

**ENVIRONMENTAL IMPACT ASSESSMENT
FOR THE PROPOSED**

**STORMBERG RENEWABLE ENERGY PROJECT:
WIND AND SOLAR ENERGY FACILITIES AND THE
ASSOCIATED GRID CONNECTION INFRASTRUCTURE**

EASTERN CAPE



NETWORX
ESCOM COMPANY

Savannah
ENVIRONMENTAL OPTICS LTD

BACKGROUND INFORMATION DOCUMENT

Networkx Eolos Renewables (Pty) Ltd (Networkx) has identified a site located near Sterkstroom within the Inkwanca and Maletswai Local Municipality (Eastern Cape Province) for the establishment of the Stormberg Renewable Energy Project, a development comprising of separate Wind and Solar energy facility components. The project is now being assessed through an Environmental Impact Assessment (EIA). The nature and extent of this facility is explored in more detail in this document. In addition, Networkx are also applying for Environmental Authorisation for the grid connection infrastructure which includes 132kV power lines.

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 projects.
- » An overview of the Environmental Impact Assessment Process and the relevant specialist studies being undertaken to assess the potential impacts associated with the projects.
- » Details of how you can become involved in the EIA process, receive information, or raise issues, which may concern and/or interest you.

OVERVIEW OF THE PROJECT

The Stormberg Renewable Energy Project is located approximately 12km north east of Sterkstroom and 25km east of Molteno in the Eastern Cape Province (refer to attached map). The development envelope comprises the following farm portions, and exceeds 13000 ha in extent: Portion 5 of the farm Leeuwe Fontein 24; Portion 5 (Langlaagte) of the Farm Nooitgedacht No.25; the remainder of Portion 1 of the farm Nooitgedacht 25; Portion 9 of the farm Nooitgedacht 25; Remainder of the farm Nooitgedacht 152; Portion 2 of the farm Nooitgedacht 154; Remainder of Portion 1 of the farm Drooge Fontein 155; Remainder of the Farm Drooge Fontein No. 151; Portions 5 and 6 of the farm Schilder Krantz 177; Portion 3 of the farm Jansen Fontein 178; the farm Gelegen Fontein 179; Remainder of the farm Valsch Fontein 180; Portions 0, 1, 2, 3 and remainder of the farm Pen Hoek 181; Portions 6, 9, 10, 11, 12 and remainder of the farm Stones Beacon 187; Portion 2 of the farm Schoemans Kraal 188; Portion 6 of the farm De Boulogne 176; Portions 0, 2, 3 and 5 of the farm Klip Plaat 22.

Based on the extent of the development envelope, both the wind and solar energy facilities can be appropriately placed within the larger site taking environmental and any other identified constraints into consideration.

Site-specific studies and assessments are currently being undertaken through an Environmental Impact Assessment process in order to evaluate the environmental suitability of the proposed project, and to delineate any areas of environmental sensitivity within the study area which should be excluded from development. A final layout of the turbines and PV panels within the facilities would be prepared prior to construction following the completion of detailed environmental investigations, solar data assessment and on-site wind monitoring.

The renewable energy facility is to accommodate the following project components:

1. The proposed Stormberg Wind Energy Facility
The facility will comprise of up to 150 turbines with a generating capacity of up to 3.5MW each, with a hub height of up to 120m and a rotor diameter of up to 130m. The wind energy facility would have a capacity of up to 420MW and is to be developed in progressive stages. Infrastructure associated with the wind energy facility is proposed to include:
 - » Wind turbines up to 3.5MW in capacity;
 - » Concrete foundations to support the turbines;
 - » Cabling between the turbines, to be laid underground where practical, will connect to an on-site substation;

- » An on-site substation to facilitate the connection between the wind energy facility and the electricity grid, including a building for control and storage;
- » Internal access roads to each turbine linking the wind turbines and other infrastructure on the site.

2. The proposed Stormberg Solar Energy Facility

The PV facility is proposed to have a total generating capacity of up to 150MW and is to be developed in two phases.

Infrastructure associated with the solar energy facility is proposed to include:

- » Photovoltaic (PV) panels on a mounting structure, with a capacity of up to 150MW and respective inverter stations;
- » A new on-site substation to facilitate the connection between the solar energy facility and the electricity grid, including a building for control and storage;
- » Cabling between the above mentioned infrastructures, to be laid underground where practical;
- » Internal access roads and fencing;

3. The proposed power lines for grid connection

For the first phase of the Stormberg Renewable Energy Project, two alternative corridors are being investigated for the construction of a 132kV power line to connect to Eskom's grid:

- » Option A is proposed from the Stormberg Renewable Energy Project to the existing Komani Substation (located near Queenstown).
- » Option B is proposed from the Stormberg Renewable Energy Project to the existing Freemantle Substation (located near Lady Frere).

For the second phase of the Stormberg Renewable Energy Project, a 132kV power line corridor will be investigated to connect to the Eskom transmission network located to the west of the Stormberg Renewable Energy Project between Molteno and Sterkstroom.

A corridor of up to 500m in width will be considered for each power line alternative. The most environmentally and technically feasible alternatives for connection will be identified through the EIA process.

THE NEED FOR THE PROJECT

The need to expand electricity generation capacity in South Africa is based on national policy and informed by on-going strategic planning undertaken by the Department of Energy (DoE) and the National Energy Regulator of South Africa (NERSA). The South African Government has recognised the need to diversify the mix of energy generation technologies within the country, and also to reduce the country's reliance on fossil fuel derived power generation. As a result, and in order to meet the long-term goal of a sustainable renewable energy industry, the South African Government has set a target of 17GW renewable energy contribution to new power generation capacity by 2030. This is to be produced mainly from biomass, wind, solar and small-scale hydro. The proposed Stormberg Renewable Energy Project aims to assist government in meeting this goal.

WIND POWER AS A POWER GENERATION TECHNOLOGY

Wind turbines use the energy from the wind to generate electricity. In essence, the blades of the turbine are turned by the wind and the energy captured is converted into electrical energy and supplied to the electricity grid for use in homes and elsewhere. Wind power is regarded as a non-consumptive use of a natural resource, which produces an insignificant quantity of greenhouse gases in its life cycle. Wind power consumes no fuel for continuing operation, and has no emissions directly related to electricity production.

A wind turbine typically consists of three rotor blades and a nacelle mounted at the tip of a tapered tower. The rotational power generated by the turbine blades is transmitted to the generator housed within the nacelle via a gearbox and drive train.

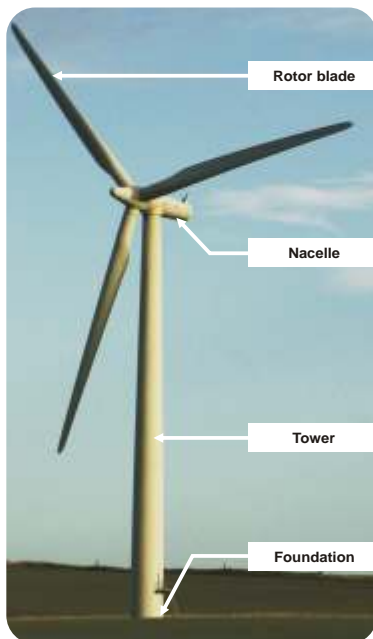


Figure 1: Illustration of a Wind turbine

PHOTOVOLTAIC (PV) TECHNOLOGY AS A POWER GENERATION TECHNOLOGY

Solar energy facility, such as those using PV panels, uses the energy from the sun to generate electricity through a process known as the Photovoltaic Effect. This effect refers to photons of light colliding with electrons, and therefore placing the electrons into a higher state of energy to create electricity. The Solar PV facility will essentially comprise of the following components:

The Photovoltaic Cell

Individual PV cells are linked and placed behind a protective glass sheet to form a photovoltaic panel.

The Inverter

The photovoltaic effect produces electricity in direct current. Therefore an inverter must be used to change it to alternating current.

The Support Structure

The PV panels will be attached to a support structure up to 10 meters off the ground at a fixed or variable angle so as to receive the maximum amount of solar radiation. The optimum angle of the panel is dependent on the latitude of the proposed facility and the angles may be adjusted to optimise for summer or winter solar radiation characteristics.



Figure 2: Illustration of a photovoltaic solar facility

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), Networx requires authorisation from the National Department of Environmental Affairs (DEA) (in consultation with the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEAET)) for the construction and operation of the proposed renewable energy facility and the grid connection infrastructure. In terms of sections 24 and 24D of NEMA, as read with the EIA Regulations of GN R543, R544, R545 and R546, a Scoping Phase and an EIA are required to be undertaken for these proposed projects. In order to obtain authorisation, comprehensive, independent environmental studies must be undertaken in accordance with the EIA Regulations. As such, the project as well as the associated substation and power line has been registered with the National DEA.

Four (4) separate applications have been prepared and submitted to the national DEA as follows:

1. Proposed Stormberg Wind Energy Facility and associated on site infrastructure, Eastern Cape (DEA reference No: 14/12/16/3/3/2/394).
2. Proposed Stormberg Solar Energy Facility and associated on site infrastructure, Eastern Cape (DEA reference No: 14/12/16/3/3/2/398).
3. Grid connection infrastructure comprising a high voltage (132kV) power line from the Wind and Solar Energy Facilities to connect to the national grid via the existing Eskom's Komani Substation or the existing Eskom's Freemantle Substation.
4. Grid connection infrastructure comprising a high voltage (132kV) power line from the Wind and Solar Energy Facilities to connect to the national grid via the transmission network located to the west of the site between Molteno and Sterkstroom.

The impacts associated with each of the applications will be assessed separately, although under a single consolidated EIA process.

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 applicant 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.

Networx has appointed Savannah Environmental, as the independent environmental consultants, to undertake the required Scoping Phase and Environmental Impact Assessment to

identify and assess all the potential environmental impacts associated with the proposed project, and propose appropriate mitigation and management measures in an Environmental Management Programme (EMPr). As part of these environmental studies, I&APs will be actively involved through the public involvement process being undertaken by Savannah Environmental.

The EIA process comprises of the following 4 primary phases:



POTENTIAL IMPACTS ASSOCIATED WITH THE ESTABLISHMENT OF A WIND AND SOLAR ENERGY FACILITY

The following impacts are typically associated with wind and solar energy facilities:

- » Visual impacts - due to their height, wind turbines (and PV panels on a smaller scale) have the potential to visually impact on the surrounding area.
- » Noise impacts - the low frequency noise associated with the rotation of the turbine blades as well as the noise associated with the generator may result in noise emissions which could affect sensitive receptors located in close proximity to the facility.
- » Impacts on avifauna and bats – bird and bat species may be affected through collisions with the turbine blades, electrocution associated with the power line, and through habitat loss and disturbance, specifically during the construction phase.
- » Impacts on ecology - the construction of the wind and solar energy facility and the associated habitat disturbance and transformation may result in impacts on the biodiversity of the area.
- » Impacts on heritage and palaeontology sites - disturbance to or destruction of heritage sites may result during the construction of the facility.
- » Impacts associated with erosion potential and agricultural potential - the construction activities may result in increased erosion on the site and/or loss of agricultural land.
- » Impacts on the social environment - the construction and operation of the facility may result in limited job opportunities and the generation of additional capacity will have an indirect but positive impact through the generation of electricity by means of renewable technology.

These potential impacts will be assessed through the specialist studies which will be undertaken in two phases as follows:

1. A Scoping Study, wherein potential issues associated with the proposed project will be identified, described and evaluated. Sensitive environmental features on the development site will be identified and mapped.
2. 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 Environmental Management Programme (EMPr).

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 PARTICIPATION PROCESS

The sharing of information forms the basis of the public participation process and offers I&APs the opportunity to become actively involved from the outset. This aims to ensure that:

- » Information containing all relevant facts in respect of the application is made available to I&APs for review.
- » Participation by potential I&APs is facilitated in such a manner that I&APs are provided with a reasonable opportunity to comment on the application.
- » Adequate review periods are provided for I&APs to comment on the findings of the Draft Environmental Impact Assessment Report.

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, you must register yourself on the project database.
- » You must ensure that any comments regarding the proposed project are submitted within the stipulated timeframes.
- » 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 project.

HOW TO BECOME INVOLVED

- » By responding (by phone, fax, or e-mail) to our invitation for your participation which has been advertised.
- » By returning the attached reply form to the relevant contact person.
- » 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.
- » By contacting the consultants with queries or comments.

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, or raise those issues and concerns which affect and/or interest you, and about which you would like more information.

COMMENTS AND QUERIES

Direct all comments, queries or responses to:

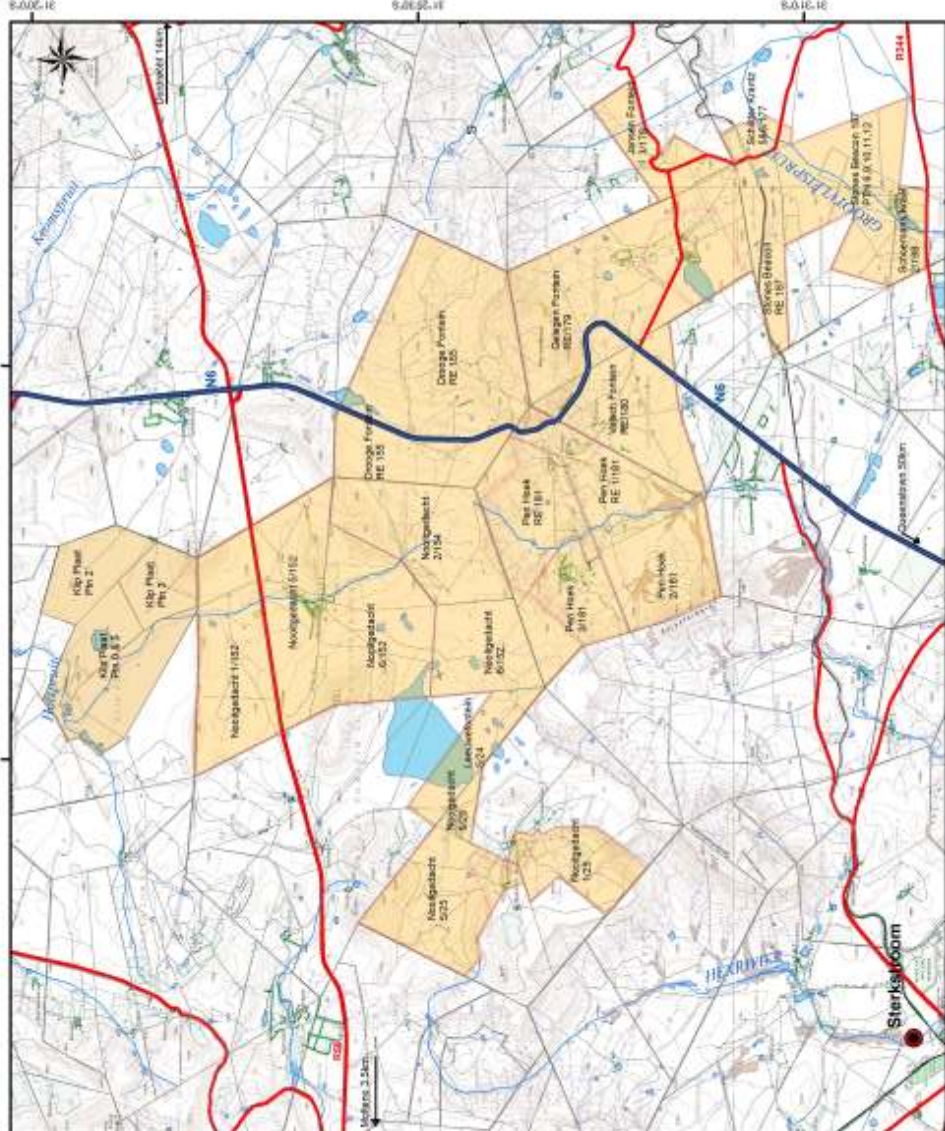
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To view project documentation, visit
www.savannahSA.com

Stormberg Renewable Project Locality Map

Legend

- Town
- Stormberg project site
- Farm boundaries
- National Route
- Secondary road
- Rivers
- Non-Perennial rivers
- Waterbody



**OMGEWINGSIMPAKEVALUERING
VIR DIE VOORGESTELDE**

**STORMBERG HERNUBARE KRAGPROJEK:
WIND- EN SONKRAGAAANLEG EN DIE GEPAARDGAANDE
ROOSTERKONNEKSIE-INFRASTRUKTUUR**

OOS-KAAP



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AGTERGRONDINLIGTINGSDOKUMENT

Networx Eolos Renewables (Edms.) Bpk. (Networx) het 'n terrein naby Sterkstroom in die Inkwanca en Maletswai Plaaslike Munisipaliteit (Oos-Kaapprovinsie) geïdentifiseer vir die oprigting van die Stormberg Hernubare Kragprojek, 'n ontwikkeling wat bestaan uit aparte Wind- en Sonkragaanlegkomponente. Die projek word nou deur 'n Omgewingsimpak-evaluering (OIE) geëvalueer. Die aard en omvang van hierdie aanleg word van naderby in hierdie dokument ondersoek. Daarbenewens doen Networx ook aansoek om Omgewings-magtiging vir die roosterkonneksie-infrastruktuur wat 132 kV kraglyne insluit.

DOEL VAN HIERDIE AGTERGRONDINLIGTINGSDOKUMENT

Hierdie dokument poog om u, as belangstellende en/of geïmpakteerde party (B&GP), te voorsien van:

- » 'n oorsig van die voorgestelde projek;
- » 'n oorsig van die Omgewingsimpakevalueringproses en tersaaklike spesialisstudies wat onderneem word om die potensiele impakte wat met die voorgestelde projek geïmpakteer gaan te evalueer; en
- » besonderhede van hoe u by die OIE-proses betrokke kan raak, inligting kan ontvang of vraagstukke kan opwerp wat u dalk kan raak en/of vir u van belang kan wees.

OORSIG VAN DIE PROJEK

Die Stormberg Hernubare Kragprojek is sowat 12 km noordoos van Sterkstroom en 25 km oos van Molteno in die Oos-Kaapprovinsie geleë (sien aangehegte kaart). Die ontwikkelingskoewert behels die volgende plaasgedeeltes en is meer as 13 000 ha in omvang: Gedeelte 5 van die plaas Leeuwe Fontein 24; Gedeelte 5 (Langlaagte) van die plaas Nooitgedacht No. 25; die Restant van Gedeelte 1 van die plaas Nooitgedacht 25; Gedeelte 9 van die plaas Nooitgedacht 25; die Restant van die plaas Nooitgedacht 152; Gedeelte 2 van die plaas Nooitgedacht 154; die Restant van Gedeelte 1 van die plaas Drooge Fontein 155; die Restant van die plaas Drooge Fontein No. 151; Gedeelte 5 en 6 van die plaas Schilder Krantz 177; Gedeelte 3 van die plaas Jansen Fontein 178; die plaas Gelegen Fontein 179; die Restant van die plaas Valsch Fontein 180; Gedeelte 0, 1, 2, 3 en die Restant van die plaas Pen Hoek 181; Gedeelte 6, 9, 10, 11, 12 en die Restant van die plaas Stones Beacon 187; Gedeelte 2 van die plaas Schoemans Kraal 188; Gedeelte 6 van die plaas De Boulogne 176; en Gedeelte 0, 2, 3 en 5 van die plaas Klip Plaat 22.

Op grond van die omvang van die ontwikkelingskoewert kan beide die wind- en sonkragaanleg behoorlik in die groter terrein geïmposeer word met inagneming van omgewings- en enige ander geïdentifiseerde beperkings.

Terreinspesifieke studies en evaluering word tans deur 'n Omgewingsimpakevalueringproses onderneem ten einde die omgewingsgeskiktheid van die voorgestelde projek te evalueer en om enige gebiede van omgewings sensitiwiteit in die studiegebied te merk wat nie by die ontwikkeling ingesluit moet word nie. 'n Finale uitleg van die turbines en PV panele in die aanlegte sal vóór konstruksie opgestel word na afloop van die voltooiing van gedetailleerde omgewingsondersoek, sonkragdata-evaluering en windmonitering op die terrein.

Die hernubare kragaanleg sal die volgende projekkomponente akkommodeer:

1. Die voorgestelde Stormberg Windkragaanleg
Die aanleg sal bestaan uit tot 150 turbines met 'n opwekkingsvermoë van tot 3.5 MW elk, met 'n naafhoogte van tot 120 m en 'n rotordeursnee van tot 130 m. Die windkragaanleg sal 'n vermoë van tot 420 MW hê en sal in progressiewe stadiums ontwikkel word. Infrastruktuur wat met die windkragaanleg geïmpakteer gaan, sal die volgende insluit:
 - » Windturbines van tot 3.5 MW in vermoë;
 - » betonfondasies om die turbines te dra;

- » kables tussen die turbines, ondergronds gelê waar prakties moontlik, wat by 'n substasie op die terrein sal aansluit;
- » 'n substasie op die terrein om die verbinding tussen die windkragaanleg en die kragrooster te bewerkstellig, wat 'n gebou vir beheer en berging sal insluit; en
- » interne toegangspaaie na elke turbine wat die windturbines en ander infrastruktuur op die terrein verbind.

2. Die voorgestelde Stormberg Sonkragaanleg

Die voorstel is dat die FV aanleg oor 'n totale opwekkingsvermoë van tot 150 MW sal beskik, wat in twee fases ontwikkel sal word.

Infrastruktuur wat met die sonkragaanleg gepaard gaan, sal die volgende insluit:

- » Fotovoltaïese (FV) panele op 'n monteerstruktuur, met 'n vermoë van tot 150 MW en onderskeie wisselrigterstasies;
- » 'n nuwe substasie op die terrein om die verbinding tussen die sonkragaanleg en die kragrooster te bewerkstellig, wat 'n gebou vir beheer en berging insluit;
- » kables tussen die bogenoemde infrastrukture, ondergronds gelê waar prakties moontlik; en
- » interne toegangspaaie en 'n omheining.

3. Die voorgestelde kraglyne vir die roosterkonneksie

Vir die eerste fase van die Stormberg Hernubare Kragprojek, word twee alternatiewe korridors ondersoek vir die oprigting van 'n 132 kV kraglyn om by Eskom se rooster aan te sluit:

- » Opsie A word voorgestel vanaf die Stormberg Hernubare Kragprojek tot by die bestaande Komani Substasie (naby Queenstown geleë).
- » Opsie B word voorgestel vanaf die Stormberg Hernubare Kragprojek tot by die bestaande Freemantle Substasie (naby Lady Frere geleë).

Vir die tweede fase van die Stormberg Hernubare Kragprojek, sal 'n 132 kV kraglynkorridor ondersoek word om by Eskom se transmissienetwerk aan te sluit wat wes van die Stormberg Hernubare Kragprojek tussen Molteno en Sterkstream geleë is.

'n Korridor van tot 500 m wyd sal vir elke kraglynalternatief oorweeg word. Die alternatiewe wat die haalbaarste is vanuit 'n omgewings- en tegniese oogpunt, sal deur die OIE-proses geïdentifiseer word.

DIE BEHOEFTE VIR DIE PROJEK

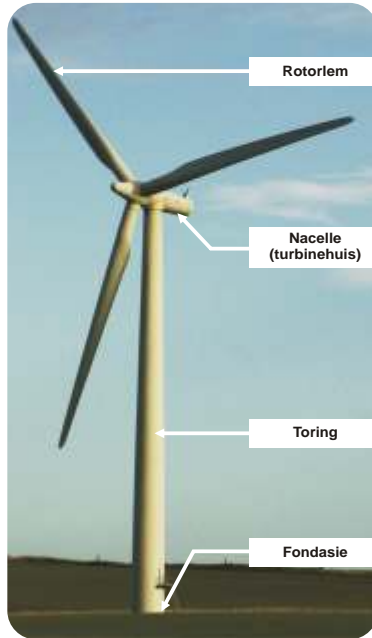
Die behoefte om die opwekkingsvermoë vir elektrisiteit in Suid-Afrika uit te brei is gegrond op nasionale beleid en toegelig deur deurlopende strategiese beplanning wat deur die Departement van Energie (DE) en die Nasionale Energiereguleerder van Suid-Afrika (NERSA) onderneem word. Die Suid-Afrikaanse Regering het die behoefte herken om die mengsel van energieopwekkingstechnologieë in die land te diversifiseer en ook om die land se afhanklikheid van fossielbrandstowwe vir kragopwekking te verminder. Gevolglik, en ten einde aan die langtermyn doelwit van 'n geskikte volhoubare hernubare kragbedryf te voldoen, het die Suid-Afrikaanse Regering 'n teiken gestel van 17 GW hernubare kragbydrae tot nuwe kragopwekkingsvermoë teen 2030. Dit sal hoofsaaklik uit biomassa, wind, son en kleinskaalse hidro-opwekking geproduseer word. Die voorgestelde Stormberg Hernubare Kragprojek is daarop gemik om die Regering te help om hierdie doelwit te verwesenlik.

WINDKRAG AS 'N KRAGOPWEKKINGSTEGNOLOGIE

Windturbines maak van windkrag gebruik om elektrisiteit op te wek. In wese word die lemme van die turbine deur die wind gedraai en die energie wat so vasevang word, word in elektriese energie omgeskakel en aan die elektrisiteitnet voorsien vir gebruik in huise en elders. Windkrag word geag

as 'n nie-verbruikende benutting van 'n natuurlike hulpbron, wat 'n onbeduidende hoeveelheid kweekhuysgasse tydens sy lewensiklus produseer. Windkrag verbruik geen brandstof vir volgehoue bedryf nie en daar is geen uitlaatgasse wat regstreeks verband hou met die opwekking van elektrisiteit nie.

'n Windturbine bestaan normaalweg uit drie rotorlemme en 'n nacelle (turbinehuis) wat bo-op 'n spitsoring gemonteer is. Die rotasiekrag wat deur die turbine se lemme opgewek word, word aan die generator wat binne-in die nacelle (turbinehuis) aangetref word, oorgedra via 'n ratkas en dryfwerk.



Figuur 1: Illustrasie van 'n windturbine

FOTOVOLTAÏESE (FV) TEGNOLOGIE AS 'N KRAGOPWEKKINGSTEGNOLOGIE

Sonkragaanlegte, soos dié wat van FV panele gebruik maak, benut die son se energie om elektrisiteit op te wek deur 'n proses wat as die Fotovoltaïese Effek bekend staan. Hierdie effek verwys na ligfotone wat met elektrone bots, wat die elektrone gevolglik in 'n hoër staat van energie plaas om elektrisiteit voort te bring. Die FV Sonkragaanleg sal in wese uit die volgende komponente bestaan:

Die Fotovoltaïese Sel

Individuele FV selle is aanmekeargekoppel en agter 'n beskermende glaspaneel geplaas om 'n fotovoltaïese paneel te vorm.

Die Wisselrigter

Die fotovoltaïese effek wek elektrisiteit in gelykstrom op, met die gevolg dat 'n wisselrigter gebruik moet word om dit in wisselstrom om te sit.

Die Steunstruktuur

Die FV panele sal op 'n steunstruktuur sowat 10 meter bo die grond aangebring word, wat

teen 'n vaste of verstelbare hoek gestel is om die maksimum hoeveelheid sonbestraling te ontvang. Die optimale hoek van die paneel hang af van die breedteligging van die voorgestelde aanleg en die hoeke kan verstel word om die kenmerke van somer- of wintersonbestraling te optimaliseer.



Figuur 2: Illustrasie van 'n fotovoltaïese sonkragaanleg

OMGEWINGSIMPAAKEVALUERINGSPROSES

Ingevolge die OIE-regulasies wat ingevolge Artikel 24(5) van die Nasionale Wet op Omgewingsbestuur (NEMA, Wet 107 van 1998) gepubliseer is, verlang Networx magtiging van die Nasionale Departement van Omgewingsake (DO) (in oorleg met die Oos-Kaapse Departement van Ekonomiese Ontwikkeling, Omgewingsake en Toerisme (DEAET)) vir die oprigting en bedryf van die voorgestelde hernubare kragaanleg en infrastruktuur vir die roosterkonneksie. Ingevolge Artikel 24 en 24D van NEMA, saamgelees met die OIE-regulasies van Staatskennisgewing R543, R544, R545 en R546, moet 'n Bestekopnamefase en 'n OIE vir hierdie voorgestelde projekte onderneem word. Ten einde magtiging te verkry, moet omvattende, onafhanklike omgewingstudies ingevolge die OIE-regulasies onderneem word. As sulks is die projek, asook die gepaardgaande substasie en kraglyn, by die Nasionale DO geregistreer.

Die volgende vier (4) aparte aansoeke is opgestel en by die nasionale DO ingedien:

1. Voorgestelde Stormberg Windkragaanleg en gepaardgaande infrastruktuur op die terrein, Oos-Kaap (DO Verw. No.: 14/12/16/3/3/2/394).
2. Voorgestelde Stormberg Sonkragaanleg en gepaardgaande infrastruktuur op die terrein, Oos-Kaap (DO Verw. No.: 14/12/16/3/3/2/398).
3. Infrastruktuur vir 'n roosterkonneksie, bestaande uit 'n hoogspanning (132 kV) kraglyn vanaf die Wind- en Sonkragaanleg om by die nasionale rooster aan te sluit via die bestaande Eskom Komani Substasie of die bestaande Eskom Freemantle Substasie.
4. Infrastruktuur vir 'n roosterkonneksie, bestaande uit 'n hoogspanning (132 kV) kraglyn vanaf die Wind- en Sonkragaanleg om by die nasionale rooster aan te sluit via die transmissienetwerk wat wes van die terrein tussen Molteno en Sterkstroom geleë is.

Die impakte wat gepaard gaan met elk van die aansoeke sal apart geëvalueer word, hoewel onder 'n enkele gekonsolideerde OIE-proses.

'n OIE is 'n doeltreffende beplannings- en besluitnemingswerktuig. Dit bring mee dat die potensiële omgewingsverwante gevolge wat voortspruit uit die oprigting en bedryf van 'n tegniese aanleg, geïdentifiseer en na behore bestuur word. Dit bied die applikant die geleentheid om vooraf gewaarsku te wees teen potensiële omgewingsvraagstukke en bied die geleentheid om die

vraagstuk(ke) waarvoor verslag gedoen word in die OIE-verslag, asook uit dialoog met B&GP's, op te los.

Networx het Savannah Environmental aangestel as onafhanklike konsultante ten einde die nodige Bestekopnamefase en Omgewingsimpakevaluering te onderneem om alle gepaardgaande potensiële omgewingsimpakte betreffende die voorgestelde projek te identifiseer en te evalueer, en om gepaste versagende en bestuursmaatreëls in 'n Omgewingsbestuursprogram (OBPr) voor te stel. As deel van hierdie omgewingstudies, sal B&GP's aktief betrokke raak deur die openbare deelnameproses wat deur Savannah Environmental onderneem word.

Die OIE-proses bestaan uit die volgende vier primêre fases:



POTENSIËLE IMPAKTE WAT MET DIE OPRIGTING VAN 'N WIND- EN SONKRAGAANLEG GEPAARD GAAN

Die volgende impakte gaan normaalweg gepaard met wind- en sonkragaanlegte:

- » Visuele impakte - Weens hul hoogte het windturbines (en FV panele op 'n kleiner skaal) die potensiaal om 'n visuele impak op die omliggende omgewing te hê.
- » Geraasimpakte - Die lae frekwensie geraas wat met die rotasie van die turbinelemme gepaard gaan, asook die geraas wat met die generator gepaard gaan, kan lei tot geraasemissies wat sensitiewe reseptors naby die aanleg kan affekteer.
- » Impakte op avifauna en vlermuise - Voëls en vlermuisspesies kan geraak word deurdat hulle in die turbinelemme kan vasvlieg, geskok kan word deur die kraglyn en weens die verlies en versteuring van habitat, veral tydens die konstruksiefase.
- » Impakte op ekologie - Die oprigting van die wind- en sonkragaanleg en die gepaardgaande versteuring en transformasie van habitat kan lei tot impakte op die gebied se biodiversiteit.
- » Impakte op erfenis en paleontologiese terreine - Die versteuring of vernietiging van erfenisterreine kan tydens die oprigting van die aanleg opduik.
- » Impakte wat met erosiepotensiaal en landboupotensiaal gepaard gaan - Die konstruksiebedrywighede kan lei tot verhoogde erosie op die terrein en/of 'n verlies aan landbougrond.
- » Impakte op die maatskaplike omgewing - Die oprigting en bedryf van die aanleg kan lei tot beperkte werkgeleenthede en die opwekking van addisionele vermoë sal 'n indirekte maar positiewe impak hê deur die opwekking van elektrisiteit aan die hand van hernubare tegnologie.

Hierdie potensiële impakte sal deur die spesialisstudies geëvalueer word, wat soos volg in twee fases onderneem sal word:

1. 'n Bestekopnamestudie, waartydens potensiële aangeleenthede wat gepaard gaan met die voorgestelde projek geïdentifiseer, beskryf en geëvalueer sal word. Sensitiewe omgewingskenmerke op die ontwikkelingsterrein sal geïdentifiseer en op 'n kaart aangeteken word.
2. 'n Gedetailleerde evaluering van potensiële wesenlike impakte wat tydens die Bestekopnamefase geïdentifiseer is. Praktiese en uitvoerbare versagtingsmaatreëls sal aanbeveel word ten einde potensiële wesenlike impakte wat geïdentifiseer is, te verminder. Hierdie aanbevelings sal in 'n konsep Omgewingsbestuursprogram (OBPr) ingesluit word.

Spesialisstudies sal toegelig word deur bestaande inligting, veldwaarnemings en insette wat uit die openbare deelnameproses voortspruit. As 'n B&GP word u insette as 'n belangrike deel van hierdie proses geag, en ons moedig u aan om betrokke te raak.

OPENBARE DEELNAMEPROSES

Die deel van inligting vorm die grondslag van die openbare deelnameproses en bied B&GP's die geleentheid om uit die staanspoor aktief by die projek betrokke te raak. Dit poog om te verseker dat:

- » inligting wat al die tersaaklike feite met betrekking tot die aansoek bevat aan B&GP's beskikbaar gestel word vir oorsig;
- » deelname deur potensiële B&GP's op so 'n wyse gefasiliteer word dat hulle 'n redelike geleentheid gegun word om kommentaar te lewer oor die aansoek; en
- » toereikende oorsigtydperke aan B&GP's gebied word om kommentaar te lewer oor die bevindinge van die Konsep Omgewingsimpakkevalueringverslag.

U VERANTWOORDELIKHEDE AS 'N B&GP

Kragtens die OIE-regulasies, word u aandag gevestig op u verantwoordelikhede as 'n B&GP:

- » Ten einde deel te neem, moet u self op die projek se databasis registreer.
- » U moet toesien dat enige kommentaar rakende die voorgestelde projek binne die gestipuleerde tydsraamwerke ingedien word.
- » Daar word van u verlang om enige regstreekse sake-, finansiële-, persoonlike- of ander belang wat u dalk mag hê in die goedkeuring of afkeuring van die aansoek vir die voorgestelde projek, bekend te maak.

HOE OM BETROKKE TE RAAK

- » Deur te reageer (per foon, faks of e-pos) op ons uitnodiging vir u deelname, wat geadverteer is.
- » Deur die aangehegte Antwoordvorm aan die tersaaklike kontakpersoon terug te besorg.
- » Deur die vergaderings by te woon wat gedurende die verloop van die projek gehou sal word. As 'n geregistreerde B&GP sal u outomaties uitgenooi word om hierdie vergaderings by te woon. Datums vir openbare vergaderings sal ook in plaaslike en streekkoerante geadverteer word.
- » Deur die konsultante te kontak met navrae of kommentaar.

Indien u self as 'n B&GP vir hierdie voorgestelde projek ag, moedig ons u aan om gebruik te maak van die geleenthede wat geskep word deur die openbare deelnameproses om kommentaar te lewer of daardie vraagstukke en knelpunte te opper wat u raak en/of waarin u belangstel en waaroor u meer inligting verlang.

KOMMENTAAR EN NAVRAE

Rig alle kommentaar, navrae of antwoorde aan:









Gabriele Wood van Savannah Environmental
Posbus 148, Sunninghill, Johannesburg, 2157
Telefoon: 011 656 3237
Faks: 086 684 0547
E-pos: gabriele@savannahsa.com

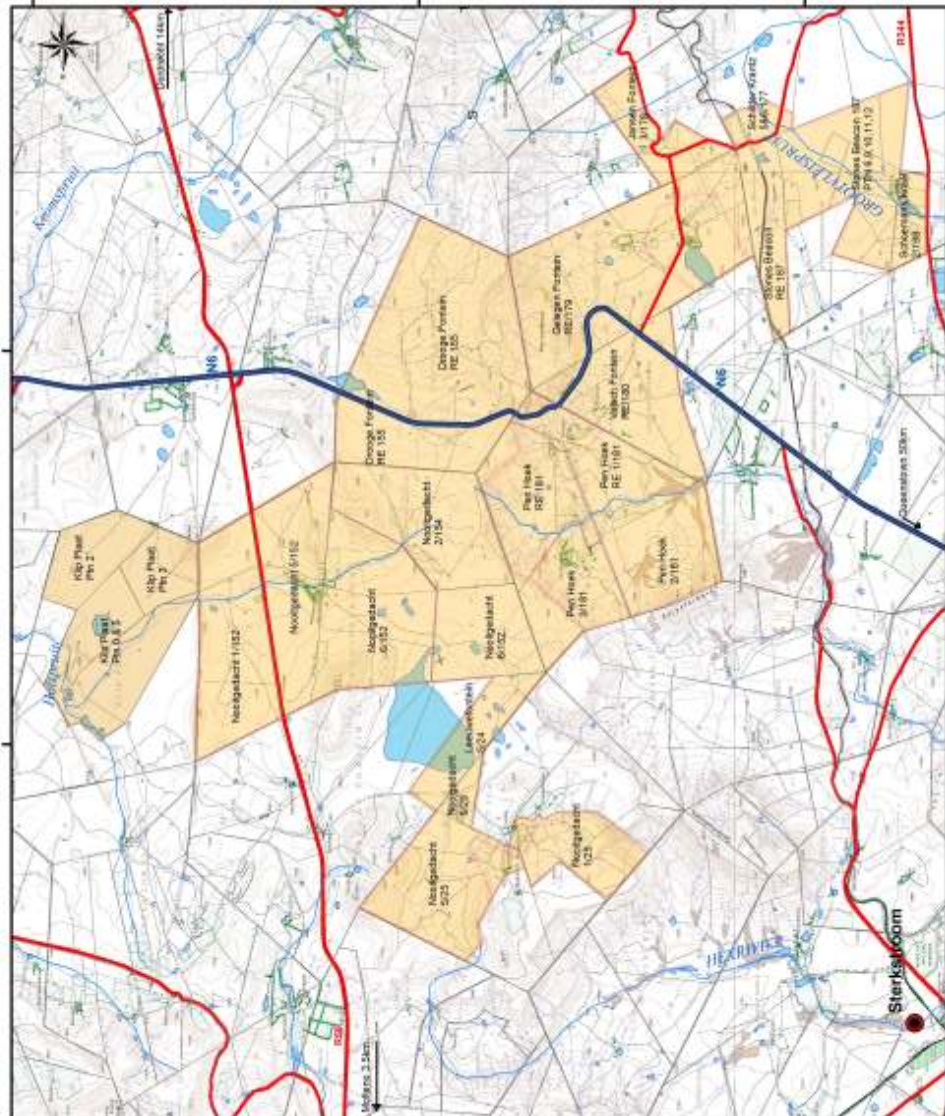
Vir dokumentasie wat met die projek gepaardgaan, besoek
www.savannahSA.com

Kopiereg: Savannah Environmental

Stormberg Renewable Project Locality Map

Legend

-  Town
-  Stormberg project site
-  Farm boundaries
-  National Route
-  Secondary road
-  Rivers
-  Non-Perennial rivers
-  Waterbody



ENVIRONMENTAL IMPACT ASSESSMENT PROCESS
THE PROPOSED STORMBERG RENEWABLE ENERGY FACILITY PROJECT LOCATED ON A SITE NEAR
MOLTENO, EASTERN CAPE PROVINCE

PUBLIC INVOLVEMENT PROCESS REPLY FORM

Return completed reply form to: **Gabriele Wood** of **Savannah Environmental (Pty) Ltd**

Fax: 086 699 5796

Phone: 011 656 3237

E-mail: gabriele@savannahsa.com

Postal Address: P O Box 148 Sunninghill 2157

Please provide your complete contact details:

Name & Surname:			
Organisation & Designation:			
Postal Address:			
Telephone:	Cellphone:		
Fax:	E-mail:		

Would you like to register as an interested and affected party (I&AP)? YES

(please tick the relevant box)

NO

Note: Please register as an I&AP to receive further correspondence regarding the EIA process for the project. Once registered on the project database, your contact details MAY be included in public documentation.

Please state your interest in the project (add additional pages if necessary):

Please list your questions, views or concerns regarding the project (add additional pages if necessary):

Please provide contact details of other persons who you regard as a potential interested or affected party:

Name & Surname:			
Organisation & Designation:			
Postal Address:			
Telephone:	Cellphone:		
Fax:	E-mail:		

What is your preferred language of correspondence? (please tick the relevant box)

English

Afrikaans



(Sien keersy vir Afrikaans)

OMGEWINGSIMPAKEVALUERINGSPROSES
VOORGESTELDE STORMBERG HERNUBARE KRAGPROJEK GELEË OP 'N TERREIN NABY MOLTENO,
OOS-KAAP

OPENBARE DEELNAMEPROSES REGISTRASIE/KOMMENTAAR VORM

Stuur voltooide registrasie/kommentaar vorm aan: **Gabriele Wood** van **Savannah Environmental (Edms.) Bpk**

Faks: 086 699 5796

Telefoon: 011 656 3237

E-pos: gabriele@savannahsa.com

Posadres: **Posbus 148 Sunninghill 2157**

Verskaf asseblief u persoonlike kontak besonderhede:

Naam & Van:

Organisasie & Rol:

Posadres:

Telefoon:

Faks:

Selfoon:

E-pos:

Stel u belang om te registreer as 'n belangstellende en/of geaffekteerde party (B&GP)? (Merk met X) JA

NEE

Nota: Dit word van u vereis om te registreer as 'n B&GP om alle toekomstige inligting in verband met die Omgewingsimpakevalueringsproses te ontvang.

Verduidelik u belangstelling in hierdie projek (gebruik addisionele bladsye indien nodig):

--

Lys u vrae, opinies of besorghede in verband met hierdie projek (gebruik addisionele bladsye indien nodig):

--

Verskaf bykommende kontak besonderhede van addisionele persoon/e wie u beskou as potensiële belangstellende en/of geaffekteerde partye:

Naam & Van:

Organisasie & Rol:

Posadres:

Telefoon:

Faks:

Selfoon:

E-pos:

Dui u taal van keuse en korrespondensie aan (Merk met X)

Engels

Afrikaans



(Sien omkeer bladsy vir Engels)