



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447· PRETORIA · 0001· Environment House · 473 Steve Biko Road · Arcadia · PRETORIA
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DEA Reference: 14/12/16/3/3/2/1746

Enquiries: Ms Mmamohale Kabasa

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Ms Jasandra Nyker
BioTherm Energy (Pty) Ltd.
PO Box 69408
BRYANSTON
2021

Telephone Number: (011) 367 4600
Email Address: eiaadmin@biothermenergy.com

PER E-MAIL / MAIL

Dear Ms Nyker

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, ACT NO. 107 OF 1998, AS AMENDED: GN R982/983/984/985, AS AMENDED FOR THE 132KV TLISITSENG 2 SUBSTATION AND POWERLINE ON PORTION 25 OF THE FARM HOUTHAAALBOOMEN NO. 31 AND PORTION 10 AND THE REMAINDER OF LICHTENBURG TOWN AND TOWNLANDS 27 NORTH OF THE TOWN OF LICHTENBURG WITHIN THE DITSBOTLA LOCAL MUNICIPALITY IN THE NORTH WEST PROVINCE

With reference to the above application, please be advised that the Department has decided to grant authorisation. The Environmental Authorisation (EA) and reasons for the decision are attached herewith.

In terms of Regulation 4(2) of the Environmental Impact Assessment Regulations, 2014, as amended (the EIA Regulations), you are instructed to notify all registered interested and affected parties, in writing and within 14 (fourteen) days of the date of the EA, of the Department's as well as the provisions regarding the submission of appeals that are contained in the Regulations.

Your attention is drawn to Chapter 2 of GN R993 of 08 December 2014, which prescribes the appeal procedure to be followed. Kindly include a copy of this document with the letter of notification to interested and affected parties.

Should any person wish to lodge an appeal against this decision, he/she must submit the appeal to the appeal administrator, and a copy of the appeal to the applicant, any registered interested and affected party, and any organ of state with interest in the matter within 20 days from the date that the notification of the decision was sent to the registered interested and affected parties by the applicant; or the date that the notification of the decision was sent to the applicant by the Department, whichever is applicable.

Appeals must be submitted in writing in the prescribed form to:

Mr Z Hassam, Director: Appeals and Legal Review of this Department at the below mentioned addresses.

By email: appealsdirector@environment.gov.za;

By hand: Environment House
473 Steve Biko
Arcadia
Pretoria
0083; or

By post: Private Bag X447
Pretoria
0001

Please note that in terms of Section 43(7) of the National Environmental Management Act, Act No. 107 of 1998, as amended, the lodging of an appeal will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged, you may not commence with the activity until such time that the appeal is finalised.

To obtain the prescribed appeal form and for guidance on the submission of appeals, please visit the Department's website at https://www.environment.gov.za/documents/forms#legal_authorisations or request a copy of the documents at appealsdirector@environment.gov.za.

Yours faithfully



Mr Sabelo Malaza
Chief Director: Integrated Environmental Authorisations
Department of Environmental Affairs

Date: 14/08/2017

cc:	A Gibb	SIVEST SA (Pty) Ltd	Email: andreag@sivest.co.za
	M Nkosi	North West DREAD	Email: mnkosi@nwpg.gov.za
	K Zandamela	Ditsobotla Local Municipality	Email: info@ditsobotla.gov.za



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of Regulation 25 of the Environmental Impact Assessment Regulations, 2014, as amended

The construction of the Tlisitseng PV2 132kV substation and powerline on Portion 25 of the Farm Houthaalboomen No. 31 and Portion 10 and the Remainder of Lichtenburg Town and Townlands No. 27 north of the town of Lichtenburg within the Ditsobotla Local Municipality in the North West Province

Ngaka Modiri Molema District Municipality

Authorisation register number:	<i>14/12/16/3/3/1/1746</i>
Last amended:	<i>First issue</i>
Holder of authorisation:	<i>BioTherm Energy (Pty) Ltd.</i>
Location of activity:	<i>Portion 25 of the Farm Houthaalboomen No. 31; Portion 10 of the Farm Lichtenburg Town and Townlands No. 27; Remainder of Portion 1 of the Farm Lichtenburg Town and Townlands No. 27; Ditsobotla Local Municipality Ngaka Modiri Molema District Municipality North West Province</i>

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.

MS

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 activities specified below.

Non-compliance with a condition of this environmental 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 No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2014 the Department hereby authorises –

BIOTHERM ENERGY (PTY) LTD

with the following contact details –

Ms Jasandra Nyker

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2021

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to undertake the following activities (hereafter referred to as "the activity") indicated in Listing Notice 1 (GN R. 983) and Listing Notice 3 (GN R. 985) as amended:

Activity number	Activity description
<p><u>GN R. 983: Activity 11:</u> <i>"The development of facilities or infrastructure for the transmission and distribution of electricity – (i) Outside urban area or industrial complexes with a capacity of more than 33 but less than 275 kilovolts..."</i></p>	<p>A powerline with a capacity of 132kV will be constructed.</p>
<p><u>GN R. 983: Activity 27:</u> <i>"The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation..."</i></p>	<p>The assessed substation site consists of an area of up to 2.25 hectares. All the vegetation will need to be cleared for the construction of the substation and associated infrastructure which will be more than 1 hectare.</p>
<p><u>GN R. 985: Activity 12</u> <i>"The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. a) In North West province: (ii) within critical biodiversity areas identified in bioregional plans;"</i></p>	<p>The assessed substation site consists of an area of up to 2.25 hectares. All the vegetation will need to be cleared for the construction of the substation and associated infrastructure which will be than 300 square metres. The site occurs within a critical biodiversity area identified in a bioregional plan.</p>

as described in the Basic Assessment Report (BAR) dated June 2017 at:

21 SG Code:

T	0	I	P	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	2	5
T	0	I	P	0	0	0	0	0	0	0	0	0	0	2	7	0	0	0	1	0
T	0	I	P	0	0	0	0	0	0	0	0	0	0	2	7	0	0	0	0	1



Alternative 2 (preferred route alternative)	Latitude	Longitude
Start	26° 5' 10.681" S	26° 8' 9.272" E
Middle	26° 5' 19.745" S	26° 8' 22.746" E
End	26° 5' 28.544" S	26° 8' 36.397" E
Substation	26° 5' 15.026" S	26° 8' 16.043" E

- for the construction of the Tlisitseng PV2 132kV substation and powerline on Portion 25 of the Farm Houthaalboomen No. 31 and Portion 10 and the Remainder of Lichtenburg Town and Townlands No. 27 north of the town of Lichtenburg within the Ditsobotla Local Municipality in the North West Province, hereafter referred to as "the property".

The Tlisitseng PV2 132kV powerline will comprise the following:

- 132kV Monopoles and Angle Strain Towers with a height of up to 30m, length of approximately 1km and a servitude width of 31m; and
- Onsite switching substation that will occupy an area of up to approximately 2.25ha.

Technical details of the proposed facility:

Component	Description/ Dimensions
Location of the site	8km north-west of Lichtenburg (approximately)
Length	1km (approximately)
SG Codes	» T0IP00000000003100025 » T0IP00000000002700010 » T0IP00000000002700001
Preferred Site access	Access to the site will be from the Regional Road R505.
Capacity / Voltage	132kV
Proposed technology	Monopoles and Angle Strain Towers in combination with other towers as required
Height of poles	Up to 30m
Width and length of required servitude	Servitude width of 31m Servitude length of approximately 1km

Substation	One substation with a voltage capacity of 132kV, comprising transformers for voltage step up from medium voltage to high voltage. The onsite switching substation will occupy an area of up to approximately 2.25ha.
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Conditions of this Environmental Authorisation

Scope of authorisation

1. The Tlisitseng PV2 132kV substation and powerline as described above is hereby approved.
2. Authorisation of the activity is subject to the conditions contained in this environmental 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 environmental 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 environmental authorisation in terms of the regulations.
6. The holder of an environmental authorisation must apply for an amendment of the environmental authorisation with the competent authority for any alienation, transfer or change of ownership rights in the property on which the activity is to take place.
7. This activity must commence within a period of five (05) years from the date of issue of this environmental 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.
8. Commencement with one activity listed in terms of this environmental authorisation constitutes commencement of all authorised activities.

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 14 (fourteen) 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 the National Appeal Regulations, 2014;
 - 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 terms of the National Appeal Regulations, 2014.

Commencement of the activity

12. The authorised activity shall not commence until the period for the submission of appeals has lapsed as per the National Appeal Regulations, 2014. In terms of section 43(7), an appeal under section 43 of the National Environmental Management Act, 1998 will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged you may not commence with the activity until such time that the appeal has been finalised.

Management of the activity

13. The Tlisitseng Solar 2 132kV Powerline Preferred Corridor Alternative Map Ref. No 13303TPL/BA2_08 prepared by SIVEST SA (Pty) Ltd. and included in Appendix A of the BAR dated June 2017 is approved.
14. The Environmental Management Programme (EMPr) compiled by SIVEST SA (Pty) Ltd that was integrated as part of the BAR dated June 2017 is approved.

15. Changes to the approved EMPr must be submitted in accordance to the EIA Regulations applicable at the time.
16. The Department reserves the right to amend the approved EMPr should any impacts that were not anticipated or covered in the BAR be discovered.

Frequency and process of updating the EMPr

17. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 24 below, indicate insufficient mitigation of environmental impacts associated with the undertaking of the activity, or insufficient levels of compliance with the environmental authorisation or EMPr.
18. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
19. The updated EMPr must be submitted to the Department for approval together with the environmental audit report, as per Regulation 34 of GN R. 982. The updated EMPr must have been subjected to a public participation process, which process has been agreed to by the Department, prior to submission of the updated EMPr to the Department for approval.
20. In assessing whether to grant approval of an EMPr which has been updated as a result of an audit, the Department will consider the processes prescribed in Regulation 35 of GN R.982. Prior to approving an amended EMPr, the Department may request such amendments to the EMPr as it deems appropriate to ensure that the EMPr sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity.
21. The holder of the authorisation may apply for an amendment of an EMPr, if such amendment is required before an audit is required. The holder must notify the Department of its intention to amend the EMPr at least 60 days prior to submitting such amendments to the EMPr to the Department for approval. In assessing whether to grant such approval or not, the Department will consider the processes and requirements prescribed in Regulation 37 of GN R. 982.

Monitoring

22. The holder of the authorisation must appoint an 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 environmental authorisation are implemented and to ensure compliance with the provisions of the approved EMPr.

- 22.1. The ECO must be appointed before commencement of any authorised activities.
- 22.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department.
- 22.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
- 22.4. 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

23. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this environmental authorisation, must be submitted to the *Director: Compliance Monitoring* of the Department.
24. The holder of the environmental authorisation must, for the period during which the environmental authorisation and EMPr remain valid, ensure that project compliance with the conditions of the environmental authorisation and the EMPr are audited, and that the audit reports are submitted to the *Director: Compliance Monitoring* of the Department.
25. The frequency of auditing and of submission of the environmental audit reports must be as per the frequency indicated in the EMPr, taking into account the processes for such auditing as prescribed in Regulation 34 of GN R. 982.
26. The holder of the authorisation must, in addition, submit environmental audit reports to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and a final environmental audit report within 30 days of completion of rehabilitation activities.
27. The environmental audit reports must be compiled in accordance with Appendix 7 of the EIA Regulations, 2014 and 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 approved EMPr.
28. 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.

Notification to authorities

29. A written notification of commencement must be given to the Department no later than fourteen (14) days prior to the commencement of the activity. 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.

Operation of the activity

30. A written notification of operation must be given to the Department no later than fourteen (14) days prior to the commencement of the activity operational phase.

Site closure and decommissioning

31. Should the activity ever cease or become redundant, the holder of the authorisation must 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

32. Information gathered during the geotechnical investigations for the development must be made available to the Heritage Practitioner and Palaeontologist to assess the possibility of exposing bedrock with fossils where excavations will exceed 1.5m or where gravity surveys indicate possible karst topography in dolomitic terrains. This information must be made available to the specialists prior to construction and the EMPr must be amended if necessary.
33. If any other heritage resources of archaeological or paleontological significance are discovered during the construction activities, construction must cease and a Phase 2 rescue operation must be undertaken by a qualified specialist. The findings must be submitted to SAHRA and should they have implications to the layout or mitigation measures, these must be submitted to this Department with SAHRA's recommendations for review and consideration.
34. Monitoring of avifauna collisions with infrastructure must be conducted for at least one year from operation of the facility. Recommendations from this monitoring must be used to update the EMPr.
35. Anti-collision devices such as bird flappers must be installed where powerlines cross avifaunal corridors (e.g. grasslands, rivers, wetlands, and dams). The input of an avifaunal specialist must be obtained for

the fitting of the anti-collision devices onto specific sections of the powerline once the exact positions of the towers have been surveyed and pegged. Additional areas of high sensitivity along the preferred alignment must also be identified by the avifaunal specialist for the fitment of anti-collision devices. These devices must be according to Eskom's Transmission and EWT's Guidelines.

36. Electric fencing should not have any strands within 30cm of the ground, which should be sufficient to allow smaller mammals, reptiles and tortoises to pass through.
37. Any fauna directly threatened by the construction activities must be removed to a safe location by a qualified person.
38. An 18m buffer must be clearly demarcated around all identified wetlands. No activities will be allowed within this buffer.
39. Watercourses outside the approved footprint/layout must be treated as "no-go" areas and demarcated as such. No vehicles, machinery, personnel, construction material, fuel, oil, bitumen or waste must be allowed into these areas without the express permission of and supervision by the ECO, except for rehabilitation work in these areas.
40. A pre-construction survey of the final development footprint must be conducted by a qualified floral specialist to identify protected species affected by the proposed development. Prior to the commencement of construction, a rescue and rehabilitation operation for these species which could survive translocation must be conducted.
41. Liaison with land owners/farm managers must be done prior to construction in order to provide sufficient time for them to plan agricultural activities.
42. No exotic plants may be used for rehabilitation purposes. Only indigenous plants occurring within a ten (10) kilometre radius of the development site must be utilised.
43. Vegetation clearing must be kept to an absolute minimum. Mitigation measures must be implemented to reduce the risk of erosion and the invasion of alien species.
44. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate.
45. Any solid waste, which will not be recycled, must be disposed of at a landfill licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act No. 59 of 2008). No waste material may be left on site after construction.
46. The recommendations of the EAP in the BAR dated June 2017 and the specialist studies attached must be adhered to. In the event of any conflicting mitigation measures and conditions of the Environmental Authorisation, the specific condition of this Environmental Authorisation will take preference.

General

47. A copy of this Environmental Authorisation, the audit and compliance monitoring reports, and the approved EMPr, must be made available for inspection and copying-
- 47.1. at the site of the authorised activity;
 - 47.2. to anyone on request; and
 - 47.3. where the holder of the Environmental Authorisation has a website, on such publicly accessible website.
48. 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 holder of the authorisation or his/her 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 holder of the authorisation 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: 14/08/2012



Mr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations
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 listed activities as applied for in the application form received on 29/03/2016.
- b) The information contained in the BAR dated June 2017.
- c) The comments received from the Department of Water and Sanitation, Eskom, PRASA and interested and affected parties as included in the BAR dated June 2017.
- d) Mitigation measures as proposed in the BAR and the EMPr.
- e) The information contained in the specialist studies contained within the appendices of the BAR dated June 2017 and as appears below:

Title	Prepared by	Date
Ecological Impact Assessment	Dr D Hoare of David Hoare Consulting	February 2017
Heritage and Paleontological Impact Assessment	W Fourie and G Groenewald of PGS Heritage	July 2016
Bird Impact Assessment	A Froneman and C van Rooyen of Chris van Rooyen Consultancy	March 2017
Visual Impact Assessment	S Jacobs of SiVEST SA (Pty) Ltd. Peer Review: K Allan of SRK Consulting SA (Pty) Ltd.	March 2017
Transport Study and Traffic Impact Assessment	S Lombard and JHB Conradie of Aurecon South Africa (Pty) Ltd.	March 2017
Social Impact Assessment	M Steynburg and E Broughton of Urban-Econ Development Economists	March 2017
Surface Water Impact Assessment	L Rimbault and R. Thomas of SiVEST SA (Pty) Ltd. Peer Review: Dr M. Ferreira of JG Afrika	February 2017
Soil Impact Assessment	N Mushia of ARC-Institute for Soil, Climate and Water	March 2017
Geotechnical Study	T Msengana of Geopractica	July 2016

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 aim of the project is to connect the Tlisitseng PV2 Solar Energy Facility to the national electricity grid.
- c) The BAR dated June 2017 identified all legislations and guidelines that have been considered in the preparation of the BAR dated June 2017.
- d) The methodology used in assessing the potential impacts identified in the BAR dated June 2017 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, 2014 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 BAR dated June 2017 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 BAR dated June 2017 is deemed to be accurate and credible.
- e) EMPr measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the BAR and will be implemented to manage the identified environmental impacts during the construction phase.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the authorised activities 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 authorised activities can be mitigated to acceptable levels. The environmental authorisation is accordingly granted.