VERIFICATION REPORT

Longyuan Mulilo De Aar 2 North Wind Energy Facility

South Asia

Document Prepared By

TÜV SÜD South Asia Pvt Ltd

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Summary:

TÜV SÜD South Asia Pvt. Ltd. has performed the third verification of the VCS project activity. The verification is based on the currently valid documentation of the VCS and United Nations Framework Convention on Climate Change (UNFCCC).

The Verification has been conducted for the monitoring period 01/01/2021 to 31/12/2021.

The verification process includes three phases:

- Desk review of documents.
- Off-site audit and follow-up interviews with the relevant personnel.
- Resolution of outstanding issues and the issuance of final verification report and opinion.

The project comprises only one activity – a single wind farm with the total installed capacity of 144 MW, which was implemented close to the town of De Aar in the Northern Cape Province of the Republic of South Africa (RSA). 96 x UP86 turbines, supplied by United Power, are employed by the project.

The wind farm started commercial operation on 31/10/2017 and continues operating. The project lifetime is 20 years.

The total GHG emission reductions covered in this monitoring period are 465,395 tCO2e.

The project is promoted by Longyuan Mulilo De Aar 2 North (RF) (Pty) Ltd (Longyuan Mulilo).

The project crediting period starts from 01/11/2017 till 31/10/2027, 10 years fixed total period.

6 Clarification Requests (CLs) and 3 Corrective Action Request (CAR) have been raised during verification process has been successfully closed. 0 Forward Action Request (FAR) was raised during this monitoring period.

VVB confirms that the project is implemented in accordance with the registered PD. The monitoring plan complies with the applied methodology ACM0002 version 19.0 and the monitoring has been carried out in accordance with the monitoring plan in the registered PD. The monitoring system is in place and the emission reductions are calculated without material misstatements. The level of assurance of the verification is reasonable. Our opinion relates to the projects GHG emissions and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information reviewed and evaluated VVB confirms that the implementation of the project has resulted in 465,395 tCO2e emission reductions during period 01/01/2021 to 30/12/2021.

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1 INTRODUCTION

1.1 Objective

TÜV SÜD has been commissioned by the client to perform an independent verification assessment.

The objective of the verification work is to comply with the requirements of Verified Carbon Standards requirements. According to this assessment TÜV SÜD shall:

- ✓ Ensure that the project activity has been implemented and operated as per the registered PD, and that all physical features (technology, project equipment, monitoring and metering equipment) of the project are in place,
- ✓ Ensure that the published MR and other supporting documents provided are complete, verifiable and in accordance with applicable VCS and CDM VVS requirements,
- ✓ Ensure that the actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology,
- ✓ Evaluate the data recorded and stored as per the applicable requirements.
- ✓ Assessment of the sustainability monitoring parameters as per the VCS requirements.

1.2 Scope and Criteria

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of VCS project activities, the scope is set by:

- ✓ VCS v4.1 requirements.
- ✓ Clean Development Mechanism Validation and Verification Standard (VVS) for Project Activities v3.0.
- ✓ Baselines and monitoring methodologies (including GHG inventories).
- ✓ Environmental issues relevant to the applicable sectoral scope.
- ✓ Current technical and operational knowledge of the specific sectoral scope and information on best practice.

✓ Stakeholder consultation and feedback

The verification process is not meant to provide any form of consulting for the project participant (PP). However, stated requests for clarifications, corrective actions, and/or forward actions may provide input for improvement of the project design.

1.3 Level of Assurance

The errors identified in the project are below the threshold limit of materiality and hence not material. The GHG emission reductions are calculated without material misstatements. The VVB confirms that a reasonable level of assurance has been achieved during the verification process.

1.4 Summary Description of the Project

The project comprises only one activity – a single wind farm with the total installed capacity of 144 MW, which was implemented close to the town of De Aar in the Northern Cape Province of the Republic of South Africa (RSA). 96 x UP86 turbines, supplied by United Power, are employed by the project.

The EPC contract was signed on 06/02/2015. The wind farm started commercial operation on 31/10/2017 and continues operating. The project lifetime is 20 years.[1]

The total GHG emission reductions covered in this monitoring period are 465,395 tCO2e. Longyuan Mulilo De Aar 2 North (RF) (Pty) Ltd and Blue World Carbon Asset Management (Pty) Ltd is the focal point and project proponent.

Location of the project was verified through Google Map (https://www.google.co.in/maps). The emission reductions from the project activity during the period 01/01/2021to 31/12/2021 (including both days) amount to 465,395 tons of CO_2e.

The assessment team has checked the verification records and interviewed the PPs representatives (telephonically) to verify the project details. Based on the assessment of the documents and remote interviews with PPs representatives, the assessment team is able to confirm that the project activity is fully functional and implemented.

2 VERIFICATIONPROCESS

2.1 Method and Criteria

The information provided by the project participants is assessed by applying the means of verification specified in the VCS v4.1, Toolkit and the VVS.

A competent assessment team is selected prior to the start of the verification. The team is selected to cover the technical area(s), sectoral scope(s) and relevant host country experience for evaluating the VCS project activity. Additionally, a competent Technical Reviewer or Technical Reviewer Team is appointed to conduct checks on quality and completeness.

The verification team performs first a desk review, followed by a remote-site visit, which results in the formation of a draft report and a list of findings. The next step involves the evaluation of the findings through direct communication with the PPs and then finally the preparation of the verification report. This verification report and other supporting documents then undergo an internal quality control by the CB “Environment and energy” before submission to the VCS.

2.2 Document Review

During the document review, VVB has applied standard auditing techniques including but not limited to document reviews, remote interviews, and stakeholder interviews, review of the applicable/applied methodologies and its underlying formulae and calculations to assess the quality of information provided.

This report contains the findings and resolutions from the verification and a verification opinion on the project thus confirming the monitoring report as document is sound and reasonable and meets the stated requirements and identified criteria. The VCS monitoring report, emission reduction calculation spread sheet and supporting documents related to the project design and baseline were reviewed as per VCS standard version 04.1 requirements.

The desk review included:

• A review of the data and information presented to verify completeness and consistency in accordance with VCS standard version 04 .1requirements;

• A review of the monitoring report and monitoring methodology.

• A review of the monitoring plan and the project's compliance with relevant VCS criteria.

Furthermore, the validation team used additional documentation by third parties like calibration reports, technical reports referring to the project design or to the basic conditions and technical data.

The documents reviewed by VVB are listed below in Appendix 1. Through the process of the validation, the revised VCS MR and the supporting documents were evaluated to confirm the actions taken by the PP to the CARs and CLs issued by the validation team.

The documents referred during this verification are provided in Appendix 1.

2.3 Interviews

The VVB has not conducted the on-site inspection for this current monitoring period due to obligations imposed by COVID 19. However, the VVB has ensured that reasonable level of assurance has been achieved as per Verra regulations on the relaxation of mandatory site visits by the VVB due to COVID 19. The VVB has conducted telephonic interviews and video calls to discuss with the client regarding the data and documents pertaining to the current verification period. The interviews and discussions were conducted successfully.

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	galant	Frank	Longyuan Mulilo De Aar 2 North (RF) (Pty) Ltd	20/04/2022	Plant technology and monitoring Plant operation, Stakeholder grievance mechanism.	Shailendra Kewat
2	-	Daixioming	Longyuan Mulilo De Aar 2 North (RF) (Pty) Ltd	20/04/2022		
3.	-	Shengbin	Longyuan Mulilo De Aar 2 North (RF) (Pty) Ltd	20/04/2022	Plant technology and monitoring, Plant operation, Stakeholder grievance mechanism.	Shailendra Kewat
4.	-	Joost.van.lie	Blue World Carbon Asset Management (Pty) Ltd	20/04/2022	Plant technology and monitoring, Plant operation, Stakeholder grievance mechanism.	Shailendra Kewat
5	Goryashin	Ilya	Blue World Carbon Asset Management (Pty) Ltd	20/04/2022	Monitoring, ER calculations	Shailendra Kewat

2.4 Site Inspections

Please see 2.3

2.5 Resolution of Findings

This section summarises the findings from the verification of the project activity. In this section the findings from the document review, assessments and remote interviews are provided.
Material discrepancies identified in the course of the verification are addressed either as CARs, CLs or FARs.
Corrective action requests (CAR) are issued, where:

mistakes have been made with a direct influence on project results requiring adjustments of the VERs/VCUs monitoring report; applicable methodological specific requirements have not been met. A Clarification request (CL) may be used where additional information is needed to fully clarify an issue or where the information is not transparent enough to establish whether a requirement is met. A forward action request (FAR) should be issued, where: i. the actual project monitoring and reporting practices requires attention and /or adjustment for the consecutive verification period, or ii. an adjustment of the MP is recommended.

In the context of FARs, risks have been identified, which may endanger the delivery of high quality emissions reductions in the future, i.e. by deviations from standard procedures as defined by the MP. As a consequence, such aspects should receive a special focus during the consecutive verification. A FAR may originate from lack of data sustaining claimed emission reductions.
A total of 3 CARs, and 06 CLs had been raised and successfully closed. Please see Appendix - 2 for the details

2.5.1 Forward Action Requests

No FAR has been raised during this verification.

2.6 Eligibility for Validation Activities

Not applicable

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project is seeking registration under CDM as a CPA.

3.2 Methodology Deviations

Not applicable, there are no methodology deviations applied during this monitoring period.

3.3 Project Description Deviations

Not applicable, there are no project description deviations applied during this monitoring period.

3.4 Grouped Project

Not applicable, this is not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project was implemented without any changes comparing with the VCS PD. The wind farm started commercial operation on 31/10/2017 and has being operating without events that could impact the GHG emission reductions or removals and monitoring.

The audit team has checked the commissioning certificates to confirm the location and the implementation of the project.

The technical specification of the project activity equipment's has been checked through the photographs of all the equipment's installed at site and are found to be consistent with the mentioned under section 3.1 of MR. The current status of the project activity is verified through the screen shots of SCADA system, indicating the real-time generation data and hence it is confirmed that the project is fully functioning.

Monitoring parameters:

<table>
<tr><td>Means of verification</td><td>Referring to VCS v4 and p.360, p.361, p.363 and p.364 of CDM VVS PA, v3.0, the below tables provide a summary on the verification of each monitoring parameter listed in the registered monitoring plan.
<table>
<tr><td>Data / Parameter:</td><td>$EG_{PJ, y}$</td></tr>
<tr><td>Data unit:</td><td>MWh</td></tr>
<tr><td>Description:</td><td>Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project in year y</td></tr>
<tr><td>Source of data used:</td><td>On-site measurement by electricity meters, yielding the net electricity supplied to the grid of the RSA. There are two main meters installed in the De Aar 2 North IPP Substation on 132kV side. Each meter is accompanied with the check meter.

Monthly reports with the records for delivered electricity to the Ndhlovu Eskom Substation are submitted by Eskom to PP</td></tr>
<tr><td>Means of verification/Comments:</td><td>The difference of final value of export and import is used for monthly values of net electricity supplied to the grid by the project activity and same value will be considered for ER calculations.

Verification team has checked the JMR to check net generation value and same has been cross verified with sales invoices raised by PP.</td></tr>
<tr><td>Cross-check</td><td>Electricity Sales invoices submitted (as per PPA)</td></tr>
</table>
Compliance with the calibration frequency requirements for measuring instruments

As per the registered monitoring plan, the meters are to be calibrated as per the requirements of the Power Purchase Agreement, clause 12.6.7, when the difference between measurements at the Ndhlovu Eskom Substation and De Aar 2 North IPP Substation is more than 0.5%. For the current monitoring period it was less then 0.5% hence, calibration was not done. VVB has cross verified the same with the generation data.</td></tr>
<tr><td>Conclusion</td><td>The monitoring has been carried out in accordance with the monitoring plan contained in the registered PDD. All parameters were monitored and determined as per the registered monitoring plan. Referring to p.360, p.361, p.363 and p.364 of CDM VVS PA, v3.0, VVB confirms through video call and telephonic interviews and from the document review, the actual monitoring</td></tr>
</table>

	system complies with the registered monitoring plan. The substantiation of this conformity on information flow for these parameters including the values in the monitoring reports is reported in the above section. During the verification, all relevant monitoring parameters of the registered monitoring plan have been verified with regard to the appropriateness of the verification method, the correctness of the values applied for ER calculation, the accuracy and applied QA/QC measures. After appropriate corrections, carried out by the project participant, it is confirmed that all monitoring parameters have been measured / determined without material misstatements and are in line with all applicable standards and relevant requirements. All parameters required to be monitored are recorded at the intervals required by the registered monitoring plan and the applied methodology. On the basis of review of source and nature of available evidences and records, the verification team confirms the quality of evidence for emission reduction provided is sufficient as per CDM VVS PA, v3.0.

The assessment team has verified the final VCS MR and confirmed that the procedure for data uncertainty, emergency preparedness, roles and responsibility, operational and management structure are mentioned in the MR. The monitoring plan completely describes all measures to be implemented for monitoring all parameters required. The monitoring plan described the positioning of the equipment.

The information relating to the project implementation, provided in the Monitoring Report is consistent & correct .Total emission reductions achieved under this monitoring period 01/01/2021 to 31/12/2021 (including both days) is *465,395* tCO_2e.

Emissions trading programs and other binding limits

Assessment team confirms that the Net GHG emission reductions or removals generated by the project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions in any Emission Trading program or other binding limits. Further, Declaration in effect of the same has been submitted by project proponent to audit team and found to be correct.

The project has not been registered under any other GHG programs. Also, the Project is not rejected by other GHG programs. A declaration for the same is checked and found

correct by the assessment team. Also, assessment team checked the following registries to confirm the same. The details of the registries checked are as follows:

1. http://cdm.unfccc.int/
2. http://www.goldstandard.org/
3. www.v-c-s.org

The Project has no intend to generate any other form of GHG-related environmental credit for GHG emission reductions or removals claimed under the VCS Program.
Thus, it is concluded that the project activity not involved on other Emissions trading programs and other binding limits.

Additional Information Relevant to the Project

Eligibility Criteria for grouped projects

This is not a grouped project activity. Thus, this section is not applicable for this project.

Leakage Management for AFOLU projects

Not applicable to the project activity.

Commercially Sensitive Information

No commercially sensitive information has been excluded from the public version of the project description. The details are presented transparently to the assessment team for analysis which leads to positive conclusion for this verification.

Sustainable Development

As part of regional development efforts associated with the wind project, Longyuan Mulilo De Aar 2 North (RF) (Pty) Ltd (Longyuan Mulilo) has:

- Initiated a Longyuan Mulilo Health Project to provide health services, including primary healthcare, dental, eye clinic and COVID-19 related services to students, educators and community members around the project using a Mobile Health Clinic (MHC), which was donated to the Department of Health to screen up to 8 800 learners annually on a permanent base. In 2021, 25,443 people have been screened, which include 8,986 dental and optometry screenings, 4,493 primary healthcare screenings and 7,471 COVID-19 screenings. Areas visited by the

MHC to date include St Johns Primary School, Emthanjeni Primary School, Orion High School, Monwabisi High School, Veritas High School, De Aar Town Clinic, Hoerskool Theron School, Montana Clinic, Nonzwakazi Clinic etc. VVB has cross verified the same during PP's interview.

- Launched Maths Enrichment Program aiming at improving the results of the subjects in the local schools through resourcing the learners, stimulating interest in the subjects, and creating opportunities to study further in subject related tertiary courses. The enrichment program also aims to encourage more leaners to take Maths and Science to Grade 12 level. Longyuan Mulilo's funding contributions went for salaries, student allowances, student study sponsorship, running cost and management fees. Five learners went through the Math enrichment programme in 2021. VVB has cross verified the same during PP's interview.

- Launched a Bursary Programme for tertiary studies to support students, which among others includes covering of tuition fees, institution's registration fees and accommodation fees, as well as book allowance per annum, food stipend (if the student applied and qualified) and laptops. Bursary Programme supported 15 students in 2021.Students are selected based on financial circumstances and targeting those that could not have attended tertiary ducation without support of the bursary programme. R974,438.54 was allocated to the Bursary Programme in 2021; VVB has cross verified the same during PP's interview.

- Renovated the 3 Early Childhood Development (ECD) Centres: Kaalvoet Akademie ECD, Karoo Druppels ECD and Mthuthuzeli Daycare ECD, with the long term impact to provide quality early childhood development programmes and services for the benefit of young children, their families and the communities and by also improving quality of early childhood development in Emthenjeni and Renosterberg regions of South Africa. Longyuan Mulilo contributes towards salaries, food and other support. 131 underprivileged children attended the ECD from the community due to this Project 1950 in 2021. VVB has cross verified the same during PP's interview.

- Upgraded the house and assisted with reparations of the Safe Haven located in Philipstown, which aim is to serve and help the abused women and children of Philipstown. VVB has cross verified the same during PP's interview.

- Funded the rehabilitation of the water supply system of Philipstown. The water is provided to 3,251 people due to this Project 1950. VVB has cross verified the same during PP's interview and photographs.

Conclusion:

In view of the assessment of MR and supporting documents as listed in Appendix 1 of this report, the validation team is able to confirm that the description contained in the MR of the project activity provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation. Consequently, assessment team confirms that the project description of the project contained in the MR to be complete and accurate. The MR complies with the relevant forms and guidance for completing the VCS MR.

4.2 Safeguards

4.2.1 No Net Harm

The wind power is one of the cleanest sources of renewable energy, The project do not have any negative environmental impacts. Project generates permanent and temporary employments.

1) Impact on biodiversity and ecosystems

Reptiles may be forced out of their underground shelters during the construction phase. Birds and bats may be impacted through collision with the blades of the wind turbines as well as collision with the associated power line during the operational phase.

Proposed mitigation measures: Length of road and cable trenches shall be reduced; relocation of facility to a lower sensitivity area; adjusting the schedule of operational turbines according to the results of ongoing monitoring of the bird and bat numbers and movement in the area; minimising the length of any new power lines.

2) Noise impact

The noise from construction machines has some impact on the surrounding area during the construction phase, which will only have a localized effect and is not expected to increase the ambient noise levels in nearest towns.

Proposed mitigation measures: all equipment should be maintained regularly and have appropriately filled silencers; personal should be specially trained. When working near to

potentially sensitive receptor, coordinate the working time with periods when the receptors are not at home where possible.

During the operation phase the cumulative contribution of the wind turbines and the transformer substation on the noise environment at the communities around the site will be within acceptable levels.

3) Impact on natural resources

The impact on the natural resources is the loss of arable land due to the construction of the turbines and associated infrastructure. However, most of the current cultivation or grazing practices will still be possible between the structures.

Proposed mitigation measures: Monitoring of the noise level

4) Impact on the atmosphere

The main impact is related to formation of dust during the construction period from land excavation and transportation vehicles. It should be mentioned that combustion of fossil fuels (mostly coal) at the Eskom power stations and hereby emissions of the harmful substances into the atmosphere, such as flue ash, oxides of sulphur and nitrogen will be reduced due to the project implementation.

Proposed mitigation measures: Dust pollution monitoring and following procedures for dealing with dust pollution

Project activity doesn't have any negative environmental and socio-economic impacts.

4.2.2 Local Stakeholder Consultation

Local stakeholder consultation has been conducted at the time of project registration. As confirmed by PP during interviews, for on-going stakeholders communication, PP has maintained feedback/complaint register at the site office. Local stakeholders can anytime lodge their grievances if any in the register over the operational lifetime of the project. On-going grievances, submitted via letter, e-mail or telephonically, must be captured on the Grievance form by the designated operational representatives defined by the PP. Stakeholders will be encouraged to use a Grievance form that are available on request (via telephone call, e-mail) and at the office address specified above.

During current monitoring period no grievance was received. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.

4.3 AFOLU-Specific Safeguards

Not applicable, this is not an AFOLU project.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

Assessment of Data and parameters Available at Validation

<table>
<tr><td>Means of verification</td><td>Referring to VCS v4 and p.360, p.361, p.363 and p.364 of CDM VVS PA, v3.0, the below tables provide a summary on the verification of each ex-ante parameter listed in the registered monitoring plan.
<table>
<tr><th>Parameters</th><th>Source of data</th><th>Values tCO_2/MWh</th><th>Documents verified</th></tr>
<tr><td>$EF_{grid, CM, y}$</td><td>ASB0040-2018, Table 1, page 5</td><td>0.9871</td><td>Standardized baseline ASB0040-2018 is selected for the project. Table 1 of this standardized baseline provides the value of the combined margin CO_2 emission factor for the project electricity system applicable to wind and solar power generation</td></tr>
</table></td></tr>
<tr><td>Conclusion</td><td>The parameters fixed ex ante indicated in the MR are crosschecked with the registered PD for consistency. The source of data, the ex-ante data are traceable.</td></tr>
</table>

Assessment of Data and parameters Monitored

Means of verification	Referring to VCS v4 and p.360, p.361, p.363 and p.364 of CDM VVS PA, v3.0, the below tables provide a summary on the verification of each monitoring parameter listed in the registered monitoring plan.

Parameters	Source of data	Values	Documents verified
$EG_{PJ, y}$	Monthly meter reading reports	471,482 MWh	Monthly reports and Invoices raised by the PP

Conclusion	It could be concluded that all monitoring parameters have been measured / determined without material misstatements and in line with all applicable standards and relevant requirements.

Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	The assessment of data and the calculation of baseline emission reduction in the MR and the ER excel sheet have been verified as per the following set of supporting documents: 1. Export, Import & transmission loss data 2. Joint meter readings 3. VER spreadsheets 4. Sales Invoices (as per PPA)
Conclusion	

Month	Month	Year	Baseline emissions in year *y* (tCO_2)
January	1	2021	35,495
February	2	2021	32,721
March	3	2021	31,606
April	4	2021	25,429
May	5	2021	36,801

	June	6	2021	46,596	
	July	7	2021	41,720	
	August	8	2021	44,711	
	September	9	2021	43,995	
	October	10	2021	47,759	
	November	11	2021	36,371	
	December	12	2021	42,191	
			Total for 2021:	465,395	

Baseline emission are 465,395, in accordance with the registered monitoring plan and are in line with the requirements of the applied methodology.

Calculation of project GHG emissions or actual net anthropogenic GHG removals by sinks

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the project activity. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan
Conclusion	Project emissions are zero as per the requirement of the methodology and registered CDM PDD.

Calculation of leakage GHG emissions

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the project activity. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan
Conclusion	Leakage emissions are not applicable according to the applied methodology and registered CDM PDD

Based on the document review and interview with PP, VVB confirms that project has been implemented as described in the project description document and emission reductions are real and measurable.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

Means of verification	No lack of evidence and missing data were detected during this monitoring period. All values as per the monitoring plan were crosschecked by the verification team against basic monitored data and the calculations were found to be correct. The verification team confirms that all assumptions, emission factors and default values have been correctly justified. All the

	emission factors, application of maximum permissible errors and default values are explicitly mentioned in the monitoring report. Hence the VVB confirms that the methods and formulae used to obtain the emissions are appropriate. No reporting risks have been identified for the data reported. Troubleshooting procedure, maintenance, and calibration of monitoring equipment, monitoring measurements and reporting, record handling and maintenance, reviewing monitored data are available at the plant. All the monitored data are archived partially in electronic and paper form. The data will be kept for the whole crediting period and 2 years after the last crediting period thereby meeting the requirement of the monitoring plan.
Conclusion	The formulae and the methods referred in the MR and the emission reduction calculation spread sheet comply with the methods described in the registered PDD. No lack of evidence and missing data were detected during this monitoring period. All values as per the monitoring plan were crosschecked by the verification team against basic monitored data and the GHG emission calculation is found correct. TUV SUD confirms that all assumptions, emission factors and default values have been correctly justified. All the emission factors and default values are explicitly mentioned in the monitoring report. Calculations applied formulae and method for calculation of GHG emission are in accordance with the registered monitoring plan and are in line with the requirements of VCS, the applied methodology and p. 372, p.373 of CDM VVS PA ver 3.0.

4.6 Non-Permanence Risk Analysis

Not applicable.

5 VERIFICATION CONCLUSION

Our verification approach was based on the requirements as defined under the applicable VCS standards and relevant UNFCCC requirements. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. The verification can confirm that:

- the project is implemented and operated as per the registered PD;
- the monitoring plan in the registered PD is as per the applied methodology;
- the monitoring complies with the monitoring plan in the registered PD;

- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS and CDM requirements;
- the installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.
- There is an audit trail that contains the evidence and records that validate the stated figures.

Based on the information we have seen and evaluated, we confirm that the project activity achieved the verified amount of reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the project activity

Verification period: From 01/01/2021 to 31/12/2021
Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
2021(01/01/2021 to 31/12/2021)	465,395	0	0	465,395
Total	465,395	0	0	465,395

APPENDIX 1: DOCUMENTS REVIEWED

No.	Author	Title	References to the document
1	UNFCCC	CDM VVS for PA v3.0	
2	UNFCCC	ACM0002 – "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", Version 19	-
3	Verra	VCS Standard v4.1	-
4	PP	VCS PD – version 2.1	20/11/2019
5	Blue World Carbon Asset Management	VCS MR – Version 2.1	06/07/2022
6	UNFCCC	Standardized baseline ASB0040-2018	
7	Blue World Carbon Asset Management	ER Calculation sheet Version 2.0	27/04/2022
8	ESKOM	Commissioning Certificates of wind power plant	31/10/2017
9	UPPTCL	Calibration test certificates for main and check meters	
10	ESKOM	Monthly meter readings for the monitoring period • Raw data from tariff meters_De Aar 2	2021
11	PP	Tax invoices and Eskom's monthly reports for cross check of the meter readings • Eskom Payment Certificates • Longyuan Mulilo_Tax Invoices	2021
12	ESKOM	Power Purchase Agreement between PP (Longyuan Mulilo De Aar 2 North (RF) (Pty) Ltd and electricity utility (ESKOM Holdings Soc Ltd)	-
13	Google Earth	GPS coordinates for Solar plant	-
14	PP	Site photographs of wind power plant and energy meters	2021
15	PP	Grievance Register	2021

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APPENDIX 2: Findings raised during this verification

CL from this verification

CL ID	01	Section no.	4.2	Date: 26/04/2022
Description of CL				
Following documents are need to be submitted: 1. Calibration records 2. Commissioning certificates 3. PPA 4. Scan copy of Grievance register 5. Web link or report for the EF				
Project participant response				**Date:** 26/04/2022
Please find the supporting documents in the “Supporting documents after the DVR” folder. Regarding document 5: EF is fixed for the whole crediting period as reported in the VCS PD. Please refer to section 4.1 of the VCS PD. Source of date is ASB0040-2018, Table 1, page 5 (https://cdm.unfccc.int/methodologies/standard_base/2015/sb131.html)				
Documentation provided by project participant				
1. Calibration Certificates - De Aar 2.pdf 2. Eskom, Notice of Commencement of the Facility (De Aar 2 North – 138.96 MW), 30_10_2017.pdf 3. Power Purchase Agreement between Longyuan Mulilo De Aar 2 North (RF)(Pty) Ltd and Eskom Holdings SOC Ltd, 2014.pdf 4. Longyuan Mulilo De Aar Wind Power_Grievance Register.pdf 5. VCS PD_De Aar 2_02.26102019_clean.doc and ASB0040_2018_PSB0044.pdf				
DOE assessment				**Date:** 08/05/2022
All requested documents are submitted. CL is closed				

CL ID	02	Section no.	1.2	Date: 26/04/2022
Description of CL				
Sectoral scope number is missing in the section 1.2				
Project participant response				**Date:** 26/04/2022
The monitoring report was corrected. Please refer to Section 1.2				
Documentation provided by project participant				
De Aar 2 VCS-Monitoring-Report (version 02)				
DOE assessment				**Date:** 08/05/2022
Revised MR received. CL is closed				

CL ID	03	Section no.	1.9	Date: 26/04/2022
Description of CL				
What is the status with the CDM registration? How PP is sure that project will not be registered with CDM in future?				
Project participant response				**Date:** 26/04/2022
The project was never seeking registration under the CDM programme. The PP is a CME of PoA 7849: South African Grid Connected Wind Farm Programme and considers the potential inclusion of the project as a CPA in future, subject to the rules and requirements of the CDM at the time of inclusion.				
Documentation provided by project participant				
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DOE assessment				**Date:** 08/05/2022
Justification is accepted. CL is closed				

CL ID	04	Section no.	2.1	Date: 26/04/2022
Description of CL				
Study or report which is basis of no net harm has to be submitted for the verification				
Project participant response				**Date:** 26/04/2022
Please find the supporting documents in the “Supporting documents after the DVR” folder.				
Documentation provided by project participant				
1. Environmental Authorization from the Department of Environmental Affairs, 01/03/2013.pdf 2. De Aar 2 - Environmental Impact Assessment				
DOE assessment				**Date:** 08/05/2022
Supporting document is submitted. CL is closed				

CL ID	05	Section no.	3.1	Date: 26/04/2022
Description of CL				
PP has to elaborate further the implementing status of the project as VCS standard guidelines.				
Project participant response				**Date:** 26/04/2022
The monitoring report was corrected. Please refer to Section 3.1				
Documentation provided by project participant				
De Aar 2 VCS-Monitoring-Report (version 02)				
DOE assessment				**Date:** 08/05/2022
Revised MR received. CL is closed				

CL ID	06	Section no.	5.4	Date: 26/04/2022
Description of CL				
PP has to present a comparison between estimated and actual values.				
Project participant response				**Date:** 26/04/2022
The monitoring report was corrected. Please refer to Section 5.4				
Documentation provided by project participant				
De Aar 2 VCS-Monitoring-Report (version 02)				
DOE assessment				**Date:** 08/05/2022
Revised MR received. CL is closed				

CARs from this verification

CAR ID	01	Section no.	1.4	Date: 26/04/2022
Description of CAR				
“Longyuan Mulilo De Aar 2 North (RF) (Pty) Ltd” is mentioned as the other party as well. Please explain their role clearly.				
Project participant response				**Date:** 26/04/2022
Longyuan Mulilo De Aar 2 North (RF) (Pty) Ltd is the project proponent and the wind farm developer.				
Documentation provided by project participant				
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DOE assessment				**Date:** 08/05/2022
Revised MR received. CL is closed				

CAR ID	02	Section no.	1.4	Date: 26/04/2022
Description of CAR				
1. PP has to submit the documentary evidence for each SDGs contribution. 2. Table-1, SDG 6.1 does not have the current project contribution.				
Project participant response				**Date:** 26/04/2022
Please find the supporting documents in the “Supporting documents after the DVR” folder. SDG 6.1 does not have the current project contribution is a correct statement, no contribution was done in 2021				
Documentation provided by project participant				
SDG Report Information				
DOE assessment				**Date:** 08/05/2022
SDG report information submitted. CAR is closed				

CAR ID	03	Section no.	4.3	Date: 26/04/2022
Description of CAR				
Single line diagram for the metering system and the monitoring structure is missing in the section 4.3				
Project participant response				**Date:** 26/04/2022
The monitoring report was corrected. Please refer to Section 4.3				
Documentation provided by project participant				
De Aar 2 VCS-Monitoring-Report (version 02)				
DOE assessment				**Date:** 08/05/2022
Revised MR received. CAR is closed				