	-40002.14990 -40007.25196	-3389435.286 -3387898.275		154
		MANGOLONG	2		-3377947.604		327
		MAQHATSENI	3	-38821.47475			207
		MARANJANA	4		-3391583.812		138
		MERITING	3	-40218.48039			276
		MKHWEZENI	4	-42193.11874	-3394888.123	2015	18
		NDESI	4	-39177.40875	-3396809.288	2024	39
		NTSILEKANE	4	-37912.13419	-3396013.884	2024	33
		SOLWANE	4	-36058.25864	-3386698.074	2031	74
		TOLENI	4	-36302.93051	-3389664.231	2024	212
		UPPER MNYAMANA	4	-26249.95294	-3387702.853	2033	323
		XHOLOTI	4	-37226.62374	-3395741.318	2031	75
		ZIMPOFU	4	-31589.41443	-3387836.761	2032	151
		ZINYOSINI	4	-35977.20346	-3383861.715		161
		UNKNOWN NAME	4	-27439.05436			126.5
		MDUMASI	1	-43418.22563			509
		EMATOLWENI	1	-38376.46835	-3373964.083	2004	269

WARD	PROJECT TYPE	NAME	PRIORITY	X_COORD	Y_COORD	YEAR	CONNECTIONS
32	CLINIC	ELUKOLWENI CLINIC	4	-14667.89153	-3389962.994	2033	1
		NYANISO CLINIC	4	-27056.2955	-3381450.674	2030	1
		ROLWENI CLINIC	4	-18229.90165	-3381099.495	2018	1
	LED	LUKHOLWENI	3	-18030.60469	-3388157.201	2021	1
	SCHOOL	BAMANZI J P S	3	-15995.845	-3379574.504	2012	1
		DUBA J P S	3	-25731.09427	-3381856.045	2036	1
		ELUKHOLWENI J S S	3	-14418.92876	-3391128.461	2033	1
		LUDIDI S S S	3	-14418.92876	-3391128.461	2033	1
		MADUBA S P S	3	-18684.55507	-3387776.885	2016	1
		MATANDELA J S S	3	-25092.44754	-3381058.63	2036	1
		MOYENI J S S	3	-27187.27449	-3382052.667	2030	1
		MRWABO S P S	4	-20708.47412	-3382066.651	2030	1
		NYANISO S S S	4	-23453.53317	-3384281.112	2032	1
		SIDAKENI J S S	3	-19474.67868	-3385949.196	2030	1
		SIPHEPHETHO J S S	1	-14925.31181	-3380072.425	2012	1
		UPPER ROLWENI P J S	4	-18218.92122	-3382014.593	2030	1
	ELECTRIFICATION	BAMANLI	3	-15672.19219	-3379658.841	2012	177
		BUBESI	4	-28444.23779	-3379063.138	2022	406
				-28206.9197	-3377082.164	2022	175
		EMAXESIBENI	4	-17329.36504	-3381084.39	2018	166
		EMNYAMANENI	4	-19136.66427	-3385869.398	2030	212
		EZIPAMPRINI	4	-24854.01391	-3382642.893	2040	31
				-23435.62089	-3380117.623	2036	135
		EZITALE	4	-13478.85004	-3383360.536	2018	288
		FIVA	3	-15982.62459	-3378137.397	2010	184
		KWAQILI	4	-23277.92116	-3383693.806	2032	201
		LUKHOLWENI	3	-17983.46543	-3388110.789	2016	267
		MJIKELWENI	4	-20966.26515	-3384344.722	2040	31
		MRWABO	4	-20950.13093	-3381989.414	2030	98
		NDAKENI	4	-14952.34783	-3389678.85	2033	660
		NKALWENI	4	-25046.43275	-3381400.314	2036	267
		NYANISO	4	-26837.754	-3381851.139	2030	16
		ROLWENI	4	-17856.11008	-3382178.372	2030	63
		UNKNOWN NAME	4	-28428.54981	-3373400.46	2020	77.05

# **APPENDIX G**

# IMPACT OF LEGISLATION ON ELECTRICITY

### **ELECTRICITY LEGISLATION**

# **Responsibilities and Obligations**

The responsibilities and obligations of the municipality with regard to delivery of electrical services within its boundaries are guided by the following:

- The Constitution
- Municipal Structures Act
- Municipal Systems Act
- Electricity Act
- Electricity Regulation Bill (to replace Electricity Act)
- Energy White Paper
- Restructure of the Electricity Distribution Industry (REDs)
- National Electrification Program & Integrated National Electrification Planning Unit (INEP)
- Electricity Basic Services Support Tariff (EBSST)

#### The Constitution

Constitutionally, executive and legislative authority in respect of, as well as the right to administer, electricity, gas reticulation and street lighting is granted to municipalities. The right to administer and to exercise executive and legislative authority over a certain matter, does not necessarily imply the exclusive right or the duty to actually deliver the relevant service. Alfred Nzo DM does however have an *obligation* to ensure that these services are provided.

Extracts from the constitution of the Republic of South Africa (Act No. 108 of 1996):

# Objects of local government

152. (1) The objects of local government are -

- to ensure the provision of services to communities in a sustainable manner;
- to promote a safe and healthy environment.

## Municipal Structures Act

The Municipal Structures Act makes provision for the establishment of municipalities in accordance with the requirements relating to categories and types of municipality. It establishes criteria for determining the category of municipality to be established in an area and defines the types of municipality that may be established within each category. It also provides for an appropriate division of functions and powers between categories of municipality, to regulate the internal systems, structures and office-bearers of municipalities and to provide for appropriate electoral systems.

Extract from the Local Government Municipal Structures Act (Act No. 117 of 1998):

#### Division of functions and powers between district and local municipalities

84. (1) A district municipality has the following functions and powers:

(c) Bulk supply of electricity that affects a significant proportion of municipalities in the district.

Section 84 (1)(c) of the Municipal Structures Act stipulates that the bulk supply of electricity which affects a significant portion of municipalities in the district (which includes the transmission, distribution and, where applicable, the generation of electricity) falls within the powers and functions of a district municipality. Category C municipalities can therefore not be licensed by the NER to distribute electricity.

#### Municipal Systems Act

The Municipal Systems Act of 1998 prescribes the procedures to be followed by municipalities in order to utilise a certain mechanism for service delivery in their areas of jurisdiction.

#### Electricity Act

The Electricity Act provides for the establishment of the National Electricity Regulator ("NER") and provides measures for the issue, transfer and cancellation of licences to generate and supply electricity.

Section 13(1) of the Electricity Act provides that an undertaker may only transfer their undertaking or any part thereof to any other undertaker or prospective undertaker with the approval of the NER.

The Electricity Act therefore acknowledges the authority of municipalities in respect of electricity supply in their areas of jurisdiction (section 15 and 17) but also protect the existing rights of third parties in this regard (section 17).

# Electricity Regulation Bill

This bill will, once it is enacted, replace the existing Electricity Act. The purpose of the Electricity Regulation Bill is:

- to establish a national regulatory framework for the electricity supply industry,
- to provide for the National Electricity Regulatory Authority as the custodian and enforcer of the national regulatory framework,
- to provide for the issuing of licences relating to the generation, transmission, distribution and retail of electricity, and the provision of certain services in connection therewith, and
- for matters connected therewith.

Apart from the fact that the bill merely sets out procedures for the application for and approval of licences, it is important to note that the bill does not acknowledge the role municipalities in respect of electricity supply, as contemplated in either the Constitution or the Municipal Structures Act. Although it remains to be seen whether the bill will survive a constitutional challenge, we need to accept that in the absence of such a challenge, the bill will even further diminish the role of municipalities in respect of the regulation of electricity supply.

#### **Energy White Paper**

The White Paper on Energy Policy for South Africa ("the White Paper") was approved by cabinet on December 2, 1998. Its objective was to lay down the broad principles that are to govern the proposed restructuring of the broader energy industry. Although cabinet has approved the White Paper, it does not have the force of law and is merely a statement of government policy.

The white paper is a comprehensive document covering all the sub-sectors of energy of which electricity, although a major component of South Africa's energy sector, forms only part of the document.

The White paper broadly separates the energy sector into demand and supply sub-sectors. The demand side is generally analysed in terms of the energy requirements of households, industry, commerce, mining, transport and agriculture. Supply sub-sectors include the electricity, nuclear, oil, liquid fuels, gas, coal, renewable energy sources and transitional fuel (low smoke) industries.

In terms of the demand sector the white paper acknowledges the fact that <u>households suffering</u> <u>unemployment and poverty rely on less convenient and often unhealthy fuels. Grid electrification</u> <u>may not satisfy all the energy needs of low-income households</u>.

In terms of the supply sector the white paper makes the following statements:

#### **ELECTRICITY**

The distribution industry faces a number of challenges if it is to meet electrification targets and continue to provide low cost, equitably priced, quality supplies to consumers. The distribution industry will accordingly be restructured into regional electricity distributors. Government will establish transitional processes that will lead up to the establishment of independent regional electricity distributors.

RENEWABLE ENERGY SOURCES

'The advantages of renewable energy are set out, particularly for remote areas where grid electricity supply is not feasible. In particular, government will facilitate the sustainable production and management of solar power and non-grid electrification systems, such as the further development of home solar systems (SHS), solar cookers, solar pump water supply systems, solar systems for schools and clinics, solar heating systems for homes, hybrid electrification systems, and wind power. All of the above will be largely targeted at rural communities.

#### TRANSITIONAL FUELS

'Government will promote research into low-smoke fuels as a transitional product that may be utilised as an energy source for remotely located and rural households.'

#### Restructure of the Electricity Distribution Infrastructure

National government has developed a blueprint for the restructuring of the electricity distribution industry (EDI).

The need for this restructure is to address the complicated system that has developed over the years resulting in some 400 distributors comprised of Eskom, Municipalities and other entities distributing electricity. Disparity in rates, service levels etc. vary widely and the electrification initiative was under threat.

National government's objectives in respect of the restructuring of the EDI are to, amongst others:

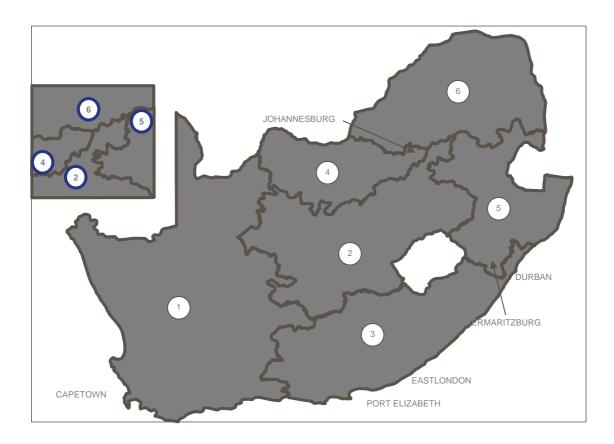
- ensure that agreed-to electrification targets are met;
- provide low-cost electricity;
- facilitate better price equality;
- improve the financial health of the industry:
- improve the quality of service and supply;
- foster proper co-ordination of operations and investment capital; and
- attract and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

Government has accepted that the EDI be consolidated into a maximum of 6 financially viable independent regional electricity distributors (REDs), which will not be provincially based. The boundaries currently proposed are illustrated below.

Alfred Nzo DM would fall into RED No.3 which supplies an area anchored by Durban to the north and East London/Port Elizabeth to the south.

RED ownership and Governance are broadly defined as follows:

- Public Sector owned Companies,
- Municipalities compensated by way of shares in proportion to assets contributed to REDs,
- Municipalities exercise constitutional governance role through service delivery agreement with Service Provider (RED),
- Dual regulation, NER on a national level & municipality on local level,
- Eskom's shares held by national Government.



# The proposed EDI Restructure Time Table is as follows:

- Phase 1 Blue print Complete
- Phase 2 Establish EDI Holdings Co August 2002
- Phase 3 Due diligence & Ringfencing of EDI April 2002 to September 2003
- Phase 4 RED Establishment October 2003 to September 2005
- Phase 5 Consolidation of REDS October 2005 to September 2007
- Phase 6 Exit Holdings Company October 2007

Recommendations from SALGA (Preparation work for Municipalities for REDs):

- Action Co-operative agreement :
  - o Ring Fence Electricity undertakings (Staff, Finances and Operations)
  - o Asset & Liabilities to be identified & valued
- Investigate requirements for Service Delivery Agreements between Municipality and Service Provider (RED, Utility Co, Eskom)
- Municipalities to determine, quantify & mitigate the impact respect to:
  - Loss of Cash flow from Electricity Sales
  - o Avoiding Stranded Assets & resources
  - Restructuring costs (once off)
  - Contribution to rates from electricity
- Restructuring to be taken into account in IDP
- Keep on with delivery during the restructure process,
- Co-operative agreement between SALGA, DME, ESKOM & NER to enable ring fencing to progress while enabling legislation is being approved is complete and approved by SALGA Management Committee

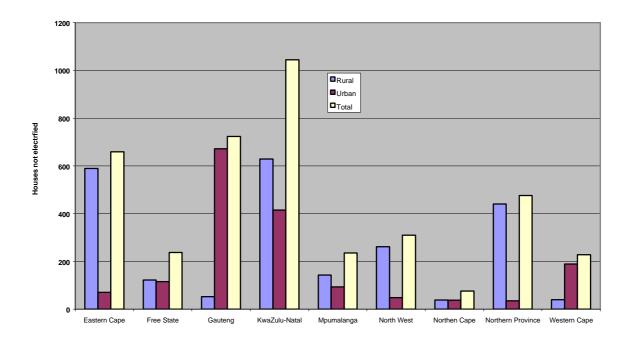
#### National Electrification Program

The RDP electrification program achieved 3.2million new household connections between 1994 and 2000. This program was financed partly through a surcharge on Eskom sales and partly through debt financing by the respective utilities. A total of 7238 schools and 530 clinics have been electrified (mix of grid and non-grid supply). To date an average investment of R1.2b per annum has been made on electrification.

The status of electrification in South Africa at the end of 2000 was:

Area	No. of Houses Electrified	No. of houses not electrified	Electrified (%)	Not Electrified (%)
Rural	1 953 494	2 314 054	45.8	54.2
Urban	4 828 103	1 675 324	74.2	25.8
Total	6 781 597	3 989 378	63.0	37.0

The electrification backlog is summarized below:



Of the 25 900 schools and 2000 health clinics there is a backlog of 17000 schools and 1000 clinics which must be integrated with the National Electrification Program. Conclusions derived from the program at that point were:

- The electrification program is not commercially viable,
- Its is a fundamentally a long-term social investment with an indirect future return on capital,
- Financing such a program from within the Electricity Distribution Industry (EDI) placed an undue burden on the utility and jeopardizes its sustainability,
- Rural areas are costly and difficult to electrify,
- Sustainable capital subsidies are required to drive such a program,
- Tariffs need to be adjusted to ensure that sales cover at least the operating costs.

In an effort for the Electrification programme to be co-ordinated and prioritised, including the setting of realistic targets, the National Electrification Fund (NEF) was established, with the objective to finance and subsidise appropriately mixed grid and non-grid electrification programmes.

A national electrification co-coordinating committee (NECC) has since been established with a mandate to consider all issues relevant to the legislation, funding, planning, monitoring and evaluation of a sustainable Integrated National Electrification Program (INEP), aimed at universal access to basic electricity services that are affordable.

Management of the national electrification program is carried out by DME and the National Electrification Advisory committee (NEAC):

 DME: Manage the INEP planning and implementation system; develop and administrate the INEP budget; Exercise macro control over INEP through monitoring, auditing and reporting;

- develop macro policy/procedures/systems/guidelines for the INEP; handle INEP related disputes and make recommendations.
- NEAC: Advise the minister on strategic direction and policy; budget requirements; National electrification business plan; program allocations and adjustments; other special duties mandated by the minister.

The project management and administration of the INEP will reside with Eskom/Municipalities and eventually the RED's. Their role will include; Project Planning (selection, design and IDP harmonization); project management; Financial management; Auditing and reporting; claims and project queries & disputes.

An INEP business planning unit has since been established in 2002. On 7 June 2002 this unit addressed a letter to all Municipalities outlining the interim process for electrification funding, the following extracts are relevant to the ESDP:

# Application for Funding for Electrification by Licensed Distributor for the Government Financial Year 2003/4 as part of the 3-year rolling cycle

In accordance with the White Paper on Energy Policy for the Republic of South Africa, published in December 1998, the Government of the Republic of South Africa in its Department of Minerals and Energy assumed responsibility for the funding of the Integrated National Electrification Programme (INEP) from 1 April 2002 for both Eskom and Municipalities licensed as electricity distributors by the NER.

The Minister approved the establishment under contract of an INEP Business Planning Unit at Eskom to assist the Department in the INEP planning, fund allocation and programme control processes. The Unit is currently being established and therefore, Eskom with the involvement of SALGA, agreed to take responsibility for the co-ordination of the 2003/4 INEP planning process in the interim until the INEP Business Planning Unit is fully established.

Provision has been made within the Medium Term Expenditure Framework (MTEF) of Government for the funding of the INEP from the line budget of the Department of Minerals and Energy. The MTEF-based government budgeting process requires a 3-year rolling and 1-year fixed planning and budgeting system. This implies that only projects that are certain to be completed should be included in the implementation plans for the fixed financial year 2003/4. Other projects should be scheduled for subsequent financial years, 2004/5 and 2005/6.

The funding available is tabled below. An amount of R950 million was approved in the previous MTEF cycle for the financial years 2002/3, 2003/4 and 2004/5 and this is expected to be confirmed by the Ministerial Committee on the Budget and Cabinet in the course of November 2002. The amount of R950 million will be used as the basis for electrification planning of the next financial year (1 April 2003 to 31 March 2004) as well as for the financial years 2004/5 and 2005/6.

The proposed allocations, as tabled below, between licensed Municipalities and Eskom is based on past practices and informed by the relative larger backlog in rural areas and the need to prioritise on development nodes identified in the ISRDS process.

BUDGET : 1 April 2003 to 31 March 2004	DME MTEF Budget (VAT Inc)
Total Budget	R950m
Proposed Programme Administration and Control Overheads (INEP BP Unit, Database and Modelling and National Audits)	R25m
Proposed Schools and Clinics Electrification Allocation (Grid and Non-Grid)	R90m
Proposed Funds available for Household Electrification	R835m
Proposed Allocation to Municipalities	R210m
Proposed Allocation to Eskom	
Grid	R565m
Non-Grid	R60m
Total	R625m

Your Municipality is hereby invited to apply for funding for electrification projects within your licensed distribution area for execution in the period 1 April 2003 to 31 March 2004 as well as to provide high level plans for the following two years as part of the National Budgeting System.

#### Please note that:

- Backlogs and harmonisation with IDP's developed by Local Government will be an important principle in the allocation of subsidies.
- There appears to be major confusion on the new distribution licenses issued to Municipalities and Eskom. It is, therefore, imperative that the planning and prioritisation of electrification projects within municipal boundaries be cleared between the Municipality and the local Eskom Region and so confirmed on the application forms. Licensed distributors are advised to amend distribution licenses with the NER if necessary.
- Allocations for Eskom and the Municipalities based on applications received and prioritised will be submitted to the NEAC and DME on 23 July 2002 for approval in principle.
- Municipalities and Eskom will be informed by 30 July 2002 on their final allocations and also be requested to complete a final application form in order to secure their allocated amounts, which will then be gazetted in terms of the Division of Revenue Act.

The consolidated Integrated National Electrification Programme will be submitted to the National Electrification Advisory Committee (NEAC) for consideration and recommendation to the Minister by 1 October 2002. Final approval by the Minister for Minerals and Energy is expected towards December 2002. It is important to note that the approved Integrated National Electrification Programme for 2003/4 will be gazetted during February 2003 in line with National Treasury requirements. Your final allocation per municipality will be formally confirmed only after the formal approval process has been concluded.

Attached please also find a document entitled "Integrated National Electrification Programme Policy Directive on Electrification" (Annexure G) that summarises the INEP guidelines and policy directives for the Integrated National Electrification Programme.

We would also like to emphasise that in order to qualify for any funding, all conditions attached to your distribution license will have to be adhered to.

Kindly note the following:

The closing date for submission of applications is 19 July 2002 and no late applications will be considered.

You are requested to email or fax your application for attention Luke Walker to the address as indicated below.

Should you require further information any of the following persons may be contacted:

Mr Luke Walker	Mr Stephen Gerstner	Mr Danie van der Walt
Tel 011 800 4999	Tel 011 800 3827	Tel 011 800 2943
Fax 011 800 4668	Fax 011 800 4668	Fax 011 800 4668
Cell 082 460 6006		Cell 082 780 0779
Email	Email	Email
Luke.Walker@eskom.co.za	Stephen.gerstner@eskom. co.za	vdwaltdj@eskom.co.za

The INEP business planning unit have also made available a document 'SUMMARY OF GUIDELINES, POLICY DIRECTIVE, CONDITIONS AND REQUIREMENTS ALLOCATION OF FUNDING FOR ELECTRIFICATION PROJECTS BY LICENSED DISTRIBUTORS' which details the purpose, conditions, allocation criteria, principles of subsidy allocation, and financial and technical control (including reporting) categories eligible for subsidisation, supply options and connections fees, costing framework and general governance issues for the NEP. Extracts from this document:

#### **CONDITIONS**

Distributors who receive funding must contractually undertake to:

- Account for the allocated funds separately from their normal business;
- Pass all benefits derived from the scheme on to end-customers;
- Not utilise the fund for any purpose other than approved electrification projects;
- Adhere to the approved electrification programme and agreed cash flow budgets;
- Ring-fence their electricity accounts (in the case of municipalities);
- Apply financial micro-controls as required by the PFMA and DoRA; and
- Adhere to reporting requirements in terms of the PFMA and DoRA.

#### **ALLOCATION CRITERIA**

Allocations are made on the basis of project applications to licensed distributors who:

- Meet the requirements, e.g. in terms of documentation, approved tariffs, ring-fenced accounts;
- Have the financial, technical and staff capabilities to distribute electricity and to expand the network;
- Regularly pay their bulk supply account and are up-to-date with payments agreed to with the bulk supplier, as applicable;
- Apply credit control effectively; and
- Have consulted their communities in terms of the prescribed Integrated Development Planning (IDP) process.

## PRINCIPLES OF SUBSIDY ALLOCATION

The allocation of electrification subsidies will be subject to the following guidelines:

- All applications for NEF assistance should be channelled through licensed Distributors only. Private individuals or any other unlicensed entity will not be able to approach the DME through the Integrated National Electrification Business Planning Unit (INEP BP Unit) directly for assistance.
- To ensure that an equitable share of the funds available is allocated towards the electrification of rural backlog areas, connection targets will be determined proportionally to the backlog at the time of planning.
- Priority will be given to identified development nodes that form part of the ISRDS.
- The amount of money available for subsiding electrification will be allocated with due cognisance of backlogs and harmonised with IDPs developed by Local Government and coordinated by the Provinces where possible for 2003/4.

•

- The approval of projects will be subject to the promotion of:
  - Job creation in communities
  - Skills transfer to local communities
  - o Black Economic Empowerment
- Subsidy levels will be adjusted from year to, year to accommodate the cost of rural electrification.
- In considering allocations preference will be given to proclaimed areas while exception will be considered in certain rural areas.
- Due to confusion regarding the new Distribution Licenses issued to new Municipalities and Eskom it is critical that the final application be cleared between the municipality and the local Eskom Region as well as the NER if necessary.
- Level of subsidy The number of connections that can be achieved with funds available must be maximised. A balance will be maintained between the benefits of economies of scale and making electricity available on widespread basis in the approval of projects. A separate maximum subsidy limit per connection will be set for urban and rural connections. The differentiation in subsidy support on a geographic basis will only be considered in two years time to allow time to investigate the practicality and value of the application of different subsidy levels based on geographic considerations. The cost per connection will be determined annually and will take into account what is actually achieved by the industry, recognising any further productivity savings that may be achieved in executing the programme.
- The capital investment in electrification on which the subsidy will be based includes:
  - Professional Fees;
  - o Construction:
  - o Bulk Supply and Strengthening;
  - o The reticulation network:
  - o The service connection.
  - o Overheads.
- No additional subsidy will be payable to the Distribution Industry for any network refurbishment that may be required as a direct result of the INEP.
- The technical capability of networks must be such that it will be possible for a customer to upgrade to a supply of increased capacity on fair commercial terms. Upgrading of non-grid supplies should be possible under similar terms.
- In situations where non-grid applications will be considered and the basic energy needs of a household cannot be satisfied by the application on its own, complementary commercial energy sources should be available to the community to fill that gap. Upgrading to larger non-grid systems should be possible on fair commercial terms.

•	Capital cost will be based on the lowest level of supply per category, while connection fees are required for higher-level services with concomitant lower needs for subsidy.		
•	The funding will primarily apply to costs incurred in respect of formal and informal occupied residential dwellings that are situated in legally authorised (proclaimed) areas set out by Local Government for permanent settlement in historically disadvantaged communities.		

The national electrification program makes provision for the following supply categories (and associated connection fees):

SUPPLY OPTION	CONNECTION FEE	CONNECTION FEE & ASSOCIATED LEVEL OF SERVICE
Non-Grid (50W Peak)	Capped at maximum R100	SHS: Lights (4), small B&W TV and small Radio
Non-Grid (Large Systems)	Capped at maximum of capital difference between this system and a 50Wpeak SHS plus the capped R100	
Basic supply (≤10 Amp)	Nil	Lights, TV, Radio, limited additional small appliances (Also known as S1 or homelight)
20 Amp	Capped at maximum R150	Most electricity requirements; may have to balance load
40 Amp	Capped at maximum R500	
60 Amp	Capped at maximum R1000	All electricity requirements - Suitable for small businesses
Larger Systems	Full commercial cost	

In this context the Non-grid Solar Home System should be seen as the basic service to be supplied to households (mainly rural) that cannot be connected to the grid within acceptable cost parameters.

The 2.5 to 10 Amp current limited supplies is the basic service where grid extension is feasible. Its availability allows settlements of sufficient density to be electrified by maximising the number of connections, thereby bringing the average cost per connection within the accepted norms. As such these options represent a "poverty safety net" qualifying for the highest level of subsidy. Progression to higher levels of applicable service would be available to households on application and payment of an appropriate connection fee.

The higher the capacity required, the less supply will be subsidised and higher capacity supplies will pay more than lower capacity supplies. This means that the higher the demand customers will pay tariffs and charges that are more cost reflective of the level of supply and services provided

Up until January 2002 municipalities could apply for grant funding directly from the NER for electrification. This mechanism has now been terminated and replaced by the INEP business planning unit.

#### Electricity Basic Services Support Tariff (EBSST)

The electricity basic services support tariff is a government initiative which aims to supply free basic energy.

The implementation of free basic energy will be in the form of the first 50kWh of electrical energy free to all grid connected customers. Non-grid connections received a R40 per month discount, reducing their monthly service fee from R58 to R18.

Free basic energy pilot studies are being implemented in 11 locations nationally and based on findings from these pilot studies, policy proposals on EBSST were made to Cabinet by year end 2002.

An EBSST Task Team was established by DME in February 2001 to formulate a policy for the free allocation of a basic amount of electricity to poor households. An investigation process was followed which included research and pilot sites and in December 2002 agreement was reached an appropriate policy.

- The free allocation of electricity to qualifying households is set at 50 kWh per month;
- Recipients of the free allocation are to be identified by means of 'self-targeting';
- Funds will be provided in the fiscus to pay for the operating cost of the free allocation.

Government's has committed funding to the amount of R1.4 billion in the national budget over the next three years towards the EBSST initiative.

The task team believed that the allocation should only be to the indigent (the original objective was to support poverty alleviation) but that many municipalities would not have resources to identify indigent households and monitor this status. It was therefore deemed more practical for the indigent to identify themselves by means of one of the following self-targeting methods:

- A 10A current limited supply. This methodology is Eskom's preference and requires that any household wishing to receive 50 kWh/month at no cost would make application to the service provider who would then restrict the supply to 10 Amperes. It was intended that the revenue lost would be claimed from a 'national fund' by the service provider. Additional consumption would be at the normal tariff rate.
- A non-current limited supply whereby distributors identify its domestic customers using less than an average amount of electricity per month (the policy document recommended up to a maximum of 150 kWh per month)

Since then a number of issues have been raised by DPLG which has delayed finalisation of the policy, these include:

- DPLG feel that the issue of free basic services is their responsibility and not that of DME;
- The funding for free basic electricity should be in the form of a conditional equitable share allocation to municipalities.
- No allocation will be made to Eskom for providing free electricity who are required to negotiate with each municipality for compensation for free electricity that they provide to households within that municipal area.
- Any shortfall in the level of allocation to be funded by cross subsidies from other sources.
- Municipalities should use their own discretion in targeting the poor.