

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

FOR

THE PROPOSED ESKOM GARONA-ARIES TRANSMISSION POWER LINE

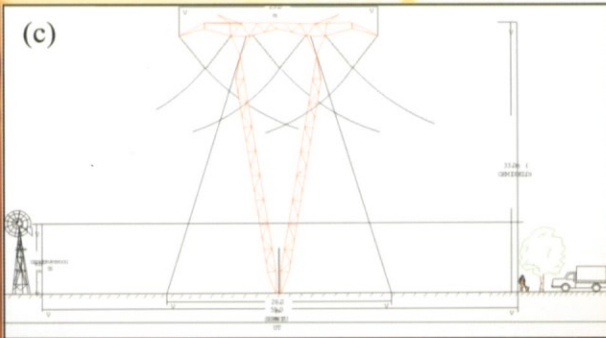
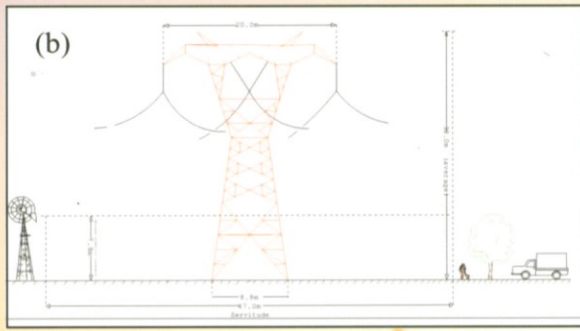
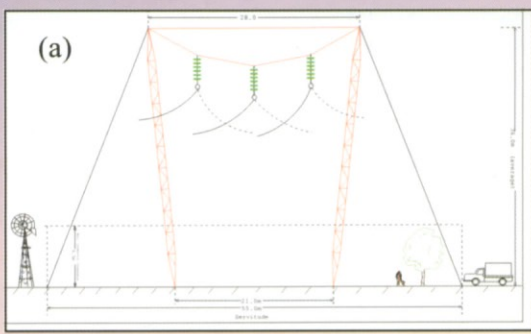


Figure 1:
Schematic diagrams showing the possible tower designs to be utilized;
(a) Cross-Rope Suspension tower (36m high),
(b) Self-Supporting tower (30m high) and
(c) Anchored-Suspension tower (33m high).

Contact details:

Ms Jayshree Govender
Tswelopele Environmental
E-mail: jayshree@eims.co.za
Fax: (011) 787-3059
Tel: (011) 789-7170
PO Box 2083, Pinogowrie, 2123
or
Mr Andre Zanolli
Tswelopele Environmental
E-mail: andre@eims.co.za
Fax: (011) 787-3059
Tel: (011) 789-7170
PO Box 2083, Pinogowrie, 2123

Background Information Document and Invitation to Comment



No final route has yet been determined. Thus, to ensure that the final route results in minimal impact on the biophysical and socio-economic environment in the region, a broad study area has been delineated in order

Demarcation of the Study Area

The proposed 400kV Transmission powerline will be constructed between the existing Garona (28°44'20.0"S; 21°59'44.998"E) and Aries (29°29'38.68"S; 20°47'40.59"E) substations in the Northern Cape province (refer to locally map overlaid). The Aries substation is approximately 45 km south-south-west of the town of Kenhardt and the Garona substation is approximately 17 km north of Groblershoop.

Location

Background to the Proposed Project

All I&APs will be given the opportunity to indicate their concerns, to verify that their issues have been evaluated, and to comment on documentation compiled during the process. The issues raised by the public as well as the findings of the EIA will be considered by the relevant authorities. This Background Information Document (BID) provides information about the proposed project, EIA process (and the Public Meetings) and invites the public to comment. Your comments will ensure that all relevant issues are evaluated and considered in the EIA process.

Public Participation in the EIA Process

This brochure provides you as a potential interested and/or affected party (I&AP) with a background description of the proposed Eskom Garona-Aries Transmission Power Line in the Northern Cape Province. It also informs you on the progress of the Environmental Impact Assessment (EIA) process (to be undertaken in line with EIA regulations). Public Participation forms an integral part of the EIA process, and the distribution of this document is a crucial step, which indicates how you can become involved in the process. The sharing of information (and timely notifications on an ongoing basis) forms the basis of this process. Public Participation offers you the opportunity to obtain information and comment or raise issues, which may concern you.

What is the purpose of this document?

to provide a range of possible routes. The study area consists of a 15km buffer zone on either side of the direct line between the two substations (represented by the blue dotted line on the attached map).

Motivation for the new transmission line

Owing to the growing need for increased electricity, the demand thereof may exceed supply by 2009. Since electricity cannot be stored, it must be generated on demand. Therefore, long term options to meet the demand need to be identified.

Customer Loads in the Northern Cape

The Cape 400kV Transmission System, in the Northern Cape area supports customer loads in the Southern Cape, West Coast, Peninsula and Namaqualand load centres. Local generation in the Cape region is limited to the Koeborg Nuclear Power Station. For the time being Koeborg is still performing satisfactorily, but will in future (unknown at this stage) reach the end of its operational lifespan. This also needs to be taken into account when developing the network.

Expected Growth and Maintenance

The forecasted growth in electricity demand is based on increasing electrification, as well as use by railway transport and commercial development. Consequently, the existing Transmission lines are becoming heavily loaded and are predicted to reach their full capacity very soon. These Transmission lines cannot supply the increased normal load demand in the long-term. Moreover, when one line is out of service, the other lines have to bear the entire load. This makes it difficult to carry out routine maintenance, as the condition of the operating lines may deteriorate, resulting in poor line performance (such as faults). Maintenance of the line will be undertaken on a routine basis (yearly) by utilizing a proposed gravel road adjacent to the line. Eskom will obtain permission from the relevant landowners prior to undertaking any maintenance.

Description of the Support Structures for the Transmission Line

A selection of typical structures is represented in Figure 1 and provides a basic representation of the tower designs to be used. Generally the Self-Supporting towers will be utilized for the bends in the line while the Cross-Rope Suspension tower is typically used for the straight sections. It is important to note that the final towers to be used have not been determined.

What are the Potential Issues for Consideration?

- Following initial investigations and discussions with the authorities, the following potential impacts (both positive and negative) have been anticipated and will be further investigated during this EIA:
- The key environmental issues that will require investigations are the following:
- Impact of the line construction on fauna and flora, including specific focus on avifauna with regards to the transmission line;
- Effects on wetlands along the proposed route will also be investigated. The proposed route traverses two main rivers (Orange River near Groblershoop and Hartbeesrivier near Kenhardt);

Consideration of Alternatives for the project

- Demand Alternatives (can the demand for the Transmission line be met by an alternative means?);
 - Process alternatives (technological or equipment alternatives);
 - Scheduling alternatives (sequencing or phasing alternatives);
 - Design alternatives; and
 - No-go alternative
- Many of the alternatives mentioned above could be incorporated into the project proposal (project description) and as such, would not be evaluated as separate alternatives.