

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).

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

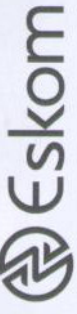
FOR

THE PROPOSED Eskom GARONA-ARIES TRANSMISSION POWER LINE

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Background Information
 Document and
 Invitation to Comment



What is the purpose of this document?

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.

Public Participation in the EIA Process

All I&AP's 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.

Background to the Proposed Project

Location

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 locality map overleaf). 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.

Demarcation of the Study Area

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

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 Koeberg Nuclear Power Station. For the time being Koeberg 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.

Consideration of Alternatives for the project

The selection of potential alternatives will be informed by focussed discussions with authorities and I&AP's during the scoping phase. The Tswelopele Environmental team (independent environmental consultants) will review and advise on environmental issues and in identifying reasonable alternatives. The project team is currently investigating all possible route options between the Garona and Aries substations. During the Scoping phase, input will be gathered from all relevant specialists and a preferred route will be proposed, including provision for alternatives around sensitive environmental and socio-economic features. The following range of alternatives will be considered and discussed in terms of their practicality and feasibility:

- 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.

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 (Oranje Rivier near Groblershoop and Hartbeesrivier near Kenhardt);

- Impacts on sites of possible historical significance;
- Visual impact of the transmission powerline;
- Social Impact Assessment;
- Tourism impacts of the transmission line and substation; and
- Impact on surrounding land uses.

These issues (to be identified during the scoping phase and added to where necessary) will initiate the EIA phase, where specialists will be commissioned, in order to provide for informed decision-making regarding the effect of the proposed activity on the environment.

Specialist Studies

Based on the initial understanding of the study area and the proposed activity as well as previous experience with similar EIA's, the following specialist studies are anticipated:

- Archaeology and Anthropology ;
- Ecology ;
- Agricultural ;
- Visual Impact Assessment;
- Tourism;
- Avifauna; and
- Social Impacts study.

Legal Requirements

In terms of Government Notice No 1182, published on 5 September 1997 and promulgated in terms of the Environment Conservation Act 73 of 1989 (ECA), Eskom Transmission requires authorization from the relevant environmental authority, for the undertaking of the proposed activity. In order to obtain this authorization, a comprehensive independent environmental impact assessment must be undertaken in accordance with the EIA Regulations. Eskom Transmission is therefore applying for authorization in terms of the ECA to carry out the construction of the transmission line, and has appointed Tswelopele Environmental (Pty) Ltd, to complete this application in terms of the requirements of Government Notice 1183. Public participation forms an integral component of the scoping phase of the Environmental Impact Assessment (EIA) Process.

What is the Environmental Impact Assessment (EIA) Process?

An environmental impact assessment is an effective planning and decision making process, to describe and assess the physical, social and economic impacts which a given development may have.

To be able to inform the decision-making process, it is important for public issues and concerns to be identified timeously, to enable the EIA technical specialists to evaluate them. The various specialists also identify potential negative and positive impacts that could arise as a result of the proposed project. They identify applicable mitigation measures required, to avoid or reduce negative impacts and to enhance positive impacts.

The EIA process allows for the environmental consequences of a proposed project to be identified up-front, investigated throughout the impact assessment process and taken into consideration by the decision-making authorities.

The EIA process functions around two phases: the Scoping Phase and the Environmental Impact Report (EIR) Phase. During the scoping phase, (site and route) alternatives will be evaluated and a recommendation will be made for the most favourable alternative. This will be further investigated during the EIA phase. During the scoping phase, comments from interested and affected parties will be encouraged so that all potential impacts may be considered.

Where possible, mitigation measures will be proposed. The Scoping Report will identify those aspects, which will require specialist investigation during the EIR phase.

The steps undertaken during this EIA process include:

- Pre-application site-visits with authorities
- Distribution of Background Information Documents to registered Interested and Affected Parties (I&AP's) in the area
- Notification of the proposed project and the EIA and invitation to attend the public meetings. This includes newspaper advertisements, posters and site notices. Public meetings held for all I&AP's
- Record all issues and feedback from I&AP's in an Issues and Response Report (IRR)
- Compile Draft Scoping Report (describes project, evaluates impacts and presents relevant mitigation measures) (the IRR will be attached with this report)
- Availability of a Draft Scoping Report (for public comment)

- Submission of Final Scoping Report to authorities for decision making.
- After obtaining authority Record of Decision, advise stakeholders of the decision, as well as relevant further processes.

Your Role in Public Participation

Public Participation occurs throughout the EIA process (outlined above) and it includes the following steps:

Advertising
through newspapers, posters, notices and BIDS

Registering
of interested and affected parties (I&AP's) on the database

Consultation
informing I&AP's through public meetings and focus groups

Issues Report
Summary of all issues raised by I&AP's and key stakeholders

Comments on Drafts
Invite I&AP's to comment on draft Scoping and EIA Reports within a 30 day comment period

We do need your contribution

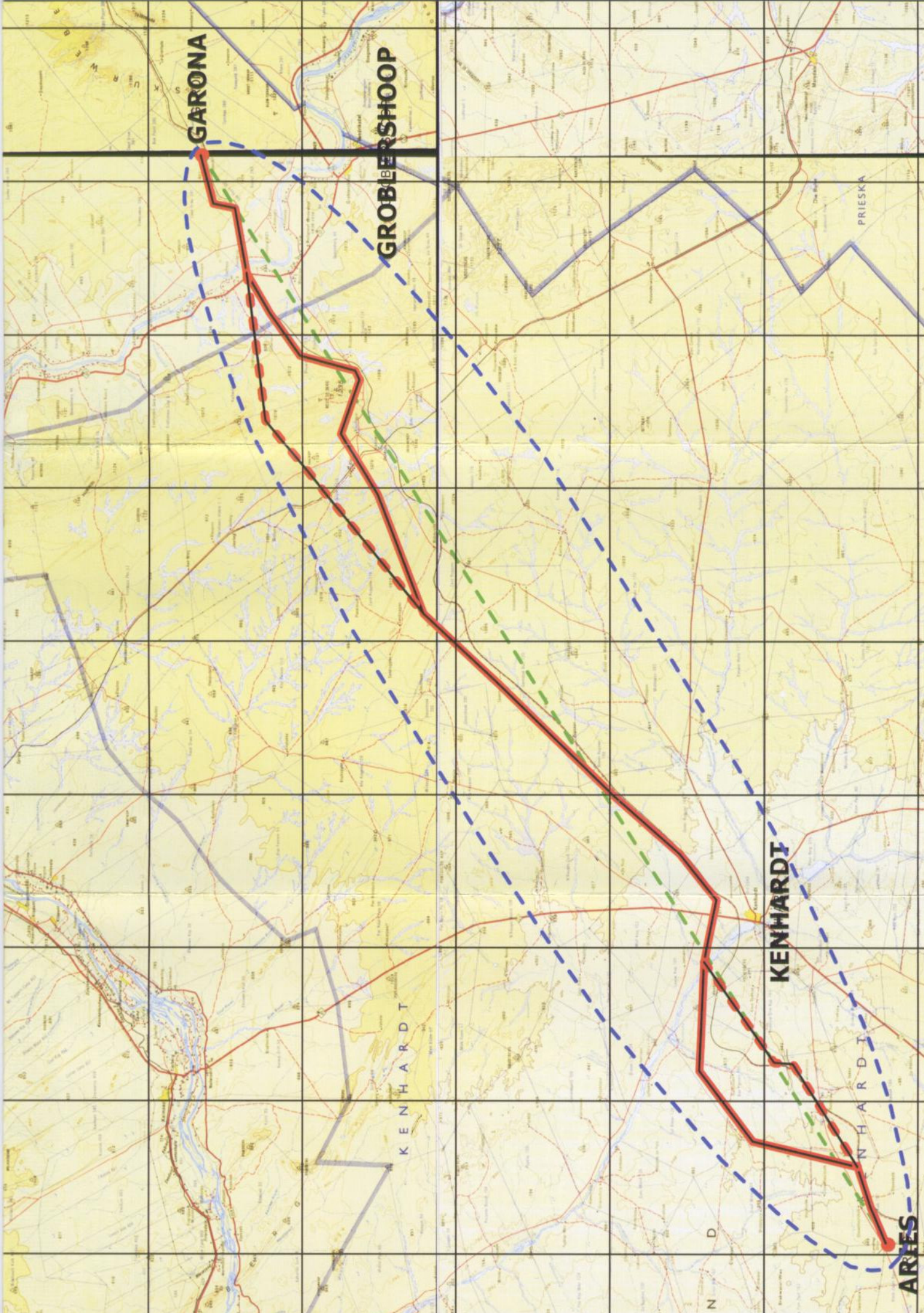
All comments received throughout the EIA process will be captured in detail and incorporated into the Final Reports and issued to the relevant environmental authority for consideration, before they will make a decision, on whether the proposed development should be allowed to go-ahead.

How to Make Contact

Comments can be made in any of the following ways:

- Completing and returning the comment sheet enclosed with this Background Information Document
- Written submissions (by fax or post)
- Comment by email or telephone in order to ensure continued involvement,

Please Ensure That You Are Registered As An Interested Party



GARONA

GROBENSHOOP

KENHARDT

PRIESKA

KENHARDT

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ARIES