

NOVEMBER 2015

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS



ADDITIONAL

**CSP FACILITIES ASSOCIATED WITH
AUTHORISED CSP SITES (1.3, 1.4, 3, 4 & 5), AS WELL AS
ASSOCIATED LINEAR INFRASTRUCTURE
WITHIN THE KAROSHOK SOLAR VALLEY PARK**

NORTHERN CAPE

BACKGROUND INFORMATION DOCUMENT



FG Emvelo (Pty) Ltd, an independent power developer of concentrating solar power (CSP) plants, is in the process of investigating additional CSP facilities immediately adjacent to **authorised CSP sites** (1.3, 1.4, 3, 4 & 5) within the **Karoshhoek Solar Valley Development** and **associated infrastructures** (power line, access road & water pipeline) on sites located approximately 30 km east of Upington within the Khara Hais Local Municipality in the Northern Cape.

The facilities are proposed on the following farm portions (refer to map attached).

- » Lot 944 Karos Settlement;
- » Portion 3 of Matjiesrivier 41;
- » Portion 2 of Matjiesrivier 41; and
- » Portion RE of Matjiesrivier 41

The purpose of the additional CSP facilities to be investigated is to facilitate the increase in capacity of each authorised facility to 150MW in order to meet the generating capacity thresholds specified by the Department of Energy's (DoE) in its Expedited Bid Window of the Renewable Energy Independent Power Producers Procurement (REIPPP) Programme (Tender No: DOE/003/13/14 – as amended from time to time). Currently all the sites mentioned above are authorised for 50MW or 100MW each.

PURPOSE OF A BACKGROUND INFORMATION DOCUMENT

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

- » An overview of the proposed additional facilities immediately adjacent to the authorised sites within the Karoshhoek Solar Valley Park.
- » An overview of the Environmental Impact Assessment (EIA) process and specialist studies being undertaken to assess the potential impacts (i.e. positive and negative; as well as direct, indirect, and cumulative) of the proposed additional CSP facilities.
- » Details of how you can become involved in the EIA and public participation process, receive information, or raise issues, which may concern and/or interest you.

OVERVIEW OF THE PROPOSED PROJECTS

Through a previous environmental process undertaken for the broader Karoshhoek development, a number of CSP facilities were authorised as follows:

Site reference (refer to map)	Project Name and description	DEA Reference number
Site 1.3	Karoshhoek PT (1 x 100 MW Parabolic Trough)	14/12/16/3/3/2/294
Site 1.4	KKaroshhoek LFT 2 (1 x 100 MW Parabolic Trough)	14/12/16/3/3/2/299
Site 3	Karoshhoek Tower 1 (1 x 50MW Tower)	14/12/16/3/3/2/298
Site 4	Karoshhoek LFTT 1 (1 x 100 MW Parabolic Trough)	14/12/16/3/3/2/296
Site 5	Karoshhoek LFTT2 (1 x 100 MW Parabolic Trough)	14/12/16/3/3/2/295

In order to meet generating capacity thresholds of 150MW for CSP facilities as specified by Department of Energy's (DoE) Expedited Bid Window for Renewable Energy Independent Power Producers Procurement (REIPPP) Programme (Tender No: DOE/003/13/14 as amended from time to time), additional projects are proposed immediately adjacent to each of the above authorised projects. In this regard, the following is proposed:

- » An additional 50MW trough plant adjacent to each sites - 1.3, 1.4, 4 and 5

- » An additional 100MW tower plant adjacent to Site 3 (with a maximum tower height of 270m)

It is the intention of the developer to develop the above proposed projects together with the already authorised projects, each project to be developed as a single 150MW facility in total. In the instance of the tower plant environmental authorisations, this would result in only a single tower being developed across both authorised projects.

Each plant within the Karoshhoek Solar Valley Development will take approximately 2-3 years to construct. The construction of the entire Karoshhoek Solar Valley development is expected to take approximately 10-12 years, taking into consideration that the construction phase for Karoshhoek One / Ilanga CSP 1 has already commenced on site 1.2.

CONCENTRATING SOLAR POWER (CSP) AS THE RENEWABLE ENERGY TECHNOLOGY FOR THE PROJECT

Concentrating Solar Power (CSP) plants produce electric power by converting the sun's energy into high temperature heat using various mirror configurations. The heat is then channelled through a conventional steam turbine, which drives a generator to produce electricity. The plants consist of two parts; i.e. the solar field which collects the solar fuel and converts it to heat, and the conventional power block that converts heat energy into solar thermal electricity. Some CSP systems use thermal storage and they can be hybridised with biofuels and fossil fuels to provide high value, round the clock, baseload and dispatchable electricity.

The above attributes, together with one of the best Direct Normal Irradiation (DNI) at the Karoshhoek Solar Valley near Upington makes concentrating solar power an attractive renewable energy option for South Africa. The following provides a brief description of the CSP technologies authorised for the Karoshhoek Solar Valley Development:

- » **Parabolic troughs** - the sun's energy is concentrated by parabolically curved, trough shaped reflectors onto a receiver pipe/tube running along the inside of the curved surface. The sun's energy heats the thermal fluid in the receiver pipe to produce high temperature steam which is used to generate electricity in a conventional power block. A solar field comprises of troughs in parallel rows aligned on a north-south axis. This configuration enables the single-axis troughs to track the sun from east to west during the day to ensure that the sun is continuously focused to the receiver tubes. Trough designs can incorporate thermal storage allowing for electricity generation several hours into the evening. Troughs can also be hybridised with other fuels such as coal, gas or biomass.



Figure 1: Parabolic Troughs – Senertrough 2



- » The Central Tower is based on concentrated solar power with an array of heliostats on a central receiver mounted atop a tower with a height of 270 metres. The molten salts running through the receiver absorb highly concentrated solar radiation in the receiver and convert it into thermal energy for use in the generation of steam, which runs the turbine and thus generates electricity.



Figure 2: The Central Tower – Gemasolar

PROJECT ASSOCIATED INFRASTRUCTURE

In addition to the additional facilities proposed, as described above, the following associated infrastructure will also be required for the authorised sites:

- » Power line(s) which will connect to the new proposed 132/400kV Substation¹ within the project site
- » Access roads and internal access roads
- » A Water Pipeline from the Orange River (including water treatment, storage reservoirs and evaporation ponds)

The above will be used as **shared infrastructure** for all the sites within the Karochoek Solar Valley Development.

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS AND BASIC 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), **FG Emvelo (Pty) Ltd** require authorisation from the National Department of Environmental Affairs (DEA) in consultation with the Northern Cape Department of Environment and Nature Conservation (DENC) for the construction and operation of the proposed CSP facilities. In terms of sections 24(5) of NEMA, the EIA Regulations of GN R982 to GN R985; a Scoping and EIA (and a Basic Assessment for the infrastructure) are required to be undertaken for this proposed project. In order to obtain authorisation, comprehensive, independent environmental studies must be undertaken in accordance with the EIA Regulations. Two scoping reports will be compiled for the different technologies (i.e. one report for all trough plants and one report for the tower plant), and separate EIA reports for each new facility. The proposed infrastructure associated with the facilities will be assessed through a separate Basic Assessment process.

An Environmental Assessment 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

¹The proposed 400kV Substation is currently assessed through a separate EIA process.

to be identified and appropriately managed. It provides the opportunity for the developer to be forewarned of potential environmental issues, and allows for resolution of the issue(s) reported on in the as well as dialogue with affected parties.

Savannah Environmental (Pty) Ltd has been appointed as the independent environmental consultant to undertake the required Scoping and EIA process and Basic Assessment process to identify and assess all the potential environmental impacts associated with each 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.

POTENTIAL IMPACTS ASSOCIATED WITH THE CONCENTRATING SOLAR POWER PLANTS AND ASSOCIATED INFRASTRUCTURES?

Although a solar facility utilises a renewable resource to generate electricity, the construction and operation of the proposed facility has the potential to impact on the environment in both a positive and negative manner, both directly and indirectly. A number of potential environmental impacts (both positive and negative), associated with the proposed solar facility have been identified. These potential impacts will be assessed through the following specialist studies:

- » **Ecological impact assessment:** considering impacts on, fauna, flora and avifaunal impacts, the construction of the facility and the associated disturbance of vegetation and habitats may affect the ecology and biodiversity of the site.
- » **Impacts on soil resources:** the construction of the facility may result in soil degradation and/or resource loss through erosion.
- » **Agricultural potential:** solar facilities typically result in whole scale disturbance of a site (i.e. the vegetation underneath the parabolic troughs will need to be cleared), resulting in the area being unavailable for agricultural activities.
- » **Heritage sites and palaeontology:** disturbance to or destruction of heritage sites and fossils may result during the construction phase through excavation activities.
- » **Water resources:** considering impacts on, the aquatic environment, hydrology and hydraulics within the area and the abstraction and use of water in the generation process may result in impacts in terms of quantity and quality of water as well as potential impacts on the riparian environment of the Orange River.
- » **Visual aesthetics:** the establishment of an industrial facility of this nature has the potential to affect the visual aesthetics within the area.
- » **Noise:** sensitive noise receptors may be affected during the construction phase and during the operational phase (i.e. due to the operation of the steam turbine and generator).
- » **Social:** the construction and operation of the facility may result in positive socio-economic opportunities in terms of local employment as well as negative impacts in terms of safety and security and land use characteristics.

These specialist studies will be undertaken in two phases as follows:

- » The **Scoping Phase**², where potential issues associated with the proposed project will be identified as part of a desktop study. Areas of sensitivity within the broader site will be identified and delineated in order to identify an appropriate portion of the site for the proposed development. The outcome of this phase will be a Plan of Study for the EIA Phase

²This process is not applicable to the Basic Assessment Process undertaken for the proposed linear infrastructure

- » The **EIA Phase**, which involves a detailed assessment of potentially significant impacts identified in the Scoping Phase. Practical and achievable mitigation and management measures will be recommended within the Draft Environmental Management Programme (**EMPr**).

Specialist studies will be guided 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 you the opportunity to become actively involved in the EIA Process from the outset. Comments and inputs from I&APs during the Scoping and the EIA Phases are encouraged in order to ensure that potential impacts are considered within the ambit of the study.

The public participation process aims to ensure that:

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

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

- » Distribution of this Background Information Document (BID) at the start of the process.
- » Identification of I&APs including adjacent landowners and Organs of State.
- » Placement of site notices at the affected properties and in local newspapers.
- » Compilation of an I&AP database which is updated throughout the EIA Process. All registered I&APs are personally notified at milestones in the EIA process through a stakeholder letter.
- » Notification of the release of the Draft Scoping and EIA Reports for public review.
- » Holding public meetings, and focus group meetings with I&APs to further facilitate the participation process.

YOUR RESPONSIBILITIES AS AN I&AP

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

- » In order to participate in this EIA process, you must register yourself on the project database.
- » You must ensure that any comments regarding the proposed project are submitted within the stipulated 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 CSP facility.

HOW TO BECOME INVOLVED

1. By **responding** by phone, fax or e-mail to the invitation for your involvement which has been advertised in newspapers.
2. By returning the **reply form** to the relevant contact person.
3. By attending the **meetings** to be held during the course of the process. As a registered I&AP you

will automatically be invited to attend these meetings. Dates for public meetings will also be advertised in local newspapers.

4. By **contacting** the consultants with queries or comments.
5. By **reviewing and commenting** on the draft Scoping and EIA Reports within the stipulated 30-day public review periods.

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

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

COMMENTS AND QUERIES

Direct all comments, queries or responses to:

Gabriele Wood of Savannah Environmental
PO Box 148, Sunninghill, Johannesburg, 2157

Phone: 011 656 3237

Fax: 086 684 0547

E-mail: gabriele@savannahsa.com

To view project documentation, visit

www.savannahSA.com

Karoshhoek Solar Park Locality map

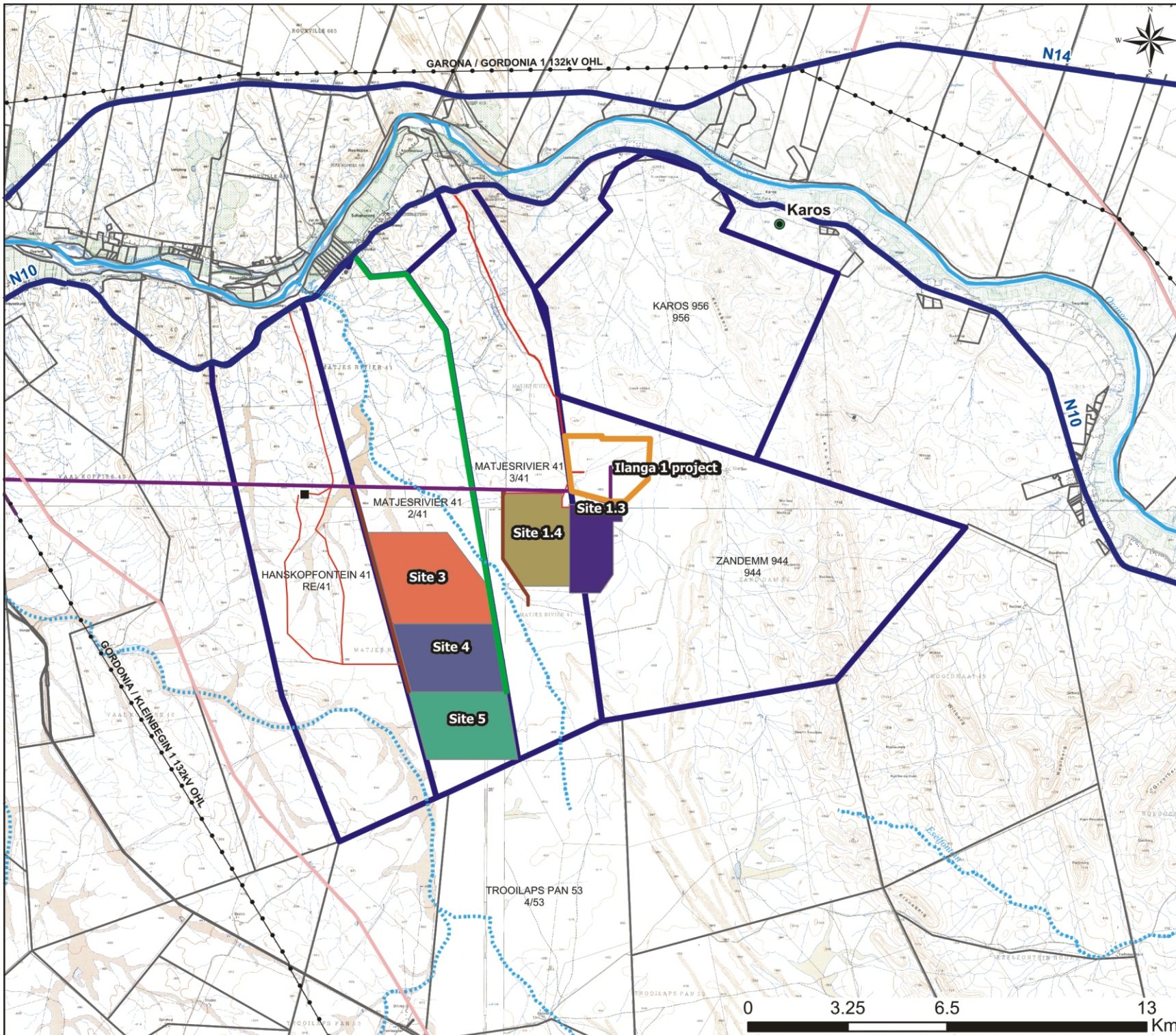
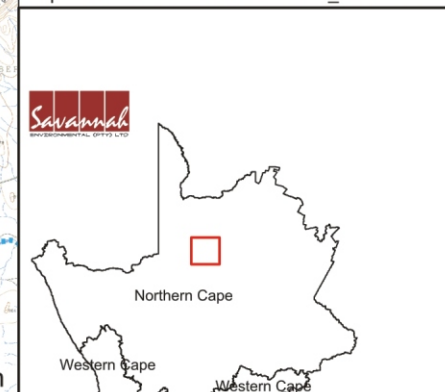
Legend

- Eskom Power Line
- National road
- Main road
- Perennial river
- Non-perennial river
- Affected Farm Portions
- Authorised Ilanga CSP site
- Authorised Ilanga 1 Power Line
- Proposed 400kV Substation
- Access roads
- Water pipeline
- Power line

CSP facilities:

- Site 1.3 (Parabolic Trough)
- Site 1.4 (Parabolic Trough)
- Site 3 (Tower)
- Site 4 (Parabolic Trough)
- Site 5 (Parabolic Trough)

Scale: A3 1:120 000
 Projection: LO21 WGS 1984
 Map ref#: Karoshhoek Solar Park sites_28.10.15



NOVEMBER 2015

OMGEWINGSIMPAKEVALUERINGSPROSES



BYKOMENDE

KSK-AANLEGTE WAT GEPAARD GAAN MET DIE GEMAGTIGDE KSK-TERREINE (1.3, 1.4, 3, 4 & 5) SOWEL AS GEPAARDGAANDE LINEÛRE INFRASTRUKTUUR IN DIE KAROSHOCK SONVALLEIPARK

NOORD-KAAPPROVINSIE

AGTERGRONDINLICHTINGS-DOKUMENT



FG Emvelo (Edms.) Bpk., 'n onafhanklike ontwikkelaar van konsentrende sonkragaanlegte (KSK-aanlegte), is in die proses om bykomende KSK-aanlegte reg langs die **gemagtigde** KSK-terreine (1.3, 1.4, 3, 4 & 5) in die **Karoshoek Sonvallei-ontwikkeling** en **gepaardgaande infrastruktuur** (kraglyn, toegangspad & waterpyplyn) te ondersoek op terreine wat sowat 30 km oos van Upington in die Khara Hais Plaaslike Munisipaliteit in die Noord-Kaap geleë is.

Die aanlegte word beoog op die volgende plaasgedeeltes (sien die aangehegte kaart):

- » Erf 944 Karos Nedersetting;
- » Gedeelte 3 van Matjiesrivier 41;
- » Gedeelte 2 van Matjiesrivier 41; en
- » die Restant van Matjiesrivier 41.

Die doel van die bykomende KSK-aanlegte wat ondersoek moet word, is om die toename in vermoë van elk van die gemagtigde aanlegte tot 150 MW moontlik te maak ten einde te voldoen aan die drumpels vir opwekkingsvermoë wat deur die Departement van Energie (DE) in sy Bespoedigde Bodtydperk van die Program vir die Verkryging van Hernubare Krag van Onafhanklike Kragprodusente (REIPPP) gestel is (Tenderno.: DOE/003/13/14 – soos van tyd tot tyd gewysig word). Tans is al die terreine wat hierbo genoem is, gemagtig vir 50 MW of 100 MW elk.

DOEL VAN 'N AGTERGRONDINLIGTINGSDOKUMENT

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

- » 'n oorsig van die beoogde bykomende aanlegte reg langs die gemagtigde terreine in die Karoshoek Sonvalleipark;
- » 'n oorsig van die Omgewingsimpakevalueringproses (OIE-proses) en die spesialisstudies wat onderneem word om die potensiële impakte (d.i. positief en negatief, asook regstreeks, onregstreeks en kumulatief) van die beoogde bykomende KSK-aanlegte te evalueer; en
- » besonderhede van hoe u by die OIE en openbare deelnameproses betrokke kan raak, inligting kan ontvang of vraagstukke kan opper wat u dalk kan raak en/of vir u van belang kan wees.

OORSIG VAN DIE BEOOGDE PROJEKTE

Deur 'n vorige omgewingsproses wat vir die groter Karoshoek ontwikkeling onderneem is, is die volgende KSK-aanlegte gemagtig:

Terreinverwysing (sien kaartopmiddelblad)	Projeknaam en beskrywing	DO Verwysingsnommer
Terrein 1.3	Karoshoek PT (1 x 100 MW Paraboliese Trog)	14/12/16/3/3/2/294
Terrein 1.4	Karoshoek LFT 2 (1 x 100 MW Paraboliese Trog)	14/12/16/3/3/2/299
Terrein 3	Karoshoek Toring 1 (1 x 50 MW Toring)	14/12/16/3/3/2/298
Terrein 4	Karoshoek LFTT 1 (1 x 100 MW Paraboliese Trog)	14/12/16/3/3/2/296
Terrein 5	Karoshoek LFTT 2 (1 x 100 MW Paraboliese Trog)	14/12/16/3/3/2/295

Ten einde te voldoen aan die drumpels van 150 MW vir KSK-aanlegte wat deur die Departement van Energie (DE) se Bespoedigde Bodtydperk in die Program vir die Verkryging van Hernubare Krag van Onafhanklike Kragprodusente (REIPPP) (Tenderno.: DOE/003/13/14 soos van tyd tot tyd gewysig word) gespesifiseer is, word bykomende projekte reg langs elk van die bogenoemde gemagtigde projekte beoog. In hierdie verband word die volgende beoog:

- » 'n Bykomende 50 MW trogaanleg langs elke terrein – 1.3, 1.4, 4 en 5; en

- » 'n bykomende 100 MW toringaanleg langs Terrein 3 (met 'n toringhoogte van hoogstens 270 m).

Die ontwikkelaar is van voorneme om die bogenoemde beoogde projekte saam met die reeds gemagtigde projekte te ontwikkel, met elke projek wat as 'n losstaande 150 MW aanleg in totaal ontwikkel sal word. In die geval van die toringaanleg se omgewingsmagtigings sal die gevolg wees dat slegs 'n enkele toring oor beide gemagtigde projekte ontwikkel sal word.

Elk van die aanlegte in die Karoshoek Sonvallei-ontwikkeling sal sowat 2–3 jaar neem om op te rig. Die oprigting van die hele Karoshoek Sonvallei-ontwikkeling sal na verwagting sowat 10–12 jaar duur, wanneer in ag geneem word dat die konstruksiefase vir die Karoshoek-teen/Ilanga KSK-1 reeds op terrein 1.2 'n aanvang geneem het.

KONSENTRERENDE SONKRAG (KSK) AS DIE HERNUBARE KRAGTEGNOLOGIE VIR DIE PROJEK

Konsentrende Sonkragaanlegte (KSK-aanlegte) wek elektriese krag op deur die son se energie aan die hand van verskeie spieëlkonfigurasies om te sit in hoë temperatuurwarmte. Die warmte word dan deur 'n konvensionele stoomturbine gekanaliseer, wat 'n generator aandryf om elektrisiteit op te wek. Die aanlegte bestaan uit twee dele, naamlik die sonvelde wat die sonstrale opvang en dit omsit in warmte en die konvensionele kragblok wat die warmte-energie omsit in sontermiese elektrisiteit. Party KSK-stelsels maak gebruik van termiese berging en kan as hibriede stelsels dien deur bio- en fossielbrandstof te gebruik om hoë waarde, 24-uur per dag basislas en evakueerbare elektrisiteit te lewer.

Die bogenoemde kenmerke, tesame met een van die beste Direkte Normale Straling (DNI) by die Karoshoek Sonvallei naby Upington maak konsentrende sonkrag 'n aantreklike hernubare kragopsie vir Suid-Afrika. Die onderstaande bied 'n bondige beskrywing van die KSK-tegnologieë wat vir die Karoshoek Sonvallei-ontwikkeling gemagtig is:

- » **Paraboliese trôe** - die son se energie word deur paraboliese geboë, trogvormige reflektors gekonsentreer op 'n ontvangspyp/-buis wat aan die binnekant van die geboë oppervlak langs loop. Die son se energie verhit die termiese vloeistof in die ontvangspyp om hoë temperatuurstoom voort te bring wat gebruik word om elektrisiteit in die konvensionele kragblok op te wek. 'n Sonveld bestaan uit trôe in parallelle rye wat op 'n noord-suid as opgestel is. Hierdie konfigurasie maak dit moontlik dat enkelas trôe die son bedags van oos na wes kan naspoor om te verseker dat die son deurlopend op die ontvangsbuise gekonsentreer is. Trogontwerpe kan termiese berging inkorporeer wat sorg vir elektriese opwekking ure nadat die son gesak het. Trôe kan ook in hibriede stelsels dien deur ander brandstowwe soos steenkool, gas of biomassa te inkorporeer.



Figuur 1: Paraboliese Trôe – Senertrough 2

- » Die Sentrale Toring is geskoei op konsentrerende sonkrag met 'n reeks heliostate wat op 'n sentrale ontvanger op die spits van 'n toring met 'n hoogte van 270 meter gemonteer is. Die gesmelte soute wat deur die ontvanger vloei, absorbeer hoogs gekonsentreerde sonbestraling in die ontvanger en sit dit om in warmte-energie wat vir die opwekking van stoom gebruik word om die turbine aan te dryf en sodoende elektrisiteit op te wek.



Figuur 2: Die Sentrale Toring – Gemasolar

PROJEK SE GEPAAARDGAANDE INFRASTRUKTUUR

Benewens die bykomende aanlegte wat beoog word, soos hierbo beskryf is, sal die volgende gepaardgaande infrastruktuur ook vir die gemagtigde terreine benodig word:

- » 'n Kraglyn(e) wat met die pas beoogde 132/400 kV Substasie¹ in die projekterrein sal verbind;
- » toegangspaaie en interne toegangspaaie; en
- » 'n waterpylyn vanaf die Oranjerivier (insluitend waterbehandeling, bergingsreservoirs en verdampingsdamme).

Die bogenoemde sal as **gedeelde infrastruktuur** vir al die terreine in die Karoshoek Sonvallei-ontwikkeling gebruik word.

OMGEWINGSIMPAKEVALUERINGS- EN BASIESE EVALUERINGSPROSES

Ingevolge die OIE-regulasies wat kragtens Artikel 24(5) van die Nasionale Wet op Omgewingsbestuur (NEMA, Wet 107 van 1998) gepubliseer is, verlang **FG Emvelo (Edms.) Bpk.** magtiging van die Nasionale Departement van Omgewingsake (DO), in oorleg met die Noord-Kaapse Departement van Omgewingsake en Natuurbewaring (DENC), vir die oprigting en bedryf van die beoogde KSK-aanlegte. Ingevolge Artikel 24(5) van NEMA, die OIE-regulasies van Staatskenningsgewing R982 tot R985, moet 'n Bestekopname en 'n OIE (sowel as 'n Basiese Evaluering vir die infrastruktuur) vir hierdie beoogde projekte onderneem word. Ten einde magtiging te verkry, moet omvattende, onafhanklike omgewingstudies ingevolge die OIE-regulasies onderneem word. Twee bestekopnameverslae sal vir die verskillende tegnologieë (d.i. een verslag vir al die trogaanlegte en een verslag vir die toringaanleg) en aparte OIE-verslae vir elke nuwe aanleg opgestel word. Die beoogde infrastruktuur wat met die aanlegte gepaard gaan, sal deur 'n aparte Basiese Evalueringsproses geëvalueer word.

'n Omgewingsevaluering 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 ontwikkelaar die geleentheid om vooraf

¹Die beoogde 400 kV Substasie word tans deur 'n aparte OIE-proses geëvalueer.

gewaarsku te wees teen potensiële omgewingsvraagstukke en bied die geleentheid om die vraagstuk(ke) waaroor verslag gedoen is, asook dié wat voortspruit uit dialoog met geïmpakteerde partye, op te los.

Savannah Environmental (Edms.) Bpk. is aangestel as die onafhanklike omgewingskonsultant om die nodige Bestekopname, OIE- en Basiese Evalueringsproses te onderneem ten einde alle potensiële omgewingsimpakte wat met elk van die beoogde projekte gepaard gaan, te identifiseer en te evalueer, en om gepaste versagtings- 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 IS DIE POTENSIËLE IMPAKTE WAT MET DIE KONSENTRERENDE SONKRAGANLEGTE EN GEPAAARDGAANDE INFRASTRUKTUUR GEPAAARD GAAN?

Hoewel 'n sonkragaanleg 'n hernubare hulpbron benut om elektrisiteit op te wek, het die oprigting en bedryf van die beoogde aanlegte die potensiaal om beide 'n positiewe en negatiewe impak op die omgewing te hê, regstreeks sowel as onregstreeks. 'n Aantal potensiële omgewingsimpakte (positief sowel as negatief) wat gepaard gaan met die beoogde sonkragaanlegte, is geïdentifiseer. Hierdie potensiële impakte sal deur die volgende spesialisstudies geëvalueer word:

- » **Ekologiese impakevaluering:** Met inagneming van impakte op fauna, flora en avifauna kan die oprigting van die aanlegte en die gevolglike versteuring van plantegroei en habitats die terrein se ekologie en biodiversiteit affekteer.
- » **Impakte op grondhulpbronne:** Die oprigting van die aanlegte kan lei tot gronddegradasie en/of 'n hulpbronverlies weens erosie.
- » **Landboupotensiaal:** Sonkragaanlegte lei normaalweg tot 'n algehele skaalversteuring van 'n terrein (d.i. die plantegroei onder die paraboliese trêe sal uitgeroei moet word), wat veroorsaak dat die terrein nie meer beskikbaar is vir landboubedrywighede nie.
- » **Erfenisterreine en paleontologie:** Die versteuring of vernietiging van erfenisterreine en fossiele kan tydens die oprigtingsfase voortspruit weens uitgrawings wat plaasvind.
- » **Waterhulpbronne:** Met inagneming van impakte op die akwatiese omgewing, hidrologie en hidroulika in die omgewing sowel as die onttrekking en gebruik van water in die opwekkingsproses, kan impakte met betrekking tot die hoeveelheid en gehalte van die water, en ook die oeweromgewing van die Oranjerivier voorkom.
- » **Visuele estetika:** Die oprigting van 'n industriële aanleg van hierdie aard het die potensiaal om die visuele estetika in die gebied te beïnvloed.
- » **Geraas:** Sensitiewe geraasreseptors kan geraak word ten tyde van die oprigtings- asook die bedryfsfase (d.i. weens die werking van die stoomturbine en generator).
- » **Maatskaplik:** Die oprigting en bedryf van die aanlegte kan 'n positiewe impak op sosio-ekonomiese geleenthede bied betreffende plaaslike werkgeleenthede, asook negatiewe impakte inhou ten opsigte van veiligheid en sekerheid en kenmerkende grondgebruike.

Hierdie spesialisstudies sal soos volg in twee fases onderneem word:

- » Die **Bestekopnamefase**², waartydens potensiële kwessies wat gepaard gaan met die beoogde projekte geïdentifiseer sal word as deel van 'n kantoor (desktop) studie. Sensitiewe gebiede binne

²Hierdie proses is nie van toepassing op die Basiese Evalueringsproses wat vir die beoogde liniêre infrastruktuur onderneem word nie.

die groter terrein sal geïdentifiseer en afgebaken word ten einde 'n gepaste gedeelte van die terrein vir die beoogde ontwikkeling te identifiseer. Die resultaat van hierdie fase sal 'n Plan van Studie vir die OIE-fase wees.

- » Die **OIE-fase**, wat 'n gedetailleerde evaluering van potensieel wesenlike impakte behels wat tydens die Bestekopnamefase geïdentifiseer is. Praktiese en uitvoerbare versagtings- en bestuursmaatreëls sal in die Konsep Omgewingsbestuursprogram (**OBPr**) aanbeveel word.

Spesialisstudies sal toegelig word deur bestaande inligting, veldwaarnemings en insette wat voortspruit uit die openbare deelnameproses. 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 u die geleentheid om uit die staanspoor aktief by die OIE-proses betrokke te raak. Kommentaar en insette van B&GP's tydens die Bestekopname- en OIE-fase word aangemoedig ten einde te verseker dat oorweging aan potensieël impakte binne die omvang van die studie geskenk word.

Die openbare deelnameproses 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 B&GP's op so 'n wyse gefasiliteer word dat hulle 'n redelike geleentheid gegun word om kommentaar te lewer oor die beoogde projekte; en
- » toereikende oorsigtydperke aan B&GP's gebied word om kommentaar te lewer oor die bevindinge van die konsep Bestekopname- en OIE-verslag.

Ten einde doeltreffende deelname te verseker, sluit die openbare deelnameproses in die:

- » verspreiding van hierdie Agtergrondinligtingsdokument (AID) met die aanvang van die proses;
- » identifisering van B&GP's, wat naburige grondeienaars en staatsinstansies insluit;
- » aanbring van terreinkennisgewings by die geaffekteerde eiendomme sowel as plasings in plaaslike koerante;
- » samestelling van 'n B&GP databasis wat regdeur die OIE-proses bygewerk word. Alle geregistreerde B&GP's word persoonlik in kennis gestel van mylpale in die OIE-proses deur 'n brief aan belanghebbendes;
- » kennisgewing van die vrystelling van die Konsep Bestekopname- en OIE-verslag vir openbare oorsig; en
- » hou van openbare en fokusgroepvergaderings met B&GP's ten einde die openbare deelnameproses verder te fasiliteer.

U VERANTWOORDELIKHEDE AS 'N B&GP

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

- » Ten einde aan hierdie OIE-proses deel te neem, moet u uself op die projekdatabasis registreer.
- » U moet toesien dat enige kommentaar rakende die beoogde projekte 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 beoogde KSK-aanlegte, bekend te maak.

HOE OM BETROKKE TE RAAK

Rig alle kommentaar, navrae of antwoorde aan:

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Vir dokumentasie wat met die projek gepaardgaan, besoek

www.savannahSA.com

Karoshhoek Solar Park Locality map

Legend

-  Eskom Power Line
-  National road
-  Main road
-  Perennial river
-  Non-perennial river
-  Affected Farm Portions
-  Authorised Ilanga CSP site
-  Authorised Ilanga 1 Power Line
-  Proposed 400kV Substation
-  Access roads
-  Water pipeline
-  Power line

CSP facilities:

-  Site 1.3 (Parabolic Trough)
-  Site 1.4 (Parabolic Trough)
-  Site 3 (Tower)
-  Site 4 (Parabolic Trough)
-  Site 5 (Parabolic Trough)

Scale: A3 1:120 000
 Projection: LO21 WGS 1984
 Map ref#: Karoshhoek Solar Park sites_28.10.15

