

**ENVIRONMENTAL IMPACT ASSESSMENTS FOR THE PROPOSED
ESKOM MERCURY - PERSEUS, PERSEUS - ZEUS AND HYDRA - PERSEUS
765 KV TRANSMISSION POWER LINES**

INTERNAL BRIEFING MEETING PROCEEDINGS

Indaba Lodge, Bloemfontein
11 November 2005
10H00 – 13H00

Should participants who attended the workshop, request any changes to these proceedings, please do so in writing within two weeks of receipt.

AGENDA

ITEM DESCRIPTION	PRESENTER
Welcome ▪ Introduction ▪ Introduction of Project Team	Carol Streaton Eskom Transmission
Need for project ▪ Strategic background ▪ EIA process	Carol Streaton Eskom Transmission
EIA methodology and findings ▪ Perseus Substation to Zeus Substation	Stuart Dunsmore PBA International
Tea Break	All
EIA methodology and findings ▪ Hydra Substation to Perseus Substation	Jaana-Maria Ball ARCUS GIBB
Public Involvement Programme	Bongi Shinga ACER (Africa)
General Discussion	All
Lunch	All

TABLE OF CONTENTS

TABLE OF CONTENTS	2
1. REGISTRATION	3
2. WELCOME AND INTRODUCTIONS.....	3
2.1 Apologies	3
3. PURPOSE OF THE MEETING.....	3
4. NEED FOR THE PROJECT	3
4.1 Strategic background.....	3
4.2 Discussion	4
4.3 Environmental Impact Assessment (EIA) Process.....	4
5. EIA METHODOLOGY AND FINDINGS.....	5
5.1 Perseus substation to Zeus substation and Hydra Substation to Perseus Substation	5
5.2 Discussion	5
5.2.1 General comments	5
5.2.2 Management of the construction programme	6
5.2.3 Technical considerations for a 765kV power line.....	6
5.2.4 Planning for the new 765kV lines.....	7
6. PUBLIC PARTICIPATION PROCESS TO DATE.....	7
6.1 Discussion	7
7. WAY FORWARD	8
8. THANKS AND CLOSURE	8
APPENDIX 1: ATTENDANCE REGISTERS.....	9
APPENDIX 2: PRESENTATIONS	14

1. REGISTRATION

The attendance registers are attached as Appendix 1.

2. WELCOME AND INTRODUCTIONS

Ms Carol Streaton, Eskom Transmission welcomed everyone and thanked them for attending. She requested all present to introduce themselves and their roles and responsibilities in relation to the proposed 765kV Transmission Power Lines.

2.1 Apologies

The following apologies were received by ACER (Africa):

Name	Representation
Ms Melini Hariram	Environmental Advisor, Lethabo Power Station
Mr Rikus Bekker	Lines and Servitudes Manager, North East Grid Transmission Group
Mr Henk Wydeman	Senior Supervisor, Southern Lines & Servitude - Karoo Area
Mr Peter J Craig	General Manager: Southern Region
Mr Johan Harmse	North West Grid Manager

3. PURPOSE OF THE MEETING

The primary objectives of this meeting were as follows:

- Present the proposed projects to all internal stakeholders that are affected by the proposed projects.
- Provide an opportunity to internal stakeholders to comment, ask questions and raise issues to be addressed by various EIA Project Teams.
- Identify issues relating to the proposed transmission power lines (negatives and positives).
- Promote common understanding of complexity of projects and relationships between issues.
- Conduct constructive debate and discussion.

4. NEED FOR THE PROJECT

4.1 Strategic background

Ms Streaton briefly explained the need for the proposed Eskom 765 kV Transmission Power Lines. The following key points were highlighted as part of the presentation:

- Graphically indicated the new load excluding natural growth and the normal load that Eskom can supply everyday.
- Graphically indicated Eskom's plans from year 2003 - 2022 to help meet the electricity demand forecasts for the country. These included recommissioning mothballed power stations, building new coal and gas fired plants and hydro-electric schemes.
- The government is also introducing independent power producers (IPPs) in the local power generation industry. The introduction of the IPPs is aimed at helping meet the increasing peak power demand.

- All Eskom initiatives including government plans are to keep pace with electricity demand fuelled by economic growth.

The summary of the information presented is provided in Appendix 2.

4.2 Discussion

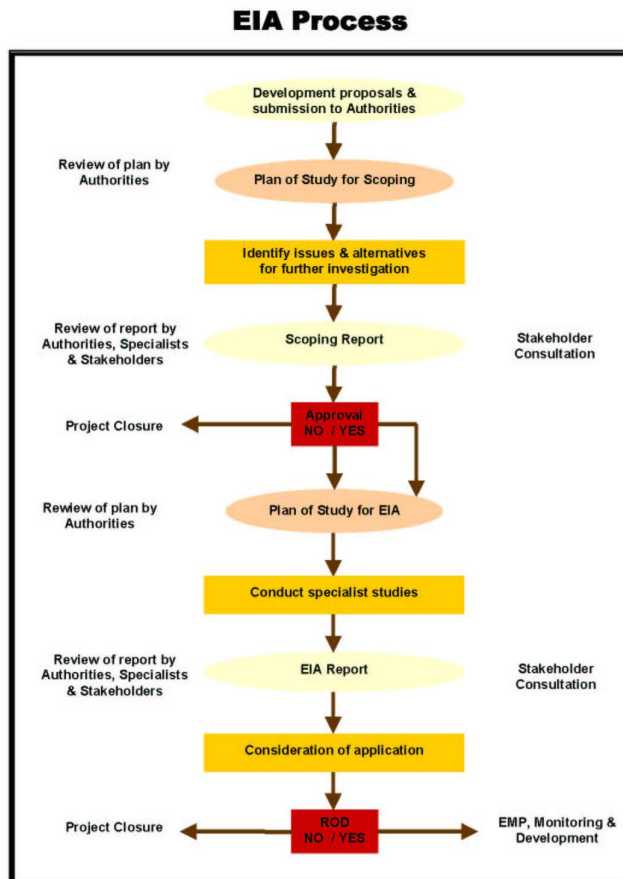
This section provides a record of issues, comments and questions that were raised and discussed as part of strategic planning.

Question: Mr Louw - why a 765kV transmission power line?

Response: There is a load growth, which needs to be met in future and which can only be accommodated by a 765kV. Mr Jurie Groenewald also suggested that Mr Louw contacts Mr Ronald Marais at the planning section. Mr Marais has useful information, which would assist with understanding the planning for the transmission network.

4.3 Environmental Impact Assessment (EIA) Process

The following diagram was used to explain the EIA process and indicate the stages in which the various projects are.



5. EIA METHODOLOGY AND FINDINGS

5.1 Perseus substation to Zeus substation and Hydra Substation to Perseus Substation

Mr Stuart Dunsmore, PBA International (SA) and Ms Jaana-Maria Ball, ARCUS GIBB presented and described the scoping processes and the activities that have been undertaken for Perseus - Zeus and Hydra - Perseus respectively.

The content of their presentations covered the following:

- Project description and technical details.
- Location and extent of study area.
- Project alternatives.
- Description of baseline environment by specialists and preliminary findings.
- Potential environmental impacts.

The summary of the information presented is provided in Appendix 2. The record of discussions is summarised in Section 5.2 below.

5.2 Discussion

This section provides a record of issues, comments and questions that were raised and discussed as part of the EIA methodology and findings. The presentations for the two projects were different, however and in most instances questions and/or comments raised were applicable to both projects as indicated and summarised below:

5.2.1 General comments

- Mr Sewkumar - there are numerous complaints from farmers pertaining to Eskom contractors leaving gates open on their farms.
- Mr Pelser - they are experiencing problems with the tower foundations due to the type of soils in the areas from Dealesville to Bultfontein. He requested Mr Jose Diez Serano (Trans-Africa Projects, structures specialist) to take note of the problems experienced with the foundations when designing towers for the new 765kV. *In responding, Mr Jose Diez Serano indicated that they are aware of the problems and are busy with new mechanisms for dealing with the existing problems. As an example, concrete will also be used around the anchors to prevent problems, keep towers in position and prevent corrosion.*
- Mr Dunsmore - a few issues have been raised regarding anchors being left out in the field after a line has been removed. However, it is not certain if it is a Distribution or a Transmission issue.
- Mr Tunnicliff - has the Perseus-Zeus and Mercury-Zeus studies taken into account the size of farms, i.e. looking at affecting many farms vs few farms? *In responding, Mr Dunsmore indicated that the size of the farms on either line is basically the same, though the farm size appears to increase as one moves south. One aspect that has not been considered is how many farms are particularly owned by one person.*
- Ms Streaton and Mr Dunsmore stated that electro-magnetic fields are becoming an issue around the whole study area.
- Mr Pelser - Eskom is trying to minimise the number of lines in the study area because 1 x 765kV transmission line replaces 2 x 400kV transmission lines, therefore farmers need to be aware of this.

5.2.2 Management of the construction programme

- Mr Dunsmore - during the construction process of the transmission lines, Eskom's management of the construction programme becomes an issue and requires attention. It appears that the environmental consultant needs to go for an option that will avoid environmental damage. What is the thinking on this issue (land use vs ecology)?
 - Mr Groenewald - if possible, the Consultant must recommend measures or resources that need to be in place to avoid or manage environmental damage. Obviously, it is always better to deal with the construction issues upfront, i.e. deal with the management system that needs to be in place. It can become difficult, from the Consultant's side, to recommend a route/corridor when he is aware that the management system will not be followed.
 - Mr Tunnicliff - if a Consultant starts setting conditions, which Eskom cannot comply with, it means that Eskom is transgressing its record of decision or conditions of the approval.
 - There will definitely be environmental damage during construction but the most important aspects are measures that Eskom has to put in place in order to recover from environmental damage.
- Mr Groenewald - during construction of fast track projects, the project manager and the construction company has only one focus, which is the completion of construction within the desired or specified timeframe. Therefore, there is often environmental neglect.
- Mr Vockerodt - the construction phase has sensitivities, which are relatively short-term and the maintenance phase has more sensitivities, which are long-term. These include access, vegetation management, etc.
- Mr Jose Diez Serano suggested that there should be more Environmental Control Officers in order to manage the construction programme effectively. This would also translate to costs savings for Eskom.
- The reasons associated with the avoidance of the construction of power lines in the ridges are mainly due to (1) the visual impact and (2) access during construction and maintenance phases.

5.2.3 Technical considerations for a 765kV power line

- Mr Pelser stated that power lines need to be kept apart for network stability. If the distance is relatively short between the lines, the technical risk and stability in terms of fires is significantly high. Also if two lines go down, the Eastern/Western Cape will be in the dark.
- Mr Dunsmore - are we able to show how often this happens and how significant the risk is? *The probability of fires is low i.e. 1:20 years, however the severity is relatively high.*
- Mr Sewkumar - will there be 2 x 765kV power lines along the Zeus - Perseus route? Mr Dunsmore confirmed that there would be 2 x 765kV Transmission Lines – one between Zeus and Mercury and one between Zeus and Perseus. Cumulative impacts should be taken into account.
- For planning purposes, lines in excess of 400kV should be kept apart as they cause magnetic induction. For technical reasons, Eskom prefers to have lines apart from each other. Therefore, Eskom planning prefers the Zeus - Mercury option.
- Landowners prefer to have lines running parallel or next to each other in order to minimise impacts. An issue that also needs to be taken into account is the fact that a farmer would always have a preferred area where a line can go in order to least affect his farming activities.
- Mr Vockerodt - there are places in the network where Eskom has redundancy; therefore there is an opportunity to switch one line off. *Mr Dunsmore highlighted the fact that on the new lines, which he has worked on, there has been no opportunity for redundancy; instead most of the lines are operating at capacity or over capacity.*
- In terms of the length of a transmission line, two shorter lines are better as they can be easily managed.
 - It is not advisable and also not a preferred option to have more than 2 x 765kV transmission lines in parallel as this is not optimal in the operation of the lines. Concern would be greater

for 3 x 765kV lines. The risk of 3 x 765kV transmission power lines going down is extremely severe.

- It was suggested that a technical meeting be held with the technical team to discuss the issues around the proposed projects. *All present agreed as a meeting will facilitate better planning for all concerned and involved in the areas of operation.*
- Mr Vockerodt stated that if Eskom chooses a compact cross-rope suspension tower, they would not be able to undertake live line maintenance. Therefore this needs to be taken into consideration when designing towers. *Mr Jose Diez Serano noted the comment.*
- It would be an advantage for Eskom to commission a Risk Assessment Study in order to investigate the risks associated with the current planning of the powerlines.
- The length of the lines by-passing the Hydra Substation needs to be considered.
- The pipelines and railway lines should be avoided, i.e. no crossings.

5.2.4 Planning for the new 765kV lines

- If system operations indicate that they will maintain the lines, they must have a buy in. It would have been better if system operations were part of the meeting.
 - Ms Erika Johnson is the head of System Operations and it is crucial that she understands what issues are on the ground, therefore she needs to be involved. It was suggested that minutes of this meeting be sent to her.
 - Mr Tunnicliff suggested that the technical meeting to discuss the maintenance issues be attended by System Operations, Planners, Technical/Maintenance Teams, Negotiators and environmentalists/consultants. It was also suggested that Messrs Brian Vockerodt, Connie Pelser and Eric Marshall (for live line maintenance, etc) should attend the meeting.

6. PUBLIC PARTICIPATION PROCESS TO DATE

Ms Bongji Shinga, ACER (Africa) presented the public participation process for the Hydra-Perseus 765kV Transmission Power Line. The following sections were covered in the presentation:

- The objectives of the public participation process.
- Roles and responsibilities of stakeholders.
- Roles and responsibilities of the public participation team.
- Opportunities for participation.
- Sectoral and stakeholder representation.
- Consultation with stakeholders to date.

The summary of the information presented is provided in Appendix 2 and a record of discussion summarised in Section 6.1 below.

6.1 Discussion

This section provides a record of issues, comments and questions that were raised and discussed as part of the public participation process.

- Mr Louw - issues that are raised by Local Municipalities relate to their economic status, economic viability, etc, however Consultants need to be aware of the fact that some of these issues can be political. How do consultants deal with Local Municipalities? *Ms Streaton indicated that the Public Participation Consultant visits all potentially affected Local Municipalities in order to inform them of the proposed project. In addition, Local Municipalities are always encouraged to attend stakeholder workshops in order to facilitate integration of issues from all potentially affected parties. Ms Ball added that the Social Impact Assessment Consultant also works directly with Local Municipalities in order to factor their planning, developments as well as their issues.*

- Mr Louw - in order to address Eskom Distribution queries at meetings with stakeholders, a local Distribution Customer Services person or the Technical Services Area (TSA) representative should be invited to attend meetings. *In responding, Ms Ball cautioned everyone of the potential for diverting meetings to address Distribution issues when it is a Transmission Project. Ms Streaton also added the fact that it is always difficult to get hold of the relevant Regional Distribution representatives. Information is distributed on to the departments but it is not always passed on to the relevant people.*
- Mr Pelser - will a local Distribution Customer Services person or TSA attend meetings after hours? *Mr Christo Louw stated that Transmission should speak to the field services representatives and they will attend after hours. The Central Region has attended many 'after hours' meetings.*
- Mr Benito Williams offered to provide a list of key people for the Hydra-Perseus study area. Additional information on archaeological and historical sites was also provided for forwarding to the relevant specialist.

7. WAY FORWARD

A meeting to discuss the issues raised in Sections 5.2.1 - 5.2.6 would be planned (refer Section 5.2.4). Attendance should include planning section, system operations, regional transmission, Eskom environmental practitioners and technical consultants of respective projects.

Ms Streaton indicated that there is an option for submitting written comments as follows:

Hydra - Perseus	Mercury - Zeus and Perseus - Zeus
ACER (Africa) Contact Person: Bongzi Shinga Tel: 086 010 4958 Fax: 035 340 2232 Email: eskomHP@acerafrica.co.za	PBA International (SA) Contact Person: Stuart Dunsmore Tel: 011 646 5130 Fax: 011 646 3758 Email: stuart@pbai.co.za

8. THANKS AND CLOSURE

Ms Streaton thanked all present and the project team for their valuable input and participation in the process and closed the meeting.

Should you as a participant at the meeting not agree to the way in which ACER has captured your issue, please do not hesitate to provide your requested changes in writing within two weeks of receiving this document.

APPENDIX 1: ATTENDANCE REGISTERS

MERCURY-ZEUS, PERSEUS-ZEUS AND GAMMA-PERSEUS

INTERNAL STAKEHOLDER MEETING : ATTENDANCE REGISTER

Indaba Lodge, Bloemfontein: 11 November 2005

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MERCURY-ZEUS, PERSEUS-ZEUS AND GAMMA-PERSEUS

INTERNAL STAKEHOLDER MEETING : ATTENDANCE REGISTER

Indaba Lodge, Bloemfontein: 11 November 2005

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MERCURY-ZEUS, PERSEUS-ZEUS AND GAMMA-PERSEUS

INTERNAL STAKEHOLDER MEETING : ATTENDANCE REGISTER

Indaba Lodge, Bloemfontein: 11 November 2005

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MERCURY-ZEUS, PERSEUS-ZEUS AND GAMMA-PERSEUS **INTERNAL STAKEHOLDER MEETING : ATTENDANCE REGISTER**

Indaba Lodge, Bloemfontein: 11 November 2005

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APPENDIX 2: PRESENTATIONS

Please note: Due to the sheer size/numbers of these presentations, they can only be made available upon request.