# **ESKOM**

Environmental Impact Assessment for the two proposed coal-fired power stations in the Waterberg area, Limpopo

DEAT Ref No. 12/12/20/1255

# Draft minutes of the Authority Focus Group Meeting

Friday, 3 October 2008 at 11:00, Machauka Lodge, Lephalale

#### 1. INTRODUCTION

The facilitator, Ms Anelle Odendaal, Zitholele Consulting welcomed all participants. The meeting was attended by local, district, provincial and national authorities relevant to this project. The contact details of those who attended are attached (See Appendix 1).

#### 2. OBJECTIVES OF THE MEETING

The objectives of this focus group meeting were to:

- · Provide stakeholders with an overview of the proposed project;
- For stakeholders to raise issues of concern and suggestions for enhanced benefits;
- For stakeholders to comment on the technical and public participation processes of the Environmental Impact Assessment (EIA) process; and
- For members of the EIA team to gather first-hand insight into stakeholders' issues of concern and suggestions for enhanced benefits.

## 3. OVERVIEW OF THE PROPOSED PROJECT

Mr Leonard van der Walt, Eskom Holdings Pty (Ltd) gave a comprehensive overview, not only of the proposed power stations, but of Eskom's national power grid and the significant role that the proposed power stations will play in providing energy (see Appendix 2 for his presentation).

### 4. APPROACH TO ENVIRONMENTAL IMPACT ASSESSMENT – TECHNICAL COMPONENT

Mr Ashwin West, Ninham Shand Consulting Services, the project manager of this EIA, gave a brief overview of the EIA process, concentrating on:

- Legislation;
- Description of the process;
- Activities involved;
- Selection of alternative sites; and
- Scheduling.

(See Appendix 2 for his presentation).

### 5. APPROACH TO ENVIRONMENTAL IMPACT ASSESSMENT – PUBLIC PARTICIPATION COMPONENT

Ms Anelle Odendaal, Zitholele Consulting gave an overview of the public participation process, focusing on:

- The role of public participation in an EIA;
- Stakeholder roles and responsibilities;
- A description of the public participation process; and
- Future engagement.

(See Appendix 2 for her presentation).

# 6. DISCUSSION

Comments and questions raised during the meeting have been captured in the following table.

	COMMENTS, QUESTIONS AND ISSUES	COMMENTATOR(S)	SOURCE	RESPONSE
1.	What other technologies have you considered using to minimise the impact on the environment.	Mr Leonard Sole, Lephalale Local Municipality (LM)	Comments during the authority focus group meeting, 3 October at Machauka Lodge	Eskom responded that they use better technology than in the past to lessen the impact on the environment. Furthermore, alternative technology options like nuclear power, wind farms and solar energy are also being investigated and implemented.
2.	Have you interacted with other stakeholders such as Sasol and PetroSA that are also interested in our coal fields?	Mr Leonard Sole, Lephalale LM	Comments during the authority focus group meeting, 3 October at Machauka Lodge	Eskom and Sasol have regular meetings and Eskom is aware of the proposed Mafutha coal-to-liquids refinery. Sasol and PetroSA are however still busy with pre-feasibility studies for their proposed developments in this area, whereas Eskom is already undertaking an EIA process.
3.	What will the water use be of the new power station and what will be done towards water conservation?	Mr Richard Tredway, Waterberg District Municipality (DM)	Comments during the authority focus group meeting, 3 October at Machauka Lodge	A power station needs about 15 million cubic metres (m <sup>3</sup> ) of water per year. Eskom has reduced its water use considerably over the years. The older generation power stations (such as Kendal and Duvha) need 1.5 litres of water to generate one kilowatt (kW) hour while the new generation power stations such as the ones proposed need 0.1 litres per kW hour – a tenth of the amount of water needed previously.
4.	Have you considered the wind direction in your site	Mr Leonard Sole,	Comments during the	Yes the wind direction was

	COMMENTS, QUESTIONS AND ISSUES	COMMENTATOR(S)	SOURCE	RESPONSE
	selection process?	Lephalale LM	authority focus group meeting, 3 October at Machauka Lodge	considered during the site selection process and it will again be investigated in the air quality specialist study during the impact assessment phase.
5.	Where will Eskom develop a new township – on site of the proposed new power stations or in Lephalale town? This question is asked due to the housing shortage currently experienced in Lephalale.	Mr Leonard Sole, Lephalale LM	Comments during the authority focus group meeting, 3 October at Machauka Lodge	Eskom does not know at this stage where a proposed township will be built. This has not as yet been decided; however it will be taken into consideration during the impact assessment phase. It should be noted that Lephalale is about 50 km away, thus a township on site might be more feasible as 600-800 people work at a power station. Should Sasol decide to proceed with their Mafutha project it may also be an option to share a township with them.
6.	Is there enough water to support another two power stations and its associated infrastructure and township?	Mr Leonard Sole, Lephalale LM and Cllr Fanie Modimola of Lephalale	Comments during the authority focus group meeting, 3 October at Machauka Lodge	The Department of Water Affairs and Forestry (DWAF) is busy with a pre- feasibility study to supply water to the Waterberg region which will be completed in December 2008. The DWAF has made allowance for future developments in their planning, and include 3 more power stations and two CTL facilities as well as associated infrastructure to support these developments. The DWAF is confident that there will be enough water for the proposed developments
7.	Is there sufficient infrastructure to provide water and	Mr Percy Ngidi,	Comments during the	As part of the pre-feasibility study an

	COMMENTS, QUESTIONS AND ISSUES	COMMENTATOR(S)	SOURCE	RESPONSE
	does that form part of this EIA?	Department of Environmental Affairs and Tourism (DEAT)	authority focus group meeting, 3 October at Machauka Lodge	estimation of infrastructural needs are determined. Any future water infrastructure development will undergo normal procedures such as EIAs – these are not included in this specific EIA, but will be administered by the DWAF when required.
8.	Who is responsible for transporting water from one point to another?	Mr Percy Ngidi, DEAT	Comments during the authority focus group meeting, 3 October at Machauka Lodge	The transporting of water is the responsibility of DWAF. Eskom provides the DWAF with its planning scenarios and the DWAF incorporates these future plans into its planning. The DWAF will confirm the availability of sufficient water when the pre-feasibility study has been completed.
9.	Could the DEAT please receive the Draft Scoping Report of this study for commenting by the various relevant divisions within the DEAT?	Mr Percy Ngidi, DEAT	Comments during the authority focus group meeting, 3 October at Machauka Lodge	Yes, draft reports will be made available.
10.	A representative of the DWAF reminded all stakeholders about the Lephalale Water Summit held in July 2008 where it was recommended that a task team be established to coordinate integrated planning that will, amongst others, assist with commenting on EIAs. Another recommendation from the summit was that an Environmental Management Framework be compiled to deal with the future planning of Lephalale and the surrounding district.	Ms Allison Matthys, DWAF and Mr Werner Comrie, Ninham Shand on behalf of DWAF	Comments during the authority focus group meeting, 3 October at Machauka Lodge	Lephalale LM responded that interaction with the provincial environmental authorities is taking place to implement the proposed recommendations.
11.	Will the proposed ash dumps be rehabilitated?	Ms Meisie Manthata Lephalale LM	Comments during the authority focus group meeting, 3 October at Machauka Lodge	Yes, it is a continuous rehabilitation process on site, which includes the application of top soil and revegetation of the ash dump

	COMMENTS, QUESTIONS AND ISSUES	COMMENTATOR(S)	SOURCE	RESPONSE
12.	The local knowledge of the area and its people is important for the EIA. The DEAT would like to see the local circumstances and the proposed impacts to it well reflected in the EIA studies.	Mr Percy Ngidi, DEAT	Comments during the authority focus group meeting, 3 October at Machauka Lodge	Noted.
13.	Lephalale LM is currently reviewing its Spatial Development Framework. In terms of proposed development – the proposed developers, its consultants and the District and Local Municipality should be in continuous contact to ensure, for example, that the same information (such as population statistics) is used throughout all the various studies.	Mr Leonard Sole, Lephalale LM	Comments during the authority focus group meeting, 3 October at Machauka Lodge	Noted.
14.	Lephalale LM is confident that they can face all challenges ahead that will be provided by the proposed developments, however, the municipality must be included in planning so that proper integration and municipal planning can take place.	Mr Leonard Sole, Lephalale LM	Comments during the authority focus group meeting, 3 October at Machauka Lodge	Noted.
15.	Does Steenbokpan have the infrastructure to handle general or hazardous waste?	Mr Waldo Last, Waterberg DM	Comments during the authority focus group meeting, 3 October at Machauka Lodge	The waste site in Lephalale is not licensed and therefore Matimba power station takes its waste to Thabazimbi. Matimba's hazardous waste is disposed of in Gauteng. Eskom proposes to apply for a combined general waste site with temporary hazardous waste storage for the Matimba and Medupi power stations. This could potentially be utilised by the proposed new power stations.
16.	Will Eskom build a clinic?	Mr Waldo Last, Waterberg DM	Comments during the authority focus group meeting, 3 October at Machauka Lodge	Eskom provides clinics and similar facilities at all its power stations.
17.	The public participation office will contact Lephalale LM		Comments during the	These municipalities undertook to

	COMMENTS, QUESTIONS AND ISSUES	COMMENTATOR(S)	SOURCE	RESPONSE
	and Waterberg DM to get a list of relevant officials in the		authority focus group	provide this information.
	relevant divisions to become involved in this EIA.		meeting, 3 October at	
			Machauka Lodge	
18.	How does the size of the proposed power stations		Comments during the	Eskom responded that it is more or
	compare to Matimba power station?		authority focus group	less the same size.
			meeting, 3 October at	
			Machauka Lodge	

The meeting was closed at 13:05

Please verify that your contribution at the meeting was correctly captured. Should you wish to notify us of any discrepancies, please contact Anelle Odendaal or Andre Joubert, Zitholele Consulting: Tel (011) 254-4855 or 254-4987, Email: <u>aodendaal@zitholele.co.za</u> or <u>Andrej@zitholele.co.za</u>.

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# Agenda

(Eskom)

):20	Objectives of the meeting (2C)	
):25	Overview of the proposed project	
):40	Approach to the EIA process (NS	
	Public participation (2C)	
.:20	General discussion	
2:00	Next steps and closure (ZC)	







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# **Objectives of the Meeting**

- To provide authorities with an overview of the proposed project
- For authorities to raise issues of concern and suggestions for enhanced benefits
- For authorities to comment on the technical and public participation processes of the EIA
- For members of the EIA team to gather first-hand insight into issues of concern and suggestions for enhanced benefits

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# Approach: **Study Approach**

- Scope of Services
  - Facilitate identification of candidate sites for coal-fired power stations
  - Undertake EIA process in accordance with NEMA
  - Facilitate compliance with relevant & related legislation
  - Ensure site selection, layout and design informed by environmental (biophysical, social and economic) considerations





# Approach: **Team Structure**

Ninham Shand – Lead Consultants

- Air Quality Assessment
- Airshed Planning Professionals (Hanlie Liebenberg Enslin)
- Noise assessment
- Jongens Keet Associates (Derek Cosijn) Visual Impact Assessment
- SEF (Eamonn O'Rourke)
- GCS (Andrew Johnstone)
- Terrestrial fauna and flora

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NTRHA- NS 84444	Approach: Team Structure cont.
to all	<ul> <li>Aquatic fauna and flora</li> <li>Golder Associates (Alan Cochran)</li> </ul>
11	<ul> <li>Heritage Impact Assessment</li> <li>Northern Flagship Institute (Johnny van Schalkwyk)</li> </ul>
	<ul> <li>Land use planning</li> <li>Winterbach, Potgieter &amp; Associates (Wim Jacobsz)</li> </ul>
	<ul> <li>Toxicology</li> <li>Infotox (Willie van Niekerk)</li> <li>Socio-economic survey</li> </ul>
@Eskom	Urban Econ (Ben van der Merwe)



# Approach: Team Structure cont.

- Social Impact Assessment
   ECV Assessment (Lisa van der Merwe)
- Risk Assessment
   Riscom (Mike Oberholzer)
- Agricultural Potential
   Ivuzi (Alta van Dyke)
- Traffic
  - Ndodana Cosulting (Louis Roodt)
  - Public participation
     Zitholele Consulting

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## Approach: Public Participation Process

- It is a process in the EIA that is regulated under NEMA
- It is to obtain and share information and to verify that comments have been considered

#### Public participation is:

A process leading to a joint effort by stakeholders, technical specialists, the authorities and the application who work together to produce better decisions than if they have acted independently



- To assist in raising issues of concern and suggestions for enhanced benefit,
- To verify that their issues have been captured

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### Approach: Public Participation Process

# Roles & Responsibilities

- Applicant Eskom:
- Need to understand that consultants are independent, neutral facilitators in service of the public
- Must demonstrate genuine desire to hear views of public and specialists

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of issues Not de-emphasizing concerns with technocratic justifications

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# Approach: Public Participation Process

Roles & Responsibilities Public participation practitioners – Zitholele Consulting:

Clear demonstration of <u>neutrality</u>

Making available information

- In service of the stakeholders ensuring stakeholder comments are fairly considered in the process

### $\checkmark$ Record the process and comments

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# Approach: Public Participation Process

- Key documents available in English and Afrikaans
- Reports available
   At key public locations
  - On the Web



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NS.

# **Authority Requirements**

- Each authority to outline:
- Legislation relevant to project

Permit/approval procedure

- Information available to EIA team
- Key information required from EIA team
- Involvement in the EIA process (timing and nature)



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Electricity demand and supply – key challenges		
<ul> <li>Demand for electricity continues to increase, resulting in South Africa approaching the end of its surplus generation capacity</li> </ul>		
1st challenge: Avoiding mismatch between demand and supply		
<ul> <li>Excess capacity - stranded resources</li> </ul>		
<ul> <li>Capacity shortage - constrained economic grow th</li> </ul>		
<u>2nd challenge</u> : Correct choice of capacity to be constructed. The available options differ dramatically in terms of:		
<ul> <li>Cost (construction and operating)</li> </ul>		
<ul> <li>Lead time to construction</li> </ul>		
- Environmental impact		
<ul> <li>Operating characteristics (for example: peaking, baseload)</li> </ul>		
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# **Regulatory processes**

#### **Environmental Impact Assessment**

- Eskom is developing options to supply the electricity need. The EIA is an important step in determining the viability of a specific option.
- The EIA is on the critical path (in terms of the schedule) in developing a power station.
- This EIA is for two coal fired power stations of approximately 5400 MW capacity each.
- A separate EIA will be undertaken for the required transmission lines, the two processes will run in parallel as far as possible.

#### Other authorisations

Applications for authorisations and permits required from other Authorities - for example with respect to water, land use zoning, generating license - will be made at the appropriate stage during the project

initiation and the second s

## **Expected Technical Parameters**

- 6 x 900 MW (nominal) = 5400 MW
- · Pulverised fuel (pf) fired, based on the newer more efficient super critical technology as used for Medupi/Kusile Dry cooled (Note, photos show direct dry cooled, indirect dry cooling, employing cooling towers, might be used)
- Flue Gas Desulpherization will be installed
   Low NOx burners will be used





	Summary
•	40 000 MW + additional generating capacity needed up to 2025, this trend continues after 2025.
•	In addition to the existing approved base load stations additional base load power stations need to be constructed.
	Coal 3 and Coal 4 are developed as options for base load coal fired power stations in the Waterberg, each with a capacity of up to 5400MW. The decision to build will be made by Eskom Board, taking the environmental and other inputs into account.
•	Three sites have been identified close to the Waterberg coal fields. These sites will be evaluated from an Environmental perspective. The aim is to complete feasibility studies for two power stations on the two most suitable of the three sites, considering environmental and various other issues.
	The approval by Eskom Board and the timing of the construction of Coal 3 & Coal 4 is dependant on various ever changing factors, amongst other the actual Electricity growth and the feasibility of these projects in relation to other available options.
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