



BUSINESS PLAN

MEDIUM VOLTAGE OHL BACKBONE TO SUPPORT ELECTRIFICATION PROJECTS IN COLENZO-NTOKOZWENI AND ADJOINING AREAS

EMNAMBITHI – LADYSMITH MUNICIPALITY

Electrical Engineering Services
02 November 2010



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1. INTRODUCTION

1.1 Project Manager / Contact

The Municipal Manager of the Emnambithi/Ladysmith Municipality, Mr N J Mdakane, is the Head of the Municipality. His contact details are as follows:

Lister Clarence Building
Murchison Street
P O Box 29
LADYSMITH 3370
TEL: 036-637 2231

e-mail: smassyn@ladysmith.co.za

The contact person for all queries is Mr Y.E Seedat. He can be reached at the following address:

4 Keate Street
P O Box 56
LADYSMITH 3370
TEL: 036-637 6905

e-mail: yeseedat@ladysmith.co.za

The author / compiler of this business plan is Mr R.S Sewtahul. His contact details are as follows:

4 Keate Street
P O Box 56
LADYSMITH 3370
TEL: 036-637 6905

e-mail: rssewtahul@ladysmith.co.za

1.2 Project Name

This project has been called the **New Medium Voltage Backbone - Colenso**.

1.3 Project Description

The Emnambithi/Ladysmith Municipality is a licensed electricity distributor with the National Electricity Regulator of South Africa (NERSA).

This project is in line with the national Department of Energy's goal to electrify all households in the republic by 2012.

Through the medium of community consultation meetings and other correspondence to ward councillors and the municipality, the community of Ntokozweni, Colenso have requested electricity supplies to their homes. This area consists of approximately 400 houses currently but that number increases monthly if not daily.

The problem facing the municipality is that there is no 11kV medium voltage supply or transformer even within 2 kilometres within the radius of this area. This hampers household electrification due to the fact that a medium voltage supply has to be brought within a reasonable distance prior to undertaking the normal low voltage household electrification.

Strengthening is therefore required in the Ntokozweni and adjoining areas to make network capacity available for:

- The electrification of 400 households in the 2012-2013 year
- Future electrification connections and load growth on existing connections.
- Other load growth (Clinics, shops, schools, etc.)
- Other governmental projects and initiatives e.g. irrigation schemes.
- Load growth from EBSST.
- Facilitating economic and agricultural development in the area.

2. ORIENTATION

The Emnambithi/Ladysmith Municipality is submitting a business plan for the approval of funding in the 2011/2012 year, to the Department of Energy.

3. AIMS AND OBJECTIVES

TO ERECT A NEW 11Kv MEDIUM VOLTAGE OVERHEAD LINE FROM AN EXISTING TRANSFORMER TO THE NTOKOZWENI TOWNSHIP IN COLENZO SO AS TO FACILITATE THE ELECTRIFICATION OF 400 HOUSEHOLDS IN THE AREA IN THE FOLLOWING YEAR.

4. BACKGROUND

NEW MEDIUM VOLTAGE BACKBONE – COLENZO

4.1 PROBLEM:

Through the medium of community consultation meetings and other correspondence to ward councillors and the municipality, the community of Ntokozweni, Colenso have requested electricity supplies to their homes. This area consists of approximately 400 houses currently, but that number increases monthly if not daily.

The problem facing the municipality is that there is no 11kV medium voltage supply or transformer even within 2 kilometres within the radius of this area. This hampers household electrification due to the fact that a medium voltage supply has to be brought within a reasonable distance prior to undertaking the normal low voltage household electrification.

4.2 SOLUTION:

The main scope of the work is to extend an 11 kV overhead MV Backbone line from substation E15 in the Tugelavale area to the Ntokozweni area in Colenso thus providing the system strengthening in Ntokozweni and the adjoining areas so that subsequent electrification projects can commence as programmed.

4.3 COSTING:

The estimated costs to;

- o lay 1 x 150mm²/3core/Aluminium 11kV cable from existing transformer E15 to the start of the MV OHL,
- o dress poles, plant poles and erect 2000 metres of 95mm² aerial bundle – medium voltage conductor to Ntokozweni is estimated at **R 1,593,766.00**

4.4 CASHFLOW FORECAST:

6. DETAILED CASH FLOW (RAND) FOR FUNDS REQUIRED FROM DoE					
April 2011	May 2011	June 2011	July 2011	Aug 2011	Sept 2011
R 160 000	R 160 000	R 160 000	R 160 000	R 160 000	R 160 000
Oct 2011	Nov 2011	Dec 2011	Jan 2012	Feb 2012	Mar 2012
R 160 000	R 160 000	R 160 000	R 160 000	R	R

4.5 TIME SCALE:

The project will be undertaken over a one year period commencing in April 2011 and completed at the end of January 2012. The basic rollout plan will be as follows:

1. April - July 2011: Procurement.
2. August 2011 – January 2012: Laying of cables, Dig holes, plant poles, Erection of overhead conductors, lightning arrestors and auto-reclosures, Making-off of cables, Testing and Commission. Project completion.

5. POLICY AND PROCEDURES:

5.1 PROJECT MANAGEMENT

The Emnambithi/Ladysmith Municipality is capable of managing this project.

5.2 TENDER AND PROCUREMENT

The Tender and Procurement Procedures will be in line with Council's Supply Chain Management Policy in terms of the MFMA and other relevant legislation.

5.3 CONSULTANTS

The services of external consultants will not be utilised.

6. ATTACHMENTS HEREWITH:

6.1 PREVIOUSLY SUBMITTED APPLICATIONS TO DOE FOR THE 2011-2012 MTEF CYCLE.

6.2 PLAN – Layout of New MV Overhead line and Ntokozweni area indicated on satellite image map.

6.3 PLAN – Layout of New MV Overhead line indicated on cadastral map.

6.1



EMNAMBITHI/LADYSMITH MUNICIPALITY

MUNICIPAL MANAGER

My Ref: **S2/5: Erf 14966**

Please ask for
Mr Y Seedat/sm

☎ 20 ☎ (036) 837 2231
Fax: (036) 831 1400
Ladysmith 3370

Email: mmlady@mlksm.co.za
Website: www.ladysmith.co.za

13 August 2010 Your Ref:

The Regional Energisation Manager
DEPARTMENT OF ENERGY
Private Bag X54307
DURBAN
4000

ATTENTION : MR J B JALI

Dear Sir

APPLICATION FOR ELECTRIFICATION FUNDING: 2011 /2012 FINANCIAL YEAR

Attached please find the following applications for electrification funding for the period 1 April 2011 to 31 March 2012:

1. Area H Steadville - 500 connections
2. Colenso Medium voltage Backbone- Bulk Electrification
3. Emnambithi/Ladysmith Medium Voltage Backbone- Bulk Electrification.

Further find attached the Rolling Plan for 2012/2013:

1. Colenso Ntokozweni - 400 connections
2. Shayamoya Phase 3 - 400 connections.

Kind regards

N J MDAKANE
MUNICIPAL MANAGER

Join the Emnambithi / Ladysmith Municipality in its fight against HIV/AIDS
Fight HIV/AIDS: Abstain, Be Faithful, Condomise – for more information visit the local clinic

Integrated National Electrification Programme - 2011/12 MTEF Cycle			
1. Details of Licensed Applicant		Annexure A	
Metro/Local Municipal Name	EMNAMBITHI	Metro/Local Municipal Number	KZ 232
NER License Number as 01 July 2001	NER/D/KZ 232	Major towns in Municipality	LADYSMITH/COLENZO
Metro/Local Municipal Physical Address	Building Name	ELECTRICAL ENGINEERING SERVICES	
	Street Name and Number	KEATE STREET 4	
	Suburb	CBD	
	City	LADYSMITH	
	Postal Code	3370	
Municipal Manager (Name)	N.J. MDAKANE	Responsible Person for Electrification Projects (Name)	Y.E. SEEDAT
Tel. number & area code	036 637 2231	Tel. number & area code	036 637 6905
Fax number & area code	036 631 1400	Fax number & area code	036 637 2592
Cell number	082 806 0006	Cell Number	083 631 3804
E-Mail Address	mmlady@intekom.co.za	E-Mail Address	yeseedat@ladysmith.co.za
Postal Address	P.O.BOX 29 LADYSMITH 3370	Postal Address	P.O.BOX 56 LADYSMITH 3370
Municipal General Manager Electricity (Name)	S. MATHEW	Consultant responsible for Electrification Projects (Name)	
Tel. number & area code	036 637 6905	Tel. number & area code	
Fax number & area code	036 637 2592	Fax number & area code	
Cell number		Cell number	
E-Mail Address	smathew@ladysmith.co.za	E-Mail Address	
Postal Address	P.O.BOX 56 LADYSMITH 3370	Postal Address	

NOTES:

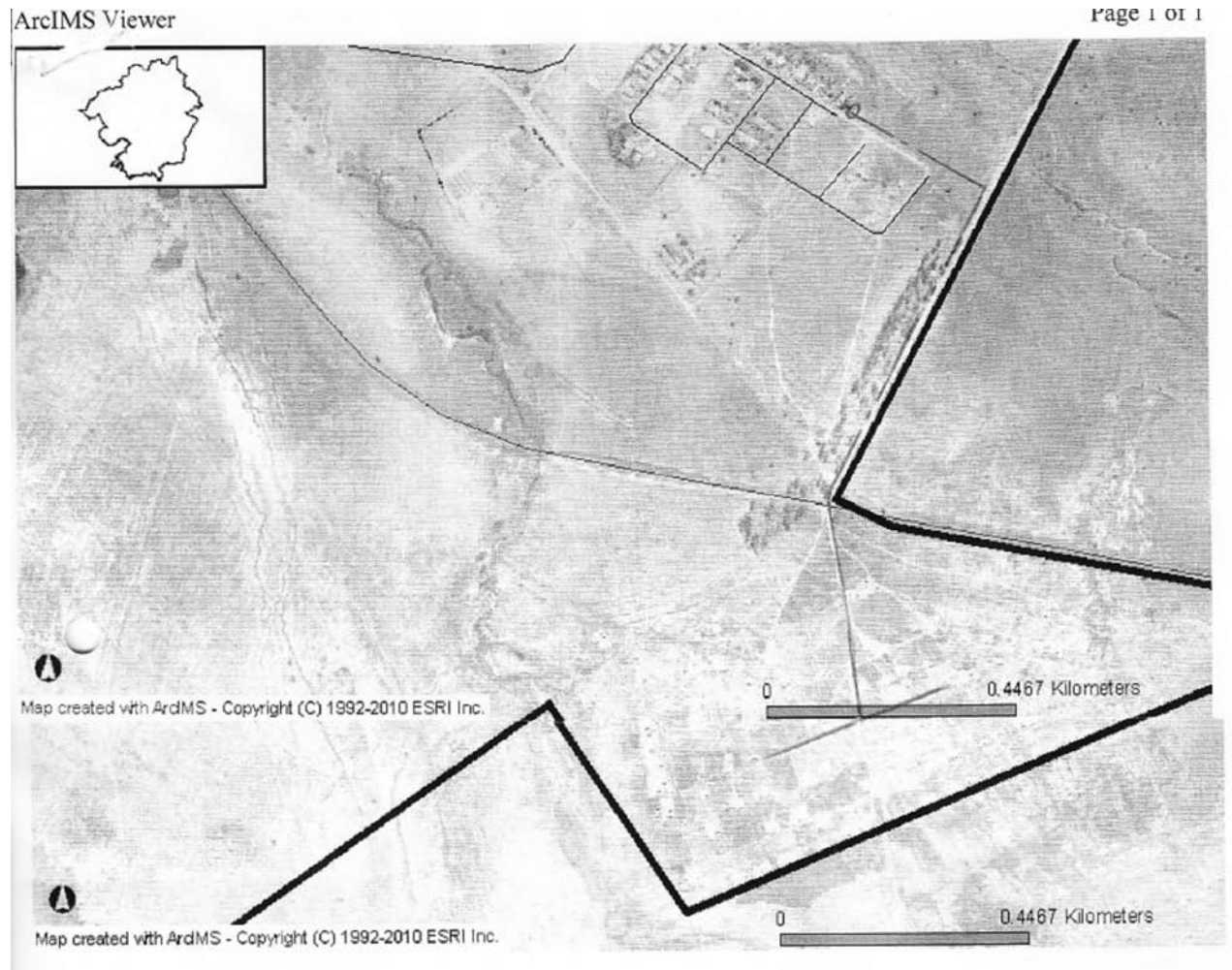
1. Details of Licensed Applicant

The main purpose of this section is to:

- Identify the Distribution License holder for the area in which electrification is to be undertaken.
- Obtain contact details of the person responsible for electricity who reports to the Municipal Manager of the Local Municipality in order to ensure correspondence between the INEP BP Unit and the Municipality flows smoothly and receives the correct attention for decision-making in the Municipality.
- Obtain contact details of the person responsible for electrification. Operational matters between the INEP BP Unit and the Municipality will be resolved by involving this person.
- Consultants can be involved if there is a letter from the municipality with the delegation from the Municipality to the Consultant.

Integrated National Electrification Programme				Annexure 5	
Application form for Bulk Infrastructure funding for 2011/12 financial year					
1. DETAILS OF LICENSED APPLICANT					
Metro/Local Municipal Name	EMNAMIBITHI		Metro/Local Municipal Number	KZ 232	
Project identified as part of IDP process	(a) Yes (b) No	IDP Project Number		Number:.....	
2. BULK INFRASTRUCTURE APPLICATION DETAILS					
Project Name	COLENZO M.V BACKBONE		Type of Bulk Infrastructure (encircle and tick)	(a) Substation (b) Medium Voltage line <input checked="" type="checkbox"/> New <input type="checkbox"/> Upgrade	
Total Capital required for the project (VAT inclusive)	R. 1'600'000.00		Substation requirements (i.e. What will be achieved after implementing project)	Rating MVA)	Voltage level
Total Capital required from DME	R. 1'600'000.00				11KV
Project location (Coordinates)	Long: --° --' --"	Name of the area in which project is located	Colenzo		
	Lat: --° --' --"				
Other Funding Sources			Distance (km)	Line Voltage	
Amount	R.....		2Km	11KV	
Beneficiaries (Names of Areas)			Type of conductor	Conductor size	
Total number of houses to benefit	400		ABC	95mm ²	
3. CURRENT ELECTRICITY STATUS IN THE MUNICIPAL AREA OF SUPPLY (FOR UPGRADE)					
Substation Name		Substation Rating (MVA)			
Substation Loading		Voltage level			
No of incoming feeders.....	No of reticulation feeders.....	Reticulation method		(a) Overhead (b) Underground	
MV Line details		Line Voltage		Type & size of conductor	
Line Distance (km)					
4. POINT OF SUPPLY DETAILS					
Feeding Substation Name	COLENZO INTAKE SUBSTATION		Substation Rating	Voltage Levels	
			10..... kVA / MVAkV (HV) / ...11kV (LV)	
Is the Municipality supplied by Eskom (POS)			(a) Yes (b) No	Have you applied for an upgrade at Eskom	
Eskom Contracted Notified Maximum Demand (NMD)			Current Demand	(a) Yes (b) No	
1.8..... kVA / MVA			1.3..... kVA / MVA	If yes, provide proof	
5. CURRENT LOADING SPLIT IN PERCENTAGE					
Households: %	Commercial: %	Industrial: %			
Is project roll over from last financial year?			(a) Yes (b) No		
Will project roll over to next financial year?			(a) Yes (b) No		
Total funding already provided for project			R 0	Project Phase	
6. DETAILED CASH FLOW (RAND) FOR FUNDS REQUIRED FROM DoE					
April 2011	May 2011	June 2011	July 2011	Aug 2011	Sept 2011
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Oct 2011	Nov 2011	Dec 2011	Jan 2012	Feb 2012	Mar 2012
R 160 000	R 160 000	R 160 000	R 160 000	R	R

Note: 70% Electrification and 30% Commercial load split will be strictly applied
: This application form should be accompanied by a detailed project business plan



6.3

