

JUNE 2010

BACKGROUND INFORMATION DOCUMENT

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

AN INITIATIVE OF RENEWABLE ENERGY INVESTMENTS
SOUTH AFRICA

CONSTRUCTION OF THE PROPOSED

HAPPY VALLEY WIND ENERGY FACILITY

ON A SITE NEAR HUMANSDORP
EASTERN CAPE



SUSTAINABLE
FUTURES ZA



Renewable Energy Investments South Africa (Pty) Ltd is proposing the establishment of a commercial wind energy facility and associated infrastructure on a site located on Portion 1 of Farm 810, which lies ~9 km north -west of Humansdorp in the Eastern Cape. The proposed wind energy facility is to be developed by Renewable Energy Investments South Africa ('REISA') and is referred to as the Happy Valley Wind Energy Facility.

Based on extensive site identification processes undertaken by REISA, a favourable site measuring ~5 km² in extent has been identified for consideration and evaluation as per the Environmental Impact Assessment (EIA) Regulations. The proposed wind energy facility would be comprised of up to 15 wind turbines with a proposed total generating capacity of ~ 30 MW.

The nature and extent of this facility is explored in more detail in this document.

AIM OF THIS BACKGROUND INFORMATION DOCUMENT

This document aims to provide you, as an interested and/or affected party (I&AP), with:

- » An overview of the proposed wind energy facility;
- » An overview of the Scoping process, EIA process and the specialist studies being undertaken to assess the potential impacts, both positive and negative, related to the proposed project; and
- » Details of how you can become involved in the process, receive information, or raise issues which may concern and/or interest you.

OVERVIEW OF THE PROPOSED PROJECT

The proposed wind energy facility will consist of up to 15 wind turbines (with a generating capacity of ~30 MW).

The proposed turbines would be appropriately located on the identified site, which covers an area of ~5 km². The broader site is proposed to accommodate both the wind turbines as well as the associated infrastructure which is required for such a facility including:

- » Wind turbines (60 - 80 m hub height) and concrete foundations to support them;
- » Cabling between the turbines, to be laid underground where practical;
- » An on-site substation to facilitate the connection between the wind energy facility and the grid;
- » New overhead powerlines to connect to Eskom's existing Melkhout Substation;
- » Internal access roads to each turbine; and
- » Workshop area for maintenance and storage.

Through a series of technical feasibility studies, which considered the site's wind resources, access to the Eskom electricity grid, accessibility and topography, the identified site is deemed suitable for the establishment of the Happy Valley Wind Energy Facility. The site location is also considered to be desirable in that it supports the notion of decentralised power generation facilities.

The wind energy facility is proposed on Portion 1 of Farm 810. The proposed site is situated adjacent to the N2 national highway which will allow for ease of access for the transportation of the turbine components during the construction phase.

The performance of wind turbines is determined by disturbances to the wind resource. Therefore they must be appropriately spaced within the facility in order to avoid wake and turbulence effects.

The overall aim of the design and layout of the facility is to maximise electricity generation through exposure to the wind resource, while minimising infrastructure, operation and maintenance costs and environmental impacts.

The use of wind for power generation is considered a non-consumptive use of a natural resource which produces zero greenhouse gas emissions.

WIND TURBINES

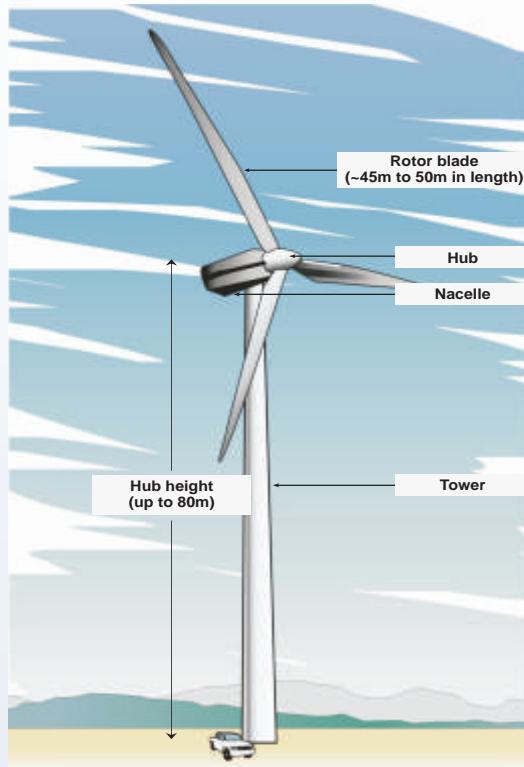
A wind energy facility consists of multiple wind turbines which are used to capture the kinetic energy of the wind for the purposes of generating electricity. This captured kinetic energy is used to drive a generator located within the wind turbine and the energy is subsequently converted into electrical energy. A typical wind turbine consists of four primary components:

- » The foundation unit upon which the turbine is anchored to the ground
- » The tower which is typically between 80m and 100m in height.
The tower is a hollow structure allowing access to the nacelle. The height of the tower is a key factor in determining the amount of electricity a turbine can generate. The tower houses the transformer which converts the electricity to the correct voltage for transmission into the grid.
- » The nacelle (generator/turbine housing).
The nacelle houses the gearbox and generator as well as a wind sensor to identify wind direction. The nacelle turns automatically ensuring the blades always face into the wind to maximise the amount of electricity generated.
- » The rotor which is comprised of three rotor blades
The rotor blades use the latest advances in aeronautical engineering materials science to maximise efficiency. The greater the number of turns of the rotor the more electricity is produced.

The amount of energy a turbine can harness is dependent on the wind velocity and the length of the rotor blades. Wind turbines start generating power at wind speeds of between 10 - 15 km/hour, with speeds between 45 - 60 km/hour required for full power operation. In a situation where wind speeds are excessive, the turbine automatically shuts down to prevent damage.

A turbine is designed to operate continuously, unattended and with low maintenance for more than 20 years or >120 000 hours of operation. Once operating, a wind farm can be monitored and controlled remotely, with a mobile team for maintenance, when required.

A facility consisting of up to 15 turbines could take several months to construct and commission, and requires the expertise of skilled staff.



ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

In terms of the EIA Regulations published in terms of Section 24(5) of the National Environmental Management Act (NEMA, Act No. 107 of 1998), REISA requires authorisation from the National Department of Environmental Affairs in consultation with the Eastern Cape Department of Economic Affairs, Environment and Tourism, for the establishment of the proposed facility. In terms of sections 24 and 24D of NEMA, as read with the EIA Regulations of GN R385 (Regulations 27 - 36) and R387, a Scoping and an EIA process are required for the proposed facility. In order to obtain authorisation, comprehensive, independent environmental studies must be undertaken in accordance with the EIA Regulations. This project has been registered with the National DEA under application reference number 12/12/20/1861.

An EIA is an effective planning and decision-making tool. It allows the potential environmental consequences resulting from a technical facility during its establishment and its operation to be identified and appropriately managed. It provides the opportunity for the developer to be forewarned of potential environmental issues, and allows for resolution of the issue(s) reported on in the EIA report as well as dialogue with I&APs.

REISA has appointed Savannah Environmental, as the independent environmental consultants, to undertake the required Scoping and EIA Phases to identify and assess all the potential environmental impacts associated with the proposed project, and to propose appropriate mitigation and management measures as part of an Environmental Management Plan (EMP). As part of these environmental studies, I&APs will be actively involved through the public involvement process being undertaken by Sustainable Futures ZA.

The phases of an EIA are:

PHASE 1

Notification of EIA Process

1. Application form sent to DEA
2. Advertise in local and national media
3. Distribute site notices BID's and stakeholders letters

PHASE 2

Environmental Scoping Phase

1. Consultation with stakeholders & I&APs
2. Focus group meetings
3. Public meeting
4. Public Review of draft Scoping Report

PHASE 3

Environmental Impact Assessment Phase

1. On-going consultation with stakeholders and I&APs
2. Focus group meetings
3. Public Review - draft EIA Report & EMP
4. Public feedback meetings

PHASE 4

Decision Making

1. Authority Review - Final EIA Report submitted to DEA
2. Inform & I&AP of decision in writing

WHAT ARE THE POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE PROPOSED PROJECT?

A number of potential environmental impacts associated with the proposed project have been identified. These potential impacts will be assessed through the following specialist studies:

Biophysical Impacts

Impacts on Agricultural Potential:

Impacts on the potential of agricultural areas and on the capability of the land.

Impacts on Geology:

Impacts associated with geology may relate to the underlying soil conditions and erosion potential of the site.

Impact on Avifauna:

Birds may be impacted through collision with the blades of the wind turbines as well as collision or electrocution with the associated power line during the operational phase.

Impacts on Ecology, Fauna and Flora:

The construction of the wind energy facility and the associated disturbance of vegetation may impact on the ecology of the site.

Social Impacts

Social Impacts: The construction and operation of the wind energy facility may lead to both positive and negative impacts (i.e. employment opportunities and impacts on local land use).

Noise Impacts:

Construction phase as well as the rotation of wind turbine blades during operational phase may impact on sensitive receptors (i.e. nearby residents).

Impacts on Heritage Sites and Fossils & Paleontology:

Disturbance to or destruction of heritage sites/fossils/paleontology may result during the construction phase.

Visual Quality and Aesthetics:

Due to their height, wind turbines have the potential to have a visual impact on the surrounds and on sensitive visual receptors.

These specialist studies will be undertaken in two phases:

1. The Scoping Phase includes a desk-top study, wherein potential issues associated with the proposed project are identified and evaluated, and those issues requiring further investigation through the EIA phase are highlighted.
2. The EIA Phase includes a detailed assessment of potentially significant impacts identified in the Scoping Phase. Practical and achievable mitigation measures will be recommended in order to minimise potentially significant impacts identified. These recommendations will be included within a draft EMP.

Specialist studies will be informed by existing information, field observations and input from the public participation process. As an I&AP, your input is considered an important part of this process, and we urge you to become involved.

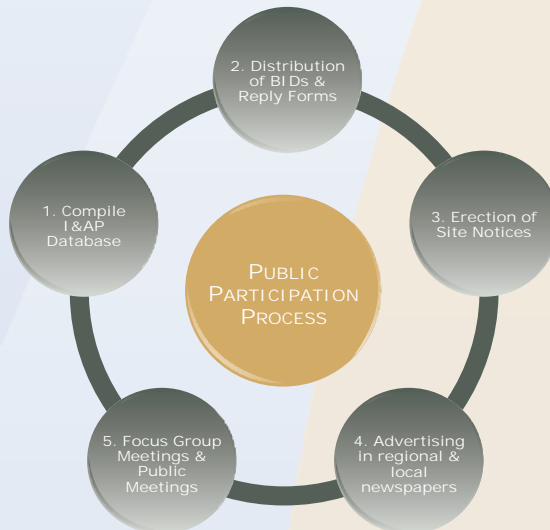
PUBLIC INVOLVEMENT PROCESS

The sharing of information forms the basis of the public participation process and offers you the opportunity to become actively involved in the EIA from the outset. Comments and inputs from I&APs during the Scoping and the EIA phases are encouraged in order to ensure that potential impacts are considered within the ambit of the study.

The public participation process aims to ensure that:

- » Information that contains all the relevant facts in respect of the application is made available to I&APs for review.
- » I&AP participation is facilitated in such a manner that they are provided with a reasonable opportunity to comment on the proposed project.
- » Adequate review periods are provided for I&APs to comment on the findings of the draft Scoping and EIA Reports.

In order to ensure effective participation, the public involvement process includes the following phases:



YOUR RESPONSIBILITIES AS AN I&AP

In terms of the EIA Regulations, your attention is drawn to your responsibilities as an I&AP:

- » In order to participate in this EIA process, you must register yourself on the project database.
- » You must ensure that any comments regarding the proposed project are submitted within the stipulated time frames.
- » You are required to disclose any direct business, financial, personal or other interest which that you may have in the approval or refusal of the application for the proposed wind energy facility.

HOW TO BECOME INVOLVED

1. By responding by phone, fax or e-mail to the invitation for your involvement which has been advertised in local and national newspapers.
2. By returning the attached Reply Form to the relevant contact person.
3. By attending the meetings to be held during the course of the project. As a registered I&AP you will automatically be invited to attend these meetings. Dates for public meetings will also be advertised in local and regional newspapers.
4. By contacting the consultants with queries or comments.
5. By reviewing and commenting on the Draft Scoping and EIA Reports within the stipulated 30-day review periods.

If you consider yourself an I&AP for this proposed project, we urge you to make use of the opportunities created by the public participation process to provide comment, raise issues and concerns which affect and/or interest you or request further information. Your input into this process forms a key element of the EIA process.

By completing and submitting the accompanying Reply Form, you automatically register yourself as an I&AP for this project, and are ensured that your comments, concerns or queries raised regarding the project will be noted.

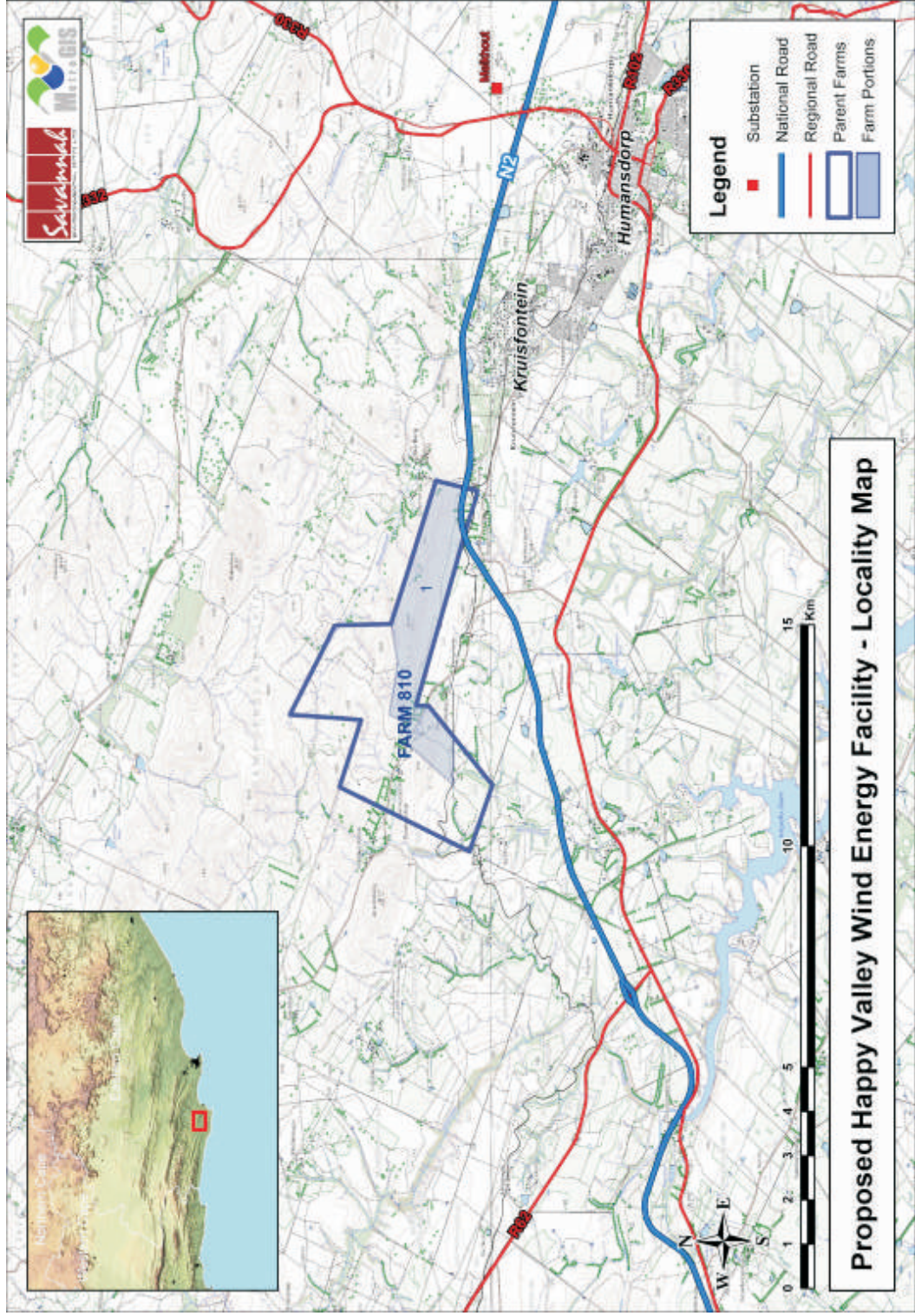
COMMENTS AND QUERIES

Direct all comments, queries or responses to:

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To view project documentation, visit

www.savannahSA.com



Proposed Happy Valley Wind Energy Facility - Locality Map