



BASIC ASSESSMENT (BA) AND ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) FOR THE PROPOSED CONSTRUCTION OF A 88kV POWER BETWEEN HEILBRON (via FRANKFORT) AND VILLIERS, NGWATHE AND MAFUBE LOCAL MUNICIPALITIES, FREE STATE PROVINCE.

(DEA Ref No: 14/12/16/3/3/1/800 and NEAS Ref No: DEA/EIA/0001625/2013)

INTRODUCTION

Eskom Holdings SOC Limited (hereafter referred to as Eskom) is proposing to construct a single 88kV power line from Heilbron to Villiers, passing Frankfort, situated in the Ngwathe and Mafube Local Municipalities, Free State Province. As such, Eskom has appointed SiVEST as the independent Environmental Assessment Practitioner (EAP) to undertake the required Basic Assessment (BA) process for the above-mentioned proposed project. Details of the 88kV power line being proposed are clarified under 'Project Information' below.

PURPOSE OF THIS DOCUMENT

The purpose of this Background Information Document (BID) is to inform interested and/or affected parties (I&APs) about the BA process that is being conducted for the proposed development.

In addition to supplying information about the proposed project and the BA process, this BID will also provide I&APs with the opportunity to:

- better understand the proposed project in order to provide comments and raise issues of concern;
- understand the environmental authorisation process in order to participate effectively;
- raise issues of concern and/or submit suggestions to enhance the proposed project;
- contribute local knowledge; and
- comment on the specialist studies that will be conducted.

BACKGROUND TO THE PROPOSED PROJECT

Currently, there is no additional load growth possible on the existing 88kV network in the Heilbron/Frankfort/Villiers area. All developments have therefore been halted as electricity provision could not be guaran-

teed. Due to this, the 88kV network needs to be strengthened.

PROJECT INFORMATION

The project is for the proposed construction of a single 88kV power line that will be approximately 95km in length. The proposed power line will consist of four sections of power line that will connect to three existing substations via a loop-in loop-out connection. These three existing substations include Tweefort Substation, Frankfort Municipal Substation and Windfield Rural Substation. The power lines therefore are not separate power lines but rather connecting lines between the existing substations along the greater power line network. The registered servitude width is 31 metres (15.5 metres either side of the centre line). The four sections of power lines include the following:

- Proposed construction of a power line from Heilbron Substation to Tweefort Substation (situated on the Portion 1 of the farm Leeuw 162) (approximately 40km in length);
- Proposed construction of a power line from Tweefort Substation to Frankfort Municipal Substation (approximately 25km in length);
- Proposed construction of a power line from Frankfort Municipal Substation to Windfield Rural Substation (situated on the farm Wanner 1248) (approximately 15km); and
- Proposed construction of a power line from Windfield Rural Substation to Villiers Substation (approximately 15km).

Project Location

The study area is located within the Free State Province. The proposed power lines traverse two local municipal areas. These include the Ngwathe Local Municipality and the Mafube Local Municipality. The proposed power lines fall within the greater Fezile Dabe District Municipality.

The proposed power line originates from the town of Heilbron and routes eastwards to Frankfort where it then deviates to the north at Villiers. The proposed power line follows on or near to the R34 and the R26. The landscape is predominantly rural in character. Land uses for the greater part of the proposed power line encompass agricultural farming activities. Commercial and residential land uses can be found in the towns of Heilbron, Frankfort and Villiers.

Proposed Route Alternatives

For each section of the proposed power line, two alternative routes are proposed. Eight alternatives are therefore proposed in total. SiVEST's application to the Department of Environmental Affairs (DEA) included a corridor width of 1km (500m either side of the centre line) for each alternative. The width of the corridor will provide Eskom with sufficient space to negotiate and secure a servitude of 31m that would be required for the proposed 88kV power line. Each Alternative Route is outlined below:

- Alternative 1A – Heilbron to Tweefort Substation (approximately 37km in length);
- Alternative 1B – Heilbron to Tweefort Substation (approximately 40km in length);
- Alternative 2A – Tweefort Substation to Frankfort Municipal Substation (approximately 22km in length) Alternative 2B – Tweefort Substation to Frankfort Municipal Substation (approximately 26km in length);
- Alternative 3A – Frankfort Substation to Windfield Rural Substation (approximately 15km);
- Alternative 3B – Frankfort Substation to Windfield Rural Substation (approximately 15km);
- Alternative 4A – Windfield Rural Substation to Villiers Substation (approximately 15km); and
- Alternative 4B – Windfield Rural Substation to Villiers Substation (approximately 16km).

The proposed route alternatives are indicated on the locality map below (Figure 1).

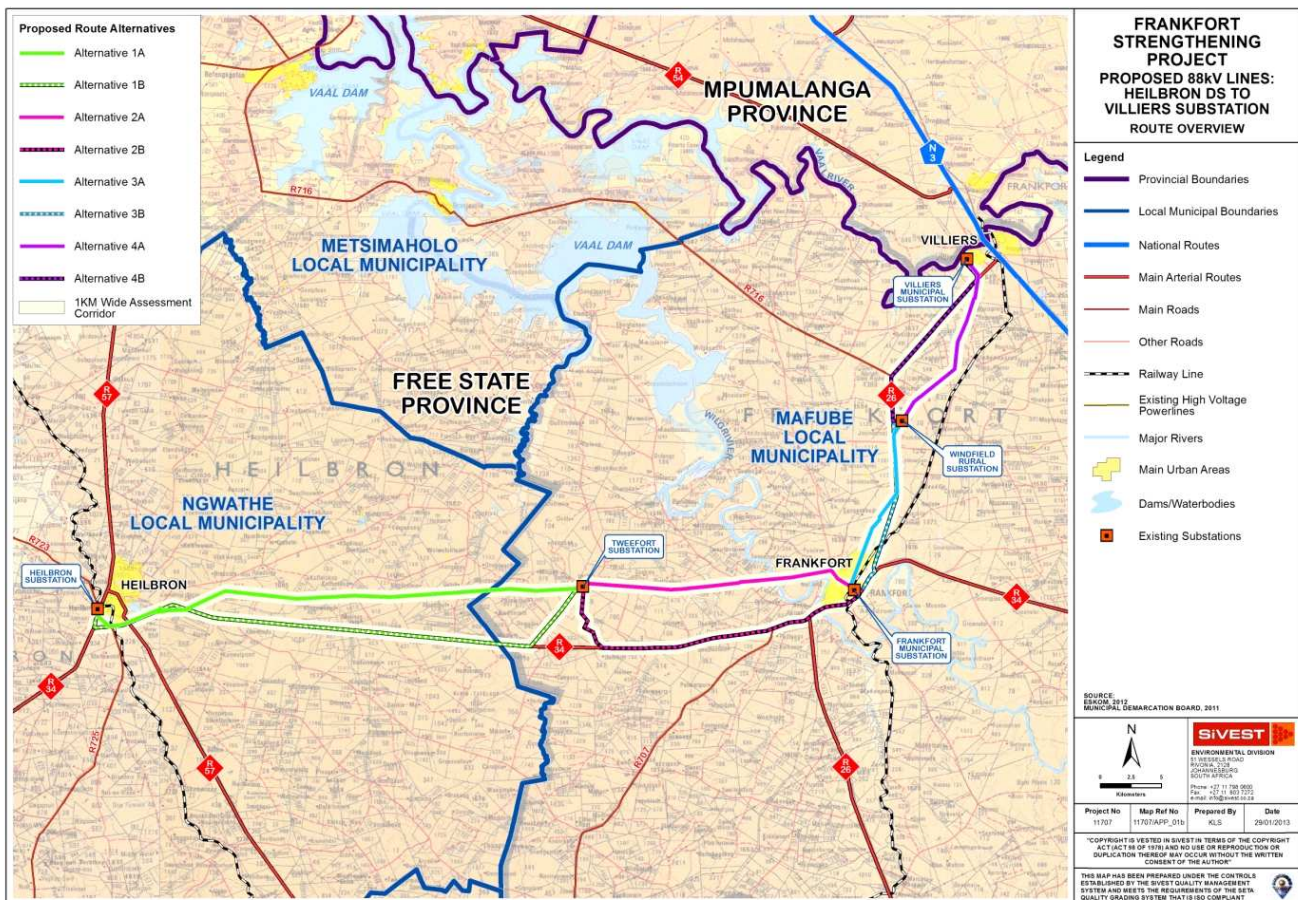


Figure 1: Propose site locality map with route alternatives.

Tower Types

The tower types that are to be used will vary to relationship between the structure, the terrain transversed, ground clearance requirements, geology, etc. These tower types consist of the following:

- Mono-pole guyed intermediate suspension structures;
- Mono-pole self supporting intermediate suspension structures;
- Mono-pole angle suspension structures;
- Mono-pole strain structures;
- H-Pole structures; and
- 3 Pole strain structures.

The type of tower that would be used for this proposed 88kV power line will be determined once a routing has been negotiated and a servitude has been secured.

The foundation depths will range between 1,5-2m. Spanning lengths between tower type structures will be between 225-250m. The tower type structures will vary in length from 18-24m in height. Finally, a Chickadee conductor is to be used.

An illustration of an example of one of the proposed towers is provided in Figure 2 below.



Figure 2: Proposed Tower Type

BASIC ASSESSMENT PROCESS

What is a Basic Assessment?

The Basic Assessment Methodology assists in evaluating the overall effect of a proposed activity on the environment. The determination of the effect of an environmental impact on an environmental parameter is determined through a systematic analysis of the various components of the impact. This is undertaken using information that is available to the environmental practitioner through the process of the environmental impact assessment. The BA evaluation of predicted impacts is undertaken through an assessment of the significance of the impacts. BAs are used by planning authorities/developers to obtain an independent and objective view of the potential environmental (biophysical and social) impacts that could arise during the construction and operation of the proposed development. This information needs to provide the Competent Authority with a sound basis for their decision-making. Environmental management and mitigation measures are also identified through the BA process.

National Environmental Management Act (NEMA)

The Basic Assessment process, as presented in Figure 3, will be conducted in accordance with the Environmental Impact Assessment (EIA) Regulations 2010 promulgated in terms of Sections 24 (5) read with section 44 of the National Environmental Management Act (No. 107 of 1998) (NEMA), as amended, in Government Notice (GN) No. R543.

In terms of Government Notice (GN) No. 544 and 546 (18 June 2010), Listing Notice 1 and 3 respectively, the following activities may be triggered by the proposed development:

| Listing Notice Number | Listed Activity |
|--|-----------------|
| Government Notice R544 (18 June 2010) | 10 |
| | 11 |
| | 18 |
| Government Notice R. 546 (18 June 2010) | 12 |
| | 13 |
| | 14 |

Details of the activities triggered by the proposed development will be provided in the Draft Basic Assessment Reports.

The Basic Assessment Process to be followed is illustrated below:

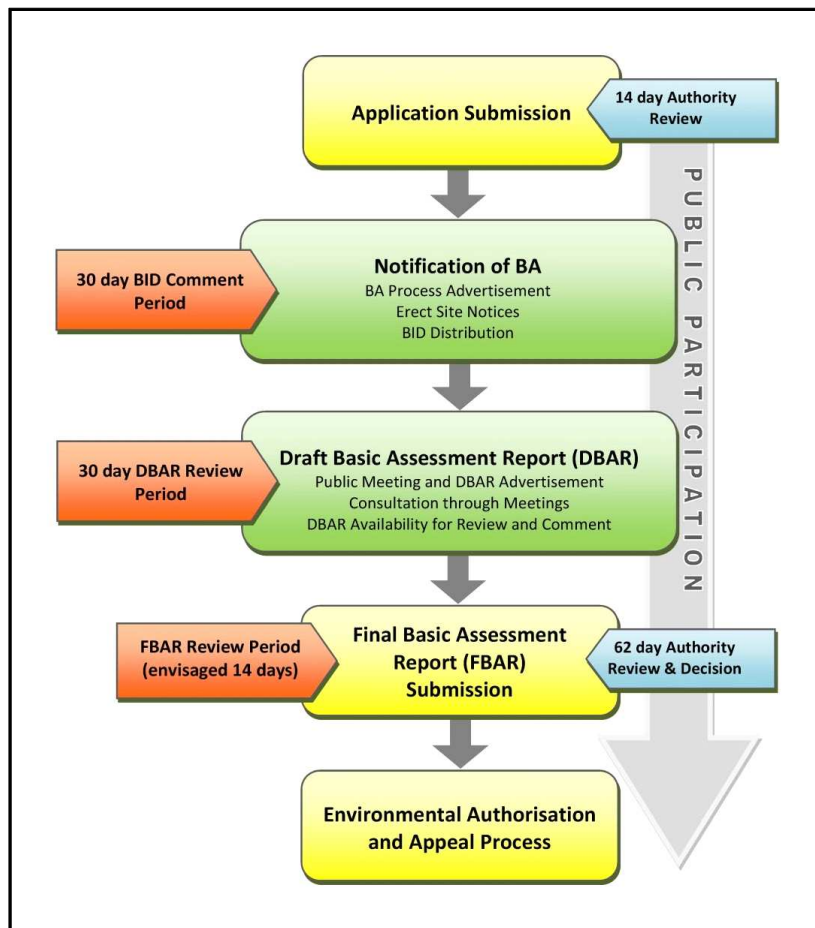


Figure 3: Basic Assessment Process Diagram

Competent Authority

The Competent Authority, as described according to the EIA Regulations, for this proposed project is the National Department of Environmental Affairs (DEA).

Environmental Issues to be Investigated during the BA

| SPECIALIST STUDY | SPECIALIST UNDERTAKING THE STUDY |
|--|--|
| Biodiversity (Flora, Fauna and Avifauna) | Mathew Ross - EnviRoss CC |
| Surface Water | Shaun Taylor - SiVEST |
| Floodlines | Warwick Pearce - SiVEST |
| Agriculture and Soils | Kurt Barichievy - SiVEST |
| Visual Impact | Andrea Gibb - SiVEST |
| Heritage | Stephan Gaigher - G & A Heritage Consultants |
| Socio-economic | Stevie Snyman - Urban Econ |
| Public Participation | Nicolene Venter - Zitholele Consulting |
| GIS and Mapping | Kerry Schwartz - SiVEST |

The Public Participation Process

Public participation is the cornerstone of any BA, as it will be for this proposed project. The key objective of public participation during this BA will be to provide I&APs with

sufficient and relevant information and to conduct a transparent consultation process to ensure effective participation throughout the BA process. As part of this public participation process you will also be provided with the opportunity to comment on the findings of the Draft Basic Assessment Report (DBAR) and the Final Basic Assessment Report (FBAR), which will be made available on Eskom’s website (www.eskom.co.za/eia) and SiVEST website (www.sivest.co.za).

It is important that relevant I&APs and Stakeholders are identified and involved in the public participation process from the outset of the proposed project. You will receive personal notification by post, e-mail and/or sms of all documents available for comment, and due dates for comment at every stage. It is important to note that Public Participation is a process involving stakeholders, environmental and technical specialists, the authorities and the applicant, working together to produce better decisions.

Your responsibilities as an I&AP:

In terms of the EIA Regulations, your responsibilities as an I&AP is to:

- register yourself on the project database in order to participate in this BA process;
- inform any other parties (neighbours, friends, colleagues, etc) who may be interested and/or affected by the proposed project about the BA process and encourage them to become involved; and
- ensure that any comments regarding the proposed project are submitted within the timeframes that have been approved or set by the DEA, or within any extension of a timeframe agreed to by the DEA and the applicant, Eskom.

Our responsibilities as Independent Environmental Consultants:

In terms of the EIA Regulations, our responsibilities in the public consultation process include:

- providing sufficient and relevant information regarding this proposed project to I&APs, either through the BID or providing information as and when requested;
- ensuring that I&APs are provided with an ample understanding of the proposed project so that they are able to comment on and submit concerns meaningfully and informatively;
- undertaking the following actions upon receiving any comments/queries/issues:
 - ✓ enter the I&APs contact details into the project database to ensure all further information releases are sent to them;
 - ✓ respond in writing to all queries or comments;
 - ✓ record to all comments/queries/issues received (e-mail, fax, telephonically);
 - ✓ provide a response (as soon as possible) to all questions that we are unable to answer.

How to become involved

- Respond (by post, phone, fax or e-mail) to our invitation for your participation, which has been advertised in the printed media.
- Post, fax or e-mail the attached Registration and Comment Form to SiVEST.

- Attend the meetings to be held during the course of the project. Should you register as an I&AP you will automatically be invited to attend these meetings.
- Contact us telephonically should you have a query, comment or require further project information.
- Comment on the DBAR and FBAR within the review periods that will be stipulated in a personalised letter to be sent to you.

If you consider yourself an I&AP for this proposed project, we urge you to make use of the opportunities created by the public participation process to become actively involved in the process and provide comment or concerns which affect and/or interest you, or about which you would like more information. Your input into this process forms a key part of the environmental studies and we would like to hear from you to obtain your views on the proposed project.

By completing and submitting the accompanying Registration and Comment Form, you automatically register yourself as an I&AP for this proposed project, ensuring that your comments and/or concerns raised regarding the proposed project will be noted. The public participation consultants will respond to all comments and queries received during the course of the project.

Please be informed that all relevant public documents can be downloaded from the SiVEST's website (www.sivest.co.za).

We look forward to your contributions

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or

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Fax: (011) 803 7272

Websites: www.sivest.co.za

LIST OF ACRONYMS

| | |
|-----------------|---|
| BA | Basic Assessment |
| BID | Background Information Document |
| DEA | National Department of Environmental Affairs |
| DBAR | Draft Basic Assessment Report |
| EA | Environmental Authorisation |
| EIA | Environmental Impact Assessment |
| EMPr | Environmental Management Programme |
| FBAR | Final Basic Assessment Report |
| GN | Government Notice |
| I&AP | Interested and/or Affected Party |
| kV | Kilo Volt |
| NEMA | National Environmental Management Act, 1998 (Act No. 107 of 1998) |

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