# PROPOSED POWER STATION AND ASSOCIATED INFRASTRUCTURE IN THE WITBANK AREA

## Public Meeting

| *Date* | *Time* | *Venue* |
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| 04 September 2006 | 18:00 – 20:00 | Protea Hotel, Witbank |

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| An open house was held between 16h00 and 18h00 in the same venue. **An attendance register for the open house and meeting is shown on the last page of the minutes.** | |
| **1. Welcome and Introduction** | |
| Ms Karen Shippey (KS) welcomed everybody and introduced the Eskom representatives and the Ninham Shand team members. The purpose of the meeting was explained as being to describe the EIA process, present the draft scoping report and to provide an opportunity to identify issues, questions and concerns of the public. | |
| **2. Overview Electricity Supply and Demand** | |
| Mr. Tony Stott (TS) presented an overview of Electricity supply and demand in the country.<br><br>The presentation covered the following points:<br>• The role of the governmental policy documents was explained<br>o DME's Integrated Energy Plan;<br>o The National Integrated Resource Plan (NIRP); and<br>o Integrated Strategic Electricity Plan (ISEP).<br>• The demand requirements were outlined and the efforts for demand side management<br>• The renewable energy research and pilot schemes were discussed<br>• The available coal, gas and nuclear technologies being used were outlined<br>• The strategic rationale for construction of coal-fired power stations was discussed. Among other reasons, this selection included the fact that coal-fired power stations were selected due to the relatively short period within which they could be built and since large coal deposits were available.<br>• Three areas were identified,<br>– Lephalale (EIA completed)<br>– Witbank (EIA process initiated)<br>– Vaal South (EIA process initiated)<br>• The meeting was advised that these three projects are not alternatives if electricity demands were to be met. The sites were selected based on resources and timelines in which resources could be accessed. | |

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| Mr Malcolm Sutill (MS) noted that everything was calculated according to the electricity demand and peak capacity and noted that the focus should be on lowering the demand for electricity. He also mentioned that if Eskom is keen on efforts to lower electricity usage they should be focussing on it more strongly across the country. He asked whether Eskom has the pollution under control at the other coal-fired station power stations that were mentioned.<br><br>TS responded that calculations are done based on energy demand, and not peak demand, which is the total amount of energy needed in each week. He agreed that peaks need to be reduced. He indicated that 2006 could have been 1000 – 1500 MW higher if demand management interventions had not been implemented.<br><br>TS responded to the question relating to pollution by saying that Eskom compared the emissions of the 90's to the present day, and they are using modern technology to reduce the emissions.<br><br>MS noted that Cape Town was rather black at times, and that must have saved a lot of electricity.<br><br>TS responded by saying that Cape Town only had power cuts for 4 days in February, which constitutes one period of blackout. Furthermore, power cuts only took place on the 8th of April, 28th of April and 5 June was the last blackout in Cape Town. He said that no blackouts were experienced in winter. He noted that Cape Town was very successful in terms of energy conservation and that was mainly due to the resident's response.<br><br>MS further queried the demand management initiatives saying that Eskom should run demand management programmes across the entire country.<br><br>TS responded that they had an active nationwide demand management initiative. He indicated that the Department of Minerals and Energy (DME) had a monthly drive whereby people were encouraged to save electricity. He also noted that the SABC monitor of the Western Cape demand for electricity had been very successful. He commented that in the winter months Eskom was aiming to implement it for the entire country. | |

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| Mr Eric Ndhlovu (EN) asked why the presentation indicated Majuba Power Station as shutting down.<br><br>TS replied that he didn't recall it being shut down. He said that during the 1980's it was recognised that the demand was not as high as was estimated so construction was stretched out over a longer period. Construction was finalised in 1995 and all 6 units were completed. Coal supply to the power station was then constricted, which required coal to be transported to the power station. Majuba then wasn't operated at the same capacity as the other power stations – only when it was absolutely essential. TS further added that currently all power stations were being operated at full capacity. Majuba had moved from operating at 25% to 60% and in the next 2 – 3 years is expected to operate at 90%. | |
| MS noted that he finds the chart depicting the life span of power stations frightening because it seems that everything tails off in 2025 and asked whether a 25-year life span is realistic for a power station.<br><br>TS said that his perception is incorrect, and proceeded to explain the graph in detail. TS showed that the graph illustrates a 40 – 50 year life span for the power station. He said that there were many power stations built in the 1970's – 1980's Eskom rapidly built power stations and assumed a 50 year life span which meant that several of them come to the end of their lifetime around the same time. He added that some of the older power stations were being refurbished to extend their life span to 60 years. | |
| Mr Wonderboy Mahlalele (WM) indicated his concern about greenhouse gas emissions due to the burning of coal during the operational stage of the power station. TS replied that there are not truly effective mitigation measures available anywhere in the world for greenhouse gases. He said that the only way to mitigate was to capture Carbon dioxide ($CO_2$) and to store it, but that this was not possible commercially. He emphasised that there is ongoing research into this and Eskom participates in the research. | |

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| Mr D Roberts (DR) inquired whether Eskom envisaged importing electricity. TS responded that a longer term project (in approximately 15 years) was underway in partnership with other country governments to construct a transmission line from the Democratic Republic of Congo (DRC) to South Africa. He added that Cahora Bassa in Mozambique was also an option. DR also questioned whether coal powered electricity from Botswana is an option. TS replied that an agreement would need to be made with the Botswana government to investigate whether this is a viable option. | |
| **3. Technical Appreciation** | |
| Mr Suren Rajaruthnam (SR) provided a technical overview of the proposed power station. He also discussed some of the technical and process alternatives available.<br><br>The presentation highlighted the following aspects:<br>• Technical Parameters and the process flow of a coal-fired Power Station<br>• Typical Power Station Site Layout<br>• Typical Technology: Coal and ash Handling and Water Treatment<br>• The proposed coal-fired power station would have a nominal capacity of 5400 MW (6 X 900 MW) capacity. The proposed power station would be fueled by pulverised fuel (pf) and would be dry cooled<br>• All Eskom stations are Zero Liquid Effluent Discharge (ZLED) and waste water will be dealt with on site and recycled:<br>• Flue Gas Cleaning and Flue Gas Desulphurisation would be considered to reduce airborne pollutants<br>• Ash dump requirements were outlined.<br>• All Eskom stations are Zero Liquid Effluent Discharge (ZLED) and waste water will be dealt with on site and recycled<br>• Auxiliary cooling provisions were outlined | |
| WB requested that SR briefly explain how and when ash dumps are rehabilitated and how the water is treated. SR explained that a dry ash handling system was utilised whereby the ash is treated and conveyed to the dump where it is spread out. He said that the dump is managed in terms of dust and as the dump footprint progresses the ash dump gets rehabilitated with topsoil and re-vegetated.<br><br>SR explained that in terms of water treatment the raw water goes through a filtration process, to produce demineralised water for the boiler. Runoff is captured in dams and goes back for cleaning and is also used on the ash dump for dust suppression. | |

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| WM asked SR to briefly explain the concept of an ash management plan and SR replied that the plan has been set out to manage the 50-year life span of the power station. The plan describes the civil engineering process of how the dump should be developed and how ash is suppressed and compacted. He said that the height and land available determines what the plan includes. He indicated that the plan had not been written yet, as the project is still in its feasibility stage. He said that the plans are very station specific. | |
| MS inquired whether pollution as a topic will be covered and KS requested that the question be held until later in the meeting when the presentation by KG could possibly answer this question. | |
| MS asked what 3 million litres of water would be in tons. SR responded that it was equivalent to 3 000 tons.<br><br>MS further asked whether there was a difference in terms of water usage when reducing the sulphur content of the emissions. SR replied that the 3 000 tons of water only covers the dry cooling process, it does not include desulphurisation.<br><br>MS requested that more information regarding water usage for desulphurisation be provided in the documentation. | |
| **4. EIA process** | |
| Mr Brett Lawson (BL) explained that the Environmental Impact Assessment (EIA) process being followed would be undertaken in accordance with the Environment Management Act (ECA) and not the National Environmental Management Act (NEMA) as the application was submitted before the NEMA EIA Regulations were promulgated. A brief explanation of the EIA process in terms of ECA was provided.<br><br>BL explained that the building of this power station was a project of considerable magnitude and the process is being undertaken as comprehensively as possible. | |
| **5. Site Selection Process** | |
| BL presented an overview of the site selection process for the proposed power station. The presentation highlighted the following aspects:<br>• Preliminary site selection criteria included: proximity to coal (within 30km), site needed to be off the actual coal resource, air quality and at least 10km away from settlements | |

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| • Within these constraints an area was identified- 8 sites were located. These were ranked using a multi criteria decision analysis tool<br>• Six site selection criteria then used to determine which of these 8 sites should be investigated further. The criteria were: operational logistics, land use, geology/geomorphology, ecology, local air quality and socio-economics<br>• Three sites showed as being worthy of taking forward for more detailed investigation. Two of the sites were consolidated into Site X, due to their proximity and similarity to each other, and another became Site Y | |
| Dr Jan Visser (JV) mentioned that 2500 ha is required for the power station, but that site X appears to be almost double that size (approximately 5000 ha). He noted that in the site selection two sites were put together and felt that it did not make sense to do this. BL responded that both the sites were similar and that they had been amalgamated to increase the flexibility regarding where the power station could be sited across that area.<br><br>JV asked whether it is possible that only 50% of site X would be used. BL replied that that was the team's understanding, the entire site will not necessarily be used. | |
| Mr Nhlanhla Mkhonto (NM) asked whether the land that is currently being used for agriculture would be restored to its previous use, post power station. BL responded that it might be possible to lease the land back to the farmers or perhaps former owners. | |
| EN asked what would happen to the people currently living on Site X should it be selected by Eskom. BL replied that this would be covered during the land acquisition process and that it would come down to an arrangement between Eskom the landowners and the people living on the farms. Furthermore, BL stated that this was an issue that needed to be dealt with in the study.<br><br>EN then noted that as in the case of New Largo Coal mine, it also needs to be ensured that these people are looked after. | |
| JV enquired where the coal would be extracted if site X was selected. BL replied that the answer would emerge from the investigations that Anglo Coal is currently undertaking and that the teams were trying to find commonality between the two processes. Furthermore, BL commented that the position of the mine would be optimised by the mining house based on the resource and the final positioning of the power station.<br><br>SR added that the first step is for Eskom to decide on a site location and then the mine plan will follow from there. | |

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| MS commented that an integrated plan and process needed to be undertaken that includes all related infrastructure as this was clearly not being done. Furthermore, he queried why Witbank had been selected and whether there were no other places with coal resources. He further mentioned that the high level area selection seemed suspect in his mind as it seemed to only consider the coal resource. He added that it had been mentioned that air pollution was an important factor and wanted to know what data Eskom is utilising and if the data available for scrutiny.<br><br>BL responded that the Witbank region had been selected by Eskom due to the coal resource which was fundamental to a coal fired power station. Ms Deidre Herbst (DH) explained that due to time constraints in terms of construction and electricity supply Eskom had to focus on where they knew the mines were and in terms of getting a licence & permit. The next three power stations will be brought online where there is coal available within the required timelines.<br><br>BL said that for the site selection process within the region, an air quality specialist had been consulted and that they understood the air quality and related issues very well. He also said that the specialist study would be based on the information that has been collected over many years and on previous studies done in the Witbank area. BL said that he was confident in the specialist input and the modelling they were using.<br><br>MS requested that the air quality data be provided so that it could be perused in detail. DH responded that air quality data is generated by the municipalities as well as Eskom monitoring sites which have been in operation for the last 20 years. She explained further that a model is used to extrapolate, if additional sources of pollution were added, to investigate how it would impact on the air quality. She also mentioned that the model is not 100% accurate and tended to be over-conservative and pollution is overestimated. She said that despite this the model is very reliable, and good enough to base decisions on. In terms of the current process Eskom have enough data do base decisions on, but it can be increased.<br><br>MS wanted to know where he can see this data and DH responded that the EIA would briefly touch on this and that the specialist study would go into more detail regarding this issue. BL suggested that MS consider the Terms of Reference (ToR) for the air quality specialist to ensure that all appropriate aspects were included in the study. He added that the complete findings of the specialist study would be presented in the Environmental Impact Report. MS then stated in general that the people need to make a big issue of this on the Highveld. | |

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| Ms Jennifer Louw (JL) stated that if people were to be relocated the municipality should be engaged. In addition the people in the informal settlements should be informed of the project. BL responded that public engagement will also be taking place in Phola and he requested assistance to ensure that the right leaders are identified to the team to ensure that the information was properly distributed. | |
| WM asked whether people who are being moved would be compensated accordingly. BL replied that landowners would be compensated. The people living and working on the farms would need to be considered in the expropriation negotiations and must be dealt with in a considerate manner. | |
| WM also wanted to know whether the visual impact of the power station was considered during site selection. BL stated that it was and referred to a table in the Draft Scoping Report (DSR). He said that the social, heritage and visual impacts were all considered.<br><br>WM asked whether this information was contained in the DSR and BL replied that is was, but that the Scoping Report only determines the scope of work for the specialist investigations and that no studies had yet been undertaken. | |
| EN noted that the presentation showed that initially there were 8 identified sites reduced down to 2. He asked whether the affected community had been engaged as people might want to do improvements to their homes etc. BL responded that interaction had taken place with landowners, but not to the level that EN was referring to. He said that this would follow and it needed to be determined how wide the scope would be for community engagement so that in-depth and concentrated engagement could now commence.<br><br>KS confirmed that site X and Y are mostly farms and BL added that there is a school on site Y, but other than that it is sparsely populated. | |
| **6. Draft Scoping Report** | |
| Mr Kamal Govender presented an overview of the Draft Scoping Report. The presentation highlighted the following aspects:<br>• Purpose of the Scoping Phase in an assessment<br>• Project level alternatives which were being considered:<br>o Site alternatives<br>o Layout alternatives<br>o Combustion alternatives | |

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| o Coal conveyor corridors to be considered. Mine to be looked at as part of a separate EIA<br>o Ash management alternatives<br>o Emission management alternatives<br>o Cooling system alternatives<br>o Water supply pipeline routing corridors<br>o Access road alignment corridors<br>• Identified impacts for specialist investigations<br>o Air quality impacts<br>o Noise impacts<br>o Visual impacts<br>o Impacts on terrestrial flora and fauna<br>o Impacts on aquatic ecosystems<br>o Groundwater impacts<br>o Risk assessment<br>o Heritage impacts<br>o Impacts on agricultural potential<br>o Socio-economic impacts<br>o Planning impacts<br>o Traffic impact assessment<br>o Geotechnical constraints | |
| EN noted that the water supply to Kendal Power Station and the residents in the surrounding area should not be affected by the needs of the new power station. KG responded that the Vaal River Eastern Sub-System Augmentation Project (VRESAP) would supply water to the power station and that because of this it was highly unlikely that the water users would be affected by the proposed power station. | |
| **7. Public Participation** | |
| KS presented an overview of the process to date and the opportunities for public input. She emphasised that it is important that everyone consider the scope of the proposed investigations and the specific terms of reference for the specialists to determine whether it is acceptable to them. She re-iterated that there are still various opportunities for input, but that as much public comment is encouraged. KS then outlined each of the four phases of PPP and indicated what each phase entailed. | |

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| MS inquired what the difference would be between the EIA process under the new regulations of NEMA and the old ECA process. BL said that essentially in terms of information gathering and presentation it is still the same, but that NEMA differs in terms of the process itself (being made up out of either a Basic Assessment or Scoping and EIA assessment). He further stated that this differentiation between the processes does ultimately not have a significant impact for a project of this scale. | |
| EN wanted to know whether the municipality was engaged during the compilation of the Scoping Report. KS responded that the municipality had been contacted early in 2006 and kept appraised of the project ever since. She said that several officials and councillors were registered on the database and been sent information directly. She said that the municipality was encouraged to comment. | |
| Ms Sharon Clark (SC) wanted to know when Eskom planned to see the various power stations in operation. SR replied that in terms of planning they are looking at the period between 2010 – 2020. He said that as soon as environmental authorisations and Eskom Board approval were received the construction could be initiated. He said that it would take approximately 4 years from approval before the first unit of the power station could be expected to be in operation. | |
| Mr Stan Makena (SM) enquired how many jobs would be provided by the power station. He noted that families employed by existing landowners would be needing jobs when the farms are expropriated and that Eskom should consider this thoroughly. SR replied that during construction there would be between 2000 – 9000 jobs and during operation 600 – 800 permanent positions and contracted business positions could be available. He added that the mine in close proximity would also provide jobs. | |
| **7. General Discussion** | |
| MS raised various issues which he would like to be responded to in the EIA Report. These issues included the following:<br>• Why coal is proposed instead of nuclear technology. People seem to be rejecting nuclear technology, while coal releases $CO_2$ into the atmosphere.<br>• Why Witbank has been chosen and why coal is the preferred technology.<br>• Which alternative technologies had been considered.<br>• Further information relating to air pollution and the air quality data. | |

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| • Eskom needs to strive towards getting rid of the Oxides of Sulphur ($SO_x$) and the Oxides of Nitrogen ($NO_x$) in the emissions from coal fired power stations.<br>• Socio-economic aspects are critical and must be dealt with adequately.<br>• Job creation should not be looked at only in terms of this power station, but jobs can be generated across the country due to the additional electricity capacity. | |
| EN noted that there were graves on the identified sites and asked where they would be moved. KS replied that graves are categorised under heritage sites and if the graves were younger than 60 years the approval of the family is required before they could be moved. She further stated that if the graves are older than 60 years an attempt needs to be made to find family to obtain permission for them to be moved. Lastly, she added that no construction is permitted on graves and the moving would be undertaken in accordance to the family's wishes including the allowing for any necessary ceremonies. | |
| **8. The Way Forward** | |
| KS reminded the meeting of the opportunities for input and encouraged everyone to submit their comments to Ninham Shand by 15 September 2006. No additional questions were raised. The meeting was closed at 20h10. | |

# PROPOSED POWER STATION AND ASSOCIATED INFRASTRUCTURE IN THE WITBANK AREA

## ATTENDANCE REGISTER (OPEN HOUSE AND PUBLIC MEETING)

| NAME | ORGANISATION |
|---|---|
| Victor Bohale (VB) | Makroti Enterprises CC |
| Sharon Clark (SC) | BHP Billiton |
| Emmau Dan (ED) | EMJU Const. |
| Adie Erasmus (AE) | Clean Stream Environmental Services |
| Bongi Malinga (BAM) | Bongi & Themba Projects |
| Wonderboy Mahlalela (WM) | Margea Industrial Services: Environmental Consultants |
| Elphas M Mathebula (EMM) | Councillor |
| Nhlanhla Mkhonto (NM): | Xstrata Coal SA |
| Hilda Mtshali (HM) | Private |
| Deon Nel (DN) | Klipfontein Farm Owner |
| Johan Raath (JR) | Klipfontein Farmer |
| D. Roberts (DR) | Private |
| P.J Roberts (PJR) | Anglo Coal Geological Services |
| N. Shongwe (NS) | Private |
| Lucas Skosana (LS) | Hartebeesfontein Farm Owner |
| Malcolm Sutill (MS) | WESSA |
| Annis Mohr Van Rooyen (AVR) | Haartebeesfontein Farm Owner |
| **Eskom Team** | |
| Deidre Herbst | ESKOM |
| Tony Stott | ESKOM |
| Tobile Bokwe | ESKOM |
| Bruce Stroud | ESKOM |
| Suren Rajaruthnam | ESKOM |
| **Environmental Team** | |
| Brett Lawson | Ninham Shand |
| Kamal Govender | Ninham Shand |
| Karen Shippey | Ninham Shand |
| Natanya Bezuidenhout | Ninham Shand |
| Gift Maganganye | Bohlweki Environmental |