



# ESKOM MERCURY-PERSEUS

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## 400 kV TRANSMISSION LINE

### THE PURPOSE OF THIS DOCUMENT...

This document aims to provide you, as an interested and/or affected party (I&AP), with background information regarding the proposed Mercury Perseus Transmission Line that is to be constructed by Eskom Transmission, as well as the environmental studies which are being undertaken.

It further indicates how you can become involved in the project, receive information /or raise issues, which may concern and/or interest you. The sharing of information forms the basis of public participation and offers you the opportunity to become actively involved in the project from the outset. Public participation plays an important role in the undertaking of environmental investigations and ensures that all potential issues are considered.

### DOEL VAN HIERDIE DOKUMENT...

Hierdie dokument poog om agtergrondinligting aan belanghebbende partye te voorsien oor die beoogde Mercury-Perseus Transmissielyn wat deur Eskom Transmissie opgerig gaan word, asook die omgewingstudies wat onderneem gaan word.

Dit dui verder aan hoe u by die projek betrokke kan raak, inligting kan ontvang of enige kwessies van belang of wat u interesseer kan lig. Die uitruil van inligting vorm die basis van publieke deelname en verskaf aan jou die geleentheid om van die begin af, aktief by die projek betrokke te wees. Publieke deelname speel 'n belangrike rol in die onderneming van omgewingstudies, aangesien insette van belanghebbendes verseker dat alle potensiële kwessies tydens die studie oorweeg word.

### BACKGROUND

Electricity cannot be stored. It is, therefore, necessary to generate and deliver power over long distances at the very instant it is needed. In South Africa, thousands of kilometers of high voltage lines transmit power, mainly from the power stations located in Mpumalanga, to major substations, where the voltage is reduced for distribution to industry, businesses, homes and farms across the country.

Two 765kV and three 400kV Transmission lines feed electricity to the Greater Cape Region south of Bloemfontein. These Transmission lines are becoming heavily loaded, and they are reaching their transfer capacity. It is also becoming very difficult to manage outages, as it is difficult to carry out routine maintenance. The condition of the lines can deteriorate, which will result in poor performance (faults etc.).

Studies have shown a steady 2% per annum average load growth for the area to the Greater Cape Region south of Bloemfontein. Forecasts predict that this load growth will continue. In addition, a steep increase in load demand of between 700 and 1000 megawatts is expected.

### AGTERGROND

Aangesien elektrisiteit nie gestoor kan word nie, is dit nodig om krag op te wek en oor lang afstande te gelei, na waar en wanneer dit op die betrokke oomblik benodig word. In Suid Afrika gelei kraglyne duisende kilometers hoë volt elektrisiteit, hoofsaaklik vanaf die hoofkragstasies in Mpumalanga na groot substasies waar die volts verlaag word, vir verspreiding na industrie, besighede, huise en plase, regoor die land.

Twee 765KV en drie 400kV transmissielyne voed elektrisiteit na die Groter Kaap Streek, suid van Bloemfontein. Hierdie transmissielyne is onder toenemende druk en is besig om oordragkapasiteit te bereik. Dit raak ook toenemend moeiliker om toevoer te bestuur, aangesien roetine instandhouding moeiliker word. Derhalwe verswak die toestand van die lyne, wat weer tot swak lynprestasie kan lei.

Studies dui 'n geleidelike 2% per jaar ladingsgroei vir die Groter Kaap Streek, suid van Bloemfontein aan. Voorspellings dui aan dat hierdie 2% groei gaan voortduur. Hiermee saam, word 'n skerp toename in ladings aanvraag van tussen 700 en 1000 megawatts verwag.

The existing network that supplies electricity to the Eastern Cape is under increasing pressure to provide a reliable supply, and the proposed Coega Industrial Development Zone, near Port Elizabeth, will place further pressure on the existing supply network. Operating within its national grid system, Eskom Transmission needs to satisfy these medium and long-term electricity supply requirements. By increasing the supply into the 400kV network, the foreseen load growth can be addressed in a suitable and economical way.

## WHAT DOES THIS PROJECT ENTAIL?

### **400 kV Transmission Lines:**

Electricity is generated in coal-fired and hydro-powered stations and transported along power lines to areas where it is needed. A kilo-Volt (kV) is a measure of how much electrical current can be carried by a transmission line. At present, the transmission system is run predominantly at 400kV.

### **Selecting and Securing Servitudes:**

Eskom Transmission selects the route for a transmission line to achieve the most suitable balance between environmental, technical and financial aspects. For reasons of safety, operation and maintenance, Eskom Transmission requires servitudes under transmission lines. Servitudes, for new lines need to be secured prior to construction. Once the preferred route for the new line is identified, landowners are contacted by Eskom to discuss servitude rights.

In this case, the proposed transmission line will be erected between Mercury (near Vierfontien) and Perseus (near Dealsville) substations.

## ENVIRONMENTAL ASSESSMENT PROCESS

Eskom follows the Integrated Environmental Management (IEM) approach, as advocated in South Africa by the Department of Environmental Affairs and Tourism. The result of this study will enable Eskom to make an informed decision on a *corridor* for the routing of the line.

A study area (see map), wherein the proposed line can be constructed, has been identified. It is necessary to determine the constraints within the study area, before a decision can be made as to the routing of the line.



Die bestaande netwerk wat elektrisiteit aan die Oos Kaap voorsien, is ook onder toenemende druk om 'n betroubare voorsiening te lewer. Die beoogde Coega Industriële Sone Ontwikkeling, naby Port Elizabeth, sal verdere druk op die bestaande voorsieningsnetwerk plaas.

Eskom Transmissie, wat binne die nasionale netwerk opereer, moet verseker dat voorsiening vir hierdie medium en langtermyn elektrisiteitsbehoefes gemaak word.

Deur die verhoging van die voorsiening in die 400 kV netwerk, kan die beoogde ladingsgroei op 'n toepaslike en ekonomiese wyse aangespreek word.

## WAT BEHELS HIERDIE PROJEK?

### **400 kV Transmissielyn:**

Elektrisiteit word deur steenkoolgedrewe- en hidro-kragstasies gegenereer en deur kraglyne vervoer tot waar dit benodig word.

'n Kilo-Volt (kV) is 'n maat-eenheid van hoeveelheid elektriese stroom wat deur 'n transmissielyn gedra kan word. Tans funksioneer die transmissie-stelsel hoofsaaklik teen 400kV.

### **Identifisering en versekering van servitude:**

Eskom Transmissie selekteer 'n roete vir 'n transmissielyn op 'n wyse wat verseker dat daar 'n balans tussen die omgewing, tegniese en finansiële faktore gehandhaaf sal word. Vir veiligheids- en instandhoudingsredes benodig Eskom Transmissie servitude onder transmissielyne. Vir nuwe lyne moet servitude verseker word alvorens konstruksie van die lyn kan plaasvind. Sodra die verkose roete vir die nuwe lyn identifiseer is, sal Eskom met die grondeienaars skakel om servituutregte te bespreek. In hierdie geval, sal die beoogde transmissielyn tussen die Mercury (naby Vierfontein) en Perseus (naby Dealsville) substasies opgerig word.

## OMGEWINGSEVALUERINGSPROSES

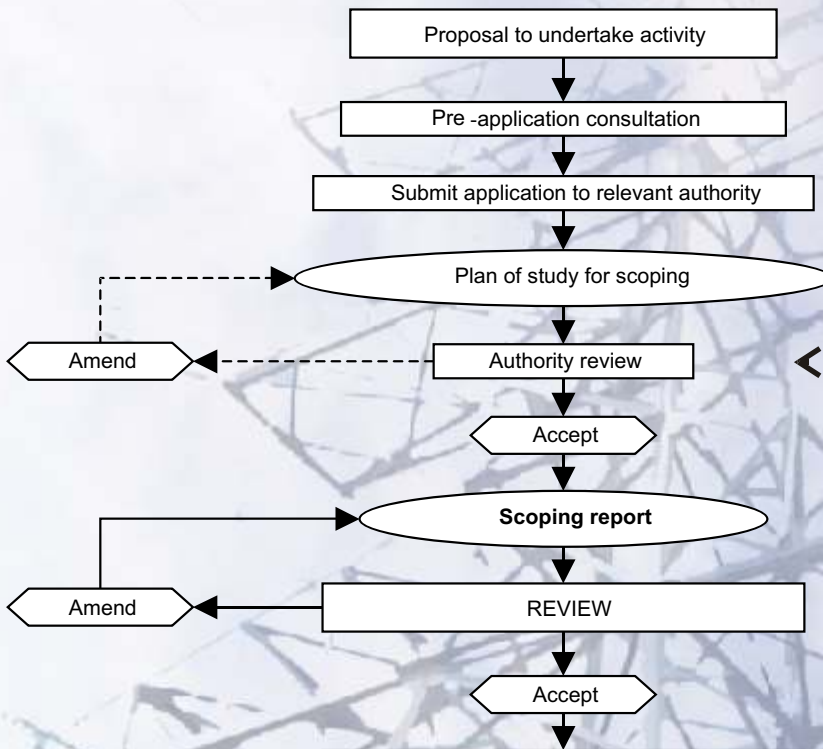
Eskom volg die geïntegreerde omgewingsbestuurs benadering (GOB) soos voorgeskryf deur die Departement van Omgewingsake en Toerisme. Die resultaat van hierdie studie sal Eskom in staat stel om 'n ingeligte besluit te neem oor die geskikte "korridor" vir die rigting van die lyn.

Die Studiegebied (sien kaart) waarbinne die voorgestelde lyn opgerig kan word is geïdentifiseer. Dit is belangrik om die beperkings van die studiegebied te bepaal voordat 'n besluit geneem kan word oor die rigting van die lyn.

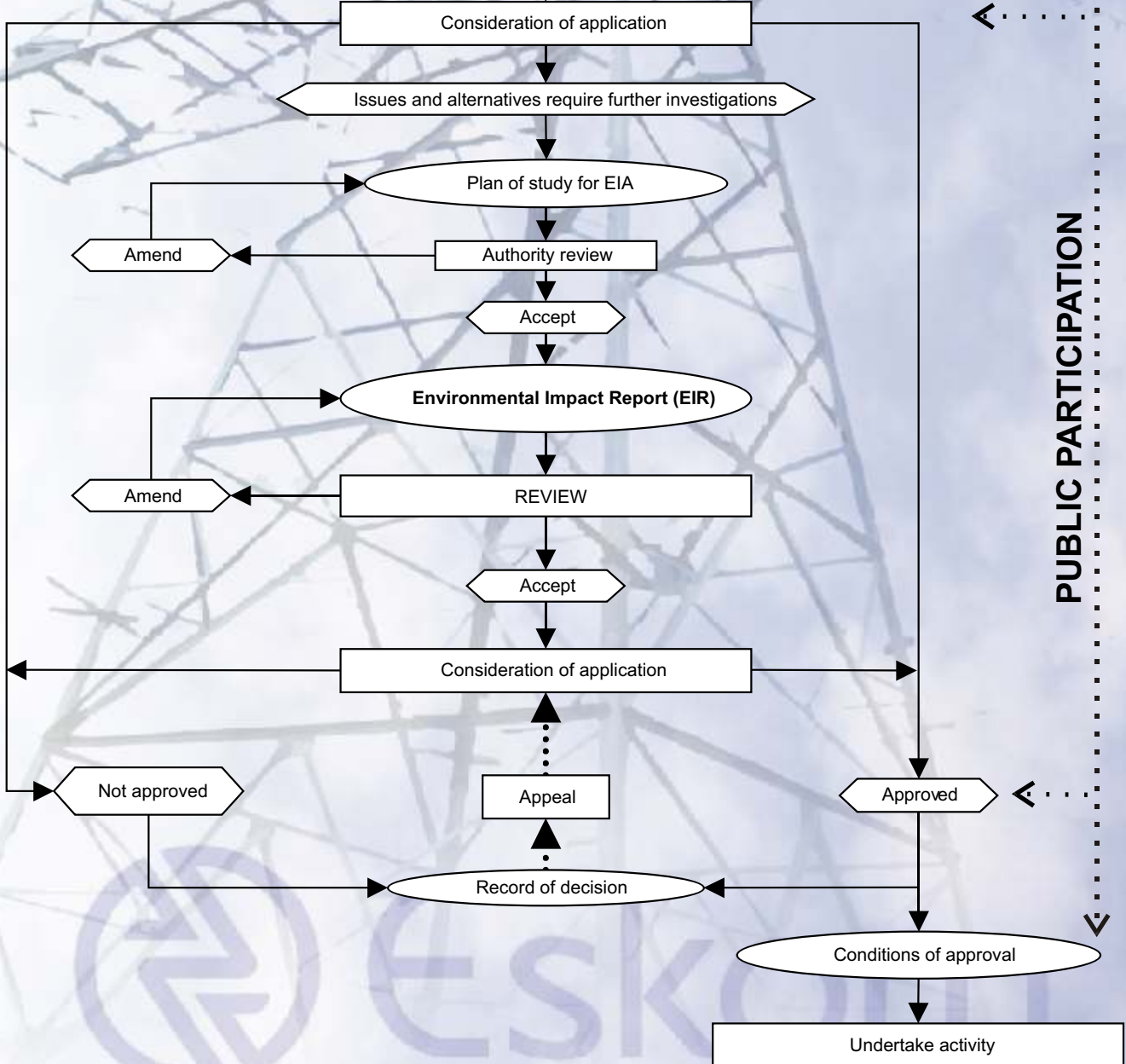
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**PHASE I**



**PHASE II**



**PUBLIC PARTICIPATION**



STUDY AREA, INCLUDING ALTERNATIVES  
TO BE INVESTIGATED

STUDIEGEBIED, INSLUITENDE ALTERNATIEWE  
WAT ONDERSOEK KAN WORD.

LEGEND

- PROPOSED ROUTE 1
- PROPOSED ROUTE 2
- PROPOSED ROUTE 3
- ALTERNATIVE A
- ALTERNATIVE B
- ALTERNATIVE C



(NOT TO SCALE)



Although the new transmission line will only be brought into operation at the time when growth and demand requires it, it is necessary to secure the corridor (servitude) that will accommodate the proposed 400kV line well in advance.

Eskom Transmission has appointed PD Naidoo & Associates (PDNA) in association with Strategic Environmental Focus (SEF) as the independent Environmental Consultant to identify and assess all potential environmental impacts associated with the proposed project. The assessment is being conducted in accordance with the Environmental Conservation Act (No. 73 of 1989) as well as the National Environmental Management Act (NEMA), No. 107 of 1998. As part of these environmental studies, all I&APs will be actively involved through a public participation process.

The environmental process will follow a two phase approach:

Phase 1: Issues-based Environmental Scoping Study (March 2003 to July 2003)

Phase 2: Environmental Impact Assessment (August 2003 to October 2003)

The National Department of Environmental Affairs & Tourism (DEA&T) is the responsible environmental authority for this project, in conjunction with the Department of Tourism, Environmental & Economic Affairs, Free State Province.

## SPECIALISTS:

PDNA and SEF will be assisted by specialist consultants in order to comprehensively identify potentially significant issues and to determine which impacts will require further studies within the Environmental Impact Assessment process. These specialists include:

Alhoewel die nuwe transmissielyn eers in werking sal tree wanneer groei en aanvraag dit verlang, is dit noodsaaklik om die roetes (servitute) wat die voorgestelde 400kV lyn sal volg, vroegtydig te verseker.

PD Naidoo & Associates, in assosiasie met Strategic Environmental Focus, is deur Eskom Transmissie aangestel as die onafhanklike Omgewingskonsultant om alle potensiële omgewingsimpakte van die beoogde projek te identifiseer en te evalueer. Hierdie evaluering word gedoen in ooreenstemming met die Wet op Omgewingsbewing (Wet 73 van 1989), sowel as die Wet op Nasionale Omgewingsbestuur (Wet 107 van 1998).

As deel van hierdie omgewingstudies, sal alle belanghebbendes aktief betrokke wees deur middel van die publieke deelnameproses.

Die omgewingsproses sal in twee fases gedoen word:

Fase 1: Kwessie-gebaseerde

Omgewingsbestekopname (Maart 2003 tot Julie 2003)

Fase 2: Omgewingsimpakstudie (Augustus 2003 tot Oktober 2003)

Die Nasionale Departement van Omgewingsake en Toerisme (DoT), in samewerking met die Departement van Toerisme, Omgewing en Ekonomiese Sake, Vrystaat Provinsie is die verantwoordelike omgewingsowerheid vir hierdie projek.

## SPESIALISTE:

PDNA en SEF sal deur spesialiste bygestaan word ten einde potensiële belangrike kwessies volledig te identifiseer en om te bepaal watter impakte verder in die Omgewingsimpakstudie ondersoek moet word.

Hierdie spesialiste sluit in:

<i>ORGANISATION/ORGANISASIE</i>	<i>SPECIALIST/SPESIALIS</i>	<i>SPECIALIST STUDY/SPESIALIS GEBIED</i>
Pedo Plan International Consultants	<u>Eben Verster</u>	Geology, soils, land types, agricultural potential/ Geologie, grond, grond tipes, landboupotensiaal
Knight Hall Henry	<u>Dawid Mouton</u>	Geo-technical study/ Geotegniese studie
Banesa Enterprises	<u>Lolo Seiboko</u>	Tourism/ Toerisme
National Cultural History Museum	<u>Johnny van Schalkwyk</u>	Heritage study/ Kultuurstudie
Strategic Environmental Focus	<u>Eamonn O'Rourke</u>	Visual Impact Assessment/ Visuele Impakstudie
Strategic Environmental Focus	<u>Gerhard Celliers</u>	Aquatic study/ Akwatiese studie
Cebo Environmental Consultants cc	<u>Johann du Preez</u>	Fauna & flora study/ Fauna & flora studie
Endangered Wildlife Trust	<u>Chris van Rooyen</u>	Aviflora (bird) specialist/ Aviflora (voëls) spesialis
Prof. Dirk Groenewald	=	Social impact Study/ Sosiale impak Studie

# PUBLIC PARTICIPATION PUBLIEKE DEELNAME

## PUBLIC PARTICIPATION PROCESS

SEF has appointed Afrosearch to manage the public participation process of the project. Afrosearch is an independent multi-disciplinary company are committed to a process of empowerment through participation.

As part of the Scoping Process, you are invited to participate in the environmental assessment process. Public participation is a process leading to a joint effort by stakeholders (including the authorities and project proponents) and technical specialists, who work together to make informed and better decisions. Public participation includes the promise that the public's views will be reflected and considered by the decision-maker.

Your role is to:

- ❖ Register as an Interested or Affected Party and be included on a database in order to receive future project information and /or formally record issues and concerns.
- ❖ Attend a public open day to obtain further project information, interact on a one-to-one basis with the Project Team, and /or raise issues and concerns. A public meeting will also be held on the same day.
- ❖ Contact the Public Liaison Officer to obtain further project information and /or raise issues and concerns.

## PUBLIEKE DEELNAMEPROSES

SEF het Afrosearch aangestel om die publieke deelname proses van die project te bestuur. Afrosearch is 'n onafhanklike multi-dissiplinêre maatskappy wat toegewyd is tot 'n proses van bemagtiging deur deelname.

As deel van die bestekopname, word u uitgenooi om deel te neem aan die omgewingevalueringsproses. Publieke deelname is 'n proses wat gesamentlik lei tot ingeligte besluitneming deur die publiek, die regering, die ontwikkelaars en tegniese spesialiste. Publieke deelname omvang 'n belofte dat die publiek se standpunte in ag geneem sal word wanneer 'n finale besluit oor die voorgestelde ontwikkeling geneem sal word.

U rol is om te:

- ❖ Registreer as 'n belanghebbende party en op 'n databasis ingesluit word, ten einde toekomstige projekinligting te ontvang en/of formeel kwessies en belange te registreer
- ❖ 'n Publieke opedag by te woon, waar u verdere projekinligting kan bekom, op 'n individuele basis met die projekspan skakel en/of kwessies en belange lig. 'n Publieke vergadering sal ook op dieselfde dag gehou word.
- ❖ Kontak die Publieke Deelname Beampte om verdere projekinligting te bekom en/of verdere kwessies en belange te lig.

## PUBLIC MEETINGS & OPEN DAY INFORMATION PUBLIEKE VERGADERINGE EN OPE DAG INLIGTING

Further project information can be obtained by attending a public open day or public meeting in your area:

Date/ Datum	Venue/ Plek	Time /Tyd Open day/ Ope dae	Time/Tyd Public meeting/ Publieke Vergadering
23 April 2003	Bultfontein: Town Hall (3 Bosman Street)	09:00 - 16:00	14:00 - 16:00
24 April 2003	Bothaville: Commando Hall (Next to Shell)	09:00 - 16:00	14:00 - 16:00
10 September 2003	Bultfontein	09:00 - 16:00	14:00 - 16:00
11 September 2003	Bothaville	09:00 - 16:00	14:00 - 16:00

## CONTACT DETAILS / KONTAKBESONDERHEDE

Contact details for the Public Liaison Officer / Kontakbesonderhede vir die Publieke Deelnamebeampte:  
Marita Oosthuizen

Afrosearch  
P.O. Box 13540  
Hatfield  
0028

Tel: (012) 362 2908  
Fax/ Faks: (012) 362 2463  
E-mail/ e-pos: marita@afrosearch.co.za





**REGISTRATION FORM**

**PLEASE COMPLETE THE FOLLOWING FORM AND RETURN TO AFROSEARCH**

**FAX NO: (012 362 2463)**

**SIGNED BY:**

NAME: .....

ORGANISATION:.....

ADDRESS: .....

.....

.....

TEL: .....

FAX: .....

EMAIL: .....

INTEREST:.....

.....

.....

**DATE:**..... **SIGNATURE:**.....

FORMS CAN BE SUBMITTED AT: [www@eskom.co.za/eia](http://www@eskom.co.za/eia)

VORMS KAN ELEKTRONIES INGEDIEN WORD BY: [www@eskom.co.za/eia](http://www@eskom.co.za/eia)