




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

*Complete this form in accordance with the instructions attached at the end of this form.*

**BASIC INFORMATION**

<b>Title and UNFCCC reference number of the project activity</b>	Vaayu India Wind Power Project in Gujarat		
<b>Scale of the project activity</b>	<input checked="" type="checkbox"/> Large-scale <input type="checkbox"/> Small-scale		
<b>Version number of the verification and certification report</b>	02.0Aa		
<b>Completion date of the verification and certification report</b>	21/12/2021		
<b>Monitoring period number and duration of this monitoring period</b>	Monitoring Period Number: 7 <sup>th</sup> Monitoring Period Duration: 01/04/2018 to 31/12/2019 (both days inclusive)		
<b>Version number of the monitoring report to which this report applies</b>	05 dated, 21/12/2021		
<b>Crediting period of the project activity corresponding to this monitoring period</b>	01/06/2011 to 31/05/2021 (Fixed Crediting Period)		
<b>Project participants</b>	Vaayu (India) Power Corporation Private Limited Numerco Limited, (United Kingdom) ACT Financial Solutions B.V., (Netherlands) First Climate Markets A.G. (Germany)		
<b>Host Party</b>	India		
<b>Applied methodologies and standardized baselines</b>	ACM0002, ver. 11 - Consolidated baseline methodology for grid-connected electricity generation from renewable sources		
<b>Mandatory sectoral scopes</b>	Scope 1 - Energy industries (renewable/ non-renewable sources).		
<b>Conditional sectoral scopes, if applicable</b>	N/A		
<b>Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the registered PDD</b>	186,526 tCO <sub>2</sub> e		
<b>Certified amount of GHG emission reductions or GHG removals for this monitoring period</b>	Amount before 1 January 2013	Amount from 1 January 2013 until 31 December 2020	Amount from 1 January 2021
		159,878 tCO <sub>2</sub> e	
<b>Name and UNFCCC reference number of the DOE</b>	RINA Services S.p.A. (RINA) E-0037		
<b>Name, position and signature of the approver of the verification and certification report</b>	Laura Severino (Authorized officer signing for the DOE Head of Sustainability Compliance & New Scheme Development Coordination Unit 		

## SECTION A. Executive summary

>> The project activity involves electricity generation by utilizing renewable wind energy. The total project capacity is 51.2 MW. The project activity involves supply, erection, commissioning and operation of 64 machines of rated capacity 800 kW each. The machines are Enercon E-53 make. The project activity is located in Jamnagar and Rajkot Districts of Gujarat state in India. The project activity supplies clean and renewable power to the grid. The WECs under the project activity were commissioned between 25/06/2010 and 04/07/2011. The project being a renewable energy generation activity, it leads to removal of fossil fuel dominated electricity generation.

### Scope of verification

This report summarizes the findings of the verification of the project, performed on the basis of UNFCCC criteria for CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The objective of the verification is to have an independent review ex post determination by a Designated Operational Entity (DOE) of the monitored reductions in GHG emissions that have occurred as a result of the registered CDM project activity during a defined monitoring period. Certification is the written assurance by the DOE that, during a specific time period, a proposed CDM project activity achieved the reductions in anthropogenic emissions by sources of GHGs as verified.

The scope of the verification is to verify that:

- the actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;
- the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement;
- the reported GHG emission data is sufficiently supported by evidence.

Verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable UNFCCC criteria for CDM in order to be certified.

### Verification process:

Verification is conducted using RINA procedures in line with the requirements specified in the latest version of the CDM Validation and Verification Standard, relevant decisions of the CDM EB and applying standard auditing techniques. RINA assesses and determines that the implementation and operation of the project activity, and steps taken to report emission reductions comply with the CDM criteria and relevant guidance provided by the Board. The verification assessment involved a document review of relevant documentation and the remote audit. Verification is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring.

### Conclusion:

Vaayu (India) Power Corporation Private Limited has commissioned RINA to carry out the verification and certification of emission reductions reported for the registered “Vaayu India Wind Power Project in Gujarat” project in India, CDM Registration Reference No. 4700, for the period 01/04/2018 to 31/12/2019. The project was validated by DNV (validation report No. 2010-9338) issued on 22/10/2010) and it was registered on 09/05/2011 under the CDM registration reference No. 4700. The GHG emission reductions were calculated on the basis of the approved methodology ACM0002 ver. 11 ‘Consolidated baseline methodology for grid-connected electricity generation from renewable sources’ and the monitoring plan included in the registered Project Design Document, version 06 of 09/04/2021.

In conclusion, it is RINA's opinion that the project activity “Vaayu India Wind Power Project in Gujarat”, in “India”, as described in the Monitoring Report version 5.0 of 21/12/2021, meets all relevant requirements for CDM activities and all relevant host Party criteria and correctly applies the baseline and monitoring methodology ACM0002 ver. 11 ‘Grid-connected electricity generation from renewable resources’. Hence, RINA is able to certify that the emission reductions from the project during the monitoring period 01/04/2018 to 31/12/2019 amount to 159,878 tCO<sub>2</sub>e.

**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, verifier, technical expert (TA1.2)	IR	MATHEW	VIJAY	RINA India	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**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	Amalorpavanathan	Cyril Augustus A	RINA India
2.	Approver	IR	Severino	Laura	RINA HO

**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.	No risk envisaged	NIL	The project has successfully completed six verifications and the monitoring parameter 'net export of electricity to grid' is monitored in calibrated energy meter duly approved by Gujarat Energy Transmission Corporation Limited (GETCO). Hence, no risk envisaged.	Cross checking all input values in the emission reduction spreadsheet with electricity generation records, invoices and calibration/meter test reports of energy meters.

**C.2. Consideration of materiality in conducting the verification**

>> In line with Guidelines for Application of materiality in verifications /14/, a reasonable level of assurance is defined for the verification of the project by complete verification of all the values indicated in the emission reduction spreadsheet with source documents such as electricity generation records, invoices at the document review stage and during remote site visit. There are no material errors, omissions or misstatements.

**SECTION D. Means of verification****D.1. Desk/document review**

>> The monitoring report, Version 01.0 of 15/05/2020, Version 02.0 of 24/09/2020, Version 03.0 of 11/08/2021, Version 04.0 of 08/09/2021 and Version 05.0 of 21/12/2021 /01/, the emission reduction calculations provided in the form of a spreadsheet (ER sheet version 5.0.xls) version 05 of 21/12/2021 /02/,

were assessed as part of the verification. In addition, the Project Design Document (PDD) /03/ in particular the baseline estimations and the monitoring plan and the validation reports /05/ /07/ /09/ for the project were reviewed.

The monitoring report version 1.0 of 15/05/2020 /01/ was made publicly available on the CDM UNFCCC website on 22/05/2020. Appendix 3 lists the documentation that was reviewed during the verification.

## D.2. On-site inspection

Duration of remote site visit inspection: 22/07/2021 to 22/07/2021				
No.	Activity performed during remote site visit call	Site location	Date	Team member
1.	Implementation and operation of the proposed project activity. Checked the monitoring equipment, interviewed key personnel of the plant to confirm the operational and data collection procedures, cross-checked between information provided in the monitoring report and data plant.	Jamnagar District of Gujarat State, India	22/07/2021	Vijay Mathew
2.	Reviewed the information flows for generating, aggregating and reporting the monitoring parameters.			
3.	Checked calibration performance, reviewed calculations and assumptions made in determining the GHG data and emission reductions.			
4.	Checked the quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.			
5.	Cross-checked between information provided in the monitoring report and data evidence.			

A complete desk review of the submitted monitoring report, version 01.0 of 15/05/2020, version 02.0 of 24/09/2020, version 03.0 of 11/08/2021, version 04.0 of 08/09/2021 and version 05 of 21/12/2021 /01/ and supportive evidences have been checked by the Verification Team.

In addition, audit team has conducted a remote site inspection via videoconference (zoom call & whatsapp video call) with PP on different topics as mentioned under section D.3 of this report. Based on the videoconference, MR review, as the review of UNFCCC procedures and guidelines, RINA Verification team has proceeded to skip the presential site visit due to the COVID-19 pandemic /19/. As per para 339 of CDM Validation and Verification Standard for project activities version 02.0 /13/, Verification team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of verification.

- By review of MR;
- By taking follow up actions by conducted interview with PP, to gather information about knowledge of project design, current situation via videoconference. Cross-checked evaluation under the scope of all information and references provided in MD. Details of interviewees, topics covered, and additional information presented in the below section "D.3 – Interviews".

Verification team has also checked the site visit requirements mentioned in the VVS for Project Activity version 02.0 /13/. The justification for the remote site visit requirements of VVS PA version 02.0 /13/ have been mentioned below.

VVS PA version 02.0 requirements	Verification team justification
Para 338 (b)	Verification team has done the follow-up actions by:

<p>(b) On-site inspection taking into account paragraphs 339–341 below, involving:</p> <ul style="list-style-type: none"> <li>(i) An assessment of the implementation and operation of the registered CDM project activity as per the registered PDD or any approved revised PDD;</li> <li>(ii) A review of information flows for generating, aggregating and reporting the monitoring parameters;</li> <li>(iii) Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the registered monitoring plan;</li> <li>(iv) Cross checks between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources;</li> <li>(v) A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PDD, the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents;</li> <li>(vi) A review of calculations and assumptions made in determining the GHG data and GHG emission reductions or net anthropogenic GHG removals;</li> <li>(vii) An identification of quality control and quality assurance procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters.</li> </ul>	<p>Team has carried out interviews with relevant personnel to verify the implementation and operation of the registered CDM project activity as per the registered PDD or any approved revised PDD. For the project 'Vaayu India Wind Power Project in Gujarat' this is 7<sup>th</sup> verification; hence, previous periodic monitoring reports and verification reports are assessed. Further, picture of monitoring meters, and other relevant background documents were provided and assessed.</p> <p>The verification team has carried out interviews using zoom call &amp; whatsapp video call application with video camera function, in order to assess the information on registered monitoring plan in the PDD. Further, to gain information regarding the implementation, data collection procedure and operation of the project activity. Team has verified the photographs submitted. Team has reviewed the information flows for generating, aggregating and reporting the monitoring parameters.</p> <p>The ex-post parameters are sourced from Joint Meter Reading and monthly credit notes, issued by GETCO (a public utility company). All the generation reports are provided and verified. Cross checks of net generation data are done against the invoice submitted by the PP to GETCO. All the invoices are verified.</p> <p>PP presented during the videoconference all documents related to monitoring and equipment calibration.</p> <p>The calculations and assumptions made in determining the CERs were reviewed and discussed with PP by videoconference.</p>
<p>Para 339</p> <p>It is mandatory for the DOE to conduct an on- site inspection at verification for the registered CDM project activity if:</p> <ul style="list-style-type: none"> <li>(a) It is the first verification for the DOE with regard to this project activity;</li> <li>(b) More than three years have elapsed since the last on-site inspection conducted for verification for the project activity; or</li> <li>(c) The project activity has achieved more than 300,000 tCO<sub>2</sub>eq of GHG emission reductions or net anthropogenic GHG removals since the last verification when an on-site inspection was conducted.</li> </ul>	<p>The on-site visit for this project activity was not conducted due to the COVID-19 pandemic. The Executive Board of the Clean Development Mechanism (CDM) agreed on its 110<sup>th</sup> EB meeting, on an exceptional basis, considering the COVID-19 pandemic, to extend the period in which CDM Designated Operational Entities (DOEs) may apply alternative measures of validation/verification to mandatory on-site inspections until 31 December 2021 <b>/19/</b>. The site visit cannot be postponed since a delay on performing the mandatory on-site visit for the project activity 4700, will impact on a delay in CERs delivery to its ERPA signed on 08/07/2020 with the buyer <b>/20/</b>.</p>

**D.3. Interviews**

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Bose	Mallika	Assiatant General Manager	22/07/2021	Monitoring report preparation, CER calculation, Project description, implementation status of the project, Monitoring plan, and ER calculations. Metering equipment accuracy/calibration, performance frequency (project boundaries processes and equipment, involved-possible leakages). Monitoring practices (against the requirements of the PDD and the selected methodology) Cross-check between information provided in the monitoring report and data from other sources such as JMR, invoice and payment receipts. Operating staff competence and the risks for inappropriate operation and data collection procedures of the project (training needs).	Vijay Mathew
2.	Savjibhai Dholariya	Ashvin	Assiatant Manager			

**D.4. Sampling approach**

&gt;&gt;N/A

**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		1	
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	1		
Compliance with the calibration frequency requirements for measuring instruments	1		
Assessment of data and calculation of emission reductions or net removals			
Assessment of reported sustainable development co-benefits			
Global stakeholder consultation			
Others (please specify)			
<b>Total</b>	<b>2</b>	<b>1</b>	

**SECTION E. Verification findings****E.1. Compliance of the monitoring report with the monitoring report form**

<b>Means of verification</b>	Comparing the monitoring report /01/ with the monitoring report form provided by CDM EB listed in UNFCCC website /08/.
<b>Findings</b>	CAR 01 is raised.

	<p>CAR 01</p> <p>1. The latest version of monitoring report template, version 08 dated 06/04/2021 is available at UNFCCC website. PP is requested to revise the monitoring report according to the latest template.</p> <p>2. As per the monitoring report version 01 dated 15/05/2020, the PDD version and date to which it refers to this to this monitoring report is not the latest version that is available in UNFCCC CDM website. PP is requested to correct the same.</p> <p>CAR 01 is closed. More information on how the CAR 01 was closed, is provided in Appendix-4 of this verification and certification report.</p>
<b>Conclusion</b>	The verification team confirms that the monitoring report used by the PP is compliance with the latest MR form available at UNFCCC website and is in accordance with the applicable instruction; hence complies paragraph 352 & 353 of VVS, version 02.

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

>>N/A

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

<b>Means of verification</b>	As part of the remote audit RINA was able to confirm that the project implementation is in accordance with the project description contained in the PDD /03/. Further, RINA has verified the validation and PRC reports /05/ /07/ /09/. The project capacity involves installation of 64 nos. of Wind Energy Convertors (WECs) of aggregate capacity 51.2 MW. Each WEGs is of 800 kW capacity. Type and capacity of individual WECs were confirmed from the previous validation reports /05/ /07/ /09/ and Joint Meter Reports (JMRs)/Generation statement /16/. It was further assessed through the technical specifications of the WEGs model E-53. The was project capacity further confirmed from the and the details mentioned in previous verification report /09/ and validation reports /05/, /07/. During the remote audit, no changes have been observed or identified which may impact the additionality as there was no change in the installed capacity, no addition of component nor extension of technology, no addition nor removal of project sites; no change has been observed or identified that may impact the scale of the project activity or applicability of baseline and monitoring methodology ACM0002, version 11 /04/. The net electricity generation by the project from 01/04/2018 to 31/12/2019, is taken into consideration.
<b>Findings</b>	N/A
<b>Conclusion</b>	The project is implemented according to the description presented in the PDD, which is discussed above. The verifier confirms, through remote audit and from the JMRs, Calibration certificates/ Meter test reports, Commissioning certificates, pervious validation and verification reports. All features of the CDM project activity including the equipment, data collecting systems and storage have been implemented in accordance with the registered PDD. The project activity is completely operational and the same has been confirmed.

## E.4. Post-registration changes

### E.4.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents<sup>1</sup>

>> N/A

<sup>1</sup> 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.4.2. Corrections**

&gt;&gt; N/A

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

&gt;&gt; N/A

**E.4.4. Inclusion of a monitoring plan**

&gt;&gt; N/A

**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**

>> There was a permanent change made during the second monitoring period. PP requested for three permanent change. (1) change in coordinates of 3 WECs (2) change in monitoring and organization structure and (3) change in calibration frequency from 1 year to 3 years. This request was approved by UNFCCC on 01/08/2013/06/. Further, verified the validation report w.r.t. PRC- 4700 -001/07/.

A permanent change was requested with UNFCCC for changing the calibration frequency from once in three year to once in five year. The PRC request was made via registered PDD version 6, dated 09/04/2021 (Reference: PRC- 4700 -002). This request was approved by UNFCCC on 04/06/2021/06/. Further, verified the validation opinion w.r.t. PRC- 4700 -002 /21/.

**E.4.6. Changes to the project design**

&gt;&gt; N/A

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

&gt;&gt; N/A

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

<b>Means of verification</b>	During the monitoring period it was noted that the parameters (also discussed in detail in section E.6.2) and the monitoring plan was found as per the applied methodology. There is no deviation observed between monitoring plan of the project activity with the monitoring plan of the applied methodology of the project activity.
<b>Findings</b>	<p>CL 01 is raised.</p> <p>CL 01</p> <p>As per the monitoring report the calibration frequency is not meeting the frequency mentioned in the registered monitoring plan. However, the monitoring report has mentioned that 'The calibration of cluster meters were delayed and not conducted in line with the frequency mentioned in the registered PDD. Calibration of cluster meter is not under the purview of PP, PP has intimated GEDA about calibration of Cluster Meters, but the same have not been calibrated yet. PP has no control over delay in Calibration. Hence, PP has applied max error on net electricity generation values during the current monitoring period. Moreover, The CEA Notification No. 502/70/CEA/DP&amp;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." In accordance of the same, the validity of the meters are till 2021'.</p> <p>PP is requested to justify the appropriateness of the monitoring frequency as per the registered monitoring plan; and the reason for permanent change is not</p>



	applicable w.r.t. calibration frequency for the project activity.
	CL 01 is closed. More information on how the CL 01 was closed, is provided in Appendix-4 of this verification and certification report.
<b>Conclusion</b>	RINA confirms that the approved monitoring plan is in accordance with the approved methodology and applicable methodological tools.

## 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

<b>Means of verification</b>	Data and parameters fixed ex-ante as listed in the monitoring report have been crosschecked and reviewed as applicable against the registered PDD, monitoring plan as well as against the applied methodology and other relevant CDM documentation.			
	DATA/PARAMETER Unit	Source of data	Reported value for the project period	Assessment/Observation
	<b>EF<sub>grid,OM,y</sub></b> Operating Margin Emission Factor of NEWNE Regional Electricity Grid in the year y tCO <sub>2</sub> e/MWh	UNFCCC registered project No. 4700 /06/	1.00498	The value is ex-ante fixed for the fixed crediting period of 10 years crediting period as per the registered PDD /03/, which has been justified and validated by validation DOE /05/ to follow the applied methodology and tool and already approved by EB.
	<b>EF<sub>grid,BM,y</sub></b> Build Margin Emission Factor of NEWNE Regional Electricity Grid in the year y tCO <sub>2</sub> e/MWh	UNFCCC registered project No. 4700 /06/	0.67518	The value is ex-ante fixed for the fixed crediting period of 10 years crediting period as per the registered PDD /03/, which has been justified and validated by validation DOE /05/ to follow the applied methodology and tool and already approved by EB.
	<b>EF<sub>y</sub> or EF<sub>grid,CM,y</sub></b> Combined Margin Emission Factor of NEWNE Regional Electricity Grid in the year y tCO <sub>2</sub> e/MWh	UNFCCC registered project No. 4700 /06/	0.92252	The value is ex-ante fixed for the fixed crediting period of 10 years crediting period as per the registered PDD /03/, which has been justified and validated by validation DOE /05/ to follow the applied methodology and tool and already approved by EB.
<b>Findings</b>	N/A			
<b>Conclusion</b>	RINA confirms that the parameters listed above are fixed ex-ante and used for baseline, project emissions and leakage emissions calculation in accordance with the applied methodology and methodological tools and they are the same used at the validation stage.			

### E.6.2. Data and parameters monitored

<b>Means of verification</b>		
	Data/Parameter	Assessment

	Data Unit	MWh (Mega-watt hour)
	Description	Net Quantity of Electricity Exported to the grid ( $EG_{PJ,y}$ )
	Source of data to be used	Share certificate issued by GETCO
	Value of monitored parameter for the monitoring period	173,306.545 MWh (After applying the error factor)
	Monitoring equipment	No monitoring equipment is used as this parameter is calculated using measured values. The WECs belongs to project activity are connected to 17 clusters and each cluster have dedicated metering arrangement at 33kV at project site. Similarly, the WECs 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 different Vacuum Circuit Breaker metering yards (VCB) which ultimately linked to common metering system (GETCO meters) at 220 kV Sadodar substation maintained by WWIL. Based on the data recorded at cluster metering points (33 kV) and at GETCO main meters, the net electricity supplied to the grid by project developer is calculated by GEDA after adjusting the transmission losses and share certificates for each project developer is prepared. Share certificate issued by GETCO/16/ on monthly basis, indicates the value of $EG_{PJ,y}$ . Since the calculation of $EG_{PJ,y}$ is completely under jurisdiction of state utility and PP don't have any interference in the calculation procedure, hence values of $EG_{PJ,y}$ are directly sourced from share certificates.
	Accuracy of the monitoring equipment	Not applicable
	Measuring/Reading/Recording frequency	The parameter is calculated and recorded on monthly basis. However, the input values used to calculate the value of $EG_{PJ,y}$ are continuously monitored and monthly recorded.
	Calculation method (if applicable)	$EG_{PJ,y} = EG_{PJ,export,y} - EG_{PJ,import,y}$ <p>Where as,  <math>EG_{PJ,export,y}</math> = Electricity exported by the project activity to the grid, calculated</p> <p><math>EG_{PJ,import,y}</math> = Electricity imported from the project activity to the grid, calculated</p> <p>The apportioning procedure for the project activity is done by GEDA (Gujarat Energy Development Agency) based on the meters that are connected to the cluster meter of various project owners connected to substation of Wind World (India) Limited based on meter reading</p>

	noted at Wind World (India) Limited substation connecting all the machines of the project activity and other project developers.																		
	<table> <tr> <th>Data/Parameter</th><th>Assessment</th></tr> <tr> <td>Data Unit</td><td>kWh (kilo watt hour)</td></tr> <tr> <td>Description</td><td>Net electricity export recorded at Wind World (India) Limited Substation (EG<sup>GETCO</sup>, Export)</td></tr> <tr> <td>Source of data to be used</td><td>Joint Meter Reading (JMR)</td></tr> <tr> <td>Value of monitored parameter for the monitoring period</td><td>1,448,975,508kWh</td></tr> <tr> <td>Monitoring equipment</td><td>Energy meters are used to monitor electricity export. The details of the meters are mentioned in section E.7 of this report.</td></tr> <tr> <td>Accuracy of the monitoring equipment</td><td>The accuracy class of energy meters are of 0.2S which is as per registered monitoring plan /03/.</td></tr> <tr> <td>Measuring/Reading/Recording frequency</td><td>Continuously measured and monthly recording. This is as per registered monitoring plan /03/. Records of monthly generation report (JMR) for the whole monitoring period is cross checked found the reported values to be correct /16/.</td></tr> <tr> <td>Calculation method (if applicable)</td><td>Not Applicable</td></tr> </table>	Data/Parameter	Assessment	Data Unit	kWh (kilo watt hour)	Description	Net electricity export recorded at Wind World (India) Limited Substation (EG <sup>GETCO</sup> , Export)	Source of data to be used	Joint Meter Reading (JMR)	Value of monitored parameter for the monitoring period	1,448,975,508kWh	Monitoring equipment	Energy meters are used to monitor electricity export. The details of the meters are mentioned in section E.7 of this report.	Accuracy of the monitoring equipment	The accuracy class of energy meters are of 0.2S which is as per registered monitoring plan /03/.	Measuring/Reading/Recording frequency	Continuously measured and monthly recording. This is as per registered monitoring plan /03/. Records of monthly generation report (JMR) for the whole monitoring period is cross checked found the reported values to be correct /16/.	Calculation method (if applicable)	Not Applicable
Data/Parameter	Assessment																		
Data Unit	kWh (kilo watt hour)																		
Description	Net electricity export recorded at Wind World (India) Limited Substation (EG <sup>GETCO</sup> , Export)																		
Source of data to be used	Joint Meter Reading (JMR)																		
Value of monitored parameter for the monitoring period	1,448,975,508kWh																		
Monitoring equipment	Energy meters are used to monitor electricity export. The details of the meters are mentioned in section E.7 of this report.																		
Accuracy of the monitoring equipment	The accuracy class of energy meters are of 0.2S which is as per registered monitoring plan /03/.																		
Measuring/Reading/Recording frequency	Continuously measured and monthly recording. This is as per registered monitoring plan /03/. Records of monthly generation report (JMR) for the whole monitoring period is cross checked found the reported values to be correct /16/.																		
Calculation method (if applicable)	Not Applicable																		
	<table> <tr> <th>Data/Parameter</th><th>Assessment</th></tr> <tr> <td>Data Unit</td><td>kWh (kilo watt hour)</td></tr> <tr> <td>Description</td><td>Net electricity import recorded at Wind World (India) Limited Substation (EG<sup>GETCO</sup>, Import)</td></tr> <tr> <td>Source of data to be used</td><td>Joint Meter Reading (JMR)</td></tr> <tr> <td>Value of monitored parameter for the monitoring period</td><td>33,465,000 kWh</td></tr> <tr> <td>Monitoring equipment</td><td>Energy meters are used to monitor electricity export. The details of the meters are mentioned in section E.7 of this report.</td></tr> <tr> <td>Accuracy of the monitoring equipment</td><td>The accuracy class of energy meters are of 0.2S which is as per registered monitoring plan /03/.</td></tr> <tr> <td>Measuring/Reading/Recording frequency</td><td>Continuously measured and monthly recording. This is as per registered monitoring plan /03/. Records of monthly generation report (JMR) for the whole monitoring period is cross checked found the reported values to be correct /16//17/.</td></tr> <tr> <td>Calculation method (if applicable)</td><td>Not Applicable</td></tr> </table>	Data/Parameter	Assessment	Data Unit	kWh (kilo watt hour)	Description	Net electricity import recorded at Wind World (India) Limited Substation (EG <sup>GETCO</sup> , Import)	Source of data to be used	Joint Meter Reading (JMR)	Value of monitored parameter for the monitoring period	33,465,000 kWh	Monitoring equipment	Energy meters are used to monitor electricity export. The details of the meters are mentioned in section E.7 of this report.	Accuracy of the monitoring equipment	The accuracy class of energy meters are of 0.2S which is as per registered monitoring plan /03/.	Measuring/Reading/Recording frequency	Continuously measured and monthly recording. This is as per registered monitoring plan /03/. Records of monthly generation report (JMR) for the whole monitoring period is cross checked found the reported values to be correct /16//17/.	Calculation method (if applicable)	Not Applicable
Data/Parameter	Assessment																		
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Calculation method (if applicable)	Not Applicable																		
<b>Findings</b>	<p>CL 02 is raised.</p> <p>CL 02 In the monitoring report section D.2 the source of data w.r.t. net Electricity export/import recorded at Wind World (India) Limited Substation as Joint meter reading reports. Further, the reference of invoice is given in section E.1. PP is requested to provide the JMRs and Invoices for the monitoring period.</p> <p>CL 01 is closed. More information on how the CL 01 was closed, is provided in Appendix-4 of this verification and certification report.</p>																		

<b>Conclusion</b>	RINA is able to confirm that the monitoring has been implemented in full compliance with the registered monitoring plan and all the parameters listed in the registered monitoring plan have been completely monitored.
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**E.6.3. Implementation of sampling plan**

<b>Means of verification</b>	N/A
<b>Findings</b>	N/A
<b>Conclusion</b>	N/A

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

Means of verification	According to approved monitoring plan in the registered PDD/03/ /05/ the meters are to be tested and calibrated once in a year. The calibration reports provided and verified /18/. The details of monitoring equipment are involved in the project activity and their calibration dates and calibration due dates are summarised in the tables below. All the meters are of accuracy class of 0.2s. The assessment team has checked the energy meter calibration/18/ for accuracy and validity, to assure reliability and steadiness of monitoring results. The details of the meters are as follows;																																																																		
	<table><tr><th rowspan="2">Name of WWIL Substation</th><th rowspan="2">(Main Meter/GETCO Meter) Meter Serial No</th><th rowspan="2">Type/Make</th><th rowspan="2">Accuracy Class</th><th rowspan="2">Frequency of Calibration</th><th colspan="2">Calibration</th></tr><tr><th>Previous Calibration</th><th>Validity</th></tr><tr><td rowspan="4">Sadodar S/s</td><td>GJB01470</td><td>Secure</td><td>0.2s</td><td>Once in a 5 years</td><td>30/09/2016</td><td>29/09/2021</td></tr><tr><td>GJU04175</td><td>Secure</td><td>0.2s</td><td>Once in a 5 years</td><td>30/09/2016</td><td>29/09/2021</td></tr><tr><td>GJU04176</td><td>Secure</td><td>0.2s</td><td>Once in a 5 years</td><td>30/09/2016</td><td>29/09/2021</td></tr><tr><td>KAB11082</td><td>Secure</td><td>0.2s</td><td>Once in a 5 years</td><td>30/09/2016</td><td>29/09/2021</td></tr></table>							Name of WWIL Substation	(Main Meter/GETCO Meter) Meter Serial No	Type/Make	Accuracy Class	Frequency of Calibration	Calibration		Previous Calibration	Validity	Sadodar S/s	GJB01470	Secure	0.2s	Once in a 5 years	30/09/2016	29/09/2021	GJU04175	Secure	0.2s	Once in a 5 years	30/09/2016	29/09/2021	GJU04176	Secure	0.2s	Once in a 5 years	30/09/2016	29/09/2021	KAB11082	Secure	0.2s	Once in a 5 years	30/09/2016	29/09/2021																										
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GJU61696	Secure	0.2s	26/09/2013	25/05/2021																																																															

	GJU61310	Secure	0.2s	26/09/2013	25/05/2021
	GJU61701	Secure	0.2s	26/09/2013	25/05/2021
	GJU61693	Secure	0.2s	26/09/2013	25/05/2021
	GJU61692	Secure	0.2s	25/09/2013	25/05/2021
	GJU61691	Secure	0.2s	26/09/2013	25/05/2021
	GJU60943	Secure	0.2s	26/09/2013	25/05/2021
	<p>Last calibration of main meters and back up meters was performed in the year 2013, which was valid till September 2018. The calibration was due in the year 2018; however, the same was only performed on 25/05/2021. So, there was a delay in calibration. Though all the meters were operating under permissible error i.e. less than the accuracy class 0.2, under conservative approach, a maximum correction factor (0.4%) has been applied by the PP in the emission reduction for the monitoring period /02/.</p> <p>The error factor of "0.2%" should be applicable for both export &amp; import i.e. the measured values. The GEDA share certificate provides only information on net electricity generation, the separate export and import values are not available. Hence being conservative and to account for the error for both export &amp; import, a cumulative error of "-0.4%" on net electricity generation has been applied from the month April 2018 to December 2019.</p> <p>This is in line with paragraph 366 of CDM validation and verification standard for project activities, version 02.0 /13/.</p>				
<b>Findings</b>	<p>CL 01 is raised.</p> <p>CL 01 As per the monitoring report the calibration frequency is not meeting the frequency mentioned in the registered monitoring plan. However, the monitoring report has mentioned that 'The calibration of cluster meters were delayed and not conducted in line with the frequency mentioned in the registered PDD. Calibration of cluster meter is not under the purview of PP, PP has intimated GEDA about calibration of Cluster Meters, but the same have not been calibrated yet. PP has no control over delay in Calibration. Hence, PP has applied max error on net electricity generation values during the current monitoring period. Moreover, The CEA Notification No. 502/70/CEA/DP&amp;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." In accordance of the same, the validity of the meters are till 2021'. PP is requested to justify the appropriateness of the monitoring frequency as per the registered monitoring plan; and the reason for permanent change is not applicable w.r.t. calibration frequency for the project activity.</p> <p>CL 01 is closed. More information on how the CL 01 was closed, is provided in Appendix-4 of this verification and certification report.</p>				
<b>Conclusion</b>	<p>RINA confirms that the calibration confirms the proper functioning of the monitoring equipment and is valid for the whole verification monitoring period. According to clause 338 (b), and 373 of VVS version 02, verification team has checked calibration/meter test reports to confirm that the frequency of calibration is carried out as per the requirements of VVS version 02.0. (clause 358, 361, 365 and 366 of VVS, version 2.0)</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

<b>Means of verification</b>	<p>The baseline emission for the project activity has been calculated as per the PDD version 06 dated 09/04/2021 /03/ and ACM0002, version 11 /04/ as follows:</p> <p>The baseline emissions (<math>BE_y</math>) are to be calculated as follows:</p> $BE_y = EG_{PJ, y} * EF_{grid, CM, y}$ <p>and</p>
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	$EG_{PJ,y} = EG_{Export,y} - EG_{Import,y}$ <p>Where,  <math>BE_y</math> is the Baseline emissions in year <math>y</math> (tCO<sub>2</sub>/yr). <math>EG_{PJ,y}</math> is the net electricity supplied to the grid in year <math>y</math> and is applied directly from GEDA sharing certified by state utility.</p> <p>As stated in the section E.6.2 above, the value of <math>EG_{PJ,y}</math> is calculated as 173,306.545 MWh for the monitoring period and the measurement is in line with the applied methodology and registered monitoring plan. However, this value is calculated after applying the error to compensate for the delay in calibration. Further, the net export of electricity is cross checked from the monthly invoices raised <b>/16/ /17/</b> to GEDA/GETCO and found both monthly generation report and invoices are consistent. Hence, reported values of monthly electricity export and import is correct.</p> <p><math>EF_{grid,CM,y}</math> (combined margin grid emission factor) of 0.92252 tCO<sub>2</sub>/MWh was fixed ex-ante which is confirmed from the registered PDD<b>/03/</b> and validation report <b>/05/ /07/</b>. The value found consistent. Accordingly, the resulted Baseline emissions (<math>BE_y</math>) for the monitoring period is 159,878 tCO<sub>2e</sub> (round down value).</p>
<b>Findings</b>	N/A
<b>Conclusion</b>	RINA confirms that baseline emissions have been appropriately calculated and are consistent with site visit observations, the applied methodology and registered PDD <b>/01/ /02/ /03/ /04/ /05/ /07/ /09/ /16/ /17/ /18/</b> .

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

<b>Means of verification</b>	N/A
<b>Findings</b>	N/A
<b>Conclusion</b>	N/A

#### E.8.3. Calculation of leakage GHG emissions

<b>Means of verification</b>	N/A
<b>Findings</b>	N/A
<b>Conclusion</b>	N/A

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

<b>Means of verification</b>	<p>Emission Reductions:</p> <p>The emission reductions in this monitoring period are:</p> $ER_y = BE_y - PE_y - L_y$ <p>Where,  <math>ER_y</math> is the total emission reductions of the project activity during the year <math>y</math> in tCO<sub>2e</sub>;  <math>BE_y</math> is the baseline emissions for the project activity during the year <math>y</math> in tCO<sub>2e</sub>;  <math>PE_y</math> is the emissions for the project activity during the year <math>y</math> in tCO<sub>2e</sub>;  <math>LE_y</math> is the leakage emissions for the project activity during the year <math>y</math> in tCO<sub>2e</sub>.</p> <p>As explained in section E.8.1 above, the resulted Baseline emissions (<math>BE_y</math>) for the monitoring period is 159,878 tCO<sub>2e</sub>. Similarly as explained in section E.8.2 and section E.8.3 project emission and leakage emissions are zero for the monitoring period. Hence, resulted emission reduction for the monitoring period is 159,878 tCO<sub>2e</sub>.</p>
<b>Findings</b>	N/A
<b>Conclusion</b>	The data presented in the monitoring report <b>/01/</b> and emission reduction worksheet <b>/02/</b> were assessed by reviewing in detail project documentation, collection of monitored data, observation of established monitoring and reporting practices and assessment of the reliability of monitoring equipment. Sufficient evidences were presented and verified by RINA for the reported emission reductions as listed

above.

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

<b>Means of verification</b>	The emission reductions from the project for the monitoring period as reported in the monitoring report revision 5 of 21/12/2021 <b>/01/</b> is 159,878 tCO <sub>2</sub> e. The reported emission reductions are 14.29% lower than the estimated emission reduction of 186,526 tCO <sub>2</sub> e for the period as per the registered PDD version 06 of 09/04/2021 <b>/03/</b> .
<b>Findings</b>	N/A
<b>Conclusion</b>	The emission reduction calculations provided in the spreadsheet <b>/02/</b> have been verified to be correct and in line with the registered PDD <b>/03/</b> .

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

<b>Means of verification</b>	N/A
<b>Findings</b>	N/A
<b>Conclusion</b>	N/A

**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**

<b>Means of verification</b>	<b>GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012</b>	<b>GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards</b>
	NA	159,878 tCO <sub>2</sub>
<b>Findings</b>	N/A	
<b>Conclusion</b>	RINA confirms that the actual GHG emission reductions achieved during period starting from 1 <sup>st</sup> January 2013 onwards was verified to be 159,878 tCO <sub>2</sub> e.	

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

<b>Means of verification</b>	N/A
<b>Findings</b>	N/A
<b>Conclusion</b>	N/A

**E.10. Global stakeholder consultation**

<b>Means of verification</b>	N/A
<b>Findings</b>	N/A
<b>Conclusion</b>	N/A

**SECTION F. Internal quality control**

>> The final verification report before being submitted to UNFCCC for request of issuance was subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent RINA instructions. The technical review was performed by a technical reviewer(s) qualified in accordance with RINA's qualification scheme for CDM validation and verification.

**SECTION G. Verification opinion**

>> RINA Service Spa (RINA) has performed verification of the emission reductions reported for the project activity "Vaayu India Wind Power Project in Gujarat" in India, CDM Registration Reference No. 4700, for the period 01/04/2018 to 31/12/2019, with regard to the relevant requirements for CDM activities.

The project participants of the "Vaayu India Wind Power Project in Gujarat" project are responsible for:

- the preparation of greenhouse gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the registered project design document version 06, dated 09/04/2021
- the development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of greenhouse gas emission reductions of the project

It is the responsibility of RINA to express an independent verification opinion about the project's conformity with the requirements of paragraph 62 of the CDM modalities and procedures and on the reported greenhouse gas emission reductions from the project.

Based on documented evidence and corroborated by an on-site assessment RINA can confirm that:

- the project has been implemented and operated as per the registered PDD;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable CDM requirements;
- the monitoring is in place as per the applied baseline and monitoring methodology;
- the monitoring complies with the monitoring plan in the registered PDD;
- the monitoring plan in the registered PDD is as per the applied baseline and monitoring methodology.

## **SECTION H. Certification statement**

>> It is RINA's opinion that the GHG emission reduction stated in the monitoring report version 05 of 21/12/2021 for the "Vaayu India Wind Power Project in Gujarat" project in India for the period 01/04/2018 to 31/12/2019 are fairly stated. The GHG emission reductions were calculated correctly on the basis of the approved monitoring methodology "ACM0002", "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 11 and the monitoring plan contained in the registered PDD.

Hence RINA is able to certify that the emission reductions from the project during the monitoring period 01/04/2018 to 31/12/2019 amount to 159,878 tCO<sub>2</sub>e.



## Appendix 1. Abbreviations

Abbreviations	Full texts
BE	Baseline Emissions
CAAT	Computer Assisted Auditing Technique
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CER(s)	Certified Emission Reduction(s)
CH <sub>4</sub>	Methane
CL	Clarification Request
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
CRT	Coordination and Technical Control Staff
DCI	Certification Division of RINA Services Spa
DISCOM	Distribution Company
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
ER	Emission Reductions
FAR	Forward Action Request
GETCO	Gujarat Energy Transmission Corporation Limited
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
JMR	Joint Meter Reading
LoA	Letter of Approval
MoV	Means of Verification
MR	Monitoring Report
PDD	Project Design Document
PE	Project Emission
PP(s)	Project Participant(s)
PRC	Post Registration Changes
Ref.	Document Reference
RINA	RINA Services Spa
SS(s)	Sectoral Scope(s)
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard
VVS-PA	Validation and Verification Standard for Project Activities
WTG	Wind Turbine Generator
WWIL	Wind World (India) Limited

## Appendix 2. Competence of team members and technical reviewers



### CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:  
We declare that Mr/Mrs/Ms:

Mathew Vijay

è qualificato come<sup>1</sup>:  
is qualified as:

CDM -TEC, -VAL, -VER, -TL  
ITRP

per le seguenti aree tecniche:  
for the following technical areas:

1.2

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2	Renewables	1

In accordo alle istruzioni del Settore Sostenibilità & Cambiamenti Climatici.  
In accordance with the instructions of the Sustainability & Climate Change Sector.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	02/08/2012	-
4	18/04/2017	Update qualification as Verifier and ITRP
5	15/11/2019	Update qualification with "Sampling and surveys for CDM PAs and PoAs"

Il Resp. CEINS  
Head of CEINS

#### <sup>1</sup> Legend:

VAL: Validator  
VER: Verifier  
TEC: Technical Expert  
TL: Team Leader  
FIN-EXP: Financial Expert  
DET: Determiner

CDM: Clean Development Mechanism  
VCS: Verified Carbon Standard  
GS: Gold Standard  
SCS: SocialCarbon Standard  
JI: Joint Implementation

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute per condurre la Validazione e la Verifica di rapporti SCS.

RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS Projects and by the Ecologica Institute, to carry out Validation and Verification of SCS Reports.

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Page 1 of 1



**CERTIFICATO DI QUALIFICA  
QUALIFICATION CERTIFICATE**

Si attesta che il sig./sig.ra:  
We declare that Mr/Ms/Ms:

**Amalorpavanathan Cynril AUGUSTUS AROKIASAMY**

è qualificato come<sup>1</sup>  
is qualified as:

CDM-TEC, CDM-VAL, CDM-VER, CDM-TL,  
ITRP, REG-EXP<sup>2</sup>

per le seguenti aree tecniche:  
for the following technical areas:

1.1, 1.2, 3.1, 4.1, 5.1, 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.1	Thermal energy generation	1
1.2	Renewables	1
3.1	Energy Demand	3
4.1	Cement and lime production	4
5.1	Chemical industry	5
13.1	Solid Waste and wastewater	13

In accordo alle Istruzioni della Unità Certification Innovation and Sustainability.  
In accordance with the Instructions of the Certification Innovation and Sustainability Unit.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	30/05/2010	-
13	31/03/2017	Updated qualification as ITRP
14	20/09/2018	Update qualification as REG-EXP
15	15/11/2019	Update qualification with "Sampling and surveys for CDM PAs and PoAs"
16	15/09/2020	Update

Il Resp. CEINS  
Head of CEINS

<sup>1</sup> Legend:

VAL: Validator  
VER: Verifier  
TEC: Technical Expert  
TL: Team Leader  
RN-EXP: Financial Expert  
DET: Determiner

CDM: Clean Development Mechanism  
VCS: Verified Carbon Standard  
GS: Gold Standard  
SCS: SocialCarbon Standard  
JI: Joint Implementation

<sup>2</sup> Ghana, Azerbaijan, China, Sri Lanka, Bangladesh, Nepal, Thailand, Indonesia, Singapore, Malaysia, Cambodia, Vietnam, Philippines, UAE and Iraq, Brazil, Japan.

RINA Services S.p.A. è accreditata da UNFCCC, quale Entity Operative Designated (EOD), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologia Institute per condurre la Validazione e la Verifica di rapporti SCS.

RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS Projects and by the Ecologia Institute, to carry out Validation and Verification of SCS Reports.

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### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	M/s Wind World (India) Limited	Monitoring report for project activity 'Vaayu India Wind Power Project in Gujarat' in India for the period 01/04/2018 to 31/12/2019	Version 01.0 of 15/05/2020, Version 02.0 of 24/09/2020 and Version 03.0 of 11/08/2021, Version 04.0 of 08/09/2021 and Version 05.0 of 21/12/2021 (final)	PP
2	M/s Wind World (India) Limited	Emission reduction calculation spreadsheet (ER sheet version 4 – 8 Sep 2021.xls)	Version 01.0 of 15/05/2020, Version 02.0 of 24/09/2020 and Version 03.0 of 11/08/2021, Version 04.0 of 08/09/2021 and Version 05 of 21/12/2021 (final)	PP
3	M/s Wind World (India) Limited	CDM-PDD for project activity "Vaayu India Wind Power Project in Gujarat" in India	Version 06 of 09/04/2021	PP
4	UNFCCC	ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources"	Version 11	Others
5	DNV	CDM validation report of "Vaayu India Wind Power Project in Gujarat"	Validation report No. 2010-9338 issued on 22/10/2010	Others
6	UNFCCC	Project 4700: Vaayu India Wind Power Project in Gujarat	<a href="https://cdm.unfccc.int/Projects/DB/DNV-CUK1303122887.18/view">https://cdm.unfccc.int/Projects/DB/DNV-CUK1303122887.18/view</a> Website is in English. Last retrieved on 14/08/2021.	Others
7	Applus+ Certification	CDM PRC validation reports of "Vaayu India Wind Power Project in Gujarat" (The PRC Reference number is PRC-4700-002)	Version 02 12/04/2021	Others
8	CDM Executive Board	Monitoring Report Form	(CDM-MR-FORM), version 08.0 of 06/04/2021	Others
9	Applus+ Certification	CDM verification and certification report of "Vaayu India Wind Power Project in Gujarat" in India for the period 01/04/2017 to 31/03/2018	Version 02 of 12/04/2021	Others
10	Central Electricity Authority	Ministry of Power, Government of India Notification No. 502/70/CEA/DP&D dated 17/03/2006	dated 17/03/2006	Others

11	CDM Executive Board	Clean Development Mechanism Project Cycle Procedure	Version 02.0 of 29/11/2018	Others
12	CDM Executive Board	Clean Development Mechanism Project Standard	Version 02.0 of 29/11/2018	Others
13	CDM Executive Board	Clean Development Mechanism Validation and Verification Standard for Project activities	Version 02.0 of 29/11/2018	Others
14	UNFCCC	Guideline: Application of materiality in verifications	Version 02 of 20/02/2015	Others
16	GETCO	Monthly credit note cum apportioning sheet for the period from 01/04/2018 to 31/12/2019		PP
17	M/s Wind World (India) Limited	Monthly invoices raised to GETCO DISCOM for net electricity export to grid for the period from 01/04/2018 to 31/12/2019		PP
18	AKRON ENERGY	Calibration certificates of the main and check meter and cluster meters for the current monitoring period.		PP
19	CDM Executive Board	The Executive Board of the Clean Development Mechanism (CDM) agreed on 23 June 2020 to, on an exceptional basis, considering the COVID-19 pandemic, to extend the period in which CDM Designated Operational Entities (DOEs) may apply alternative measures of validation/verification to mandatory on-site inspections until 31 December 2021.		Other
20	M/s Wind World (India) Limited	ERPA Signed with the Buyer dated 08/07/2020.		PP
21	Applus+ Certification	Validation report for post-registration changes for the CDB project titled 'Vaayu India Wind Power Project in Gujarat'.	Version 02 dated 12/04/2021	Others

## 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				
/				
Project participant response				Date: DD/MM/YYYY

Documentation provided by project participant	
DOE assessment	Date: DD/MM/YYYY

Table 2. CL from this verification

CL ID	01	Section no.	E.5	Date:	15/10/2020
<b>Description of CL</b>					
<p>As per the monitoring report the calibration frequency is not meeting the frequency mentioned in the registered monitoring plan. However, the monitoring report has mentioned that 'The calibration of cluster meters were delayed and not conducted in line with the frequency mentioned in the registered PDD. Calibration of cluster meter is not under the purview of PP, PP has intimated GEDA about calibration of Cluster Meters, but the same have not been calibrated yet. PP has no control over delay in Calibration. Hence, PP has applied max error on net electricity generation values during the current monitoring period. Moreover, The CEA Notification No. 502/70/CEA/DP&amp;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." In accordance of the same, the validity of the meters are till 2021'.</p> <p>PP is requested to justify the appropriateness of the monitoring frequency as per the registered monitoring plan; and the reason for permanent change is not applicable w.r.t. calibration frequency for the project activity.</p>					
<b>Project participant response</b>					Date: 11/08/2021
<p>During the current monitoring period, it has been identified that the last calibration for the cluster meters has been performed in the year 2013, which were valid till September 2018 and afterwards the calibration has been performed in the year 2021. The calibration has not been performed as per the frequency mentioned, i.e. once in five years.</p> <p>However, all the meters were operating under permissible error i.e. less than the accuracy class 0.2, hence, under conservative approach, a maximum correction factor (0.4%) has been applied by the PP in the emission reduction calculations for the entire monitoring period, i.e. from 01 April 2018 to 31 December 2019.</p>					
<b>Documentation provided by project participant</b>					
Please refer to the revised Monitoring Report, version 3, dated 11 August 2021 and the revised Emission Reduction (ER) Sheet, version 3, dated 11 August 2021.					
<b>DOE assessment</b>					Date: 17/08/2021
PP has revised the monitoring report and ER sheet. The revision found appropriate. Further, the justification provided found acceptable. Hence, CL 01 is closed.					

CL ID	02	Section no.	E.6.2	Date:	15/10/2020
<b>Description of CL</b>					
<p>In the monitoring report section D.2 the source of data w.r.t. net Electricity export/import recorded at Wind World (India) Limited Substation as Joint meter reading reports. Further, the reference of invoice is given in section E.1. PP is requested to provide the JMRs and Invoices for the monitoring period.</p>					
<b>Project participant response</b>					Date: 11/08/2021
<p>The share certificates have been provided to the DoE. These share certificates reflect the net electricity supply, export and import values and these share certificates are directly sourced from the GUVNL website (State Utility - <a href="http://slcdguj.com/energyaccount/energy_block_new.php">http://slcdguj.com/energyaccount/energy_block_new.php</a>). PP has no control on the same and any third party can check the net supply data from the link.</p>					
<b>Documentation provided by project participant</b>					
Please refer to the share certificates directly sourced from the GUVNL website (State Utility - <a href="http://slcdguj.com/energyaccount/energy_block_new.php">http://slcdguj.com/energyaccount/energy_block_new.php</a> ).					
<b>DOE assessment</b>					Date: 17/08/2021
PP has submitted the required documents. The same found acceptable. Hence, CL 02 is closed.					

Table 3. CAR from this verification

CAR ID	01	Section no.	E.1	Date:	06/04/2021
<b>Description of CAR</b>					

1. The latest version of monitoring report template, version 08 dated 06/04/2021 is available at UNFCCC website. PP is requested to revise the monitoring report according to the latest template.	
2. As per the monitoring report version 01 dated 15/05/2020, the PDD version and date to which it is refers to this to this monitoring report is not the latest version that is available in UNFCCC CDM website. PP is requested to correct the same.	
<b>Project participant response</b>	<b>Date:</b> 11/08/2021
1. The Monitoring Report has been revised using the latest template.	
2. The latest version of the PDD has been mentioned in the monitoring report.	
<b>Documentation provided by project participant</b>	
Please refer to the revised Monitoring Report, version 3, dated 11 August 2021.	
<b>DOE assessment</b>	<b>Date:</b> 17/08/2021
PP has revised the MR. The revision found appropriate. Hence, the CAR 01 is closed.	

Table 4. FAR from this verification

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

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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"> <li>• Reflect the “Clarification: Regulatory requirements under temporary measures for post-2020 cases” (CDM-EB109-A01-CLAR).</li> </ul>
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"> <li>• Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN);</li> <li>• Make structural and editorial improvements.</li> </ul>
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		