

## Dale Holder

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**From:** Samkelisiwe Dlamini <SDlamini@environment.gov.za>  
**Sent:** 10 September 2020 12:43 PM  
**To:** Dale Holder  
**Cc:** Masina Litsoane  
**Subject:** RE: 2020-08-0027

Dear Dale

The Public Participation Process (PPP) Plans for The proposed Humansrus PV3 Solar, North Cape Province and received on the 27 August 2020 refers.

The Department has evaluated the Public Participation Plan which is submitted as per Minister Directive dated 05 June 2020 in response to Covid-19 pandemic and hereby approves the plan for the abovementioned project.

Please ensure that all correspondence to be sent to I&APs must clearly specify the dates when comments on the report should be submitted. Further, should there be a need to for a meetings from I&APs, the meeting can take place via virtual platforms such as Microsoft Teams.

You may proceed with the public participation process in accordance with the tasks contemplated in the PPP plan. Should you wish to deviate from the submitted PPP Plan, the amended PPP Plan must be submitted to the Department for approval prior commencement.

You are hereby reminded of Section 24F of the National Environmental Management Act 1998 (Act No. 107 of 1998), as amended, that no activity may commence prior to an Environmental Authorization being granted by the Department.

Do not hesitate to contact me if you need further clarity

Regards

Samkelisiwe Dlamini

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**From:** EIA Applications  
**Sent:** Tuesday, September 1, 2020 2:03 PM  
**To:** Samkelisiwe Dlamini <SDlamini@environment.gov.za>  
**Cc:** Masina Litsoane <MLitsoane@environment.gov.za>; Dale Holder <dale@cape-eaprac.co.za>  
**Subject:** 2020-08-0027

Dear Samke.

Please note that you have been allocated an application:

**Type of Application:** Pre-Application Meeting Request;  
**Reference Number:** 2020-08-0027;  
**Date Received:** 27/08/2020;  
**Action Required:** Decide on meeting request.

Kindly let Ephron know which date the meeting is to be held, if it will be set.

\*EAP/Applicant: please use this reference number when submitting the application for EA/amendment application (page 1 of the application form), as well as attach the approved PP Plan if the application requires a PP process.

## EIA Applications

Integrated Environmental Authorisations  
Department of Environment, Forestry and Fisheries

**Please note that this email is for the receipt and processing of online applications only, and is not monitored for responses. All queries must be directed to [EIAAdmin@environment.gov.za](mailto:EIAAdmin@environment.gov.za).**

**You are advised that this mailbox has a 48 hour response time.**

*Please note that this mailbox has a 5mb mail limit. No zip files are to be attached in any email.*

**From:** Dale Holder <[dale@cape-eaprac.co.za](mailto:dale@cape-eaprac.co.za)>

**Sent:** Thursday, August 27, 2020 10:03

**To:** EIA Applications <[EIAApplications@environment.gov.za](mailto:EIAApplications@environment.gov.za)>

**Subject:** Submission of Pre Application Meeting Request and Public Participation Plan - Humansrus 3 Part 2 Amendment

To Whom it may concern.

Kindly find the following documentation attached:

1. Document Control Form
2. Request for Pre-Application Meeting
3. Proposed Public Participation Plan

These documents are submitted for a proposed part 2 amendment for the Humansrus 3 Solar Energy Development.

Kind Regards,

**Dale Holder | 082 448 9225**  
**SENIOR CONSULTANT | ECO | GIS**  
Ndip Nat. Con. (Pretoria Tech)

T: 044 874 0365  
F: 044 874 0432  
17 Progress Street, George  
PO Box 2070, George 6530



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## Dale Holder

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**From:** Samkelisiwe Dlamini <SDlamini@environment.gov.za>  
**Sent:** 28 October 2020 09:11 AM  
**To:** Dale Holder  
**Cc:** Masina Litsoane; Ephron Maradwa  
**Subject:** 14/12/16/3/3/2/888/AM3 - Acknowledgment of receipt

Dear Dale

**ACKNOWLEDGEMENT OF RECEIPT OF APPLICATION FOR AMENDMENT OF ENVIRONMENTAL AUTHORISATION ISSUED ON 29 MAY 2017 FOR THE HUMANSRUS SOLAR 3 TO INCLUDE BATTERY ENERGY STORAGE SYSTEM ON FARM 147 HUMANSRUS, PRIESKA, NORTHERN CAPE PROVINCE**

The Department confirms having received the application for amendment of the Environmental Authorisation and the Draft motivation report for the abovementioned project on 20 October 2020.

Please note that your application for amendment of the environmental authorisation falls within the ambit of amendments to be applied for in terms of Part 2 of Chapter 5 of the Environmental Impact Assessment Regulations, 2014, as amended. You are therefore referred to Regulation 32 of the EIA Regulations, 2014 as amended.

Regards  
Samke

National Infrastructure Projects  
Department of Environmental Affairs  
473 Steve Biko Road  
Arcadia  
Tel: 012399 9379

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## environment, forestry & fisheries

Department:  
Environment, Forestry and Fisheries  
REPUBLIC OF SOUTH AFRICA

Private Bag X 447· PRETORIA · 0001· Environment House ·473 Steve Biko Road, Arcadia,· PRETORIA

DEA Reference: 14/12/16/3/3/2/888/AM3

Enquiries: Ms Samkelsiwe Dlamini

Telephone: (012) 399 9379 E-mail: [SDlamini@environment.gov.za](mailto:SDlamini@environment.gov.za)

Mr Dale Holder  
Cape Environmental Assessment Practitioners (Cape EAPrac)  
PO Box 2070  
**GEORGE**  
6530

Telephone Number: (044) 874 0365  
Email Address: [dale@cape-eaprac.co.za](mailto:dale@cape-eaprac.co.za)

### PER MAIL / EMAIL

Dear Mr Holder

### COMMENTS ON THE APPLICATION FOR AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION ISSUED ON 29 MAY 2017 FOR THE PROPOSED HUMANSRUS SOLAR 3 TO INCLUDE BATTERY ENERGY STORAGE SYSTEM ON FARM 147 HUMANSRUS, PRIESKA, NORTHERN CAPE PROVINCE

The Environmental Authorisation (EA) for the above-mentioned project dated 29 May 2017, the application for amendment of the EA and the draft motivation report received by the Department on 20 October 2020, and the acknowledgement letter dated 28 October 2020, refer.

The Department has the following comments on the abovementioned amendment application:

#### **(a) Amendment Report**

- It should be noted that the most significant hazard with battery units is the possibility of flammable gases which may burst into flames, however, no fire management plan has been included in the draft amendment report. Therefore, you are required to include a detailed fire management and protection plan.
- An "End-of-Life plan" needs to be in place for the handling, repurposing or disposal of dysfunctional, severely damaged batteries, module and containers. This information must be included in the final amendment report.
- An Emergency Response Plan needs to be in place that will be applicable for the life cycle of the project. The Emergency Response Plan must include details of the most appropriate emergency response to fires, both while the units are in transit and once they are installed and operating.

**(b) Layout & Sensitivity Maps**

- The final amendment report must include an environmental sensitivity map indicating environmental sensitive areas, buffer areas and features identified during the assessment process.
- A copy of the layout map must be submitted with the final amendment report. All available biodiversity information must be used in the layout map. The layout map must indicate the following:
  - ✓ The location of the BESS taking into consideration the motivation provided that "the units would be placed far apart to prevent propagation from one unit to another and large external fires". The distance of the units must be clearly indicated in metres on the legend of the layout map;
  - ✓ All supporting onsite infrastructure e.g. roads (existing and proposed);
  - ✓ The location of sensitive environmental features on site e.g. drainage lines etc. that will be affected;
  - ✓ Buffer areas; and
  - ✓ All "no-go" areas.

**(c) Environmental Management Programme**

- The EMP and layout map to be submitted with the final amendment motivation report must be updated to include and incorporate all mitigation measures recommended by the specialist.

**(d) Public participation**

- Please ensure that comments from all relevant stakeholders are submitted to the Department with the final amendment report. This includes but not limited to the Department of Environment, Forestry and Fisheries (DEFF): Biodiversity Planning and Conservation; Siyathemba Local Municipality; Pixley Ka Seme District Municipality, Water and Sanitation; Northern Cape Provincial Heritage Authority; Department of Energy; Eskom SOC Limited; and South African Heritage Resources Agency (SAHRA).
- Furthermore, ensure that all issues raised and comments received during the circulation of the draft amendment report from registered I&APs and organs of state which have jurisdiction in respect of the proposed activity are adequately addressed in the final amendment report.
- Proof of correspondence with the various stakeholders must be included in the final amendment report. This must indicate that this draft amendment report has been subjected to 30 days public participation process, stating the start and end date of the PPP. Should you be unable to obtain comments, proof should be submitted to the Department of the attempts that were made to obtain comments.

**General**

The Public Participation Process must be conducted in terms of Regulations 39, 40, 41, 42, 43 & 44 of the EIA Regulations 2014, as amended.

You are further reminded to comply with Regulation 32(1)(a) of the NEMA EIA Regulations, 2014, as amended, which states that: *"The applicant must within 90 days of receipt by the competent authority of the application made in terms of regulation 31, submit to the competent authority -*

- (a) a report, reflecting—
- (i) an assessment of all impacts related to the proposed change;
  - (ii) advantages and disadvantages associated with the proposed change; and
  - (iii) measures to ensure avoidance, management and mitigation of impacts associated with such proposed change; and
  - (iv) any changes to the EMPr;

which report-

- (aa) had been subjected to a public participation process, which had been agreed to by the competent authority, and which was appropriate to bring the proposed change to the attention of potential and registered interested and affected parties, including organs of state, which have jurisdiction in respect of any aspect of the relevant activity, and the competent authority, and
- (bb) reflects the incorporation of comments received, including any comments of the competent authority."

Should there be significant changes or new information that has been added to the motivation report or EMPr which changes or information was not contained in the reports or plans consulted on during the initial public participation process, you are required to comply with Regulation 32(1)(b) of the NEMA EIA Regulations, 2014, as amended, which states: *"the applicant must, within 90 days of receipt of the application by the competent authority, submit to the competent authority – (b) a notification in writing that the report will be submitted within 140 days of receipt of the application by the competent authority, as significant changes have been made or significant new information has been added to the report, which changes or information was not contained in the report consulted on during the initial public participation process contemplated in subregulation (1)(a) and that the revised report will be subjected to another public participation process of at least 30 days".*

In the event where subregulation (1)(b) applies, the report which reflects the incorporation of comments received, including any comments of the competent authority, must be submitted to the competent authority within 140 days of receipt of the application by the competent authority.

Should you fail to meet any of the timeframes stipulated in Regulation 32 of the NEMA EIA Regulations, 2014, as amended, your application will lapse.

You are hereby reminded of Section 24F of the National Environmental Management Act, Act No 107 of 1998, as amended, that no activity may commence prior to an environmental authorisation being granted by the Department.

Yours faithfully



**Mr Sabelo Malaza**

**Chief Director: Integrated Environmental Authorisations**

**Department of Environment, Forestry and Fisheries**

**Signed by: Ms Masina Litsone**

**Designation: Control Environmental Officer: National Infrastructure Projects**

**Date: 13/11/2020**

cc	Jixin Li	Humansrus Solar 3	Email: <a href="mailto:david@atlanticep.com">david@atlanticep.com</a>
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## Dale Holder

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**From:** MMatlala Rabothata <MRabothata@environment.gov.za>  
**Sent:** 18 November 2020 01:34 PM  
**To:** Dale Holder  
**Subject:** Requested comments for Humansrus solar PV 3 & 4 EA amendment to include BESS  
**Attachments:** Signed Draft Amendment Report Comments for Humansrus solar 3 & 4.pdf

Dear Dale,

Kindly find the attached comments from Directorate: Biodiversity Conservation for the abovementioned project for your consideration.

Regards,  
Mmatlala  
Tel: 012 399 9174

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## environment, forestry & fisheries

Department: Environment, Forestry  
and Fisheries  
REPUBLIC OF SOUTH AFRICA

Private Bag X447, Pretoria, 0001, Environment House, 473 Steve Biko Road, Pretoria, 0002 Tel: +27 12 399 9000, Fax: + 27 86 625 1042

**Reference:** 14/12/16/3/3/2/888 & 14/12/16/3/3/2/887

**Enquiries:** Ms M Rabothata & Ms Tsholofelo Sekonko

**Telephone:** (012) 399 9174

**E-mail:** [MRabothata@environment.gov.za](mailto:MRabothata@environment.gov.za) or [TSekonko@environment.gov.za](mailto:TSekonko@environment.gov.za)

Mr Dale Holder  
Cape Environmental Assessment Practitioners  
PO Box 2070  
**GEORGE**  
6530

Telephone Number: + 27 (44) 874 0365  
Email Address: [dale@cape-eaprac.co.za](mailto:dale@cape-eaprac.co.za)

### PER E-MAIL

Dear Mr. Holder

### COMMENTS ON DRAFT AMENDMENT ASSESSMENT REPORT FOR AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION FOR HUMANSRUS SOLAR 3 AND 4 TO INCLUDE BATTERY ENERGY STORAGE SYSTEM (BESS) NEAR PRIESKA IN THE NORTHERN CAPE

The Directorate: Biodiversity Conservation reviewed and evaluated the aforementioned draft report. Based on the information provided in the report, the proposed BESS falls entirely within the previously assessed area. Furthermore, this is an amendment to the Environmental Authorisation (EA) that is already being authorised. The proposed amendment (addition of a BESS) will not result in any significant change to their original impact rating as assessed in their previous studies and therefore no additional assessments, impacts and mitigation measures would be applicable to the BESS. The proposed BESS area and new substation position avoids all of the sensitive areas identified by the specialists.

Notwithstanding the above, the following recommendations must be considered in the final report:

- Any protected plant species present must not be removed or damaged prior to obtaining permit from relevant National or Provincial Authorities.

- Alien Invasive plant species Management Plan must be developed.
- Sensitive areas in close proximity to the development footprint must be demarcated and regarded as No-Go area i.e. watercourses.

The final report must comply with all the requirements as outlined in the Environmental Impact Assessment (EIA) guideline for renewable energy projects and all the original mitigation measures as indicated in the original botanical and faunal study must still be relevant and applicable to the amended layout and must be implemented

Yours faithfully



**Mr. Seoka Lekota**  
**Control Biodiversity Officer Grade B: Biodiversity Conservation**  
**Department of Environment, Forestry & Fisheries**  
**Date: 17/11/2020**

## Dale Holder

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**From:** John Geeringh <GeerinJH@eskom.co.za>  
**Sent:** 19 November 2020 12:35 PM  
**To:** Dale Holder  
**Subject:** RE: Notification of Availability of Draft Amendment Assessment Report for Humansrus Solar 3 and Humansrus Solar 4  
**Attachments:** Eskom requirements for work in or near Eskom servitudes.doc; Renewable Energy Generation Plant Setbacks to Eskom Infrastructure Rev2 - signed.pdf

Please find attached Eskom requirements for works at or near Eskom infrastructure ad servitudes, as well as the Setbacks Guideline for renewable energy developments including BESS. Please send me a KMZ file of the proposed position of the BESS.

Kind regards

John Geeringh (Pr Sci Nat)(EAPASA)  
Senior Consultant Environmental Management  
Land and Rights  
Eskom Transmission Division  
Megawatt Park, D1Y42, Maxwell Drive, Sunninghill, Sandton.  
P O Box 1091, Johannesburg, 2000.  
Tel: 011 516 7233  
Cell: 083 632 7663  
Fax: 086 661 4064  
E-mail: [john.geeringh@eskom.co.za](mailto:john.geeringh@eskom.co.za)

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**From:** Dale Holder <dale@cape-eaprac.co.za>  
**Sent:** Monday, 19 October 2020 16:26  
**To:** slekota@environment.gov.za; TRatlou@environment.gov.za; Donald Matjuda <MatjudD@eskom.co.za>; MelanieM@L2B.co.za; mashuduma@daff.gov.za; thokob@daff.gov.za; Ayandam@doc.gov.za; Pheladi.Masipa@energy.gov.za; peter.novellie@sanparks.org; nomawethu.qase@energy.gov.za; bridgetc@ewt.org.za; strohl@caa.co.za; koegelenbergj@sentech.co.za; John Geeringh <GeerinJH@eskom.co.za>; leaskk@eskom.co.za; energy@birdlife.org.za; atiplady@ska.ac.za; pixley@telkomsa.net; juliusg@nra.co.za; Justine Wyngaardt <WyngaaJO@eskom.co.za>; Marshall Felaar <FelaarMB@eskom.co.za>; phine@sahra.org.za; nielj07@vodamail.co.za; mmboneni.mutheiwana@dmr.gov.za; ntsundeni.ravhugoni@dmr.gov.za; tmtho@webmail.co.za; dstander@ncpg.gov.za; ratha.timothy@gmail.com; jacolinema@daff.gov.za; ntoerien1@gmail.com; hohned@dwa.gov.za; mjh@lantic.net; humanwj@gmail.com; gloriaspeelman.gs@gmail.com; mm@siyathemba.gov.za; johannb@siyathemba.gov.za; Musa Baloye <mbaloye@ska.ac.za>; abrahamsn@nra.co.za  
**Subject:** Notification of Availability of Draft Amendment Assessment Report for Humansrus Solar 3 and Humansrus Solar 4

Dear Interested and Affected Party

### **NOTIFICATION OF AVAILABILITY OF DRAFT AMENDMENT ASSESSMENT REPORT FOR HUMANSRUS SOLAR 3 AND HUMANSRUS SOLAR 4**

**DEFF REFERENCE HUMANSRUS SOLAR 3:** 14/12/16/3/3/2/888

**DEFF REFERENCE HUMANSRUS SOLAR 4:** 14/12/16/3/3/2/887

Kindly find the attached notification regarding the availability of the Draft Amendment Assessment report for the abovementioned projects.

In compliance with the approved public participation plan, the amendment assessment reports as well as all appendices thereto are available on the following dedicated download link.

<https://www.dropbox.com/sh/zvmkcbhkmqfz82t/AADZo47Re72OwEq32C7mwxva?dl=0>

In terms of the approved public participation plan, the following alternative mechanisms for accessing the reports are available to any I&AP's that may not have access to the digital platforms listed above.

1. Digital copies of the reports can be provided on CD or Flash Drive;
2. Digital copies can be provided via a sharepoint download link;
3. Digital copies can be provided via Whatsapp messenger;
4. Hard copies of the report and any relevant specialist studies can be couriered to any parties.

Should you be unable to access the documents on the Cape EAPrac website or Download Link and would like to utilise any of the alternative methods listed above, please contact Cape EAPrac on any of the contact details below.

Please contact the undersigned should you have any further queries in this regard.

Regards,

**Dale Holder** | 082 448 9225  
SENIOR CONSULTANT | ECO | GIS  
Ndip Nat. Con. (Pretoria Tech)

T: 044 874 0365  
F: 044 874 0432  
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	<p style="text-align: center;">SCOT</p>	<p style="text-align: center;">Technology</p>
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Title: **Renewable Energy Generation Plant Setbacks to Eskom Infrastructure**      Unique Identifier: **240-65559775**

Alternative Reference Number: **N/A**

Area of Applicability: **Power Line Engineering**

Documentation Type: **Guideline**

Revision: **2**

Total Pages: **9**

Next Review Date: **N/A**

Disclosure Classification: **CONTROLLED DISCLOSURE**

**Compiled by**



**J W Chetty**  
**Mechanical Engineer**

Date: 15 / 09 / 2020

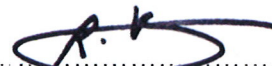
**Approved by**



**B Ntshuntsha**  
**Chief Engineer (Lines)**

Date: 30/10/2020

**Authorised by**



**R A Vajeth**  
**Snr Manager (Lines) and SCOT/SC/ Chairperson**

Date: 30/10/2020

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## **EXECUTIVE SUMMARY**

In recent decades, the use of wind turbines, concentrated solar plants and photovoltaic plants have been on the increase as it serves as an abundant source of energy. This document specifies proposed setbacks for wind turbines and the reasons for these setbacks from infrastructure as well as setbacks for concentrated solar plants and photovoltaic plants. Setbacks for wind turbines employed in other countries were compared and a general setback to be used by Eskom was suggested for use with wind turbines and other renewable energy generation plants.

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## **1. INTRODUCTION**

During the last few decades, a large amount of wind turbines have been installed in wind farms to accommodate for the large demand of energy and depleting fossil fuels. Wind is one of the most abundant sources of renewable energy. Wind turbines harness the energy of this renewable resource for integration in electricity networks. The extraction of wind energy is its primary function and thus the aerodynamics of the wind turbine is important. There are many different types of wind turbines which will all exhibit different wind flow characteristics. The most common wind turbine used commercially is the Horizontal Axis Wind Turbine. Wind flow characteristics of this turbine are important to analyse as it may have an effect on surrounding infrastructure.

Wind turbines also cause large turbulence downwind that may affect existing infrastructure. Debris or parts of the turbine blade, in the case of a failure, may be tossed behind the turbine and may lead to damage of infrastructure in the wake path.

This document outlines the minimum distances that need to be introduced between a wind turbine and Eskom infrastructure to ensure that debris and / or turbulence would not negatively impact on the infrastructure and future expansion of infrastructure (lines and substation) as per the long term planning scenario.

Safety distances of wind turbines from other structures as implemented by other countries were also considered and the reasons for their selection were noted. All renewable energy developments are approved by The Department of Environmental Affairs, Forestry and Fisheries (DEFF) in terms of NEMA. The DEFF is aware of the setbacks guideline, however they cannot use it in terms of decision making since the setbacks document has no legal standing in SA and it would be outside of their mandate who have been advised to follow the guidelines herein.

Concentrated solar plants and photovoltaic plants setbacks away from substations were also to be considered to prevent restricting possible power line access routes to the substation and possible expansion of substations.

## **2. SUPPORTING CLAUSES**

### **2.1 SCOPE**

This document provides guidance on the safe distance that a wind turbine should be located from any Eskom power line or substation. Although it is not based on any legislative requirement, it is deemed important that Eskom's infrastructure and future network expansion planning is not impeded. The document specifies proposed setback distances for transmission lines (220 kV to 765 kV), distribution lines

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(66 kV to 132 kV) and all Eskom substations. Proposed setbacks for concentrated solar plants and photovoltaic plants are also specified away from substations.

### **2.1.1 Purpose**

Setbacks for wind turbines and power lines / substations are required for various reasons. These include possible catastrophic failure of the turbine blade that may release fragments and which may be thrown onto nearby power lines that may result in damage with associated unplanned outages. Turbulence behind the turbine may affect helicopter flight during routine Eskom live line maintenance and inspections that may lead to safety risk of the aircraft / personnel. Concentrated solar plants and photovoltaic plants setback away from substations were required to prevent substations from being boxed in by these renewable generation plants limiting line route access to the substations and possible future substation expansion.

### **2.1.2 Applicability**

This document is applicable to the siting of all new and existing wind turbines, concentrated solar plants and photovoltaic plants near power lines and substations and in line of site between Eskom telecommunication infrastructure, including future Eskom renewable energy development.

## **2.2 NORMATIVE/INFORMATIVE REFERENCES**

### **2.2.1 Normative**

1. <http://www.envir.ee/orb.aw/class=file/action=preview/id=1170403/Hiiumaa+turbulence+impact+EMD.pdf>.
2. <http://www.energy.ca.gov/2005publications/CEC-500-2005-184/CEC-500-2005-184.PDF>
3. <http://www.adamscountywind.com/Revised%20Site/Windmills/Adams%20County%20Ordinance/Adams%20County%20Wind%20Ord.htm>
4. [http://www.dsireusa.org/incentives/incentive.cfm?Incentive\\_Code=PA11R&RE=1&EE=1](http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=PA11R&RE=1&EE=1)
5. <http://www.wind-watch.org/documents/european-setbacks-minimum-distance-between-wind-turbines-and-habitations/>
6. <http://www.publications.parliament.uk/pa/ld201011/ldbills/017/11017.1-i.html>
7. [http://www.caw.ca/assets/pdf/Turbine\\_Safety\\_Report.pdf](http://www.caw.ca/assets/pdf/Turbine_Safety_Report.pdf)
8. Rogers J, Slegers N, Costello M. (2011) A method for defining wind turbine setback standards. Wind energy 10.1002/we.468

### **2.2.2 Informative**

None

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## 2.3 DEFINITIONS

Definition	Description
Setback	The minimum distance between a wind turbine and boundary line/dwelling/road/infrastructure/servitude etc.
Flicker	Effect caused when rotating wind turbine blades periodically cast shadows
Tip Height	The total height of the wind turbine ie. Hub height plus half rotor diameter (see Figure1)

### 2.3.1 Disclosure Classification

**Controlled disclosure:** controlled disclosure to external parties (either enforced by law, or discretionary).

## 2.4 ABBREVIATIONS

Abbreviation	Description
None	

## 2.5 ROLES AND RESPONSIBILITIES

All parties involved in the positioning wind turbines, concentrated solar plants and photovoltaic plants near power lines/substations should endeavour to follow the setbacks outlined in this guideline.

## 2.6 PROCESS FOR MONITORING

Agreement by Eskom in writing on any encroachment of the setbacks distance should be requested via the Grid Access Unit. Eskom should ensure that every application for renewable energy (RE) developments are informed about the existence of the setbacks document early in the RE planning process to ensure maximum effect. This includes Eskom RE development.

## 2.7 RELATED/SUPPORTING DOCUMENTS

None

## 3. DOCUMENT CONTENT

### 3.1 INTERNATIONAL SETBACK COMPARISON

Wind Turbine setbacks employed by various countries were considered. It was found that setbacks were determined for various reasons that include noise, flicker, turbine blade failure and wind effects as well as

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future network expansion planning. The distances (setbacks) varied based on these factors and were influenced by the type of infrastructure

Wind turbine setbacks varied for roads, power lines, dwellings, buildings and property and it was noted that the largest setbacks were employed for reasons of noise and flicker related issues [1-7]. Very few countries specified setbacks for power lines.

The literature survey [1-7], yielded information about studies and experiments were conducted to determine the distance that a broken fragment from a wind turbine might be thrown. Even though of low probability of hitting a power line [ $5.0 \times 10^{-5}$ ]<sup>[8]</sup>, the distances recorded were significant [750m]<sup>[8]</sup>

Wind turbines may also cause changes in wind patterns with turbulent effects behind the hub. These factors influence the wind turbine setbacks specified in this document.

Setbacks were thus introduced to prevent any damage to Eskom infrastructure and impedance to operation and future network expansion planning.

Renewable energy plant can also limit access into substations for power lines of all voltages. A setback distance should therefore be employed to prevent substations from being boxed in by these generation plants and preventing future network expansion. These setback distances are specified in this document.

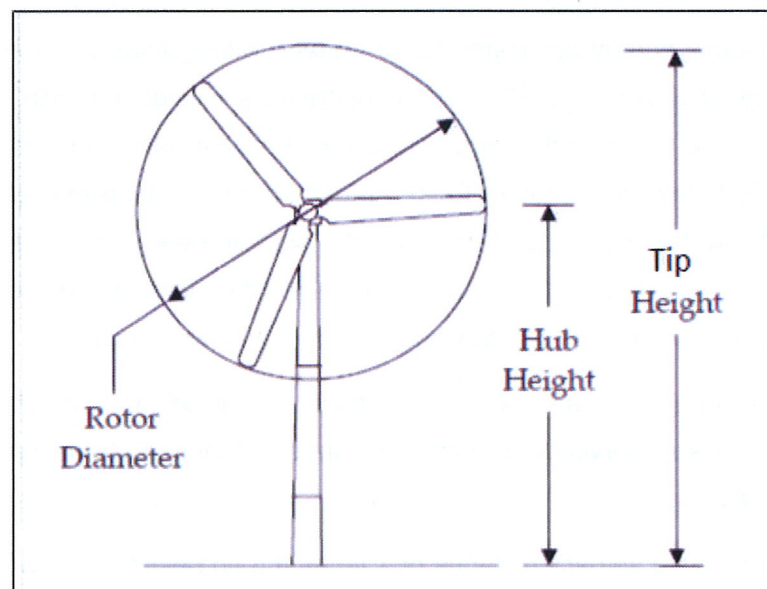
### **3.2 ESKOM RECOMMENDED SETBACKS**

Any renewable energy applicant should engage with Eskom to determine if their plant layout or positioning of turbines, CSP or PV infrastructure would encroach on the proposed setbacks provided for in this guideline and to ensure that their planning and Eskom's future expansion planning is taken into account. Eskom must inform all renewable energy developers, including Eskom RE, of the existence of the setbacks guideline early in the development process. Should there be an encroachment, a formal request should be sent to and accepted by Eskom in writing if any of the below mentioned setback distances are infringed upon:

- Eskom requests a setback distance of 3 times the tip height of the wind turbine from the edge of the closest Eskom servitude (including vacant servitudes) for transmission lines (220kV to 765kV) and Substations.
- Eskom requests a setback distance of 1 times the tip height of the wind turbine from the edge of the closest Eskom servitude (including vacant servitudes) for distribution lines (66 kV to 132 kV) and Substations.

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- A written request should be sent to Eskom via the Grid Access Unit regarding any proposed wind turbine, concentrated solar plants and photovoltaic activity within a 5 km radius of a substation for Eskom to comment on.
- Where concentrated solar plants, photovoltaic structures, battery storage systems (BESS) and other renewable generation plants fall within a 2 km radius of the closest point of a transmission or distribution substation (66kV to 765kV), a written agreement with Eskom is recommended during the planning phase of such plant or structures to ensure Eskom's future planning is not impeded.
- Applicants should not position any wind turbine in the line of site between and two Eskom Radio Telecommunication masts. It should be proven that Eskom radio telecommunication systems (mainly microwave systems) will not be affected in any way by wind turbines due to the criticality of this infrastructure in terms of network operation. Eskom Telecommunications should be engaged on this matter.
- If the position or size of any turbine changes and subsequently infringes on any of the above stated setbacks, a request for relaxation must be sent through to Eskom as per the point mentioned above.



**Figure 1: Horizontal Axis Wind Turbine <sup>[2]</sup>**

**CONTROLLED DISCLOSURE**

#### 4. AUTHORISATION

This document has been seen and accepted by:

<b>Name &amp; Surname</b>	<b>Designation</b>
V Naidoo	Chief Engineer
Dr P Pretorius	Electrical Specialist
J Geeringh	Snr Consultant Environ Mngt
B Haridass	Snr Consultant Engineer
B Ntshuntsha	Chief Engineer
R Vajeth	Snr Manager (Lines)
D A Tunnicliff	Snr Manager L&R (Acting)
B Branfield	Snr Consultant Engineer

#### 5. REVISIONS

<b>Date</b>	<b>Rev.</b>	<b>Compiler</b>	<b>Remarks</b>
November 2013	0	J W Chetty	First Publication - No renewable energy generation plant setback specification in existence.
October 2018	1	JW Chetty	Modification to sub-section 3.2 to provide more clarity for application procedure.
June 2020	2	JW Chetty	Content within the guideline was re-worded to explain the benefits of mutual agreements between the applicants and ESKOM rather than the application being a legal obligation.

#### 6. DEVELOPMENT TEAM

The following people were involved in the development of this document:

Jonathan Chetty (Mechanical Engineer)

Vivendhra Naidoo (Chief Engineer)

Dr Pieter Pretorius (Electrical Specialist)

John Geeringh (Snr Consultant Environ Mngt)

Bharat Haridass (Snr Consultant Engineer)

Riaz Vajeth (Snr Manager (Lines))

Bruce Ntshuntsha (Chief Engineer)

David Tunnicliff (Snr Manager L&R Acting)

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## TO WHOM IT MAY CONCERN

### Eskom requirements for work in or near Eskom servitudes.

1. Eskom's rights and services must be acknowledged and respected at all times.
2. Eskom shall at all times retain unobstructed access to and egress from its servitudes.
3. Eskom's consent does not relieve the developer from obtaining the necessary statutory, land owner or municipal approvals.
4. Any cost incurred by Eskom as a result of non-compliance to any relevant environmental legislation will be charged to the developer.
5. If Eskom has to incur any expenditure in order to comply with statutory clearances or other regulations as a result of the developer's activities or because of the presence of his equipment or installation within the servitude restriction area, the developer shall pay such costs to Eskom on demand.
6. The use of explosives of any type within 500 metres of Eskom's services shall only occur with Eskom's previous written permission. If such permission is granted the developer must give at least fourteen working days prior notice of the commencement of blasting. This allows time for arrangements to be made for supervision and/or precautionary instructions to be issued in terms of the blasting process. It is advisable to make application separately in this regard.
7. Changes in ground level may not infringe statutory ground to conductor clearances or statutory visibility clearances. After any changes in ground level, the surface shall be rehabilitated and stabilised so as to prevent erosion. The measures taken shall be to Eskom's satisfaction.
8. Eskom shall not be liable for the death of or injury to any person or for the loss of or damage to any property whether as a result of the encroachment or of the use of the servitude area by the developer, his/her agent, contractors, employees, successors in title, and assignees. The developer indemnifies Eskom against loss, claims or damages including claims pertaining to consequential damages by third parties and whether as a result of damage to or interruption of or interference with Eskom's services or apparatus or otherwise. Eskom will not be held responsible for damage to the developer's equipment.
9. No mechanical equipment, including mechanical excavators or high lifting machinery, shall be used in the vicinity of Eskom's apparatus and/or services, without prior written permission having been granted by Eskom. If such permission is granted the developer must give at least seven working days' notice prior to the commencement of work. This allows time for arrangements to be made for supervision and/or precautionary instructions to be issued by the relevant Eskom Manager



Note: Where and electrical outage is required, at least fourteen work days are required to arrange it.

10. Eskom's rights and duties in the servitude shall be accepted as having prior right at all times and shall not be obstructed or interfered with.
11. Under no circumstances shall rubble, earth or other material be dumped within the servitude restriction area. The developer shall maintain the area concerned to Eskom's satisfaction. The developer shall be liable to Eskom for the cost of any remedial action which has to be carried out by Eskom.
12. The clearances between Eskom's live electrical equipment and the proposed construction work shall be observed as stipulated by *Regulation 15* of the *Electrical Machinery Regulations of the Occupational Health and Safety Act, 1993 (Act 85 of 1993)*.
13. Equipment shall be regarded electrically live and therefore dangerous at all times.
14. In spite of the restrictions stipulated by Regulation 15 of the Electrical Machinery Regulations of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), as an additional safety precaution, Eskom will not approve the erection of houses, or structures occupied or frequented by human beings, under the power lines or within the servitude restriction area.
15. Eskom may stipulate any additional requirements to highlight any possible exposure to Customers or Public to coming into contact or be exposed to any dangers of Eskom plant.
16. It is required of the developer to familiarise himself with all safety hazards related to Electrical plant.
17. Any third party servitudes encroaching on Eskom servitudes shall be registered against Eskom's title deed at the developer's own cost. If such a servitude is brought into being, its existence should be endorsed on the Eskom servitude deed concerned, while the third party's servitude deed must also include the rights of the affected Eskom servitude.

John Geeringh (Pr Sci Nat)(EAPASA)  
Senior Consultant Environmental Management  
Eskom Transmission Division: Land & Rights  
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Cell: 083 632 7663  
Fax: 086 661 4064  
E-mail: john.geeringh@eskom.co.za



## Dale Holder

---

**From:** Dale Holder  
**Sent:** 24 November 2020 03:16 PM  
**To:** John Geeringh  
**Subject:** RE: Notification of Availability of Draft Amendment Assessment Report for Humansrus Solar 3 and Humansrus Solar 4  
**Attachments:** Humansrus 3 BESS Amendment Layout.kmz; Humansrus 4 BESS Amendment Layout.kmz

Dear John

Thank you for the comments on the proposed amendments.

I confirm that I will include these comments in the revised EMPr for the Facility.

Kindly find the attached KMZ's as requested ( These include the BESS as well as the Authorised PV Footprint)

Regards,

**Dale Holder** | 082 448 9225  
SENIOR CONSULTANT | ECO | GIS  
Ndip Nat. Con. (Pretoria Tech)

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Our advisers and staff are working remotely and are contactable via email or on their cellphones.



We will advise when physical meetings and office visits can resume. Our commitment to offering you service excellence remains unchanged.

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**From:** John Geeringh <GeerinJH@eskom.co.za>

**Sent:** 19 November 2020 12:35 PM

**To:** Dale Holder <dale@cape-eaprac.co.za>

**Subject:** RE: Notification of Availability of Draft Amendment Assessment Report for Humansrus Solar 3 and Humansrus Solar 4

Please find attached Eskom requirements for works at or near Eskom infrastructure ad servitudes, as well as the Setbacks Guideline for renewable energy developments including BESS. Please send me a KMZ file of the proposed position of the BESS.

Kind regards

John Geeringh (Pr Sci Nat)(EAPASA)  
Senior Consultant Environmental Management  
Land and Rights  
Eskom Transmission Division  
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**From:** Dale Holder <[dale@cape-eaprac.co.za](mailto:dale@cape-eaprac.co.za)>

**Sent:** Monday, 19 October 2020 16:26

**To:** [slekota@environment.gov.za](mailto:slekota@environment.gov.za); [TRatlou@environment.gov.za](mailto:TRatlou@environment.gov.za); Donald Matjuda <[MatjudD@eskom.co.za](mailto:MatjudD@eskom.co.za)>; [MelanieM@L2B.co.za](mailto:MelanieM@L2B.co.za); [mashuduma@daff.gov.za](mailto:mashuduma@daff.gov.za); [thokob@daff.gov.za](mailto:thokob@daff.gov.za); [Ayandam@doc.gov.za](mailto:Ayandam@doc.gov.za); [Pheladi.Masipa@energy.gov.za](mailto:Pheladi.Masipa@energy.gov.za); [peter.novellie@sanparks.org](mailto:peter.novellie@sanparks.org); [nomawethu.qase@energy.gov.za](mailto:nomawethu.qase@energy.gov.za); [bridgetc@ewt.org.za](mailto:bridgetc@ewt.org.za); [strohl@caa.co.za](mailto:strohl@caa.co.za); [koegelenbergj@sentech.co.za](mailto:koegelenbergj@sentech.co.za); John Geeringh <[GeerinJH@eskom.co.za](mailto:GeerinJH@eskom.co.za)>; [leaskk@eskom.co.za](mailto:leaskk@eskom.co.za); [energy@birdlife.org.za](mailto:energy@birdlife.org.za); [atiplady@ska.ac.za](mailto:atiplady@ska.ac.za); [pixley@telkomsa.net](mailto:pixley@telkomsa.net); [juliusg@nra.co.za](mailto:juliusg@nra.co.za); Justine Wyngaardt <[WyngaajO@eskom.co.za](mailto:WyngaajO@eskom.co.za)>; Marshall Felaar <[FelaarMB@eskom.co.za](mailto:FelaarMB@eskom.co.za)>; [phine@sahra.org.za](mailto:phine@sahra.org.za); [nielj07@vodamail.co.za](mailto:nielj07@vodamail.co.za); [mmboneni.mutheiwana@dmr.gov.za](mailto:mmboneni.mutheiwana@dmr.gov.za); [ntsundeni.ravhugoni@dmr.gov.za](mailto:ntsundeni.ravhugoni@dmr.gov.za); [tmtho@webmail.co.za](mailto:tmtho@webmail.co.za); [dstander@ncpg.gov.za](mailto:dstander@ncpg.gov.za); [ratha.timothy@gmail.com](mailto:ratha.timothy@gmail.com); [jacolinema@daff.gov.za](mailto:jacolinema@daff.gov.za); [ntoerien1@gmail.com](mailto:ntoerien1@gmail.com); [hohned@dwa.gov.za](mailto:hohned@dwa.gov.za); [mjh@lantic.net](mailto:mjh@lantic.net); [humanwj@gmail.com](mailto:humanwj@gmail.com); [gloriaspeelman.gs@gmail.com](mailto:gloriaspeelman.gs@gmail.com); [mm@siyathemba.gov.za](mailto:mm@siyathemba.gov.za); [johannb@siyathemba.gov.za](mailto:johannb@siyathemba.gov.za); Musa Baloye <[mbaloye@ska.ac.za](mailto:mbaloye@ska.ac.za)>; [abrahamsn@nra.co.za](mailto:abrahamsn@nra.co.za)

**Subject:** Notification of Availability of Draft Amendment Assessment Report for Humansrus Solar 3 and Humansrus Solar 4

Dear Interested and Affected Party

**NOTIFICATION OF AVAILABILITY OF DRAFT AMENDMENT ASSESSMENT REPORT FOR HUMANSRUS SOLAR 3 AND HUMANSRUS SOLAR 4**

**DEFF REFERENCE HUMANSRUS SOLAR 3:** 14/12/16/3/3/2/888

**DEFF REFERENCE HUMANSRUS SOLAR 4:** 14/12/16/3/3/2/887

Kindly find the attached notification regarding the availability of the Draft Amendment Assessment report for the abovementioned projects.

In compliance with the approved public participation plan, the amendment assessment reports as well as all appendices thereto are available on the following dedicated download link.

<https://www.dropbox.com/sh/zvmkcbhkmqfz82t/AADZo47Re72OwEq32C7mwxva?dl=0>

In terms of the approved public participation plan, the following alternative mechanisms for accessing the reports are available to any I&AP's that may not have access to the digital platforms listed above.

1. Digital copies of the reports can be provided on CD or Flash Drive;
2. Digital copies can be provided via a sharepoint download link;
3. Digital copies can be provided via Whatsapp messenger;
4. Hard copies of the report and any relevant specialist studies can be couriered to any parties.

Should you be unable to access the documents on the Cape EAPrac website or Download Link and would like to utilise any of the alternative methods listed above, please Cape EAPrac on any of the contact details below.

Please contact the undersigned should you have any further queries in this regard.

Regards,

**Dale Holder | 082 448 9225**  
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