




**Verification and certification report form for
CDM project activities
(Version 04.0)**

BASIC INFORMATION

Title and UNFCCC reference number of the project activity	Wind Energy Project in Gujarat UNFCCC Ref.No- 6484		
Scale of the project activity	<input checked="" type="checkbox"/> Large-scale <input type="checkbox"/> Small-scale		
Version number of the verification and certification report	03		
Completion date of the verification and certification report	21/10/2021		
Monitoring period number and duration of this monitoring period	7 th 01/01/2020 – 31/12/2020 (including both days)		
Version number of the monitoring report to which this report applies	1.4		
Crediting period of the project activity corresponding to this monitoring period	Type: Fixed Length: 10 years Duration: 01/10/2012 to 30/09/2022		
Project participants	Vish Wind Infrastrukture LLP (India) ACT Financial Solutions B.V. (Netherlands) Statkraft Markets GmbH (Switzerland) First Climate Markets A.G. (Germany) Numerco Limited (UK of Great Britain and Northern Ireland)		
Host Party	India		
Applied methodologies and standardized baselines	Applied Methodology: ACM0002, version 13.0.0 Title: Consolidated baseline methodology for grid-connected electricity generation from renewable sources Selected standardized baseline: N/A		
Mandatory sectoral scopes	Sectoral scope : 1- Energy industries (renewable - / non-renewable sources)		
Conditional sectoral scopes, if applicable	Not applicable		
Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the registered PDD	101,511 tCO ₂ e		
Certified amount of GHG emission reductions or GHG removals for this monitoring period	Amount before 1 January 2013	Amount from 1 January 2013 until 31 December 2020	Amount from 1 January 2021
	0	69,829	0
Name and UNFCCC reference number of the	Earthood Services Private Limited		

DOE	UNFCCC ref.No- E-0066
Name, position and signature of the approver of the verification and certification report	 Dr. Kaviraj Singh Managing Director

SECTION A. Executive summary

>> The project activity involves electricity generation by wind energy and supplying the generated electricity to the NEWNE grid (Now part of integrated Indian Grid). The project being a renewable energy generation activity, it leads to removal of fossil fuel dominated electricity generation. The project activity results in reductions of greenhouse gas (GHG) emissions that are real, measurable, and verifiable and plays beneficial role in the mitigation of climate change.

The project activity involves electricity generation by wind turbine generators (WTGs) and supplying the same to the NEWNE regional electricity grid (now part of integrated Indian grid). This is renewable energy generation which will replace the fossil fuel dominated grid connected electricity generation.

The project activity consists of 63 WTGs (0.8 MW capacity each), making the total installed capacity to be 50.4 MW in the district of Kutch and Jamnagar in Gujarat, India. The WTGs are of Wind World (E-53) make.

It is to be noted that name of company "Enercon India Limited" is changed as "Wind World (India) Limited" from 01/01/2013 onwards, the same is verified through the name change consent issued by Government of India/19/.

Name of project participant is changed as "Vish Wind Infrastruktüre LLP" from 06/09/2017 onwards. The same is verified through the name change consent issued by Ministry of Environment, Forest and Climate Change, Government of India/22/ and also reflected at UNFCCC project webpage/18/.

The WTGs have been commissioned from 02/10/2011 to 31/03/2012. The same was verified against the commissioning certificates/15/.

The project is fully functional, and the assessment team verified this through the latest photographs/21/ of online monitoring system (SCADA), generation records/12/ and interaction with site personal (during virtual meeting). The assessment team confirms that the total emission reductions achieved under this monitoring period 01/01/2020 – 31/12/2020 (including both days) is 69,829 tCO₂e.

The basic details of the project activity are mentioned below:

Project title	Wind Energy Project in Gujarat
UNFCCC registration number	6484
Date of registration	10/09/2012
Sectoral scope	1 - Energy industries (renewable/ non-renewable sources).
Methodology/ies applied	Approved consolidated baseline methodology ACM0002, Version 13.0.0
Project participant	Vish Wind Infrastruktüre LLP
Location of Project Activity	Kutch and Jamnagar district, Indian State of Gujarat

Scope of verification:

The scope of the verification was limited to the monitoring period covered under the current monitoring period 01/01/2020 – 31/12/2020 of the registered CDM PA "Wind Energy Project in Gujarat". The verification is the periodic independent review and *ex post* determination by Earthood of the monitored reductions in GHG emissions that have occurred as a result of the registered CDM project activity during the defined monitoring period.

The scope of the verification is to establish/verify that:

- The project activity has been implemented and operated as per the approved registered PDD/revised PDD, and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- The monitoring report and other supporting documents provided are complete in accordance with the latest applicable version of the completeness checklist for requests for issuance of CERs, verifiable, and in accordance with applicable CDM requirements;
- The actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan, any registered monitoring plan, the approved methodology including applicable tool(s) and/or, where applicable, the approved standardized baseline;
- The data recorded and stored as per the monitoring methodology including applicable tool(s) and, where applicable, the standardized baseline.

Verification Process:

The verification process involves an agreement with project participant for verification scope and defined monitoring period in accordance with latest valid CDM PS. The monitoring report version 1.0 dated 22/02/2021 was published on UNFCCC project webpage on 23/02/2021 and verification was performed as

per latest valid CDM Standards i.e., CDM PS, VVS and latest valid CDM PCP for PAs/08,09 & 10/. The desk review, remote site audit, interview, reporting of findings, preparation of draft verification report followed by independent technical review (internal quality check) were performed as stated in further sections of this report.

Conclusion

Earthood has performed the verification of the CDM project “Wind Energy Project in Gujarat” having UNFCCC Ref. Number 6484. The verification includes confirming the implementation of the project as per description in the registered PDD, the monitoring plan of the PDD and the application of the monitoring methodology as per ACM0002 version 13.0.0 - Consolidated baseline methodology for grid-connected electricity generation from renewable sources /3.1/. ESPL confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements. The emission reductions from the CDM project activity 6484 “Wind Energy Project in Gujarat” in India during the period 01/01/2020 to 31/12/2020 (first and last days included) amount to 69,829 tCO₂e.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Verification findings
1.	Team Leader and Local Expert	EI	Soni	Ravi Kant	Central office	Y	N	Y	Y
2.	Verifier	EI	Soni	Ravi Kant	Central office	Y	N	Y	Y
3.	Technical Expert and Meth Expert	EI	Soni	Ravi Kant	Central office	Y	N	Y	Y

B.2. Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Garg	Shreya	Central Office
2	Expert to TR	IR	Garg	Shreya	Central Office
3	Approver	IR	Singh	Kaviraj	Central Office

SECTION C. Application of materiality

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	

1.	Omissions and misstatements in data transfer from hand written data in the JMR to ER calculation sheet.	Low	Ineffective quality control of data transfer due to unclear QA/QC procedure.	<p>Quality procedure followed at site to be checked.</p> <p>It is to be demonstrated by the PP that how to transfer data and how this can be crosschecked.</p> <p>Relevant site personnel have been interviewed to confirm whether procedure is actually conducted.</p>
2.	Missing data due to failure of measurement equipment	Low	The monitoring plan defines emergency procedures in case malfunctioning or failure of meter. Further, check meters are also installed onsite.	<p>It is to be checked if related main meters are installed as per monitoring plan.</p> <p>Relevant site personnel have been interviewed to confirm whether the emergency procedure is known to them.</p> <p>To be checked if the equipment is malfunctioning and the accuracy and reliability of data for the concerned period cannot be ensured, the relevant emission reductions have been claimed or not.</p>

C.2. Consideration of materiality in conducting the verification

>> In accordance with CDM VVS for PAs, Version 03.0 para 326 the prescribed thresholds for materiality for CDM PAs are as under;

Emission Reductions (tCO ₂ e)/year	500,000 or more	300,001 to 499,999	300,000 or less	Small Scale CDM PAs	Micro Scale CDM PAs
Materiality Threshold (para 326)	0.5%	1.0%	2.0%	5.0%	10.0%

The applicable materiality threshold is 2% as project activity.

Particulars / Monitoring Report	MR Version (Public)	MR Version (Revised/Final)
Emission Reductions Achieved (tCO ₂ e) in this monitoring period	69,829 tCO ₂ e	69,829 tCO ₂ e
Applicable Threshold (%) as per para 326(c) of CDM VVS for PAs Version 03.0	2%	2%

The verification team has identified the impact of errors observed and those were corrected by PP during verification for all monitoring parameter at individual level. The extrapolated impact on ERs is also provided for parameters individually and in aggregated manner in the end.

Monitored Parameter (Symbol / Description)	Reporting Frequency	Number of Discrete Data (Total)	Sample selected for verification	Type of error identified	Impact on ERs	
					ERs impacted (Sample)	ERs impacted (Population based on extrapolation)
EG _{facility,y}	Monthly	12(100%)	12 (100%)	No error	No impact	No impact

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Based on the above table it can be confirmed that the applicable materiality threshold is not breached for the registered PA as per CDM VVS. Complete set of data were verified and no errors were identified during the verification of data from their respective source.

SECTION D. Means of verification

D.1. Desk/document review

>> A desk review was conducted by the verification team that included

- a. A review of the data and information presented to verify its completeness;
- b. A review of the registered monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- c. An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions;

A complete list of documents/evidences reviewed is included as Appendix 3.

D.2. On-site inspection

Due to the current situation with the global COVID-19 pandemic scenario and increased risk of exposure and contraction due to travel, an on-site inspection has not been performed by the assessment team.

Although, domestic travel is permitted while taking precautions to limit the spread of the virus, there are states specific restrictions and many guidelines which must be followed for travelling to various states, which include negative Covid-19 test reports, mandatory home/ institutional quarantine (State-Wise-Health-and-Safety-Requirements-Version-175.pdf (goindigo.in)), compulsory Covid-19 test on arrival into the state, traveling back out of the state within 72 hours of the arrival, etc.

As per the latest communication received from CDM Executive Board (110th EB meeting) regarding the relaxation for mandatory site visits by DOEs till 31/12/2021, due to COVID-19 pandemic, it is recommended that site visit should be postponed because of the COVID-19 pandemic.

As per the paragraph 339 of VVS-PA, it is mandatory for the DOE to conduct an on-site inspection at verification for the registered CDM project activity if:

- a) It is the first verification for the DOE with regard to this project activity;
- b) More than three years have elapsed since the last on-site inspection conducted for verification for the project activity; or
- c) The project activity has achieved more than 300,000 t CO₂ eq of GHG emission reductions or net anthropogenic GHG removals since the last verification when an on-site inspection was conducted.

It is to be noted that, it is not the first verification for the DOE (ESPL), as fourth verification (period 01/04/2016 to 31/03/2017) was done by the DOE(ESPL).

On -site visit for the fourth verification (done by ESPL) was conducted on 16/06/2017 -17/06/2017.

The Applus+Certification had done the previous verification (sixth monitoring period: 01/04/2018 to 31/12/2019) and on-site visit was conducted on 03/03/2020. It is noted that more than 3 years have been elapsed since the last on-site inspection conducted by the DoE (ESPL) for verification for the project activity.

During the current monitoring period the project activity has achieved emission reductions 69,829 tCO_{2e}, which is less than the threshold limit (300,000 t CO_{2e}).

Hence as per paragraph 339 of VVS-PA, it is mandatory to conduct the on-site inspection by the DOE for current verification.

The Project participant has signed the ERPA/23/ with the buyer and as per the contract the credits shall be delivered on or before 31/12/2021, hence it is not possible to postpone the site visit for an indefinite period and the contract might be terminated in case if the credits not delivered as per the timeline agreed in the contract.

Considering health and safety a top priority, it is justified to not conduct the physical site visit for verification audit. Since the site visit cannot be postponed but is not conducted due to the COVID-19 pandemic, hence the DOE has used standard auditing techniques for validation as referred to in sections 7.1.3 and 9.1.3 of the VVS for PAs version 03.0.

The source documents/alternative means of verification/validation referred by the assessment team to validate the aspect of verification is summarized in the below table, however detailed description of the same is provided under relevant sections of this report.

Assessment criteria	Means of verification/source documents	Remark
Description of project activity	Commissioning certificates /15/, registered PDD/01/, CDM validation report /02/, CDM PRC opinion/02/ and previous verification report/03/ PPA signed with GUVNL /16/ Virtual meeting with site personnel (video conferencing via Zoom) on 12/04/2021.	The information's with reference to project capacity, technology, plant equipment's and commissioning dates as provided in section A.2 and B.1 of MR are found consistent with the documents.
Compliance of the project implementation with the registered project design document	Monthly share certificates issued by state utility (GETCO) /12/. Commissioning certificates /15/ Geographical co-ordinates of project activity verified through Google Map ¹ Photograph of equipment's installed at site and screen shots of SCADA system /21/ Virtual meeting with site personnel (video conferencing via Zoom) on 12/04/2021.	Monthly share certificates issued by the state utility indicate the name of the project developer, identification of substation and installed capacity of the project connected to individual substation. Location of project is verified through Google Map and found consistent with registered PDD and MR. Photograph of equipment's and screen shots of SCADA system are verified to check the operational status of project activity. Grid connectivity of the project is confirmed through the PPA. All the information's regarding the project implementation as discuss above are further

¹ <https://www.google.com/maps>

		verified through registered PDD/01/ and found consistent.
Compliance of the registered monitoring plan with applied methodologies and standardized baselines	<p>Virtual meeting with site personnel (video conferencing via Zoom) on 12/04/2021.</p> <p>PPA signed with GUVNL /16/</p> <p>Monthly share certificates issued by state utility (GETCO) /12/.</p> <p>Invoices raised by project developer to state utility /13/</p>	<p>The organizational structure, responsibilities and competencies of the personnel confirmed during the con-call held with the site personnel.</p> <p>Frequency of monitoring of parameters listed under approved monitoring plan is verified through meter reading reports /Invoices.</p> <p>The methods used for measuring, recording, storing, aggregating, and reporting the data on monitored parameters are verified through PPA and telephonic conversations with site personnel.</p> <p>Procedure for data uncertainty, emergency preparedness, roles and responsibility, operational and management structure are mentioned in the MR is confirmed during the con-call /21/ and found satisfactory.</p>
Compliance with the calibration frequency requirements for measuring instruments	<p>Calibration certificates of meters/14/</p> <p>PPA signed with GUVNL /16/.</p> <p>Photograph of energy meters indicating sr. No, accuracy class, make /21/.</p> <p>Central Electricity Authority (Installation and Operation of Meters) Regulations/20/</p>	<p>Calibration frequency and energy meter specifications (Sr. No, make accuracy class) is verified through calibration certificates and further verified through photographs and found consistent.</p> <p>Responsibility of calibration and maintenance of energy meters is solely under control of GUVNL; this is verified through the PPA.</p>
Assessment of data and calculation of emission reductions or net removals	<p>Monthly share certificates issued by state utility (GETCO) /12/.</p> <p>Invoices raised by project developer to state utility /13/</p> <p>CEA CO₂ Baseline Database for the Indian Power Sector /17/</p>	<p>Monthly values of monitoring parameter used in ER calculation are verified through share certificates and cross verified with the invoices.</p> <p>Methods, formulae and emission factor for calculating baseline emissions have been followed are in accordance with the applied methodology and as described in the approved CDM validation report/02/ and previous verification reports /03/.</p>

It is noteworthy that no sampling plan for verification is applied as 100% of data is verified for the current monitoring period. Most of the reference documents referred by the assessment team (above table) are either issued by state utility (GETCO), an external government agency, hence is deemed authentic.

Based on the above assessment it can be concluded that the alternative means used for verification are credible and sufficient for verification.

Duration of on-site inspection: DD/MM/YYYY to DD/MM/YYYY				
No.	Activity performed on-site	Site location	Date	Team member
1.	NA	NA	NA	NA

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			

1.	Kumar	Navneet	Assistant Manager (WWIL)	12/04/2021	Electricity Generation Records (JMRs), Reliability & accuracy of readings considered for emission reduction calculations, Calibration procedure	Ravi Kant Soni
2.	S	Jayakumar	Site Engineer (WWIL)	12/04/2021	Monitoring and measuring system, Collection of measurements, Observations of established practices and Data Verification of monitoring parameters	Ravi Kant Soni

D.4. Sampling approach

>> No sampling approach has been applied by the verification team as all the monthly reported figures in the MR/05/ and the ER sheet/07/ were checked from the actual records.

D.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form	-	-	-
Compliance of the project implementation and operation with the registered PDD	-	-	-
Post-registration changes	-	-	-
Compliance of the registered monitoring plan with the methodologies including applicable tools and standardized baselines	-	-	-
Compliance of monitoring activities with the registered monitoring plan	-	-	-
Compliance with the calibration frequency requirements for measuring instruments	-	CAR #2	-
Assessment of data and calculation of emission reductions or net removals	-	CAR #1	-
Assessment of reported sustainable development co-benefits	--	-	-
Global stakeholder consultation	-	-	-
Others (please specify)	CL #1 (Missing documents) CL #2 (Inconsistencies)	-	-
Total	02	02	-

SECTION E. Verification findings

E.1. Compliance of the monitoring report with the monitoring report form

Means of verification	The monitoring report form used is CDM-MR-FORM version 09.0/11/, which was the appropriate form, and the latest version available at the time of verification. All the sections of the form were filled as per the guidelines and gave all the relevant
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	details.
Findings	No finding
Conclusion	The monitoring report is found to be complying with the monitoring report form.

E.2. Remaining forward action requests from validation and/or previous verifications

>> This is seventh verification of the project activity. There are no FAR(s) from validation or previous verification /03 /that need to be closed during this verification.

E.3. Compliance of the project implementation and operation with the registered project design document

Means of verification	<p>This project activity is the generation of electricity from WTGs supplying the generated electricity to the NEWNE grid of India. The project is located at Kutch (33 WTGs) and Jamnagar (30 WTGs) districts of Gujarat state in India and has an installed capacity of 50.4 MW (63 WTGs x 0.8 MW/WTG).</p> <p>The PP has signed two PPAs/16/ with GUVNL for the sale of electricity to the grid. The project was registered as a CDM project on 10/09/2012 /18/. The PP has considered a fixed crediting period for the project activity from 01/10/2012 to 30/09/2022.</p> <p>The commercial operation of the project activity had been started on 02/10/2011 – 31/03/2012, which was verified vide commissioning certificates/15/.</p> <p>This is the seventh verification of the project activity covering the period from 01/01/2020 to 31/12/2020.</p> <p>The technical specifications of WTGs were verified through the nameplate details (imprinted/placed at the bottom of WTG tower) available at the WTGs, checked through the actual photographs indicating the technical specifications/21/ and were found to be consistent with the details provided in the registered PDD.</p> <p>The project location was verified through Google Maps (https://www.google.com/maps) and found consistent with the same mentioned in the registered PDD /01/ and MR.</p> <p>The assessment team has checked the latest photographs, video recording of project site/21/, verification report of previous monitoring period/03/ and it is observed that project WTGs are connected to various clusters at the site for the purpose of metering. Each cluster has dedicated main and the check meter at 33 kV. In all the clusters, only WTGs of project activity are connected, and no WTGs of other project developer are there in the clusters. Similarly, the WTGs of other project developers (non-project activity) in the wind farm are also connected to separate clusters having exclusive dedicated metering arrangement at 33kV at project site. All the cluster meters (for the project activity and non-project activity) are further connected to 66 kV Wind World sub-station through 33kV bus (Kutch Site) and 220 kV WWIL substation at Lalpur site.</p> <p>There are 4 main meters (2 main & 2 check meter) installed at both WWIL substations (Kutch & Lalapur site). Electricity exported and imported by all the WTGs (including non-project WTGs) is recorded through these meters.</p> <p>Net electricity supplied to the grid by each project developer in the wind farm is calculated by the state utility (GEDA) using apportioning procedure, adjusting the transmission loss between metering point at 33kV and the metering points at respective WWIL substations for both the sites.</p> <p>Apportioning procedure used in the calculation of net electricity supplied to the grid is correctly described in section C of the MR/05/ and in section B.7.2 of the revised approved PDD/01/. This was also verified by interviewing the staff at the sub-station and the officials of the state utility/21/.</p> <p>The project activity was fully functional and the assessment team verified this through the monthly generation records (share certificates) and latest photographs of online monitoring (SCADA) system /21/. In addition to the interaction(remotely) with site personnel, the following documents have been reviewed by the assessment team to verify the project implementation:</p> <ul style="list-style-type: none"> • Commissioning certificates/15/
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	<ul style="list-style-type: none"> • Power Purchase Agreement/16/ • JMRs (Form-B) issued by GETCO /12/ • Invoices raised by the PP to State utility /13/ • Testing certificates of all energy meters/14/ <p>The information relating to the project implementation, provided in the Monitoring Report/05/ is consistent with that stated in the registered PDD/01/. The data and variables provided in the monitoring report are the same as stated in the registered PDD. Total emission reductions achieved under this monitoring period 01/01/2020 to 31/12/2020 (including both days) is 69,829 tCO_{2e}.</p>
Findings	No issues identified and hence finding was not raised for this section.
Conclusion	<ul style="list-style-type: none"> • In view of the information's verified during the remote audit (conversation with site in-charge) and actual photographs/video recording of project site, the verification team is able to confirm that all physical features (technology, project equipment, and monitoring and metering equipment) of the registered CDM project activity are in place and that the project participants have operated the project activity as per the registered PDD. • No information with regard to data and variables was identified that may surpass the estimated quantity of ERs in the registered PDD. • The emission reductions achieved during the current monitoring period are (69,829) tCO_{2e}, that is within the estimated quantity (101,511 tCO_{2e}) in the registered PDD for the comparable period.

E.4. Post-registration changes

E.4.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents²

>> /.

There are no temporary deviations from registered monitoring plan or applied methodology in the current monitoring period. It was verified and confirmed from the registered PDD; the applied methodology and the remote audit.

E.4.2. Corrections

>> Corrections to the registered project activity have been approved by the board on 25/10/2013 (PRC Ref: PRC-6484-001).

(Ref: Validation opinion on changes in PDD, version 02, dated 05/08/2013)/02/

E.4.3. Changes to the start date of the crediting period

>> There is no change to the start date of the crediting period. It was verified and confirmed from the UNFCCC project webpage/18/.

E.4.4. Inclusion of a monitoring plan

>> Not applicable

E.4.5. Permanent changes from registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

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Permanent changes from the registered monitoring plan have been approved by the board on 25/10/2013 (PRC Ref: PRC-6484-001).

(Ref: Validation opinion on changes in PDD, version 02, dated 05/08/2013)/02/

² Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

E.4.6. Changes to the project design

>> Changes to the project design of the registered project are not identified during the current verification.

E.4.7. Changes specific to afforestation and reforestation project activities

>> Not applicable

E.5. Compliance of the registered monitoring plan with applied methodologies, applied standardized baselines, and other applied methodological regulatory documents

Means of verification	<p>The monitoring plan as contained in the revised approved PDD/01/ was reviewed against the monitoring requirements of the applied methodology ACM0002 version 13.0.0/3.1/. Based on this review it was found that the monitoring plan contained in the revised approved PDD includes all the required parameters to be monitored in the context of project design and description and allows proper determination of emission reductions in accordance with the PDD /01/ and applied methodology ACM0002 version 13.0.0 /3.1/.</p> <p>It was observed during the site visit that, the WTGs (project activity and non-project) are connected to the common metering system at 66 kV WWIL sub-station (Kutch site) and 220/33 kV WWIL sub-station (Lalpur site).</p> <p>Hence, to calculate the net electricity exported to the grid by the WTGs of the project activity, the state electricity utility uses an apportioning procedure that has been correctly described in section C of the MR/05/ and in section B.7.2 of the revised approved PDD/01/. This was also verified by interviewing the site personnel during the virtual site visit /21/.</p> <p>As verified through Article 5 of PPA/16/ and clause 3 in section C of share certificates issued by state utility/12/ that the apportioning procedure is carried out by the state utility and the PP has no role in this calculation. It was confirmed through the interviews of representatives of the O&M provider during the virtual site visit, that the procedure to derive the electricity exported to the grid by each project owner is completely under jurisdiction of the state utility.</p> <p>Values of the parameter "Net electricity supplied to the grid by project" is directly sourced from the monthly "Share certificates" issued by GETCO/12/ that indicates the share of electricity for project activity received at the WWIL sub-station.</p> <p>The Share certificates are prepared and endorsed by GETCO, an external government agency and the PP has no influence in the entire procedure. Hence, the data issued by the state electricity board through the Share certificate is deemed authentic.</p> <p>Based on the assessment of previous verification records/03/,share certificates /12/ and information verified during the virtual site visit , it can be confirmed that, the WTGs belonging to the project activity are connected to the grid through an appropriate power evacuation system. Appropriate metering system and calculation procedures are transparently described in the monitoring plan to enable accurate determination of emission reductions achieved by the project activity.</p>
Findings	No finding was raised
Conclusion	The monitoring plan outlined in the revised approved PDD/1/ is in accordance with the applied methodology /03/ and correctly applied by the registered CDM project activity.

E.6. Compliance of monitoring activities with the registered monitoring plan**E.6.1. Data and parameters fixed ex ante or at renewal of crediting period****E.6.1.1. Operating Margin Emission Factor of NEWNE Electricity Grid (EF_{OM,y}, tCO₂e/MWh)**

Means of verification	The value of this parameter is considered as 0.99431.This was checked with the revised approved PDD /01/ and CO2 Baseline Database for Indian Power Sector", version 06 published by the Central Electricity Authority, Ministry of Power, Government of India /17/.
Findings	No finding was raised
Conclusion	The value in the monitoring report /05/ and corresponding emission reduction calculations spreadsheet /07/ are consistent with the revised approved PDD (page

26). The applied value is correct and justified.
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E.6.1.2. Build Margin Emission Factor of NEWNE Electricity Grid ($EF_{BM,y}$, tCO_2e/MWh)

Means of verification	The value of this parameter is considered as 0. 81231. This was checked with the revised approved PDD /01/ and CO2 Baseline Database for Indian Power Sector", version 06 published by the Central Electricity Authority, Ministry of Power, Government of India /17/.
Findings	No finding was raised
Conclusion	The value in the monitoring report /05/ and corresponding emission reduction calculations spreadsheet /07/ are consistent with the revised approved PDD/1/ (page 27). The applied value is correct and justified.

E.6.1.3. Combined Margin Emission Factor of NEWNE Electricity Grid (EF_y or $EF_{grid,CM,y}$, tCO_2e/MWh)

Means of verification	The value of this parameter is considered as 0. 94881. This was checked with the revised approved PDD /01/ and CO2 Baseline Database for Indian Power Sector", version 06 published by the Central Electricity Authority, Ministry of Power, Government of India /17/.
Findings	No finding was raised
Conclusion	The value in the monitoring report /05/ and corresponding emission reduction calculations spreadsheet /07/ are consistent with the revised approved PDD/1/ (page 26). The applied value is correct and justified.

E.6.2. Data and parameters monitored**E.6.2.1. Quantity of net electricity generation supplied by the project activity to the grid in year y , $EG_{facility,y}$ (MWh)**

Means of verification	Criteria/Requirements		Assessment/Observation	
	Measuring /Reading /Recording frequency		The parameter is calculated and recorded on monthly basis, however, the input values used to calculate the value of $EG_{facility,y}$ are continuously monitored, hourly measured and monthly recorded.	
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?		The WTGs belongs to project activity are installed at Kutch and Lalpur site and connected to various clusters and each cluster have exclusive dedicated metering arrangement at 33kV at project site. Similarly the WTGs of other project developers (non-project activity) are also connected to separate clusters having exclusive dedicated metering arrangement at 33kV at project site. All the cluster meters (for the project activity and non-project activity are further connected at 66 kV Wind World sub-station through 33kV bus (Kutch Site) and 220 kV WWIL substation at Lalpur site. At both the substations the electricity generated by all the WTGs (project and non-project) is been fed to the NEWNE grid through two separate lines. Each line having one set of meters (main and check meter) and monthly reading is taken by the representatives GEDA/GETCO in the presence of WWIL officials in the form of JMR.	
	Yes. The reporting frequency is in line with the monitoring plan as outlined in the revised approved PDD/01/ and monitoring methodology/3.1/.			

	(Yes / No)	
	Monitoring equipment	<p>No monitoring equipment is used as this parameter is calculated using the measured values.</p> <p>The monitoring equipment's (Energy meters) discussed in this section are concerning to the input values (Used in calculation of $EG_{facility,y}$) only.</p> <p>Additional details of energy meters are verified in section E.7 of this report.</p>
	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	The accuracy of the monitoring equipment used to measure the input values used to calculate $EG_{facility,y}$ is 0.2s as verified from the physical inspection of the project activity, which is as per the revised approved CDM PDD/01/ which is as per the norm defined in the PPA/16/.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes. Calibration certificates/14/ are verified and confirmed that accuracy of monitoring instruments is valid for the entire range.
	Calibration frequency /interval:	Calibration frequency of the meters is once in 3 years/01/.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	Yes. The calibration frequency is in line with the monitoring plan as outlined in the revised approved PDD/01/ (P.34).
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Yes the calibration is conducted by GEDA which NABL Accredited Government institution/14/.
	Is(are) calibration(s) valid for the whole reporting period?	There is delay in calibration is identified during the current monitoring period (please refer section E.7 of this report for further details).
How were the values in the monitoring report verified?	Cumulative value of $EG_{facility,y}$ for entire monitoring period is reported in the monitoring report, however monthly values are reported in the ER calculation sheet. The monthly values were verified from the share certificates issued by state utility and found to be consistent.	

		Value of this parameter for the current monitoring period was verified as 73,597.213 MWh.
	If applicable, has the reported data been cross-checked with other available data?	The monthly reported values of $EG_{facility,y}$ were further cross checked with the monthly invoices raised by the PP /11/ to state utility and found to be consistent.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	<p>Yes, the adequate QA/QC procedures were implemented by all the stakeholders, namely, the Grid Authority (GEDA), the PP and the WWIL (O&M Contractor). The data transfer process for the said parameter is as follows:</p> <p>The Joint meter reading at cluster metering points and at WWIL substation is taken by the representatives of GEDA/GETCO in the presence of WWIL officials in the form of JMRs.</p> <p>Based on the data recorded in the JMRs, electricity supplied to the grid by the project activity is calculated by GEDA, using the apportioning procedure and share certificates for each project developer is prepared.</p> <p>Monthly share certificates issued by state utility provides the value of $EG_{facility,y}$ that is directly used for emission reduction calculations.</p> <p>It is to be noted that all the meters (cluster and substation) are sealed by GEDA and JMR readings taken at cluster meters & substation meters are solely kept with state utility and not shared with the PP.</p>
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	No finding was raised	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

E.6.3. Implementation of sampling plan

Means of verification	Not applicable
Findings	Not applicable
Conclusion	Not applicable

E.7. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	<p>As per the monitoring plan in the revised approved PDD/01/ the meters are to be tested and calibrated once in three years.</p> <p>The calibration certificates/14/ of meters have been checked to confirm the same.</p> <p>The details of monitoring equipment involved in the project activity and their calibration dates are mentioned in Section C of the MR/05/ and are summarised in the tables below. All the cluster meters and substation meters are of accuracy class of 0.2s and a calibration frequency of once in three years.</p> <p>Cluster Meters (Kutch Site):</p>
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Sr.No-	Meter Sr.No	Date of calibration	Is there any delay in calibration?
1	GJU64407	18/08/2017 and 28/05/2021	Y
2	GJU64650	18/08/2017 and 28/05/2021	Y
3	GJU900077	18/08/2017 and 28/05/2021	Y
4	GJU64652	18/08/2017 and 28/05/2021	Y
5	GJU64406	18/08/2017 and 28/05/2021	Y
6	GJU65845	18/08/2017 and 28/05/2021	Y
7	GJU65846	18/08/2017 and 28/05/2021	Y

Cluster Meters (Lalpur Site):

Sr.No-	Meter Sr.No	Date of calibration	Is there any delay in calibration?
1	GJU62414	13/09/2017 and 26/05/2021	Y
2	GJU62406	13/09/2017 and 26/05/2021	Y
3	GJU61312	13/09/2017 and 26/05/2021	Y
4	GJU61318	13/09/2017 and 26/05/2021	Y
5	GJU61319	13/09/2017 and 26/05/2021	Y
6	GJU61308	13/09/2017 and 26/05/2021	Y
7	GJU62457	13/09/2017 and 26/05/2021	Y
8	GJU62405	13/09/2017 and 26/05/2021	Y
9	GJU62463	13/09/2017 and 26/05/2021	Y
10	GJU62416	13/09/2017 and 26/05/2021	Y
11	GJU62411	13/09/2017 and 26/05/2021	Y
12	GJU60957	13/09/2017 and 26/05/2021	Y
13	GJU62415	13/09/2017 and 26/05/2021	Y
14	GJU62413	13/09/2017 and 26/05/2021	Y

Sub-station meters:

Site Location	Line No.	Meter Sr.No	WWIL substation	Date of calibration	Is there any delay in calibration?
Kutch	Line 1	MM: GJ0978-A	33/66 kV Rasaliya (Kotda Jadoar)	31/01/2017 and 25/05/2021	Y
		CM: GJU63159		31/01/2017 and 25/05/2021	Y
	Line 2	MM: GJ0979-A		31/01/2017 and 26/05/2021	Y
		CM: GJU63158		31/01/2017 and 26/05/2021	Y
Lalpur	Line 1	MM: GJ0947-A	220 kV Tebhda (Dharampur)	12/01/2017 and 18/12/2020	Y
		CM: GJU62417		12/01/2017 and 13/06/2021	Y
	Line 2	MM: GJ0950-A		12/01/2017 and 18/12/2020	Y
		CM: GJU62418		12/01/2017 and 13/06/2021	Y

The above meter details have been verified through the following means:

- i. Actual photographs of the meters
- ii. Interviewing (virtually) the staff at the sub-station
- iii. Calibration certificates

The installation and working condition of the meters were checked through the calibration certificates/14/, actual photographs/21/ and it was found to be satisfactory. These meters are duly approved, installed, tested, sealed and in the custody of the state utility. The PP has no control over the same.

Accordance with the guidelines as state under section 3.2.3 of CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006/20/ which is considered as national standard "All interface meters shall be tested at least once in five years." Hence, the calibration frequency of once in 3 years, mentioned in the revised approved PDD for the meters is appropriate.

Assessment on delay in calibration:

As evident from the calibration details provided in the above table, there is a delay in calibration of cluster meters (both sites) and substation meters (Kutch and Lalpur site) identified during the current monitoring period.

It is worthy to note that the meters installed at substations (Rasaliya and Tebhda) are directly used for monitoring of net electricity supplied to the grid by the project activity, known as "billing meters". The PP has addressed the calibration delay by applying the error factor considering the calibration delayed results for billing meters.

Name of Substation	Meter location	Calibration dates	Calibration delay period ³	% Error identified*
33/66 kV Rasaliya (Kotda Jadoar)	Line-1	31/01/2017 and 25/05/2021	31/01/2020 to 31/12/2020	MM: 0.13% CM: 0.08%
	Line-2	31/01/2017 and 26/05/2021		MM: 0.12% CM: 0.08%
220 kV Tebhda (Dharampur)	Line-1	MM: 12/01/2017 and 18/12/2020 CM: 12/01/2017 and 13/06/2021	MM: 12/01/2020 to 17/12/2020 CM: 12/01/2020 to 31/12/2020	MM: 0.13% CM: -0.01%
	Line-2	MM: 12/01/2017 and 18/12/2020 CM: 12/01/2017 and 13/06/2021	MM: 12/01/2020 to 17/12/2020 CM: 12/01/2020 to 31/12/2020	MM: 0.15% CM: 0.01%

Note: MM- Main meter, CM- Check meter

★ as per the latest calibration results

The verification team has checked the latest calibration certificates/14/ for all the meters (billing meter & cluster meters) and confirmed that the meters were working satisfactorily and error in the meters was under permissible limits.

Since the delay in calibration of the substation meters (billing meters) and meters at 33 kV is observed for different period, during the current monitoring period, hence an error factor is applied for the entire monitoring period.

Accordance with the guidelines outlined under paragraph 366(a) of VVS for PAs version 03.0, an error factor 0.2% should be applied for both export & import i.e., the measured values in the delayed calibration period. However, the monthly share

³ Applicable for the current monitoring period

	<p>certificates issued by the state utility only provides the value of "Quantity of net electricity generation supplied by the project activity to the grid in year y" ($EG_{\text{facility},y}$) and not the export and import values by the project activity. Hence the error for both export & import has been taken into account and a cumulative error factor of (-0.4%) on the parameter $EG_{\text{facility},y}$ is applied. The approach followed by the PP was found to be conservative and appropriate, hence accepted.</p> <p>It is verified through the registered PDD and PPA signed by the PP with state utility that the state utility (GUVNL) is the buyer of generated electricity and sole entity responsible for calibration of meters.</p> <p>It is verified that the PP receives payment, for the electricity supplied to the grid, from the state utility (which is a Government Organisation and a 3rd party with respect to this CDM project). This electricity supplied to the grid is obtained using directly measured values at the energy meters. Hence the state utility ensures that the energy meters are in proper working condition, since they must make payments to the project developers, based on these meter readings.</p>
Findings	CAR #2 was raised and resolved
Conclusion	<p>The assessment team has confirmed that the calibration is not conducted at the frequency as per the monitoring plan contained in the revised approved PDD /01/ and delayed calibration results were available. Therefore, following the requirements of paragraph 366(a) of CDM-VVS for PAs, version 03.0, the error factor is applied to the monitoring parameters.</p> <p>In line with paragraph 367 of CDM-VVS for PAs, version 03.0, the assessment team also confirm that the error has been applied:</p> <p>(a) In a conservative manner, such that the adjusted measured values of the delayed calibration shall result in fewer claimed GHG emission reductions or net anthropogenic GHG removals;</p> <p>(b) For all measured values taken during the period between the scheduled date of calibration and the actual date of calibration.</p>

E.8. Assessment of data and calculation of emission reductions or net removals

E.8.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	<p>The verification team verified that</p> <ol style="list-style-type: none"> A complete set of data for the monitoring period was available for the monitoring period and the verification of each monitoring parameter is elaborated under Section E.6.2 of this report. The complete monitoring data is also presented in the corresponding ER sheet /07/ of final Monitoring Report /05/. The information provided in the monitoring report was crosschecked with other sources, wherever appropriate and available, and such information is also included under Section E.6.2 of this report. The calculations of baseline emissions as presented in the corresponding ER sheet of final Monitoring Report were checked and found to be consistent with the formulae and methods described in the registered monitoring plan and the applied methodology. All assumptions used in the emission calculations were found appropriate and therefore justified Appropriate emission factors and other reference values have been correctly applied. This has also been elaborated under Section E.6.1 of this report. No standardized baseline was prescribed in the registered PDD and therefore it has not been applied. <p>The baseline emissions are the product of net electricity supplied to the grid $EG_{\text{facility},y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor. Baseline emission factor is calculated as combined margin, consisting of a combination of operating margin (OM) and build margin (BM) factors.</p>
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	$BE_y = EG_{\text{facility},y} * EF_{\text{grid, CM, y}}$ <p>Where: BE y: Baseline Emissions in year y; t CO₂ EG_{facility,y}: Net electricity supplied to the grid by the CDM project activity in year y (MWh) EF_{grid, CM, y} = Combined margin CO₂ emission factor (tCO₂/MWh) As per the revised approved PDD, combined margin emission factor is 0.94881 tCO₂ /MWh. Hence the baseline emissions for the project activity for the current monitoring period are as follows. BE_y = 73,597.213*0.94881 = 69,829 tCO₂e</p>
Findings	CAR #1 was raised and resolved.
Conclusion	<p>In line with paragraph 374 of VVS for PAs version 03.0, the verification team confirms that:</p> <ol style="list-style-type: none"> The complete data was available and is duly reported. As indicated above, the description with regard to cross-check of reported data is included under respective parameter (refer Section E.6.2 of this report); Appropriate methods and formulae for calculating baseline GHG emissions or baseline net GHG removals were followed. Appropriate emission factors and other reference values were correctly applied.

E.8.2. Calculation of project GHG emissions or actual net anthropogenic GHG removals by sinks

Means of verification	The registered PDD/01/ and applied monitoring methodology/3.1/ does not prescribe any project emissions to be considered. The project design also did not reveal any potential source to be considered in this regard.
Findings	No finding was raised
Conclusion	No project emissions were required to be calculated.

E.8.3. Calculation of leakage GHG emissions

Means of verification	The registered PDD/01/ and applied monitoring methodology/3.1/ does not prescribe any leakage emissions to be considered. The project design also did not reveal any potential source to be considered in this regard.
Findings	No finding was raised
Conclusion	No leakage emissions were required to be calculated.

E.8.4. Summary calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

Means of verification	<p>As elaborated above, the entire emission reductions from the project activity were based on baseline emissions. The calculations presented in this regard in the final monitoring report and corresponding ER calculation sheet were found appropriate and complying with the provisions prescribed in the monitoring plan of registered PDD/01/ and applied methodology.</p> <p>The verification team confirms that an audit trail that contains the evidence and records that validated the stated figures were checked and found acceptable.</p>
Findings	No finding was raised
Conclusion	<p>The verification team confirms that</p> <ol style="list-style-type: none"> The complete data was available and is duly reported; As indicated above, the description with regard to cross-check of reported data is included under respective parameter (refer Section E.6.2 of this report); Appropriate methods and formulae for calculating baseline GHG emissions or baseline net GHG removals, project emissions and leakage emissions were followed; Appropriate emission factors and other reference values were correctly applied. There is no pro-rate approach was applied in the current monitoring period as entire monitoring period falls into period that is after the end of first

	commitment period of Kyoto Protocol.
	The total number of ERs achieved during the current monitoring period is 69,829 tCO ₂ e.

E.8.5. Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Means of verification	As verified and evident from the final Monitoring Report /05/ and corresponding ER sheet /07/, the actual emission reductions achieved by the project activity in the current monitoring period were found 31.02% lower than the estimated quantity in the registered PDD/01/ for the comparable period.				
	<table> <tr> <th>Estimated ERs for comparable period as per registered PDD (tCO₂e)</th><th>Actual ERs achieved in the current monitoring period (tCO₂e)</th></tr> <tr> <td>101,511</td><td>69,829</td></tr> </table>	Estimated ERs for comparable period as per registered PDD (tCO ₂ e)	Actual ERs achieved in the current monitoring period (tCO ₂ e)	101,511	69,829
Estimated ERs for comparable period as per registered PDD (tCO ₂ e)	Actual ERs achieved in the current monitoring period (tCO ₂ e)				
101,511	69,829				
Findings	No finding was raised				
Conclusion	The actual emission reductions achieved by the project activity are lower than the estimated quantity of ERs in the registered PDD/01/. Accordingly, it was accepted by the verification team.				

E.8.6. Remarks on difference from estimated value in registered PDD

Means of verification	The actual emission reductions were less than the estimation in the revised approved PDD/01/ for an equivalent length of the monitoring period therefore no further explanation is required.
Findings	No finding was raised
Conclusion	The actual ERs are less than the estimated quantity of ERs as given in the revised approved PDD/01/, which is appropriate and accepted.

E.8.7. Actual GHG emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

Means of verification	Based on the assessment done in section E.8.1 to E.8.6, the verification team is able to certify that the emission reductions from the CDM project activity 6484 “Wind Energy Project in Gujarat” in India during the period 01/01/2020 to 31/12/2020 (including both days) is 69,829 tCO ₂ e.			
		First commitment period (up to 31 Dec 2012) (tCO ₂ e)	01 Jan 2013 onwards (tCO ₂ e)	01 Jan 2021 onwards (tCO ₂ e)
	Emission Reductions	NA	69,829	NA
Findings	No finding was raised			
Conclusion	Actual GHG emission reductions achieved during period starting from 1 st January 2013 onwards was verified as 69,829 tCO ₂ e.			

E.9. Assessment of reported sustainable development co-benefits

Means of verification	Not applicable
Findings	Not applicable
Conclusion	Not applicable

E.10. Global stakeholder consultation

Means of verification	Not applicable
Findings	Not applicable
Conclusion	Not applicable

SECTION F. Internal quality control

>> The draft verification report that is prepared by verification team is reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by Earthood were duly complied with and such opinion/conclusion is reached in an objective manner that

complies with the applicable CDM rules/requirements. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the verification team.

During the technical review process additional findings may be identified or the closed-out findings may be opened, which needs to be satisfactorily resolved before the request for issuance is submitted to UNFCCC. The independent technical reviewer may either approve the report as such or reject/return the same in such case providing the comments/findings/issues that needs to be resolved by the verification team. The decision taken by the Technical Reviewer is final and is authorized on behalf of Earthood Services Private Limited.

SECTION G. Verification opinion

>> Earthood Services Private Limited (ESPL), contracted by Vish Wind Infrastruktur LLP, has performed the independent verification of the emission reductions for the CDM project activity 6484 "Wind Energy Project in Gujarat" in India for the monitoring period 01/01/2020 to 31/12/2020 (including both days) as reported in the Monitoring Report (public) Version 1.0 dated 22/02/2021. The Vish Wind Infrastruktur LLP is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

ESPL commenced the verification based on the baseline and monitoring methodology ACM 0002 Version 13.0, the monitoring plan contained in the registered PDD Version 6.0, dated 23/07/2013, Monitoring Report (public) Version 1.0 dated 22/02/2021.

ESPL verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. ESPL planned and performed the verification by obtaining evidence and other information and explanations that ESPL considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

The verification team confirms that:

- The project activity was found completely implemented as per the description given in the registered PDD.
- The actual operation conforms to the description in the registered PDD.

SECTION H. Certification statement

>> Earthood Services Private Limited (ESPL), contracted by Vish Wind Infrastruktur LLP, has performed the independent verification of the emission reductions for the CDM project activity 6484 "Wind Energy Project in Gujarat" in India for the monitoring period 01/01/2020-31/12/2020 (including both days) as reported in the Monitoring Report (Final) Version 1.4 dated 21/10/2021. The Vish Wind Infrastruktur LLP is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity. It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity.

ESPL commenced the verification based on the baseline and monitoring methodology ACM0002 Version 13.0.0, the monitoring plan contained in the PDD Version 6.0, dated 23/07/2013, Monitoring Report (public) Version 1.0 dated 22/02/2021 as per the procedure as described under Section D of this report.

ESPL verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. ESPL planned and performed the verification by obtaining evidence and other information and explanations that ESPL considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion, the GHG emissions reductions reported for the project activity for the period 01/01/2020-31/12/2020 are fairly stated in the Monitoring Report (final) Version 1.4 dated 21/10/2021. The GHG emission reductions were calculated correctly based on the approved baseline and monitoring methodology ACM0002 Version 13.0.0 and the monitoring plan contained in the PDD Version 6.0, dated 23/07/2013.

Earthood Services Private Limited can certify that the emission reductions from the CDM project activity 6484 "Wind Energy Project in Gujarat" in India during the period 01/01/2020 – 31/12/2020 (including both days) amount to 69,829 Tco_{2e}.

Verified and certified emission reductions as per commitment period:

Commitment period	Amount
Up to 31/12/2012 (1 st commitment period)	Not Applicable/Nil

From 01/01/2013 onwards

69,829 Tco₂e

From 01/01/2021 onwards

Not Applicable/Nil

Appendix 1. Abbreviations

Abbreviations	Full texts
ABT	Availability Based Tariff
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CDM VVS	Clean Development Mechanism Validation and Verification Standard
EB	Executive Board
EF	Emission Factor
EPC	Engineering, Procurement and Construction
ER	Emission Reductions
CEA	Central Electricity Authority
CER	Certified Emission Reduction
CL	Clarification Request
DOE	Designated Operational Entity
DNA	Designated National Authority
EIL	Enercon (India) Limited
FAR	Forward Action Request
GEDA	Gujarat Electricity Development Authority
GETCO	Gujarat Electricity Transmission Company
GHG	Greenhouse Gas(es)
GUVNL	Gujarat Urja Vikas Nigam Limited
GHG	Greenhouse Gas(es)
GOI	Government of India
IRR	Internal Rate of Return
IPCC	Intergovernmental Panel on Climate Change
JMR	Joint Meter Reading
MP	Monitoring Plan
MR	Monitoring Report
MWh	Megawatt hour
PDD	Project Design Document
PPA	Power Purchase Agreement
PP	Project Participant
PRC	Post Registration Changes
PS	Project Standard
RMP	Revised Monitoring Plan
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard
UID	Unique Identification number
UNFCCC	United Nations Framework Convention on Climate Change
WTG	Wind Turbine Generator
WEC	Wind Energy Convertor
WWIL	Wind World India Limited

Appendix 2. Competence of team members and technical reviewers

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Name	Ravi Kant Soni		
Country	India		
Education	B. Tech. (Mechanical Engineering) M. Tech. (Energy Management)		
Experience	8 Years +		
Field	Energy and Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-I.C., ACM0002		
Local expert	YES (India)		
Financial Expert	No		
Technical Reviewer	No		
TA Expert	YES (TA 1.2)		
Reviewed by	Shreya Garg	Date	04/06/2019
Approved by	Anshika Gupta	Date	04/06/2019

Competence Statement			
Name	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., ACM0002, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Abhishek Mahawar	Date	01/03/2018
Approved by	Ashok Gautam	Date	01/03/2018

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	PP	Registered approved PDD	Version 6.0, dated 23/07/2013	Other
2	DNV	Validation Report	Version 02, dated 04/09/2012	Other
3	Applus +Certification	Verification report (6 th periodic verification,	Version 1.2 , dated 23/04/2020	Other

		Period: 01/04/2018 to 31/12/2019		
3.1	UNFCCC	Consolidated baseline methodology for grid-connected electricity generation from renewable sources, ACM0002	Version 13.0.0	Other
4	PP	Monitoring Report (publication)	Version 1.0, dated 22/02/2021	PP
4.1	PP	Monitoring report (intermediate versions)	Version 1.1, dated 10/05/2021	PP
4.2	PP	Monitoring Report	Version 1.2, dated 23/06/2021	PP
4.3	PP	Monitoring Report	Version 1.3, dated 17/08/2021	PP
5	PP	Monitoring Report (final)	Version 1.4, dated 21/10/2021 (This version is submitted by the PP due to revision in the CDM-MR-FORM template)	PP
6	PP	ER Spreadsheet	Version 1.1, dated 10/05/2021	PP
6.1	PP	ER spreadsheet	Version 1.2, dated 23/06/2021	PP
7	PP	ER spreadsheet (final)	Version 1.3, dated 17/08/2021	PP
8	UNFCCC	Standard: CDM PS for PAs	Ver. 03.0	Others
9	UNFCCC	Standard: CDM PCP for PAs	Ver. 03.0	Others
10	UNFCCC	Standard: CDM VVS for PAs	Ver. 03.0	Others
11	UNFCCC	Form: CDM-MR-FORM	Ver. 09.0	Others
12	State Utility	Monthly Share certificates issued by state utility	For duration of 01/01/2020 to 31/12/2020	PP
13	PP	Monthly invoices raised by the PP to state utility	For duration of 01/01/2020 to 31/12/2020	PP
14	State Utility	Calibration certificates of main meters and check meters	For duration of 01/01/2020 to 31/12/2020	PP
15	State Utility	Commissioning certificates issued by GEDA (for all 63 WTGs): GEDA/VISH WIND/PWF/LALPUR/2011-12/2329 dated 19/10/2011 (30 WTGs i.e. 24 MW commissioned on 02/10/2011 and 03/10/2011) GEDA/VWILLP/PWF/Kutch/2011-12/147 dated 13/04/2012(29 WTGs i.e. 23.2 MW commissioned on 31/03/2012) GEDA/VWILLP/PWF/Kutch/2011-12/148 dated 13/04/2012(4 WTGs i.e. 3.2 MW commissioned on 31/03/2012)	-	PP
16	State Utility	Power Purchase Agreement between GUVNL and Vish Wind Infrastruktüre LLP	Dated 15/09/2011	PP
17	CEA	CO ₂ Baseline Database for Indian Power Sector	Version 06	Others
18	UNFCCC	CDM Project activity view page "Wind Energy Project in Gujarat " http://cdm.unfccc.int/Projects/DB/DNV-CUK1340349635.01/view	-	Others

19	Ministry of corporate Affairs, GOI	Name change consent (Enercon to WWIL) issued by Government of India,	dated 01/01/2013	PP
20	CEA	CEA Notification No. 502/70/CEA/DP&D	Dated 17/03/2006	Others
21	ESPL	<ul style="list-style-type: none"> Remote site visit (Video con-call with site personnel) on 12/04/2021 Latest photographs of project site (including WTGs, Energy meters and SCADA system) 	-	PP
22	Ministry of Environment, Forest and climate change,GOI	Project Participant name change (from VISH Wind Infrastructure LLP to Wish Wind Infrastructure LLP) consent issued by Government of India, (Ref.No-4/8/2010-CC)	Dated 06/09/2017	PP
23	Confidential	Emission Reductions Purchase Agreement	Dated 24/02/2020	PP

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. Remaining FAR from validation and/or previous verifications

FAR ID	Xx	Section no.	xx	Date: DD/MM/YYYY
Description of FAR				
NA				
Project participant response				Date: DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY
NA				

Table 2. CL from this verification

CL ID	01	Section no.	D.1	Date : 19/04/2021
Description of CL				
Please submit the following documents:				
1. Commissioning certificates for all WTGs				
2. Power Purchase Agreement (PPA) signed with state utility				
3. Monthly share certificates and invoices raised to state utility for the current monitoring period				
Project participant response				Date : 10/05/2021
PP has submitted the following documents:				
1. Commissioning certificates for all WTGs				
2. Power Purchase Agreement (PPA) signed with state utility				
3. Monthly share certificates and invoices raised to state utility for the current monitoring period				
Documentation provided by project participant				
Commissioning certificates				
PPA				
Monthly share certificates and Invoices raise				

DOE assessment	Date: 30/05/2021
Monthly share certificates for the current monitoring period are submitted and found to be appropriate. However, commissioning certificates, invoices and PPA is not submitted, please submit the same. CL #1 is open	
Project participant response	Date : 23/06/2021
PP has submitted commissioning certificates, invoices and PPA.	
Documentation provided by project participant	
commissioning certificates, Invoices PPA	
DOE assessment	Date: 31/07/2021
The PP has submitted the requested documents and found to be satisfactory. CL #1 is closed.	

CL ID	02	Section no.	A	Date : 10/08/2021
Description of CL				
End date of crediting period as stated under section A.5 of the MR is not consistent with the same as mentioned at UNFCCC project webpage. The total number days in the current monitoring period is 366 but the same is considered in the ER sheet as 365, please clarify the inconsistency.				
Project participant response				Date : 17/08/2021
PP has revised end date of crediting period as stated under section A.5 of the MR as per UNFCCC project webpage. PP has revised total number days in the current monitoring period as 366 in place of 365 in ER sheet.				
Documentation provided by project participant				
MR version 1.3 ER sheet version 1.3				
DOE assessment				Date: 22/08/2021
The PP has corrected the end date of the crediting period under section A.5 and number of days in the ER sheet is considered as 366, found to be correct, hence accepted. CL #2 is closed.				

Table 3. CAR from this verification

CAR ID	01	Section no.	E.6.	Date : 19/04/2021
Description of CAR				
Please submit the ER calculation sheet for current monitoring period.				
Project participant response				Date : 10/05/2021
PP has submitted ER calculation sheet for current monitoring period.				
Documentation provided by project participant				
ER sheet version 1.1				
DOE assessment				Date: 30/05/2021
The PP has submitted the ER calculation sheet and the monthly values of $EG_{facility,y}$ as reported in the sheet is verified through the share certificates/invoices, found to be consistent. CAR #1 is closed.				

CAR ID	02	Section no.	E.7	Date : 19/04/2021
Description of CAR				
Please submit the calibration certificates of all the meters valid for current monitoring period.				
As per the details provided under section C of the MR, it is observed that the calibration of the energy meters is delayed and not valid for the entire monitoring period (from 01/01/2020 to 31/12/2020). Kindly clarify how it is ensured that the meters were working satisfactorily during the current monitoring period.				
Project participant response				Date : 10/05/2021

Since there is delay in meter calibration, PP has submitted last available calibration certificates for the year 2017 of all the energy meters to DOE.

As per registered monitoring plan, the calibration/testing of energy meters will be done once in three years. However, it may be noted here that the calibration/testing of the meters is conducted by the Gujarat State Utility as per provisions of the Power Purchase Agreement (PPA). As per signed PPA, the energy meters shall be jointly inspected and sealed on behalf of both parties (State Utility and Project Participant (PP)); and shall not be interfered with except in the presence of representatives of both the parties. Essentially, the State Utility must conduct the calibration of energy meters and representative of PP has to be present during the process. PP can request the state utility to conduct the calibration/testing of the energy meters at the scheduled time but cannot by any means force the state utility to conduct the calibration/testing. PP has intimated the utility regarding the delay in calibration of meters, but same has not been done yet. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006, which is considered as National Standard mentions that "All interface meters shall be tested at least once in five years." Therefore, we have applied guidelines for assessing compliance with the calibration frequency requirements and applicable national guidelines for calibration/testing of energy meters. Additionally, in order to follow most conservative approach, PP has applied correction factor as -0.4% to the $EG_{facility,y}$ values for the entire monitoring period. .

Documentation provided by project participant

MR version 1.1

DOE assessment

Date: 30/05/2021

Calibration certificates are not provided please submit the same. Open

There are no monitoring parameters like import & transmission loss in the registered PDD/ER sheet and also the error factor applied as -0.4%. In view of this information, kindly review and clarify the response as provided above.

The PP has applied the error factor to the monitoring parameter for the delayed period in accordance with the guidance provided under paragraph 366 (a) of VVS PAs v 02.0, however it is observed that calibration is not conducted during or after the monitoring period, hence no calibration results are available. In absence of calibration results, please clarify how it is appropriate to address the calibration delay in line with the guidance provided under paragraph 366 (a) of VVS PAs v 02.0.

CAR #2 is open

Project participant response

Date :21/06/2021

The PP has rectified the copy paste error and response is updated.

PP has submitted latest calibration certificates conducted in year 2021 for substation meters and cluster meters to DOE.

PP has provided % error identified during meter calibration of energy meters in revised ER sheet. The certificates issued by the state utility states that all meters are working within permissible error limit.

Documentation provided by project participant

Calibration certificates Substation Meters

Calibration certificates Clusters Meters

MR version 1.2

ER sheet version 1.2

DOE assessment

Date: 31/07/2021

The PP has applied the error factor -0.4% to the parameter $EG_{facility,y}$ for entire monitoring period and updated the response appropriately.

The PP has submitted the latest calibration certificates (FY 2020-21), the assessment has verified the calibration results and confirmed that the error was within the permissible limits, hence the approach followed by the PP to address the calibration delay is deemed as conservative and in line with the guidance provided under paragraph 366 (a) of VVS PAs v 02.0.

CAR #2 is closed.

CAR #2 re-opened

10/08/2021

Please address the following comments:

Section C of MR:

1. Information about the calibration delayed is not provided in the MR. Also the reference of relevant guidelines followed to address the delay to address the delay in calibration is not mentioned.
2. Calibration validity date for cluster meters (Lalpur site) is not in accordance with the calibration frequency as mentioned in the approved monitoring plan.
3. Please clarify why the delayed calibration results (% error identified) obtained during the calibration of cluster meters are not reported.

CAR #2 is open

Project participant response

Date : 17/08/2021

1. PP has provided information about delayed calibration in revised MR along with reference of relevant guidelines followed to address the delay.
2. PP has revised calibration validity date for cluster meters (Lalpur site) which is now in accordance with the calibration frequency as mentioned in the approved monitoring plan.
3. PP has provided cluster meter calibration reports to DOE. The delayed calibration results (% error identified) obtained during the calibration of cluster meters was found within permissible limit of error.

Documentation provided by project participant

MR version 1.3

ER sheet version 1.3

DOE assessment**Date:** 22/08/2021

1. The PP has mentioned the delayed calibration period for all the meters and reference of applicable guideline relevant to calibration delay is provided in the revised MR.
2. Calibration validity date is corrected for cluster meters installed at Lalpur site and found to be in accordance with the calibration frequency as mentioned in the approved monitoring plan.
3. The meters installed at substations (Rasaliya and Tebhda) are directly used for monitoring of net electricity supplied to the grid by the project activity, known as "billing meters". The PP has addressed the calibration delay applying the error factor considering the calibration delayed results for billing meters. The assessment team has checked the latest calibration certificates for cluster meters also and confirmed that the meters were working satisfactorily, and error identified was well within the permissible limits. Since the cluster meters are directly not used for billing hence the relevant calibration results are not reported. The clarification provided by the PP is found to be appropriate, hence accepted.

CAR #2 is closed.

Table 4. FAR from this verification

FAR ID	xx	Section No.	Date: DD/MM/YYYY
Description of FAR			
NA			
Project participant response			Date: DD/MM/YYYY
NA			
Documentation provided by project participant			
NA			
DOE assessment			Date: DD/MM/YYYY
NA			

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Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
04.0	6 April 2021	Revision to: <ul style="list-style-type: none"> • Reflect the “Clarification: Regulatory requirements under temporary measures for post-2020 cases” (CDM-EB109-A01-CLAR).
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN); • Make structural and editorial improvements.
02.1	11 January 2018	Editorial revision to correct the numbering of appendices in the instructions.
02.0	31 October 2017	Revision to align with the requirements of the “CDM validation and verification standard for project activities” (version 01.0).
01.0	23 March 2015	Initial publication.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: project activities, verifying and certifying		