

**BASIC ASSESSMENT: Broadlands Photovoltaic Power Project
Farm Broadlands, Portion 1 of 868 and Portion 15 of 689
Humansdorp, Kouga Local Municipality**



BACKGROUND INFORMATION DOCUMENT, March 2011

Public Process Consultants
Environmental Impact Assessment and
Public Participation Management

INTRODUCTION

Windcurrent SA (Pty) Ltd (the applicant), in a Joint Venture with WKN Windkraft Nord AG, is proposing the construction and operation of a 4.5 MW solar power project on Portion 1 of 868 and Portion 15 of 689, near Humansdorp, Kouga Municipality in the Eastern Cape Province. The Joint Venture Company, presently being formed, will be a South African based renewable energy company that develops, builds and operates renewable energy projects.

In terms of the 2010 NEMA EIA Regulations, as amended: GN R543, 544 and 546; promulgated under Chapter 5 of the National Environmental Management Act (Act 107 of 1998) and published in Government Gazette 33306 on 18 June 2010; a Basic Assessment is required for this project. The project requires environmental authorisation from the National Department of Environmental Affairs, prior to the commencement of activities on site. The applicant has appointed the CSIR as the independent Environmental Assessment Practitioner to undertake the Basic Assessment and Public Process Consultants will manage the public participation component of the assessment process.

PROJECT LOCALITY

The properties are located west of the Humansdorp/ St Francis Bay Road, approximately 4.5 km south of the town of Humansdorp. The sites can be accessed via an entrance directly off the Humansdorp/ St Francis Bay Road. The attached locality map provides an overview of the location of the properties under assessment.

HOW CAN I PARTICIPATE IN THIS PROCESS?

In terms of regulation 55 (1) (b) of Government Notice R 543 interested and affected parties are to request, in writing, that their names be placed on the register of interested and affected parties (I&APs). In order to register on the database complete the comment and registration form attached to this correspondence or submit your contact details (via fax or email), stating your full name, address and contact numbers to the consultant indicated in this documentation.

WHAT DOES THIS DOCUMENT TELL YOU

This document provides you, as an interested and or affected party (I&AP) with background information on the proposed project, the Basic Assessment as well as Public Participation process. It indicates how you can become involved in the project, receive information and raise issues that may interest and/or concern you. The sharing of information forms an important component of the public participation process and provides you with the opportunity to become actively involved in the environmental assessment process from the outset. The input received from I&APs together with scientific and technical investigations assists the responsible authority, in this instance the National Department of Environmental Affairs (DEA), with their decision-making.

WHAT DOES THE PROJECT ENTAIL

Windcurrent SA (Pty) Ltd is proposing the construction of a solar power project on Portion 1 of Farm 868 (measuring 307 ha) and Portion 15 of Farm 689 (measuring 164 ha) south of Humansdorp in the Eastern Cape Province (see attached locality map). The project is estimated to have a generation capacity of 4.5 MW and will entail two footprints of approximately 6.5 ha each with a total surface area of approximately 13 ha.

The project would entail the erection of an array of photovoltaic panels, mounted on metal structures fixed into the ground, using either a concrete or a deep seated screw foundation. Electrical power is generated through photovoltaic (PV) modules which convert energy from the sun into direct current (DC) electricity. The project is anticipated to have an expected lifespan of 20 to 30 years.

Sections of the PV array are wired to central inverters (which have a rated power of 500 to 2.400 kW each). The inverter is a pulse width mode inverter that converts DC electricity to alternating current (AC) electricity at grid frequency. Each inverter has a dimension of approximately 3 m x 2.5 m x 1 m up to 11.5 m x 3 m x ca. 2. 3 m.

Connecting the array to the electrical grid requires transformation of the voltage from the inverter to 22,000 V or 66,000 V. The normal components and dimensions of a distribution rated electrical substation will be required. Output voltage from the inverter is between 3~370 V up to 20.000 V and this is fed into step up transformers of 22 or 66 kV and transmitted via either above ground or underground lines to a substation over a distance of approximately 1 km.

A control facility, with a footprint of less than 20 m², providing basic services such as water and electricity would be constructed at the site. Other supporting infrastructure includes voltage and current regulators and protection circuitry.

OVERVIEW OF THE ENVIRONMENTAL BASIC ASSESSMENT (BAR) PROCESS

In terms of Regulations 543 and 544 promulgated under Chapter 5 of the NEMA in Government Gazette 33306 on 18 June 2010, the project requires a Basic Assessment because it includes, amongst others, the following activities listed in GN R 544:

Regulation 544 (Listing Notice 1)	
1. The construction of facilities or infrastructure for the generation of electricity where: ii. the output is 10 megawatts or less but the total extent of the facility covers an area in excess of 1 hectare.	It is proposed to establish a solar power plant with electricity output of approximately 4.5 MW but the total extent of the facility covers an area in excess of 1 hectare.
10. The construction of facilities or infrastructure for the transmission and distribution of electricity – (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or	It is not certain (at this early stage of the project planning process) whether or not this activity is included in the proposed project. A precautionary approach is used and the potential activity is listed. It is likely that this activity will not be applicable as there is an existing 22 kV grid on site which is the best option for the proponent to feed into the grid (as the project will only generate 4.5 MW max).
23. The transformation of undeveloped, vacant or derelict land to- (ii) residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares;	The applicant proposes to establish a solar power plant with a footprint (total area transformed) of greater than 1 Ha but less than 20 Ha.

The listed activities require authorisation from the National Department of Environmental Affairs. The CSIR has been appointed as the independent Environmental Assessment Practitioner to undertake the Basic Assessment and Public Process Consultants will manage the public participation component of the assessment process. The Basic Assessment needs to show the responsible authority, DEA, and the project proponent what the consequences of their choices will be in biophysical, social and economic terms. The steps in the Environmental Assessment Process are outlined below.

The Basic Assessment Process including Public Participation can be summarised into the following stages:

Stage 1: Notification to Authorities and I&APs (30 days)

The first stage in the process entails notification to the DEA as well as interested and affected parties (I&APs) of the intention to proceed with the BAR. I&APs are required to register their interest on the project database, within 30 days and raise issues of concern.

Stage 2: Draft Basic Assessment (BAR) for Public Comment (40 days)

The Basic Assessment is undertaken in order to identify and assess potential environmental impacts, both positive and negative, that may be associated with the project activity. This includes mitigatory measures to

reduce potential negative impacts and maximise positive benefits as well as the consideration of alternatives. The Basic Assessment will include an overview of the affected environment on which the activity is to take place. Specialist information for inclusion in the Draft Basic Assessment Report has been identified as follows:

- Biophysical Site Assessment (to include vegetation and ecology), Jamie Pote, Private Consultant
- Visual Impact Assessment, Henry Holland, MapThis
- Heritage (Archaeological Assessment), Johan Binneman, Albany Museum

The Draft Basic Assessment, together with comments received from I&APs will be made available for a 40 day review period. Reasonable and feasible alternatives identified to date and to be included in the draft BAR are:

- No-go: to leave the land as is and not commence with the activity
- Go: the project alternative as proposed, including alternative layouts considered on site.
- Reasonable and feasible alternatives as raised by I&APs

All registered I&APs on the project database will be notified in writing of the 40 day comment period for the Draft Basic Assessment, copies of the Draft Report and project information can be downloaded from the following project website www.publicprocess.co.za and a copy of the report will be placed at the Humansdorp Library. It is not proposed that public meetings are held during this period but telephonic consultations and one on one meetings with key I&APs will take place where required.

Step 3: Submit Final Basic Assessment Report and Application

The comments received from I&APs will be included in the Final BAR before it is submitted to the DEA for their decision making. I&APs will be notified in writing of any additional comment period on the Final BAR.

Step 4: Notification of Environmental Authorisation and Appeal Period

The final step in the process entails providing written notification to all I&APs on the project database of the issuing of the environmental authorisation and appeal period, including the manner of appeal. Project construction may only commence once approval has been received from the DEA.

WHAT IS YOUR ROLE AS AN I&AP?

1. I&APs are required to respond to the letters of notification and/or newspaper advertisements and register their interest on the project database
 - By emailing, faxing or mailing a comment form to the participation consultant indicated below.
 - By registering your interest in the project you will be kept informed of the process and notified of any opportunities to comment
2. I&APs are required to state their area of interest and/or concern in the matter
 - By emailing, faxing or mailing a comment form to the public participation consultant indicated below.
3. By telephonically contacting the public participation consultant if you have a query, comment, or require further project information.
4. By reviewing the Draft BAR and submitting any comments within the 30-day comment period.

WHO SHOULD YOU CONTACT?

Sandy Wren, Public Process Consultants, PO Box 27688, Greenacres, 6057, Phone 041-374 8426 Fax 041-373 2002 Email sandy@publicprocess.co.za

Information on the project can be downloaded from the following website: www.publicprocess.co.za



Locality Map: Farm Boundaries for Portion 1 of 868 Farm Broadlands and Portion 15 of Farm 689



Example Photograph: An example of a typical Photovoltaic array