



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of regulation 36 of the Environmental Impact Assessment Regulations, 2010

Construction of a 400kV/132kV Solar Park Substation, 2x400kV power lines from the existing Aries Substation and 1x400kV power line from the existing Nieuwehoop Substation, Northern Cape Province

Siyanda District Municipality

Authorisation register number:	12/12/20/2606
NEAS reference number:	DEA/EIA/785/2011
Last amended:	First issue
Holder of authorisation:	Eskom Holdings SOC Limited
Location of activity:	NORTHERN CAPE PROVINCE: Khara Hais, !Kheis, !Garib Local Municipalities

This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.

Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this environmental authorisation, that the applicant should be authorised to undertake the activity/ies specified below.

Non-compliance with a condition of this authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the EIA regulations.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

Activities authorised

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act 107 of 1998) and the Environmental Impact Assessment Regulations, 2010 the Department hereby authorises –

ESKOM HOLDINGS SOC LIMITED

with the following contact details –

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to undertake the following activity/ies (hereafter referred to as "the activity") indicated in Listing Notices 1, 2 or 3 (GN R. 544, 545 & 546):

Listed activities	Activity/Project description
<p><u>GN R544 Item 10:</u></p> <p>The construction of facilities or infrastructure for the transmission and distribution of electricity -</p> <p>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts.</p>	<p>Construction of a substation outside the urban area that will include infrastructure for the transmission of electricity with a capacity of 132kV.</p>
<p><u>GN R544 Item 11:</u></p> <p>The construction of:</p> <p>(iii) bridges;</p> <p>(xi) infrastructure or structures covering 50 square metres or more</p> <p>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.</p>	<p>The realignment of the un-tarred road currently running through the CSP site and the establishment of new access routes could require the installation of small pipes/culverts to prevent damage and erosion of the road surface through submersion of the road during heavy rains.</p>
<p><u>GN R544 Item 22:</u></p> <p>The construction of a road, outside urban areas,</p> <p>(ii) where no reserve exists where the road is wider than 8 metres</p>	<p>The construction of access roads for the construction and or long term servicing of all planned infrastructure for the project and/or the realignment and expansion of existing roads.</p>
<p><u>GN R544 Item 24:</u></p> <p>The transformation of land bigger than 1000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule or thereafter such land was zoned open space, conservation or</p> <p>had an equivalent zoning.</p>	<p>The construction of the substation at the CSP site and power lines will result in the transformation of land larger than 1000 square metres.</p>

Listed activities	Activity/Project description
<p><u>GN R545 Item 8:</u></p> <p><i>The construction of facilities or infrastructure for the transmission and distribution of electricity with a capacity of 275 kilovolts or more, outside an urban area or industrial complex.</i></p>	<p>Construction of a 400kV / 132kV substation. Construction of two 400kV power lines from the Solar Park to Aries substation and the construction of one 400kV power line from the Solar Park to the Nieuwehoop substation.</p>
<p><u>GN R546 Item 12:</u></p> <p><i>The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.</i></p> <p>(a) <i>Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; and</i></p> <p>(b) <i>Within critical biodiversity areas identified in bioregional plans.</i></p>	<p>The construction of pylons on either side of the Orange River may result in the clearance of more than 300 square metres of natural vegetation within the identified CBA identified along the Orange River.</p>
<p><u>GN R546 Item 16:</u></p> <p><i>The construction of:</i></p> <p>(iv) <i>infrastructure covering 10 square metres or more 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.</i></p> <p>(a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and Northern Cape</p> <p>ii. <i>Outside urban areas, in:</i></p> <p>(ff) <i>Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans.</i></p>	<p>The construction of pylons on either side of the Orange River may result in the clearance of more than 300 square metres of natural vegetation within the identified CBA identified along the Orange River.</p>

as described in the Environmental Impact Assessment Report (EIR) dated September 2013 at:

Alternatives	Latitude	Longitude
Solar Park Substation (Alternative 6)		
Northern border left corner	28°32'48.57" S	21°07'49.72" E
Northern border right corner	28°32'26.95" S	21°08'18.66" E
Southern border left corner	28°33'13.83" S	21°08'13.35" E
Southern border right corner	28°32'52.72" S	21°08'42.30" E
Power line from the Solar Park to the Aries substation (Alternative 1B)		
Starting point of activity	28°32'44.3" S	21°07'56.1" E
Middle point of activity	28°52'47.0" S	20°42'33.3" E
End point of activity	29°29'42.8" S	20°48'06.6" E
Power line from the Solar Park to the Nieuwehoop substation (Alternative 3B)		
Starting point of activity	28°32'44.1" S	21°07'55.4" E
Middle point of activity	28°43'44.2" S	21°18'19.7" E
End point of activity	29°02'39.8" S	21°25'04.3" E
Road relocation (Alternative 1)		
Starting point of activity	28°29'00.9" S	21°03'04.0" E
Middle point of activity	28°31'29.4" S	21°05'39.2" E
End point of activity	28°34'08.1" S	21°08'11.7" E

- Construction of the 400kV/132kV Solar Park Substation, two (2) 400kV power lines from the existing Aries Substation and one (1) power line from the existing Nieuwehoop Substation, Northern Cape Province, hereafter referred to as "the property".

The power lines will be located within a 2km wide corridor and the construction activities will include the following:

- New Solar Park Substation:
 - 5 x 500 MVA 132/400kV transformer & associated switchgear;
 - Establish 5x400kV transformer feeder bay; and

- Establish 13x132kV transformer feeder bay.
- Upgrade of the Aries Substation:
 - Establish 2x400kV transformer feeder bay;
 - Add a 400/132kV transformer;
 - 132kV busbar;
 - 400/132kV 500MVA x 3 transformers; and
 - 8x 132kV feeder bays and associated lines
- Upgrade of the Nieuwehoop Substation:
 - Establish 2x400kV transformer feeder bay;
 - Add a 400/132kV transformer;
 - 132kV busbar;
 - 400/132kV 500MVA x 3 transformers; and
 - 8x 132kV feeder bays and associated lines
- Transmission Line
 - Approximately 2 x ± 130 km 400kV power lines between the CSP and Aries Substation.
 - Approximately 1 x ± 75 km 400kV power line between the CSP and Nieuwehoop Substation.
- Relocation of provincial road D3279 outside the CSP property boundary. This road will be upgraded, widened and surfaced and will have a road reserve of at least 40m.

Conditions of this Environmental Authorisation

Scope of authorisation

1. The preferred route corridors for the power lines from the Solar Park to the Aries Substation (Alternative 1B), the power lines from the Solar Park to the Nieuwehoop substation (Alternative 3B), the Solar Park substation (Alternative 6) and the relocation of road D3279 (Alternative 1) are approved.
2. Authorisation of the activity is subject to the conditions contained in this authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.
3. The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holder's behalf,

- including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.
4. The activities authorised may only be carried out at the property as described above.
 5. Any changes to, or deviations from, the project description set out in this authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.
 6. This activity must commence within a period of five (5) years from the date of issue of this authorisation. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.
 7. Commencement with one activity listed in terms of this authorisation constitutes commencement of all authorised activities.
 8. The holder of an environmental authorisation must notify the competent authority of any alienation, transfer and change of ownership rights in the property on which the activity is to take place.

Notification of authorisation and right to appeal

9. The holder of the authorisation must notify every registered interested and affected party, in writing and within 12 (twelve) calendar days of the date of this environmental authorisation, of the decision to authorise the activity.
10. The notification referred to must –
 - 10.1. specify the date on which the authorisation was issued;
 - 10.2. inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Environmental Impact Assessment Regulations, 2010;
 - 10.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
 - 10.4. give the reasons of the competent authority for the decision.
11. The holder of the authorisation must publish a notice –
 - 11.1. informing interested and affected parties of the decision;
 - 11.2. informing interested and affected parties where the decision can be accessed; and

- 11.3. drawing the attention of interested and affected parties to the fact that an appeal may be lodged against this decision in the newspaper(s) contemplated and used in terms of regulation 54(2)(c) and (d) and which newspaper was used for the placing of advertisements as part of the public participation process.

Management of the activity

12. The Environmental Management Programme (EMPr) submitted as part of the Application for EA is hereby approved. This EMPr must be implemented and adhered to.

Monitoring

13. The applicant must appoint a suitably experienced independent Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this authorisation are implemented and to ensure compliance with the provisions of the EMPr.
- 13.1. The ECO must be appointed before commencement of any authorised activity/ies.
- 13.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department.
- 13.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
- 13.4. The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.

Recording and reporting to the Department

14. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this authorisation, must be submitted to the *Director: Compliance Monitoring* at the Department.
15. The holder of the authorisation must submit an environmental audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and within 30 days of completion of rehabilitation activities.

16. The environmental audit report must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the EMPr.
17. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

Commencement of the activity

18. The authorised activity shall not commence within twenty (20) days of the date of signature of the authorisation.
19. An appeal under section 43 of the National Environmental Management Act (NEMA), Act 107 of 1998 (as amended), does not suspend an environmental authorisation or exemption, or any provisions or conditions attached thereto, or any directive, unless the Minister, MEC or delegated organ of state directs otherwise.
20. Should you be notified by the Minister of a suspension of the authorisation pending appeal procedures, you may not commence with the activity until such time that the Minister allows you to commence with such an activity in writing.

Notification to authorities

21. Fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number. This notification period may coincide with the notice of intent to appeal period.

Operation of the activity

22. Fourteen (14) days written notice must be given to the Department that the activity operational phase will commence.



Site closure and decommissioning

23. Should the activity ever cease or become redundant, the applicant shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.

Specific conditions

24. A heritage specialist must be commissioned to perform a final walkthrough of the site once the final route alignment and tower positions have been identified. All heritage sensitivities, if any, must be recorded and avoided and a specialist report must be submitted to the Department for approval prior to construction.
25. Once the final alignments and tower positions have been selected, a helicopter inspection along that part of the alignment falling within Eastern Kalahari Bushveld should be conducted by the avifaunal specialist to record any large raptor nests that could be impacted by the proposed line. Should any nests be recorded, it would require re-routing of the alignment to accommodate a 1km buffer around the nest.
26. Once the final alignments and tower positions have been selected, the sections of the line that would need the application of Bird Flight Diverters to mitigate for potential collisions should be indicated by the avifaunal specialist. This exercise should be informed by an analysis of satellite imagery supplemented by on site ground-truthing.
27. A walk-through must take place before tower positions are planned with a botanical specialist. Areas where protected plants occur should be identified. Sensitive habitats should be avoided at all cost, but if this is not possible permits should be acquired and a rescue and rehabilitation plan developed.
28. Where plants protected in terms of NEMBA or LEMA must be removed, a TOPS permit should be acquired and the species rehabilitated according to an approved rescue and rehabilitation plan. Where protected trees need to be removed, a permit should be acquired from the Department of Agriculture, Forestry and Fisheries, and the seedlings of the same specie be replanted in a 5:1 ratio.
29. No exotic plants may be used for rehabilitation purposes. Only indigenous plants of the area may be utilised.
30. Vegetation clearing must be kept to a minimum.

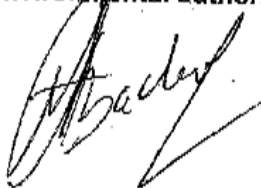
31. All areas affected by construction should be rehabilitated upon completion of the construction phase of the power line crossing. Areas should be reseeded with indigenous grasses, and survival of these plants should be ensured with an intensive follow-up programme. This is an arid area and rehabilitation does not take place without serious interventions.
32. Liaison with land owners/farm managers is to be done prior to construction in order to provide sufficient time for them to plan agricultural activities.
33. The power line crossing design must ensure that the creation of turbulent flow in the system is minimised, in order to prevent downstream erosion. No support pillars should be constructed within the active channels.
34. Impacts on the stream should be avoided at all cost, and where this is unavoidable, the duration of impacts on the stream should be minimised as far as possible by ensuring that the duration of time in which flow alteration and sedimentation will take place is minimised.
35. During construction, erosion berms should be installed to prevent gully formation and siltation of the Orange River. This is necessary to ensure the ongoing viability of the aquatic communities downstream of the proposed crossing which are dependent on cobble substrates which are free of sediment deposition. There is already evidence of sedimentation at the site and further degradation of the river in this regard should not take place.
36. During the construction phase, no vehicles should be allowed to indiscriminately drive through the riparian areas at all. Riparian areas should be designated no-go areas.
37. The characteristics of the stream bed are likely to be altered locally. In particular, the rock and rubble created during the construction process is likely to have sharp edges, and not the smooth surfaces that are typically associated with river rocks and pebbles. All rock and rubble must be removed from the active stream channel immediately once construction has been completed.
38. Where there is unavoidable impact on the riparian area, biomonitoring, using the same techniques as were used in this baseline report should be implemented throughout the construction phase of the development, in order to monitor the effects of the development on the aquatic systems present. Assessments should be undertaken on a quarterly basis. If the SASS and ASPT scores decrease by more than 15%, it should serve as an indication that the system is suffering harm and measures to minimise the impacts of the development on the system should be implemented.
39. Any areas where bank failure is observed, due to the effects of the power line crossing, should be immediately repaired by reducing the gradient of the banks to a 1:3 slope.
40. Bank vegetation cover should be monitored to ensure that sufficient vegetation is present to bind the bankside soils and prevent further bankside erosion.

41. For a minimum period of three years after construction, active management of the crossing and lines should take place to remove any recruited alien vegetation.
42. Rehabilitated areas should be managed to ensure the survival of the plants, and monitored, and problems with the growth of plants in these areas addressed immediately.

General

43. A copy of this authorisation and the approved EMPr must be kept at the property where the activity/ will be undertaken. The authorisation and approved EMPr must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.
44. The holder of the authorisation must notify both the *Director: Integrated Environmental Authorisations* and the *Director: Compliance Monitoring* at the Department, in writing and within 48 (forty eight) hours, if any condition of this authorisation cannot be or is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.
45. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the applicant or his successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

Date of environmental authorisation: 14 FEBRUARY 2014



Mr Ishaam Abader

Deputy Director-General: Legal, Authorisations, Compliance and Enforcement
Department of Environmental Affairs

Annexure 1: Reasons for Decision

1. Information considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The information contained in the EIR dated September 2013;
- b) The comments received from the organs of state and interested and affected parties as included in the EIR dated September 2013;
- c) Mitigation measures as proposed in the EIR dated September 2013 and the EMPr;
- d) The information contained in the specialist studies contained within Appendix H of the EIR;
- e) Findings of the site visit conducted on 30-31 October 2013; and
- f) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act 107 of 1998).

2. Key factors considered in making the decision

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below.

- a) The findings of all the specialist studies conducted and their recommended mitigation measures.
- b) The need for the proposed project stems from the requirement to integrate the electricity generated at the Upington Solar Park (by IPP's and Eskom) into the National Electricity Grid and to distribute the power generated to Upington and surrounds.
- c) The EIR dated September 2013 identified all legislation and guidelines that have been considered in the preparation of the EIR.
- d) The methodology used in assessing the potential impacts identified in the EIR dated September 2013 and the specialist studies have been adequately indicated.
- e) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2010 for public involvement.

3. Findings

After consideration of the information and factors listed above, the Department made the following findings -

- a) The identification and assessment of impacts are detailed in the EIR dated September 2013 and sufficient assessment of the key identified issues and impacts have been completed.
- b) The procedure followed for impact assessment is adequate for the decision-making process.
- c) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- d) The information contained in the EIR dated September 2013 is accurate and credible.
- e) EMP measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the EIR and will be implemented to manage the identified environmental impacts during the construction process.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the proposed activity will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the proposed activity can be mitigated to acceptable levels. The environmental authorisation is accordingly granted.

