

**Environmental Impact Assessment for the  
proposed Banna Ba Pifhu Wind Energy Project  
near Humansdorp, Eastern Cape:  
Final Scoping Report**

# **Chapter 4:**

## **Approach to EIA Process and Public Participation**



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## 4. INTRODUCTION

This chapter presents the EIA process for the proposed development with particular attention to the steps in the Scoping and public participation component of the EIA.

### 4.1 LEGAL CONTEXT FOR THIS EIA

The EIA process is a planning, design and decision making tool used to demonstrate to the responsible authority, DEA, and the project proponent, WKN-Windcurrent SA (Pty) Ltd, what the consequences of their choices will be in biophysical, social and economic terms. As such it enables the identification of potential impacts (negative and positive) that the project may have on the environment. The EIA contains recommendations to mitigate negative impacts and enhance positive impacts associated with the project.

**Amended NEMA EIA Regulations** (Notices GN R. 543, 544, 545, and 546) were published in the Government Gazette No. 33306 of 18 June 2010, and came into effect from 2 August 2010 (referred to as the **2010 EIA Regulations**). This EIA application by WKN-Windcurrent is undertaken under the 2010 EIA Regulations. In terms of these regulations, Scoping and Environmental Impact Assessment are required as the project includes listed activities shown in Table 4.1 below.

Table 4.1/...

**Table 4.1: Listed activities in Government Gazette No. 33306 of 2010 (2010 EIA Regulations) that potentially form part of the proposed Banna Ba Pifhu Wind Energy Project near Humansdorp**

| Listed activities in Government Notices 544, 545, and 546 |                                     |   |
|---|-------------------------------------|---|
| Government Notice   | Activity No(s)                      | Describe the relevant Scoping and EIA Activity in writing   |
| GN.R544,<br>18 June<br>2010                               | 10                                  | 10. The construction of facilities or infrastructure for the transmission and distribution of electricity -<br>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts;   |
| GN.R545,<br>18 June<br>2010                               | 1                                   | 1. The construction of facilities or infrastructure for the generation of electricity where the electricity output is<br><i>20 megawatts or more.</i>   |
|   | 15                                  | 15. Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational,<br><i>industrial or institutional use where the total area to be transformed is 20 hectares or more;</i>   |
|   | 4(a)(ii)(ee)                        | 4. The construction of a road wider than 4 metres with a reserve less than 13,5 metres.<br>(a) In Eastern Cape...:<br>(ii) Outside urban areas, in:<br>(ee) Critical biodiversity areas (Type 1) as identified in systematic biodiversity plans adopted by the competent<br><i>authority or in bioregional plans;</i>   |
| GN.R546,<br>18 June<br>2010                               | 14a (i)                             | 14. The clearance of an area of 5 hectares of more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for:<br>(a) In Eastern Cape...:<br><i>(i) All areas outside urban areas;</i>  |
|   | 16 (iii); (iv)<br>and a<br>(ii)(ff) | 16. The construction of:<br>(iii) buildings with a footprint exceeding 10 square metres in size;<br>(iv) infrastructure covering 10 square metres or more<br>where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.<br>(a) In Eastern Cape,<br>ii. Outside urban areas, in:<br>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans<br><i>adopted by the competent authority or in bioregional plans;</i> |
|   |                                     |   |

## 4.2 LEGISLATION AND GUIDELINES PERTINENT TO THIS EIA

The scope and content of this Final Scoping Report has been informed by the following legislation, guidelines and information series documents:

### 4.2.1 National Legislation

- National Environmental Management Act (NEMA) (Act 107 of 1998);
- EIA Regulations published in Government Notice R543, 544, 545 and 546 on 18 June 2010 in *Government Gazette* 33306 (as amended);
- Guidelines published in terms of the NEMA EIA Regulations, in particular:
  - Guideline 4: Public Participation in support of the Environmental Impact Assessment Regulations, 2006 (DEAT, May 2006)
  - Guideline 5: Assessment of alternatives and impacts in support of the Environmental Impact Assessment Regulations, 2006 (DEAT, June 2006)
  - Integrated Environmental Management Information Series (Booklets 0 to 21) published by DEAT over the period 2002 to 2005;
- Land Use Planning Ordinance (Ordinance 15 of 1985);
- National Environmental Management: Biodiversity Act (NEMBA) (Act 10 of 2004);
- Conservation of Agricultural Resources Act (CARA) (Act 43 of 1983);
- National Heritage Resources Act (NHRA) (Act 25 of 1999);
- National Water Act (Act 36 of 1998);
- Municipal Systems Act (Act 32 of 2000);
- Subdivision of Agricultural Land Act (SALA) (Act 70 of 1970);
- Animal Health Act (Act 7 of 2002); and the
- Electricity Act (Act 41 of 1987).

A review of relevant legislation applicable to the various specialist studies and this EIA will be undertaken as part of the EIA process.

### 4.2.2 Overview of SA Energy Policy and Planning

#### Long-term Mitigation Strategy, 2008

The **Long-term Mitigation Strategy** (LTMS) was a research-based, scenario building process designed to assess the potential for greenhouse gas mitigation within the South African economy over a 50 year period. A wide range of stakeholders across government, business, labour, and the scientific community looked at options for reducing our greenhouse gas emissions with MARKAL, a modelling energy tool used internationally. It showed that South Africa's emissions would increase fourfold if steps were not taken to reduce them.

Two scenarios were modelled, namely "Growth Without Constraints" and "Required by Science". For the former scenario, emissions were projected to quadruple between 2003 and 2050, while the latter was aimed at reducing emissions by 30 % - 40 % between

2003 and 2050. The energy model assumed a renewable electricity share of 15 % in 2020 and 27 % by 2030<sup>1</sup>.

A series of recommendations on potential interventions were taken to a national Cabinet Lekgotla in July 2008. These were the following six broad policy direction themes<sup>2</sup>:

- Reducing and limiting greenhouse gas emissions;
- Building on, strengthening and or upscaling current initiatives;
- Implementing the “Business Unusual” call to action;
- Preparing for the future;
- Vulnerability and adaptation;
- Alignment, co-ordination and co-operation.

Any work in this regard is to be informed by, monitored and measured against the following emissions decline trajectory:

- Greenhouse gas emissions stop growing and start to plateau in 2020 – 2025;
- Greenhouse gas emissions begin to decline in absolute terms around 2030 – 2035;
- Long-term greenhouse gas emissions levels reduce to 300 Mt CO<sub>2</sub>-eq by 2050 – 2060.

Cabinet approved these policy directions and a process for development of the country’s Climate Change Response Policy.

### Integrated Energy Plan, 2003

The **Integrated Energy Plan** (IEP) for the Republic of South Africa was published on 19 March 2003<sup>3</sup>. Its purpose is to balance energy demand with supply resources in concert with safety, health and environmental considerations. More particularly, it is intended to provide a framework in which specific energy policies, development decisions and energy supply trade-offs could be made on a project-by-project basis.

It used computer modelling to forecast which energy sources could be used most effectively to meet demand, under two basic scenarios, each modelled as “simulated” and “optimised”. These are:

*The proposed Banna Ba Pifhu wind energy project will contribute to reduction of emissions as a result of its replacing electricity from carbon-based generation.*

<sup>1</sup> Hughes, A, Haw, M, Winkler, H, Marquard, A. And Merven, B. (2007) *Energy emissions: a modelling input into the long-term mitigation scenarios process. LTMS Input Report 1*. Energy Research Centre, University of Cape Town.

<sup>2</sup> Briefing notes for President Thabo Mbeki on the outcome of the July Cabinet Lekgotla, Pretoria. 27 July 2008. Available online: <http://www.info.gov.za/speeches/2008/08072816151001.htm>. Accessed 2 December 2010.

<sup>3</sup> Department of Energy. Available online: [www.info.gov.za/view/DownloadFileAction?id=124574](http://www.info.gov.za/view/DownloadFileAction?id=124574). Accessed 2 December 2010.



- “Baseline Simulated” - “business-as-usual”, continuing present trends based on coal;
- “Baseline Optimised” - least cost, taking into account energy efficiency and fuel switching;
- “Siyaphambili Simulated” - fuel diversification away from coal, prescribing other energy technologies at set times; and
- “Siyaphambili Optimised” - least cost, using energy efficiency and fuel switching.

The IEP identified significant gaps that it had not addressed, and which were planned to be addressed in Phase II of its integrated energy planning programme.

### **Integrated Resource Plan for Electricity, 2010**

The **Integrated Resource Plan for Electricity (IRP)**<sup>4</sup> for South Africa is a subset of the aforementioned IEP. Its Draft Executive Summary and **Medium Term Risk Mitigation Plan**<sup>5</sup> were published by the Department of Energy on 8 October 2010. The objective for the IRP is to develop a sustainable electricity investment strategy for generation and transmission of electricity in South Africa for the next 25 years. This was developed through 17 scenarios that covered targets for limits on greenhouse gas (GHG) emissions, the role of independent power producers and changes in technology in the medium term. Risk and uncertainties were dealt with through sensitivity studies and risk analysis. The primary externality considered was the constraint of having to reduce carbon emissions. From these, a Balanced Scenario between the two extremes of “Low Cost” and “Low Carbon” was developed to represent the best trade-offs. This was revised after a series of workshops.

Scenarios were evaluated against a set of criteria, then scored with a rigorous multi-criteria decision making framework. The evaluation criteria included:

- Usage of water for each energy technology;
- Cost of construction of new generation capacity;
- Climate change and restriction on GHG emissions;
- Risk and uncertainties associated with each scenario portfolio;
- Support for localisation of technologies and supporting industries;
- SADC regional development and integration;
- Security of supply.

Lower cost scenarios were not favoured because they were “business as usual”, and continued the current trend of carbon emissions. Scenarios were modelled to reduce absolute and relative emissions. In the Revised Balanced Scenario, a significant reduction in carbon emissions was possible with only a marginal increase in the price to

<sup>4</sup> *Executive Summary of the Draft Integrated Electricity Resource Plan for South Africa - 2010 to 2030*. Available online: [http://www.doe-irp.co.za/content/Executive\\_Summary\\_Draft\\_IRP2010\\_8Oct2010.pdf](http://www.doe-irp.co.za/content/Executive_Summary_Draft_IRP2010_8Oct2010.pdf). Department of Energy. Accessed 1 December 2010.

<sup>5</sup> *Medium Term Risk Mitigation Plan (MTRM) for Electricity in South Africa - 2010 to 2016*. [http://www.doe-irp.co.za/content/Medium\\_Term\\_Risk\\_Mitigation\\_Project\\_Phase\\_1.pdf](http://www.doe-irp.co.za/content/Medium_Term_Risk_Mitigation_Project_Phase_1.pdf). Department of Energy. Accessed 1 December 2010.



the electricity consumer. It progressively shifts the generation mix away from coal towards renewable energies, where the increase in capacity is not at the expense of security of supply. It included a nuclear fleet of 9.6 GW; 6.3 GW of coal; 11.4 GW of renewables; and 11.0 GW from other generation sources.

After public participation during November/December 2010, the IRP was revised and released as the Policy-Adjusted IRP on 28 March 2011 by the Department of Energy. As a contribution towards building local industry clusters and fulfilling South Africa's commitments to mitigating climate change as expressed at the Copenhagen climate change summit, it increased the proportion of renewable energy in the proposed new build fleet for 2010 to 2030 by 6.4 GW, that is, from 7.5 % of the energy share to 9 %. In other words, the Plan now includes a nuclear fleet of 9.6 GW; 6.3 GW of coal; 17.8 GW of renewables; and 8.9 GW from other generation sources. To achieve a lower carbon emission peak, it recommends early adoption of renewable technologies, with solar PV capacity of 8 400 MW from 2012 to 2030, solar CSP of 1 200 MW from 2014 to 2030, and wind capacity of 9 100 MW from 2012 to 2030.

#### **REFIT (REBID) Programme**

Regulations<sup>6</sup> for procurement of new generation were promulgated on 5 August 2009 under the Electricity Regulation Act, 2006 (Act 4 of 2006). Section 7(1) specifies that the Minister may require that the renewable energy feed-in tariff (REFIT) programme be used for procurement of new generation. Feed-in tariffs are a tariff (price) that covers the cost of generation plus a "reasonable profit" to induce developers to invest. The price is set at a level and for a period that provides a reasonable return on investment for a specific technology. Under this approach it is possible to award different tariffs for different technologies. The cost of the tariff is passed through to Eskom electricity customers.

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*The proposed Banna Ba Pifhu wind energy project will contribute to reduction of emissions as a result of its replacing electricity from carbon-based generation. The proposed Banna Ba Pifhu wind energy project will contribute 50 MW to the recommended total wind capacity of 9 100 MW by 2030.*

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Section 7(3) requires the Regulator, in determining criteria for the selection of a renewable energy independent power producer (IPP) or cogeneration IPP that qualifies for a licence, to take into account the following:

- Compliance with the integrated resource plan and the preferred technologies;
- Acceptance by the IPP of a standardised power purchase agreement;
- Preference for a plant location that contributes to grid stabilisation and mitigates against transmission losses;
- Preference for a plant technology and location that contributes to local economic development;
- Compliance with legislation in respect of the advancement of historically disadvantaged individuals;

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<sup>6</sup> Government Notice No. R.721. *Government Gazette* 32378. 5 August 2009.

- Preference for projects with viable network integration requirements;
- Preference for projects with advanced environmental approvals;
- Preference for projects demonstrating the ability to raise finance;
- Preference for small distributed generators over centralized generators; and
- Preference for generators that can be commissioned in the shortest time.

The National Energy Regulator (NERSA) published rules relating to these selection criteria on 19 February 2010<sup>7</sup>. It provides measurements on which individual projects will be evaluated and ranked, and established gate keeping criteria to ensure that minimum requirements are met.

NERSA approved the first REFIT scheme under a set of regulatory Guidelines on 26 March 2009<sup>8</sup>. These appoint Eskom's Single Buyer Office as the Renewable Energy Purchasing Agency (REPA), which is obliged to purchase power from qualifying renewable energy generators at pre-determined prices based on the levelised cost of electricity. It also allows licensed independent renewable energy power producers to sell power directly to buyers outside of the REFIT mechanism.

In March 2011, NERSA issued a Consultation Paper "Review of Renewable Energy Feed-In Tariffs"<sup>9</sup>, in which it reviews renewable energy technologies, qualifying principles for REFIT and eligibility criteria for qualifying technologies. The new tariffs were presented with projected CPI adjustments for years 2012-2013, and assumed a capacity factor for 27% for wind technology. All tariffs were lower than the initial REFIT scheme for 2009, with a 25% reduction in tariffs for wind energy.

In mid-2011, the South African government indicated a change in pricing strategy for renewable energy. Instead of applying a predetermined renewable-energy feed-in tariff (Refit), as previously indicated, the government would conduct a selection process that would involve both price and non-price elements. This requires bidders to propose their price per MWh for the energy output to be generated, along with full or partial inflation indexation. The price indication would be for the first 20 years of operation, or for the duration of the power purchase agreement (PPA). On 3 August 2011, the Department of Energy (DoE) released the qualification and proposal documentation for South Africa's first renewable energy independent power producer (IPP) tender process, and announced that it has allocated a total of 3 725 MW capacity across various renewables technologies, with 1 850 MW set aside for onshore wind, 200 MW for concentrated solar thermal, a further 1 450 MW for solar photovoltaic solutions, 12.5 MW for both biomass and biogas, 25 MW for landfill gas capacity, 75 MW for small hydro, and a further 100 MW for small-scale IPP projects of less than 5 MW. This allocation to wind energy is an increase on the 1 025 MW set out for the first procurement round in the Integrated Resource Plan (IRP) 2010-2030 (Source: Engineering News, 4 & 5 August 2011).

<sup>7</sup> NERSA. *Rules on selection criteria for renewable energy projects under the REFIT programme*. Available online: <http://www.nersa.org.za/Admin/Document/Editor/file/Electricity/Legislation/Regulatory%20Rules/RULES%20FOR%20SELECTION%20CRITERIA%2019%20Feb10.pdf>. Accessed 3 November 2010.

<sup>8</sup> South Africa Renewable Energy Feed-in Tariff (REFIT). Regulatory Guidelines 26 March 2009. Government Notice No. 382. *Government Gazette* 32122. 17 April 2009.

<sup>9</sup> Available online: <http://www.nersa.org.za/Admin/Document/Editor/file/Electricity/Consultation/Documents/Review%20of%20Renewable%20Energy%20Feed-In%20Tariffs%20Consultation%20Paper.pdf>. Accessed 29 March 2011.

### 4.3 PRINCIPLES FOR SCOPING AND PUBLIC PARTICIPATION

The public participation process for this Scoping and EIA process is being driven by a stakeholder engagement process that will include inputs from authorities, interested and affected parties (I&APs), technical specialists and the project proponent. Guideline 4 on “Public Participation in support of the EIA Regulations” published by DEAT in May 2006, states that public participation is one of the most important aspects of the environmental authorisation process. This stems from the requirement that people have a right to be informed about potential impacts that may affect them and that they must be afforded an opportunity to comment on those impacts. Effective public participation also improves the ability of the competent authority to make informed decisions and results in improved decision-making as the view of all parties are considered (DEAT, 2006: pg 9).

According to The DEAT (2006) Guideline on Public Participation, an effective public participation process:

- Provides an opportunity for Interested and Affected Parties (I&APs) to obtain clear, accurate and comprehensive information about the proposed activity, its alternatives or the decision and the environmental impacts thereof;
- Provides I&APs with an opportunity to indicate their viewpoints, issues and concerns regarding the activity, alternatives and /or the decision;
- Provides I&APs with the opportunity of suggesting ways of avoiding, reducing or mitigating negative impacts of an activity and for enhancing positive impacts;
- Enables the proponent to incorporate the needs, preferences and values of affected parties into the activity;
- Provides opportunities to avoid and resolve disputes and reconcile conflicting interests; and
- Enhances transparency and accountability in decision making.

To the above, one can add the following universally recognised principles for public participation:

- Inclusive consultation that enables all sectors of society to participate in the consultation and assessment processes;
- Provision of accurate and easily accessible information in a language that is clear and sufficiently non-technical for I&APs to understand, and that is sufficient to enable meaningful participation;
- Active empowerment of grassroots people to understand concepts and information with a view to active and meaningful participation;
- Use of a variety of methods for information dissemination in order to improve accessibility, for example, by way of discussion documents, meetings, workshops, focus group discussions, and the printed and broadcast media;
- Affording I&APs sufficient time to study material, to exchange information, and to make contributions at various stages during the assessment process;

- Provision of opportunities for I&APs to provide their inputs via a range of methods, for example, via briefing sessions, public meetings, written submissions or direct contact with members of the Environmental Impact Assessment (EIA) Team; and
- Public participation is a process and vehicle to provide sufficient and accessible information to I&APs in an objective manner to assist them to identify issues of concern, to identify alternatives, to suggest opportunities to reduce potentially negative or enhance potentially positive impacts, and to verify that issues and/or inputs have been captured and addressed during the assessment process.

At the outset it is important to highlight two key aspects of public participation:

- There are practical and financial limitations to the involvement of all individuals within a public participation programme (PPP). Hence, public participation aims to generate issues that are representative of societal sectors, not each individual. Hence, the PPP will be designed to be inclusive of a broad range of sectors relevant to the proposed project; and
- The PPP will aim to raise a diversity of perspectives and will not be designed to force consensus amongst I&APs. Indeed, diversity of opinion rather than consensus building is likely to enrich ultimate decision making. Therefore where possible, the public participation process will aim to obtain an indication of trade-offs that all stakeholders (i.e. I&APs, technical specialists, the authorities and the development proponent) are willing to accept with regard to the ecological sustainability, social equity and economic growth associated with the project.

#### **4.4 OBJECTIVES OF THE SCOPING PROCESS**

This Scoping process is being planned and conducted in a manner that is intended to provide sufficient information to enable the authorities to reach a decision regarding the scope of issues to be addressed in this EIA process, and in particular to convey the range of specialist studies that will be included as part of the Environmental Impact Reporting Phase of the EIA, as well as the approach to these specialist studies.

Within this context, the objectives of this Scoping process are to:

- Identify and inform a broad range of stakeholders about the proposed development;
- Clarify the scope and nature of the proposed activities and the alternatives being considered;
- Conduct an open, participatory and transparent approach and facilitate the inclusion of stakeholder concerns in the decision-making process;

- Identify and document the key issues to be addressed in the forthcoming Environmental Impact Reporting Phase of the EIA, through a process of broad-based consultation with stakeholders; and
- Ensure due consideration of alternative options in regard to the proposed development, including the “No development” option.

#### 4.5 TASKS IN THE SCOPING PHASE

This section provides an overview of the tasks being undertaken in the Scoping Phase, with a particular emphasis on providing a clear record of the public participation process followed.

##### Task 1: I&AP identification, registration and the creation of an electronic database

Prior to advertising the EIA process in the local and regional print media an initial database of I&APs was developed for the Scoping process. This was supplemented with input from the EIA Project Managers, CSIR. A total of 44 I&APs was included on the project database in this manner. The identification of I&APs included landowners and tenants adjacent to the site. Mechanisms used to identify surrounding landowners included a deeds search and telephonic follow ups.

Appendix F contains the current I&AP database, which has been updated to include participation by I&APs in response to requests to register their interest in the project, through comments received and participation at meetings held. Subsequent to the local government elections the I&AP database was amended, and while the Councillor for the area stays the same the ward is now delineated as Ward 12. At the time of producing the Draft Scoping Report, the database included 45 registered I&APs. The database for the Final Scoping Report includes **59 registered I&APs**.

While I&APs have been encouraged to register their interest in the project from the start of the process, following the public announcements (see Task 2), the identification and registration of I&APs will be ongoing for the duration of the study. Stakeholders from a variety of sectors, geographical locations and/or interest groups can be expected to show an interest in the development proposal, for example:

- Provincial and Local Government Departments
- Adjacent/ surrounding landowners
- Local interest groups, for example, Councillors and Rate Payers associations
- Farmers Organisations
- Environmental Groups and NGO's
- Grassroots communities and structures

In terms of the electronic database, I&AP details are being captured and automatically updated as and when information is distributed to or received from I&APs. This ongoing and up-to-date record of communication is an important component of the public participation process. It is important to note that I&APs proactively identified and included

on the project database at the outset of the process will remain on the database unless they specifically request to deregister their interest in the project.

### Task 2: Announcement of the Scoping process

In order to notify and inform the public of the proposed project and invite members of the public to register as I&APs, the project and EIA process was advertised in one regional and one local newspaper, as shown below. Copies of the advertisements placed are contained in Appendix D of this report. Included in this media announcement was information on the website address where information available on the project could be downloaded, namely, [www.publicprocess.co.za](http://www.publicprocess.co.za).

- Regional Newspaper – *The Herald*, 19 May 2011
- Local Newspaper - *Our Times*, 19 May 2011

In addition to the newspaper advertisements, letters with personal notification regarding the EIA process were mailed to all pre-identified key stakeholders on the database. I&APs were provided a 30-day period within which to raise issues and/or register their interest on the project database, this period extended from the 19 May 2011 to the 20 June 2011.

Appendix G contains copies of correspondence and information distributed to I&APs prior to the release of the Draft Scoping Report. Letter 1 to I&APs included the Background Information Document (BID) developed for the project, a locality map and a comment form. The purpose of the BID is to inform the public of the proposed project, the EIA process and provide an overview of the opportunities and mechanisms for public participation.

The EIA Regulations require that a notice board providing information on the project and EIA process is placed at the site. Two notice boards were placed at two separate locations on the boundary of the site, one on the Humansdorp/St Francis Bay road and one on the Oyster Bay Road. Photographs of the notice boards placed, including the geographical coordinates of the locations of the notice boards are contained in Appendix C.

### Task 3: Ongoing Communication and Capacity Building

In accordance with the principles of bodies such as the International Association for Public Participation (IAP2), the process for this EIA aims to ensure that people are involved from the outset, that we proactively solicit the involvement of stakeholders representing all three dimensions of sustainability (i.e. biophysical, social and economic dimensions), and that we provide them with sufficient and accessible information to contribute meaningfully to the process. In this manner, the public participation process aims to build the capacity of stakeholders to participate.

Within the context of the EIA process, capacity building is not viewed as a “once off” event, but rather a series of events and/or information sharing which provides information on a continuous basis thereby building the capacity and knowledge of I&APs to participate effectively in the EIA process and raise issues of concern.

One of the challenges facing the participation process is the diversity of South African society. Public participation by its very nature is a dynamic process with various sectors of society having varying needs, values and interests. The core question for public participation is “How can I, the interested and affected party, meaningfully participate in the process?” This varies according to the needs of I&APs. The public participation process should be inclusive of all I&APs, and afford them the opportunity to raise their issues and concerns in a manner that suits them. Coupled with this, South African society is characterized by varying socio-economic, literacy and language levels all of which need to be considered in the participation process. For example, certain I&APs may want to receive documentation only and not attend meetings, some I&APs may want to only attend meetings, other I&APs may not want to attend meetings and send their comments in writing, and some I&APs may want to be actively involved throughout the process.

In order to accommodate the varying needs of I&APs and develop their capacity to participate in the process, **information sharing** forms an integral and ongoing component of the EIA process to ensure effective public participation. The following provides an overview of information sharing throughout the EIA process in order to develop the capacity of I&APs to effectively engage in the public participation process:

- *Website* – placing EIA related project information on the website [www.publicprocess.co.za](http://www.publicprocess.co.za);
- *Language* – encouraging I&APs to use the language of their choice at meetings and providing translations at meetings in English, Afrikaans and Xhosa when required;
- *Background Information Document* (May2011; Appendix E) –contains information on the project, EIA and public participation process;
- *Newspaper Advertisements* requesting I&APs to register their interest in the project and raise issues of concern;
- *Letters to I&APs* notifying them of the various stages of the EIA process, availability of reports for comment and inviting them to attend public meetings to be held;
- *Report Distribution* – providing hard copies of the Scoping and EIA reports at local libraries and on the project website for viewing by I&APs;
- *Public Meetings* – where representatives of the project proponent and EIA team are present to interact and engage with members of the public; and
- *Focus Group Meetings* – to target I&AP groups (e.g. Councillors, ratepayers association, surrounding landowners, affected organs of state, environmental organisations) and proactively invite them to attend a meeting where they are provided with an overview of the project and EIA process.

Documents were posted onto the website ([www.publicprocess.co.za](http://www.publicprocess.co.za)) as and when they became available and I&APs have been notified accordingly.



#### Task 4: Consultation with authorities

All public participation documentation will be supplied to the lead authority (National DEA) as well as other relevant authorities included on the I&AP database. Additionally, consultation with relevant authorities on a one-on-one basis will be effected where necessary. The CSIR EIA project leader and manager and the client team will seek to hold meetings as necessary with the authorities at various milestones throughout the process. The following provides an overview of authorities included on the project database:

- Provincial Department of Economic Development and Environmental Affairs
- Provincial and Local Department of Water Affairs
- National and Provincial Department of Agriculture
- SA Heritage Resources Agency
- Kouga Local Municipality
- National Energy Regulator
- Eastern Cape Department of Roads and Transport
- SA National Roads Agency Limited

#### Task 5: Technical Scoping with project proponent and EIA team

The Scoping process has been designed to incorporate two complementary components: a stakeholder engagement process that includes the relevant authorities and wider interested and affected parties (I&APs); and a technical process involving the EIA team and the project proponent (WKN-Windcurrent).

The purpose of the technical Scoping process is to draw on the past experience of the EIA team and the project proponent to identify environmental issues and concerns related to the proposed project at the outset, and confirm that the necessary specialist studies have been identified. Consequently, an initial meeting and site visit were held with the EIA team and the project proponent on 19 and 20 January 2011 respectively. The results from this site visit and meeting have informed the scope and Terms of Reference for the project including the specialist studies. Based on the experience of the EIA team in working on several similar projects, combined with the experience of the project proponent and their technical team (who also have extensive experience in working with similar projects locally and internationally), the specialist studies are being initiated in parallel with the Scoping process. This enables the specialists to analyse baseline information and conduct field work that will assist the EIA team in understanding the key issues raised during the public Scoping phase. The findings of the Scoping process with the public and the authorities will inform the specialist studies, which will only be completed after the Scoping process has been finalised.

### Task 6: Consultation with I&APs (public) to identify issues and concerns

In order to accommodate the varying needs of I&APs as well as capture their views, issues and concerns regarding the project, a 30 day comment and registration period extending from the 19 May 2011 to the 20 June 2011 was provided prior to the release of the Draft Scoping Report for I&AP review. A 40 day comment period was provided for the review of the Draft Scoping Report which extended from the 7 July 2011 to the 17 August 2011. The comment period took into account public holidays which fell during the review period. I&APs were notified of the comment period on the Draft Scoping Report via Letter 2. Included with this correspondence was a comment form and an Executive Summary of the Draft Scoping Report as well as details of the Public Meeting which was held during the review period. Appendix G contains copies of the correspondence sent to I&APs.

The comments received from I&APs, via fax or email, have been captured in the Issues and Responses Trail contained in Chapter 5 of this report. The comments trail includes comments received from affected authorities in response to the first notification distributed on the project. Appendix H contains copies of all the comments received.

Various opportunities have been provided for I&APs to have their issues noted prior to the release of the Draft Scoping Report and for inclusion in the Final Scoping Report. These include:

- Letter 1 to I&APs (19 May 2011) notifying them of the initiation of the Scoping process and providing them with a Background Information Document (BID) to inform them about the project and a comment form;
- Newspaper advertisements placed requesting I&APs to register their interest in the project and raise issues of concern for inclusion in the Final Scoping Report;
- Site notice boards placed;
- Project information made available through the website information;
- Letter 2 to I&APs, dated 6 July 2011, notifying them of the comment period on the Draft Scoping Report which included an executive summary of the report as well as a comment form. This correspondence included notification of the Public Meeting held during the review of the Draft Scoping Report;
- Public Meeting held on the 12 July 2011, to which all I&APs were invited via Letter 2 and through the placement of newspaper advertisements;
- Placement of the Draft Scoping Report at the Jeffreys Bay Library as well as the Humansdorp Library
- Focus Group Meetings held prior to the review of the Draft Scoping Report. These meetings are aimed particularly at Councillors and community based organisations where information on the project can be provided in the language of choice of the participant.
- Written, faxed or email correspondence:

Appendices H and I of this report contains copies of the correspondence received from I&APs and notes from the focus group meetings.

### Task 7: Focus Group Meetings

One-on-one focus group meetings were held with stakeholders during the review of the Draft Scoping Report. The purpose of these meetings has been to inform key stakeholders of the proposed project, the EIA process and obtain their issues and concerns for inclusion in the Final Scoping Report. It is further intended for these meetings to develop their capacity to participate in the process as well as identify issues for inclusion in the Final Scoping Report and later phases of the EIA process. The following provides an overview of the meetings held during the review of the Draft Scoping Report and participation at these meetings.

| Organisation            | Date of Meeting | No of Participants |
|-------------------------|-----------------|--------------------|
| St Francis Kromme Trust | 12 July 2011    | 3                  |
| COSATU Humansdorp       | 12 July 2011    | 3                  |
| ANC Kouga Sub Region    | 12 July 2011    | 1                  |
| Total Participants      |                 | 7                  |

Appendix I includes a copy of the registration forms from the meeting. The issues raised at the meeting have been incorporated into the Issues and Responses Trail in Chapter Five, and notes from the meeting are included in Appendix I of this report. These meetings will continue to play a key role in the sharing information on the findings of the Draft EIA and the identification of comments for inclusion in the final EIA.

### Task 8: Identification of Issues and Concerns

Issues and concerns raised by I&APs have been synthesized in the Issues and Responses Trail (Chapter 5). The issues and concerns were identified through the following mechanisms:

- written submissions in response to advertisements and communications with I&APs;
- issues raised through written correspondence received from I&APs (fax, email and mail); and
- Issues raised at the focus group meetings.

The Issues Trail (Chapter 5) also includes responses from the EIA Team (and, in some cases, the project proponent) to the issues raised. In general, the responses indicate how the issues will be addressed in the EIA process. In some cases, immediate responses and clarification were provided. Where issues were raised that the EIA team considers beyond the scope and purpose of this EIA process, clear reasoning for this view is provided.

The Scoping process is currently at this stage, when I&APs will be invited to submit any additional comments on the Final Scoping Report directly to the decision making authority. The following section provides an overview of the steps undertaken for the review of the Draft Scoping Report.

#### Task 9: Review of the Draft Scoping Report

This stage in the process entailed the release of the Draft Scoping Report for a 40-day period for public review, which extended from the 7 July 2011 to the 17 August 2011. All I&APs on the project database were notified in writing, via letter 2 dated the 6 July 2011, of the release of the Draft Scoping Report for review and were invited to attend a public meeting that was held during the review period.

The following mechanisms and opportunities were utilised to notify I&APs of the release of the Draft Scoping Report for comment:

- Letter 2: to notify I&APs of the release of the Draft Scoping Report, the comment period, which included an executive summary of the report, comment form and invitation to attend the public meeting;
- Newspaper advertisements placed in The Herald and Our Times on the 7 July 2011, notifying I&APs of the review period for the Draft Scoping Report, availability of the Draft Scoping Report and details of the Public Meeting;
- Placement of Draft Scoping Report on the project website ([www.publicprocess.co.za](http://www.publicprocess.co.za));
- Placement of the Draft Scoping Report at the Jeffrey's Bay and Humansdorp Municipal Libraries;
- A public meeting, to which all I&APs on the project database were invited to attend, via Letter 2 and the newspaper advertisements placed, was held on the 12 July 2011; and
- One-on-one focus group meetings with key I&AP groups were held as outlined in Task 7 above.

Copies of the newspaper advertisements placed are included in Appendix D and copies of the correspondence sent to I&APs is included in Appendix G. While I&APs were notified of the public meeting via Letter 2 and through the two newspaper advertisements placed, no I&APs participated in this meeting. The I&AP database has been updated to reflect the interaction with I&APs during the review of the Draft Scoping Report, which included participation at focus group meetings and issues raised through emails, and the submission of comment forms. The database for the final Scoping Report includes **59 registered I&APs**. All issues and concerns raised during the review of the Draft Scoping Report have been captured in the updated Issues and Responses Trail in Chapter Five of this Report.

#### Task 10: Final Scoping Report (current stage in the process)

Letter 3 to I&APs will include notification of the submission of the Final Scoping Report to DEA for their decision making and information regarding the comment period on the Final Scoping Report. To ensure ongoing access to information, copies of the Final Scoping Report will be placed in the Jeffrey's Bay and Humansdorp Municipal Libraries and be placed on the project website ([www.publicprocess.co.za](http://www.publicprocess.co.za)).

This step marks the end of the public participation process for the Scoping Phase. The publication participation programme for the subsequent Environmental Impact Reporting Phase is presented in the Plan of Study for EIA (Chapter 6 of this report).

## 4.6 APPROACH TO THE ASSESSMENT OF ALTERNATIVES

As per Guideline 5: Assessment of Alternatives and Impacts (DEAT, June 2006), the EIA Regulations require that alternatives to a proposed activity be considered. Alternatives are different means of meeting the general purpose and need of a proposed activity. This may include the assessment of site alternatives, activity alternatives, process or technology alternatives, temporal alternatives and/or the no-go alternative.

Section 28 (1)(c) of the 2010 NEMA EIA Regulations requires that the scoping report must contain a description of any feasible and reasonable alternatives that have been identified. Interested and Affected Parties must also be provided with an opportunity to provide inputs into the process of formulating alternatives. The assessment of alternatives should, as a minimum, include the following:

- The consideration of the no-go alternative as a baseline scenario;
- A comparison of the selected alternatives; and
- Providing reasons for the elimination of an alternative i.e. selection criteria.

### 4.6.1 No-go alternative

This alternative will be included in the EIA as a benchmark against which to assess the impacts (positive and negative) of the proposed Banna Ba Pifhu Wind Energy Project. The main implications of the no-go option are, among others, a lack of additional power supply to the local area, increased electrical losses due to the large distances between power generation and consumption in the Kouga area, and increased environmentally harmful emissions due to the necessity of coal-fired power generation.

### 4.6.2 Land use alternatives

At present the proposed site is zoned for Agriculture, and is mainly used for extensive cattle grazing. In addition to the application for a proposed wind farm, WKN-Windcurrent also submitted an application to DEA for the erection of a 4.5 MW photovoltaic (PV) solar power project on portion 15 of farm 689 and portion 1 of farm 868 (DEA reference number: 12/12/20/2236). These properties are included in this application for the

proposed Banna Ba Pifhu wind energy facility. The PV project comprises a Basic Assessment. A Draft Basic Assessment Report has been released for public comment from 15 June 2011 until 26 July 2011 (CSIR Ref No: Stel General: 9291). WKN-Windcurrent wishes to diversify the use of renewable energy resources by erecting a solar and a wind energy facility on the same farms.

#### **4.6.3 Location Alternatives**

During the pre-feasibility for the project, WKN-Windcurrent reviewed a range of potential sites in the Kouga Region. These sites were evaluated based on a range of criteria such as:

- Local wind climate, using data from local weather stations in the area;
- Local power line network, including existing grid availability, stability and capacity, local power utilisation, future developments and planned power line upgrades;
- Road access for construction and operational maintenance and the topography of the site;
- Engagement with landowners; and
- The visibility of the project with regard to local habitation and tourism.

Based on the above review, WKN-Windcurrent selected the Banna Ba Pifhu site located near Humansdorp (subject of this EIA) as its option. Following site selection WKN-Windcurrent moved forward towards a feasibility study. An environmental screening study for the Banna Ba Pifhu site was undertaken by the CSIR in November 2009. Based on this preliminary screening, it was concluded that there were no fatal flaws identified from an environmental perspective that would necessitate termination of the project at this stage, provided that the exclusion criteria are reviewed in more detail as part of the forthcoming planning in the EIA phase.

It is recognized that wind energy developments are being planned for other sites in the Jeffrey's Bay and Humansdorp regions, and these would require their own EIA processes. The cumulative impact of these other wind projects will be considered and addressed in this EIA. The projects that will be considered are other wind project proposals in the local area (within approximately 20 km of the proposed Banna Ba Pifhu project) that have received a positive Environmental Authorisation or with EIAs in progress in the public domain, based on an internet search.

#### 4.6.4 Technology alternatives as part of the development

The only feasible technological alternative to the horizontal axis wind turbine (HAWT) is the vertical axis wind turbine (VAWT). With the VAWT system, the turbine rotor shaft is mounted vertically as opposed to the horizontal mount of the HAWT (Figure 4.1). Such a configuration affords the VAWT various advantages, most notably; easy access to the turbine gearbox and relative quiet operation. WKN-Windcurrent, however, did not consider VAWT to be a reasonable alternative technology due to the unproven nature of these turbines at a commercial or Megawatt scale as well as its reduced efficiency (due to its relative low height and subsequent lower wind speeds at ground level) compared to that of HAWT (REFOCUS, 2003). Further the HAWT have proven worldwide that it has installed capacity of more than hundred GW.

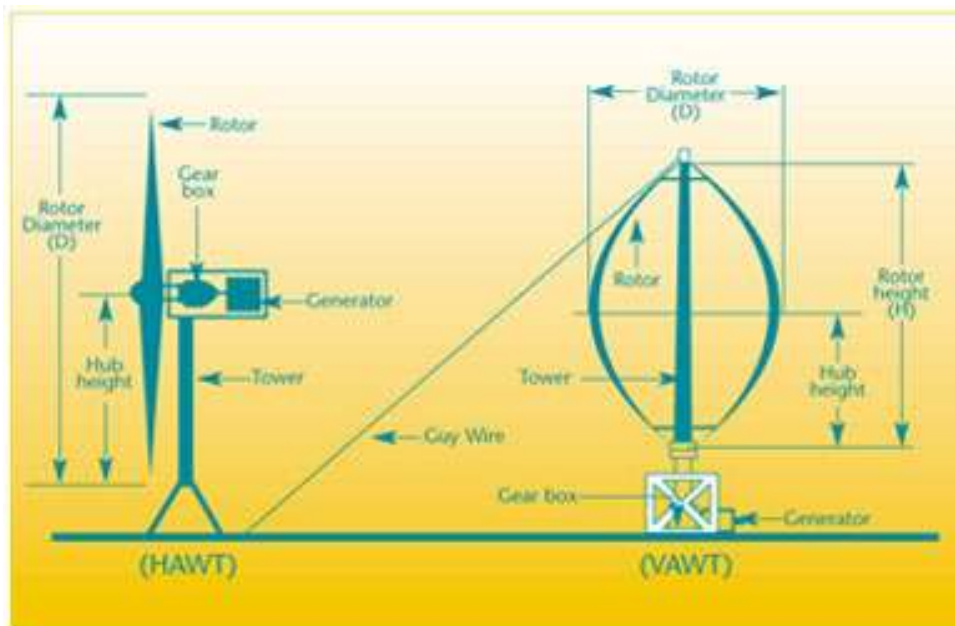


Figure 4.1: Comparison between HAWT and VAWT systems (not to scale)



#### 4.6.5 Activity Alternatives as part of the development

The fundamental goal of the WKN-Windcurrent project is the economically viable generation of renewable energy (RE) on a commercial scale. Theoretically, RE alternatives which could potentially achieve the same power generation targets include solar power generation (concentrated solar power and photovoltaic), hydro-electricity and biomass-based energy generation. Wind energy was selected as the energy source of choice due to the very favourable wind regime of the Kouga area, compared to the relatively poor solar, hydro and biomass resources in the study area (refer to Figures 4.2 to 4.5).

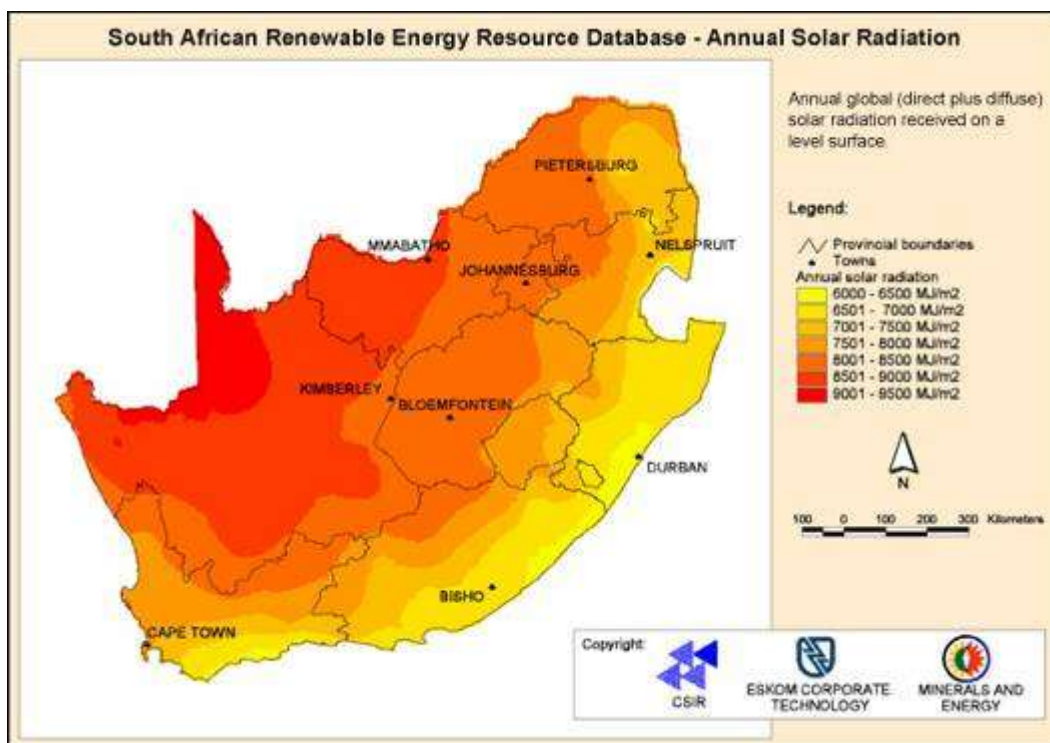


Figure 4.2: South African annual solar radiation in MJ/m<sup>4</sup>

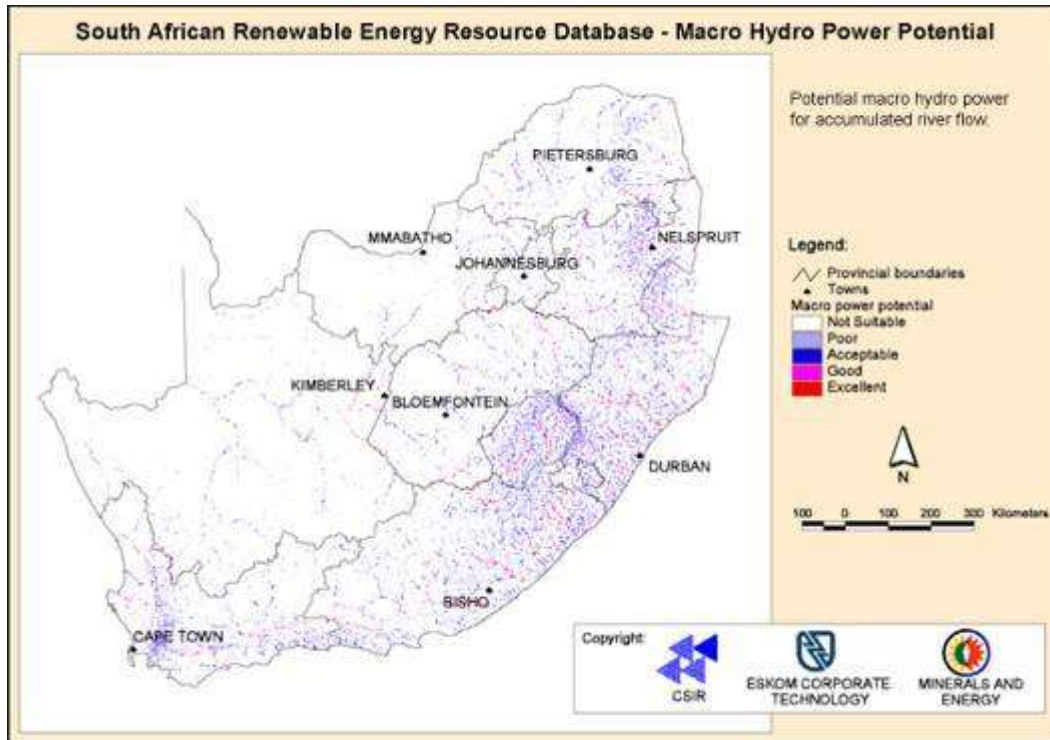


Figure 4.3: South African macro hydro power potential

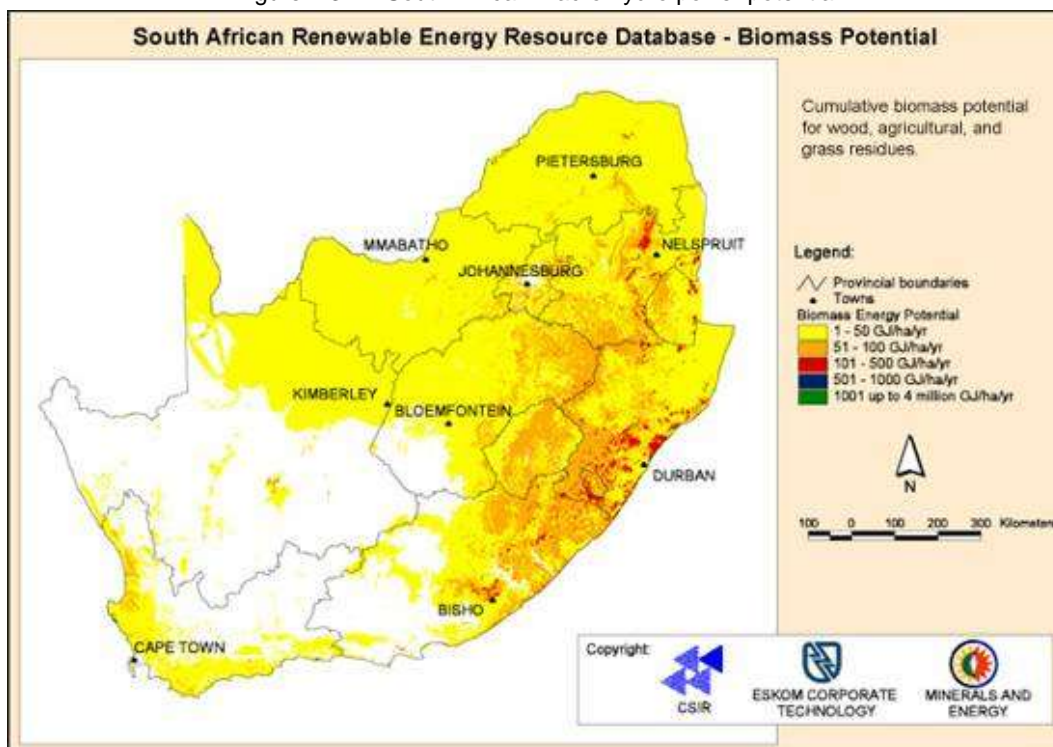


Figure 4.4: South African biomass potential

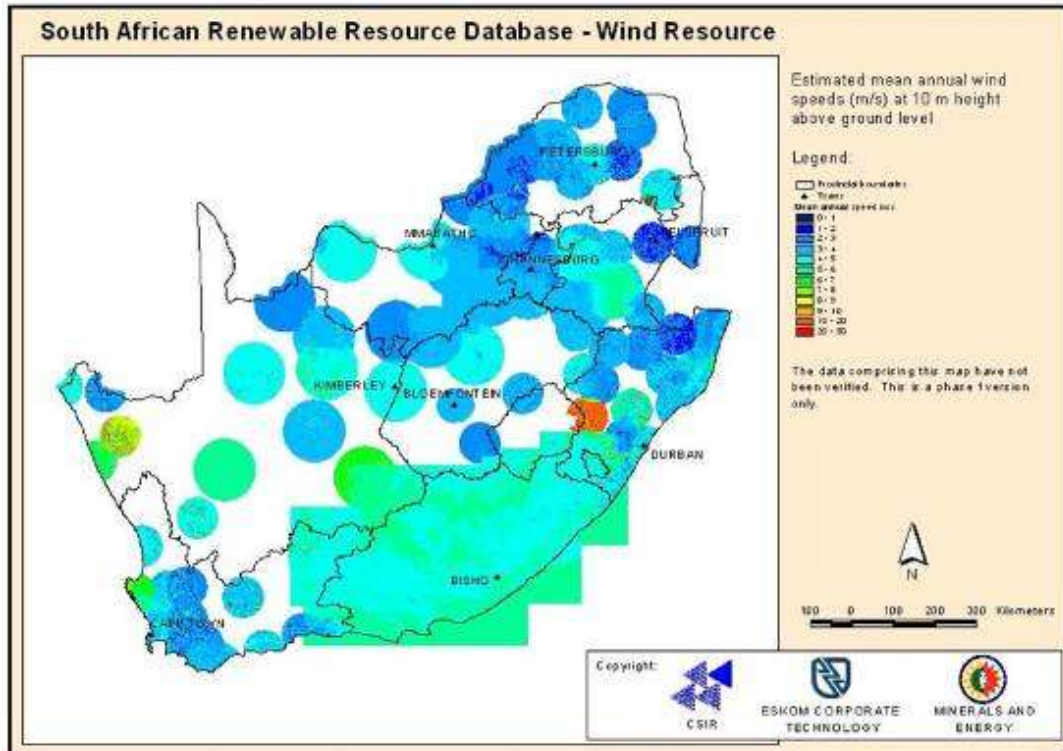


Figure 4.5: South African wind resource with the study area receiving between 4-5m & 5-6m/second mean annual wind speeds

#### 4.6.6 Turbine size alternatives as part of the development

- WKN-Windcurrent proposes to establish approximately 15 to 25 wind turbines, depending on the capacity of the turbines to be used (i.e. 2 MW or 3.2 MW). The total installed capacity will be a maximum of 50 MW. The proponent is considering a multitude of turbine suppliers. The preferred supplier and turbine capacity will be chosen later in the EIA process.
- Alternative turbine layouts are being prepared by WKN-Windcurrent pending the size of the turbines to be used. These layouts are based on specialist input data, and will be reviewed and informed by various factors such as the proximity to the dwellings, proximity to roads, linking to access road, undisturbed natural areas, proximity to wetlands, the botanical sensitivity of the proposed area as well as the sensitivity of the area from a birds and bats perspective. The turbine layout will also be informed by the wind regime (climate).

#### 4.7 SCHEDULE FOR THE EIA

The proposed schedule for the EIA, based on the legislated EIA process, is presented in Table 4.2. It should be noted that this schedule could be revised during the EIA process, depending on factors such as the time required for decisions from authorities.



**Table 4.2: EIA Schedule for the proposed Banna Ba Pifhu Wind Energy Project**

| TASKS | EIA SCHEDULE (MONTHS)  |     |      |     |      |      |     |     |     |     |     |     |     |     |     |     |     |     |   |
|-------|--|-----|------|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
|       | 2011   |     |      |     |      | 2012 |     |     |     |     |     |     |     |     |     |     |     |     |   |
|       | May  | Jun | July | Aug | Sept | Oct  | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct |   |
| 2     | Establish I&AP database, prepare BID and announce EIA  | █   |      |     |      |      |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 3     | I&AP registration & meetings with key stakeholders to source issues                                      | █   | █    |     |      |      |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 4     | Prepare Draft Scoping Report (DSR) and Plan of Study for EIA (PSEIA)                                     |     | █    | █   |      |      |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 5     | Public comments period (40 days) on DSR and stakeholder meetings   |     |      | █   | █    |      |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 6     | Submit Final Scoping Report (FSR) and PSEIA to I&APs (21 days) and to authorities for decision (30 days) |     |      |     |      |      | █   | █   |     |     |     |     |     |     |     |     |     |     |   |
| 7     | Communicate authority decision to I&APs and process for next phase                                       |     |      |     |      |      | █   | █   |     |     |     |     |     |     |     |     |     |     |   |
| 8     | Specialist studies (including fieldwork)   |     |      | █   | █    | █    | █   | █   |     |     |     |     |     |     |     |     |     |     |   |
| 9     | Prepare Draft EIA Report and EMP   |     |      |     |      |      | █   | █   | █   | █   |     |     |     |     |     |     |     |     |   |
| 10    | Public review of Draft EIA Report and EMP (40 days)  |     |      |     |      |      |     |     |     | █   | █   |     |     |     |     |     |     |     |   |
| 11    | Submit Final EIA Report and Draft EMP to authorities   |     |      |     |      |      |     |     |     |     | █   |     |     |     |     |     |     |     |   |
| 12    | Decision by authorities  |     |      |     |      |      |     |     |     |     |     | █   | █   | █   | █   | █   |     |     |   |
| 13    | Appeal process   |     |      |     |      |      |     |     |     |     |     |     |     |     |     |     |     |     | → |

**Key:**

- BID: Background Information Document
- DEA: National Department of Environmental Affairs
- EIA: Environmental Impact Assessment
- DEIA: Draft EIA report
- DSR: Draft Scoping Report
- PSEIA: Plan of Study for EIA
- EMP: Environmental Management Plan