PROPOSED CONSTRUCTION OF 132 KV POWERLINE BETWEEN THE APPROVED SUBSTATION AT THE AUTHORISED LOERIESFONTEIN 3 PV SOLAR ENERGY FACILITY (12/12/20/2321/2/AM4) AND THE APPROVED SUBSTATION AT THE AUTHORISED DWARSRUG WIND ENERGY FACILITY (14/12/16/3/3/2/690/AM4), LOCATED NEAR LOERIESFONTEIN IN THE HANTAM LOCAL MUNICIPALITY, NAMAKWA DISTRICT IN THE NORTHERN CAPE PROVINCE OF SOUTH AFRICA.

TERMS OF REFERENCE (ToR) FOR SPECIALIST STUDIES

1 INTRODUCTION

The purpose of the Terms of Reference (ToR) is to provide the specialist team with a consistent approach to the specialist studies that are required as part of the Basic Assessment (BA) process being conducted in respect of the proposed construction of the 132 kV powerline. This will enable comparison of environmental impacts, efficient review, and collation of the specialist studies into the BA report, in accordance with the latest requirements of the EIA Regulations, 2014 (as amended).

2 PROCESS

In terms of the Environmental Impact Assessment (EIA) Regulations, which were published on 04 December 2014 [GNR 982, 983, 984 and 985) and amended on 07 April 2017 [promulgated in Government Gazette 40772 and Government Notice (GN) R326, R327, R325 and R324 on 7 April 2017], various aspects of the proposed development are considered listed activities under GNR 327 and GNR 324 which may have an impact on the environment and therefore require authorisation from the National Competent Authority (CA), namely the Department of Environment, Forestry and Fisheries (DEFF), prior to the commencement of such activities. Specialist studies have been commissioned to assess and verify the power line under the new Gazetted specialist protocols.

3 PROJECT BACKGROUND

South Africa Mainstream Renewable Power Developments (Pty) Ltd (hereafter referred to as "Mainstream") has appointed SiVEST SA (Pty) Ltd (hereafter referred to as "SiVEST") to undertake a Basic Assessment (BA) Process for the proposed construction of a 132 kV powerline between the approved substation at the authorised 100MW Loeriesfontein 3 Photovoltaic (PV) Solar Energy Facility (SEF) (12/12/20/2321/2/AM4) and the approved substation at the authorised 140MW Dwarsrug Wind Energy Facility (WEF) (14/12/16/3/3/2/690/AM4), located near Loeriesfontein in the Northern Cape Province of South Africa.

4 PROJECT DESCRIPTION

Mainstream are proposing the construction of a 132 kV grid connection between the approved substation at the authorised 100MW Loeriesfontein 3 PV SEF (12/12/20/2321/2/AM4) and approved

substation at the authorised 140MW Dwarsrug WEF (14/12/16/3/3/2/690/AM4), located near Loeriesfontein in the Hantam Local Municipality, Namakwa District in the Northern Cape Province of South Africa.

The grid connection is required to link the authorised 100MW Loeriesfontein 3 PV SEF to the authorised 140MW Dwarsrug WEF in order to create a hybrid energy facility. The hybrid energy facility will ensure that electricity is constantly supplied to the national grid by at least one (1) or both technologies (namely solar PV and wind) at any given time. Separate BA processes to add battery energy storage systems (BESS) to both renewable energy facilities (Loeriesfontein 3 BESS DEFF Reference number: 14/12/16/3/3/1/2263 and Dwarsrug BESS DEFF Reference number: 14/12/16/3/3/1/2262) are currently underway. The BESS will contribute to the hybrid renewable energy facility by storing and providing electricity for the national grid.

5 BA ALTERNATIVES

5.1 Layout alternatives

Two (2) Power line alternatives are proposed to link the authorised Loeriesfontein 3 PV SEF to the authorised Dwarsrug WEF. These alternatives provide for two (2) different power line route alignments contained within an assessment corridor (each 300m wide, 150m on either side of power line). The Power line alternatives which are being proposed and assessed are shown in **Figure 1** below.

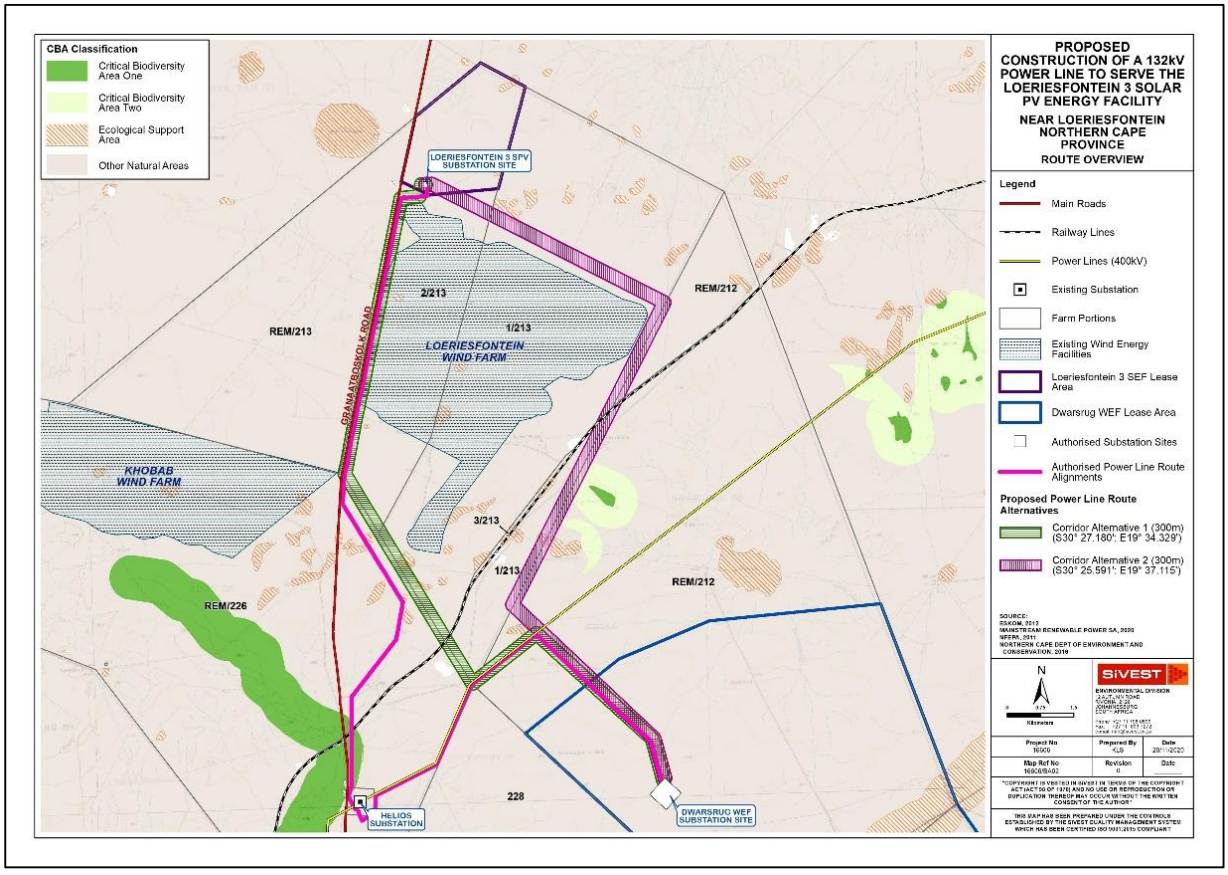

Figure 1: Power line alternatives proposed to link Loeriesfontein 3 PV SEF to Dwarsrug WEF

The layout alternatives are being considered and assessed as part of the BA process and will be refined to avoid identified environmental sensitivities.

5.2 'No-go' alternative

The 'no-go' alternative is the option of not constructing the powerline project, which would prevent the realization of the hybrid facility and thus prevent electricity generated from renewable sources being fed into the national grid. This alternative would result in no additional environmental impact other than that assessed during the BA for the Renewable Energy (RE) facilities.

The 'no-go' option is a feasible option; however, this would prevent the hybrid facility from contributing to the environmental, social and economic benefits associated with the development of the renewables sector.

6 SPECIALIST STATEMENT / REPORT REQUIREMENTS

The specialist assessments should include the following sections:

6.1 Project Description

The specialist report must include the project description as provided above.

6.2 Terms of Reference (ToR)

The terms of reference for the appointment has two elements (1), Site Verification Report and (2) a specialist study / compliance statement as per Government Notice 320 of 20 March 2020 and Government Notice 1150 of 30 October 2020. The specialist report must include an explanation of the Terms of Reference (ToR) applicable to the specialist study. In addition, if the report is written as per Appendix 6 of the EIA Regulations, 2014 (as amended), a table must be provided at the beginning of the specialist report listing the requirements for specialist reports in accordance with and cross referencing these requirements with the relevant sections in the report. An MS Word version of this table will be provided by SiVEST.

6.3 Legal Requirements and Guidelines

The specialist report must include a thorough overview of all applicable best practice guidelines, relevant legislation and authority requirements.

6.4 Methodology

The report must include a description of the methodology applied in carrying out the specialist assessment.

6.5 Specialist Findings / Identification of Impacts

The report must present the findings of the specialist studies and explain the implications of these findings for the proposed development (e.g. permits, licenses etc.). This section of the report should also identify any sensitive and/or 'no-go' areas on the development site which should be avoided.

The reports should be accompanied with spatial datasets (shapefiles, KML) and accompanying text documents if required.

6.6 Impact Rating Methodology

The impacts of the proposed development (during the Construction, Operation and Decommissioning phases) are to be assessed and rated according to the methodology developed by SiVEST. Specialists will be required to make use of the impact rating matrix provided (in Excel format) for this purpose.

Please note that the significance of Cumulative Impacts should also be rated in this section. Both the methodology and the rating matrix will be provided by SiVEST.

Please be advised that this section must include mitigation measures aimed at minimising the impact of the proposed development.

6.7 Input to The Environmental Management Program (EMPr)

The report must include a description of the key monitoring recommendations for each applicable mitigation measure identified for each phase of the proposed development for inclusion in the Environmental Management Program (EMPr) or Environmental Authorisation (EA).

Please make use the Impact Rating Table (in Excel format) provided for each of the phases (i.e. Design, Construction, Operation and Decommissioning).

6.8 Cumulative Impact Assessment

A cumulative impact assessment must be undertaken for the proposed development in order to determine the cumulative impact that will materialise should other Renewable Energy Facilities (REFs) with their associated power lines and substations (i.e. powerline infrastructure) and large-scale industrial developments be constructed within 35km of the proposed development.

The cumulative impact assessment must contain the following:

- A cumulative environmental impact statement noting whether the overall impact is acceptable; and
- A review of the specialist reports undertaken for other REFs and powerline infrastructure developments, including an indication of how the recommendations, mitigation measures and conclusion of the studies have been considered.

In order to assist the specialists in this regard, SiVEST will provide the following documentation / data:

- A summary table listing all REFs and associated powerline infrastructure developments identified within 35km of the proposed development;
- A map showing the location of the identified REFs and their associated powerlines; and
- Relevant KML files.

It should be noted that it is the specialist's responsibility to source the relevant EIA / BA reports that are available in the public domain. SiVEST will assist, where possible.

The list of renewable energy facilities that must be assessed as part of the cumulative impact will be provided.

6.9 'No Go' Alternative

Consideration must be given to the 'no-go' option in the BA process. The 'no-go' option assumes that the site remains in its current state, i.e. there is no construction of a power line in the proposed project area and the *status quo* would proceed.

6.10 Comparative Assessment of Alternatives

As mentioned, two (2) Power line alternatives are proposed to link the authorised Loeriesfontein 3 PV SEF to the authorised Dwarsrug WEF. These alternatives provide for two (2) different power line route alignments contained within an assessment corridor (each 300m wide, 150m on either side of power line).

As such, specialists are required to undertake a comparative assessment of the Power line alternatives mentioned above as per the latest table provided by SiVEST.

6.11 Conclusion / Impact Statement

The conclusion section of the specialist reports must include an **Impact Statement**, indicating whether any fatal flaws have been identified and ultimately whether one or both of the proposed powerlines can be authorised or not (i.e. whether EA should be granted for one or both/ issued or not).

6.12 Executive Summary

Specialists must provide an Executive Summary which summarises the findings of their report to allow for easy inclusion in the BA reports (Draft and Final BA Reports).

7 DELIVERABLES

All specialists will need to submit the following deliverables:

- 1 x Site Verification Report and Specialist Report / Compliance statement no later than the 06th November 2020;
- A copy of the specialist's Curriculum Vitae (CV);
- A copy of the Specialist Declaration of Interest (DoI) form, containing original signatures. This form will be provided to the specialists. ***Please note that the undertaking / affirmation under oath section of the report must be signed by a Commissioner of Oaths***; and
- All data relating to the studies, such as shape files, photos and maps (see **Section 8** below).

8 GENERAL SUBMISSION REQUIREMENTS

Please ensure that your specialist report includes the following:

- The Site Verification Report and Compliance Statement / Specialist Report must in line with the DEFF Screening Tool Specialist Theme Protocols (As gazetted on 20 March 2020 and 30 October 2020), should they apply. Should they not apply, the report must be written in accordance with Appendix 6 of the EIA Regulations, 2014 (as amended);
- A table cross referencing how the requirements for specialist reports have been adhered to according to Appendix 6 of the EIA Regulations, 2014 (as amended) must be provided at the beginning of your report. An MS Word version will be provided by SiVEST;
- A thorough overview of all applicable legislation, policies, guidelines. etc.;
- Identification of sensitive and/or 'no-go' areas to be avoided;
- Recommend mitigation measures in order to minimise the impact of the proposed development;
- Provide implications of specialist findings for the proposed development (e.g. permits, licenses etc.);
- Specify if any further assessment will be required;
- Include an Impact Statement, concluding whether one or both of the the proposed powerlines development can be authorised or not (i.e. whether EA should be granted for one or both/ issued or not); and
- A copy of the specialist's Curriculum Vitae (CV);
- A copy of the Specialist Declaration of Interest (DoI) form, containing original signatures, must be appended to all Draft and Final Reports. This form will be provided to the specialists. ***Please note that the undertaking / affirmation under oath section of the report must be signed by a Commissioner of Oaths.***

9 DEADLINES AND REPORT SUBMISSION

- Site Verification Report and Compliance Statement / Specialist Report no later than 04 December 2020.
- Any changes arising based on stakeholder engagement no later than 12 January 2020

10 REPORT / DATA FORMATS

- All specialist reports must be provided in MS Word format;
- Where maps have been inserted into the report, SiVEST will require a separate map set in PDF format for inclusion in our submission;
- Where figures and/or photos have been inserted into the report, SiVEST will require the original graphic in .jpg format for inclusion in our submission; and
- Delineated areas of sensitivity must be provided in either ESRI shape file format or Google Earth KML format. ***Sensitivity classes must be included in the attribute tables with a clear indication of which areas are 'No-Go' areas.***