



# PROPOSED WIND ENERGY FACILITY IN THE WESTERN CAPE PUBLIC PARTICIPATION MEETING

## RECORD OF EIA PHASE PUBLIC PARTICIPATION MEETING

CAPE TOWN

Held on  
Friday 25 January 2008,  
Koeberg Visitors Centre, Cape Town

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Please address any comments to Shawn Johnston at the above address.

## **EIA PHASE PUBLIC PARTICIPATION MEETING: KOEBERG VISITORS CENTRE, CAPE TOWN**

**Venue:** Koeberg Visitors Centre

**Date:** Friday, 25 January 2008

**Time:** 09h00

### **WELCOME, INTRODUCTION AND APOLOGIES**

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Shawn Johnson, process facilitator from Sustainable Futures, thanked everybody for their attendance. He welcomed all the stakeholders to last public meeting of the Environmental Impact Assessment (EIA) process. The purpose of this meeting was to provide feedback to stakeholders on the outcomes of the EIA process and the impact assessment studies, to record further comments on issues of concern, and to hear feedback from stakeholders who have already had an opportunity to study the Draft EIA Report (which is available at various venues and on the websites of Savannah Environmental and Eskom). The comments and concerns received at this meeting would form part of the consultation record in the Final EIA Report, which will be submitted to the Department of Environmental Affairs and Tourism (DEAT) and Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) for review and decision-making.

### **MEETING ATTENDEES**

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- » Francois Williams, Sake24 (Die Burger)
- » Warren Dreyer, Department of Water Affairs and Forestry
- » Flemming Schlier, Vestas
- » N. Polland, Oelsner Group
- » Lizelle Strol, South African Civil Aviation Authority
- » J. Pretorius, South African Civil Aviation Authority
- » Mike L-Thurgood, NACA
- » Wouter Roggen, City of Cape Town
- » Andre Otto
- » H. Oelsner, Oelsner Group
- » Noma Qase, Department of Minerals and Energy
- » Nico Gewers, Eskom Generation
- » Morore Mashao, Eskom Generation
- » Zuki Qina, Eskom
- » Isaac Blou, Eskom
- » M. Maass, Eskom
- » K. Nans, Eskom
- » Linda Khuluse, Eskom

- » Trevor Cairns, Eskom
- » Patience Selepe, Eskom
- » G. Langeveld, Eskom
- » M. Eygelaar, Eskom
- » S. Visagie, Eskom
- » Ayanda Nakedi, Eskom Foundation
- » Karen Jodas, Savannah Environmental (Pty) Ltd
- » Grant Little, EcoSecurities
- » Kinesh Chetty, EcoSecurities
- » Shawn Johnston, Sustainable Futures ZA
- » René Ngwenya, Sustainable Futures ZA

## **APOLOGIES**

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Apologies were received from the following parties:

- » Brian Jones, City of Cape Town Electricity Department

## **BACKGROUND & TECHNICAL ASPECTS REGARDING THE PROPOSED PROJECT**

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Shawn Johnston provided an overview of the draft agenda. He noted that negotiations are currently underway with various landowners with regards to the potential for Eskom to purchase their land (should this project be approved). This process of negotiation is, however, separate to the EIA process and is not a process which will be reported on through the public meeting.

Shawn Johnston explained that purpose of the meeting was to provide feedback to the community and to communicate the EIA findings. He referred to the maps/posters which were available for viewing at the meeting, and invited the community to take the opportunity to comment on the proposed project.

Shawn Johnston informed the meeting that representatives of local government, provincial and national government visited the area the day before as a visual inspection of the various aspects of the proposed wind energy facility project. He confirmed that the site visit focused on the proposed transmission line alignments, the Skaapvlei road and the proposed site for the wind energy facility. He further mentioned that this site visit was not a public site visit, but was intended as a specific site visit for those officials who deal with the authorisation process of the EIA process.

Shawn Johnston then introduced Karen Jodas, the lead environmental practitioner, who was responsible for the compilation of the Draft EIA Report.

A formal presentation was delivered to the attendees. This presentation provided an overview of the Environmental Assessment (EIA) Process and feedback of the findings of the EIA Phase and the draft EIA report (presented by Karen Jodas). A copy of the presentation delivered is attached for reference.

Grant Little, a representative from EcoSecurities was provided an opportunity to explain how the proposed wind energy facility would be linked to Eskom's Cleaner Development Mechanism (CDM) initiatives (refer to the attached presentation).

After the completion of the presentations, the facilitator opened the floor for comments and questions of clarification.

## **DISCUSSION SESSION**

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Andre Otto	<p>The DEA&amp;DP Guideline for siting wind energy facilities in the Western Cape were used for the siting process for this project. The Guidelines is very specific on environmental issues. He pointed out that it is vital to consider the social and economic issues, as well the environmental issues in a regional/strategic assessment.</p> <p>Analysis of accurate costing with regard to economics and finances is important to consider as it will give the private sector the same opportunities.</p>
Karen Jodas	<p>The Regional Assessment conducted did consider the Western Cape Department of Environmental Affairs and Development Planning's (DEA&amp;DP) guideline. It was acknowledged that the guideline pointed to areas for development, and the criteria relevant to a wind energy facility were overlain to provide reasonable/workable results.</p>
Morore Mashao	<p>The costing and performance of the proposed facility is guided by the Klipheuwel pilot/demonstration project. In addition, all markets have been scanned for the best costings and best returns on investments.</p> <p>Eskom expenditure is governed by the PFMA. The AsgiSA guidelines are used for the international and local companies participation/return in this process.</p> <p>Eskom's tender process is intended to be as wide as possible to ensure competitiveness.</p>
Wouter Roggen	<p>He enquired about the 'unpopulated' top apex of the triangle – that is with the site being roughly triangular in shape. Will turbines be established here at a later stage?</p> <p>What is the cost per kilowatt hour sent out of the facility?</p>
Morore Mashao	<p>It is difficult to quantify the optimum number of turbines on a site. From assessments of other facilities, it is known that with increased numbers</p>

	<p>of rows of turbines, plants lose up to 20% of their efficiency due to wind-shade effects. For this site, it is not anticipated that more than 100 turbines will be constructed in order to not lose efficiency.</p> <p>The cost will be in the order of 68c per kilowatt hour.</p>
Herman Oelsner	<p>The site is outside the original study area that was assessed through the DEA&amp;DP guideline/study. He raised a concern about the construction of 100 turbines and noted that the size of this facility might have negative consequences for other independent power producers in the future as too many turbines in one area will drive people away from wind energy. He argued for small wind energy facilities and mentioned that large-scale wind energy facilities like those in the USA have proven to be ineffective. He would like to see 10 turbines in one facility as the optimum number.</p>
Karen Jodas	<p>The proposed site does lie outside of DEA&amp;DP pilot area used for developing its wind energy facility guidelines. The DEA&amp;DP guidelines was used for the new study area. Eskom selected a site that met their criteria in terms of technical needs and wind resource, and complies with the DEA&amp;DP environmental criteria.</p> <p>The guideline also makes mention of small facilities and larger facilities – this facility would be categorised as a large-scale facility.</p>
Mike L-Thurgood	<p>He urged the meeting not to apply European/USA standards in the discussion of a local wind energy facility. Mike did not support the sentiment of Herman Oelsner. He also noted that there should be no obstacles with visual or noise impact as the turbines are to be erected 50km from the small towns.</p>
Wouter Roggen	<p>He agreed that there are cases abroad where large installations of wind turbines have been erected. However, these have generally consisted of more than 4 rows of turbines, and also the lattice-type structures have also typically been used. Since the proposed wind energy project will consist of 4 rows, the impact can not be easily compared to these other vast areas covered by turbines.</p>
Wouter Roggen	<p>What outputs are expected from each turbine?</p>
Morore Mashao	<p>It is anticipated that 2MW turbines will be installed, but is dependant on the suppliers and their technical specifications. Eskom is looking at the best and latest product and the best return on its investment. The type of turbine, the size and efficiency will be further explored with suppliers and as part of the tender process.</p>
Mike L-Thurgood	<p>He enquired about the number of blades per turbine and the reason for only 3 blades instead of perhaps 5, which would improve the turbine's efficiency.</p> <p>Mike further sought clarity on the types of drive systems to be used on the wind generators. He wanted to know whether they would be</p>

	<p>gearbox or direct drive systems. How would this affect noise quality?</p> <p>How can the lifespan of the entire wind energy facility be prolonged to over 20 years? He would not support that the site be decommissioned, and that the turbines rather be replaced at the end of their useful life.</p>
Morore Mashao	<p>It is expected that suppliers will, in response to Eskom's enquiry document, provide guidance with regards to the turbine for optimum performance. This is also based on the wind speeds at the site.</p> <p>Noise levels which are considered to be acceptable have been specified, and the supplier would be required to provide guarantees in this regard.</p> <p>The lifespan of the wind energy facility would be explored beyond 20 years at the time when this is required. Wind technology improves constantly and that Eskom would devise a strategy for enhancing lifespans on such facilities. This would include the replacement of nacelles and ensuring the integrity of the structure.</p>
Mike L-Thurgood	<p>He indicated that there is a wider possibility of options regarding the lifespan than indicated in the report. He suggested that new technology is ever advancing and that this could be further explored.</p>
Koos Pretorius	<p>The main concern for aviation is from a safety perspective - the rotation of the blades could display as false targets on an aircraft's radar.</p> <p>There could be other interference with aviation, landing or surveillance equipment, and therefore the following is important:</p> <ul style="list-style-type: none"> <li>• The turbine should not be closer than 35km to a major airport;</li> <li>• The obstacle is difficult to clearly define as it is of varying geometry (as the turbine rotates);</li> <li>• Commercial aviation – minimal impact, as long as sufficient distance from airport;</li> <li>• Sports aviation of greater concern – fly slow and low;</li> <li>• Radio beacons and the associated network of equipment is most critical to not be interfered with.</li> </ul> <p>White is preferred as a visible colour from airborne aircraft.</p> <p>Lighting of the facility requires a unique method of marking, and this is detailed in the Regulations of Act No. 39 of 1962. The normal standard includes 2 lights side by side (to avoid shading by a blade), where the outline/extremities of the facility of marked. The lighting would not affect the man on the ground.</p>
Andre Otto	<p>This is a good opportunity for all organisations interested in renewable energy to come together, share ideas and ensure the industry is at its optimum.</p>
Morore Mashao	<p>Eskom has put out an enquiry document in order to receive the best input possible from worldwide sources. Eskom give their assurance to the industry that they are doing the best they can for the introduction of</p>

	renewable energy into the country. Eskom are also applying lessons learnt from their demonstration facility at Klipheuwel.
Herman Oelsner	What is the input from local suppliers, and will local components be used?
Trevor Cairns	Eskom have specific performance requirements which must be met. Where it is possible, local participation will be encouraged – specifically for the road/access construction and power line construction. Eskom are guided by AsgiSA. It is also acknowledged parts of the facility would be produced abroad due to technology, skills and turn around time during the production cycle of parts.
Mike L-Thurgood	It is interesting to note that Eskom are also involved in a pilot project for the use of solar energy. This is over an area of 4km <sup>2</sup> . If this technology was required to be used for baseload, this area would be required to increase 10-fold to over 40km <sup>2</sup> . This area of disturbance is larger than any wind energy facility.
Ayanda Nakedi	Ayanda Nakedi thanked everybody on behalf of Eskom for their participation in the meeting. She noted that she was encouraged by the questions posed and that the meeting provided an opportunity for Eskom to listen to the public and key stakeholders with insight and passion for the subject and future of wind energy in South Africa.

## **WAY FORWARD AND CLOSURE**

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Shawn Johnston thanked everybody for their participation in the EIA process and the Stakeholder meeting and encouraged all stakeholders to utilise the comments period to provide comments on the Draft EIA Report.

The meeting closed at 11h15.