



44 MW BUNDLED WIND POWER
PROJECT IN MAHARASHTRA MANAGED
BY ENERCON INDIA LIMITED



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Summary:

The project under consideration is set up to produce clean power from the wind electric converters (WECs). The generated electricity is supplied to the national grid. The project activity consists of 55 machines of Wind World make E-48 machines of 800 KW each, totalling to the capacity of 44 MW in the state of Maharashtra. The generated electricity is supplied to the National grid comprising mainly fossil fuel-based power plants.

Verification is the periodic independent review and ex-post determination by a DOE of the monitored reductions in GHG emissions that have occurred as a result of the registered VCS project activity during a defined monitoring period. Certification is the written assurance by a DOE that, during a specific period in time, a project activity achieved the emission reductions as verified. The objective of this verification is to verify and certify emission reductions reported for the project “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India” for the period 01/01/2020 to 31/12/2020.

Verification is conducted using RINA procedures in line with the VCS Standard Version 4.1, available at the time of the verification starts, 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 VCS criteria. The verification assessment involved a document review of relevant documentation. The review of the project design documentation, monitoring report and additional documents related to baseline and monitoring methodology; the subsequent

background investigation, follow-up interviews and stakeholders have provided RINA S.p.A. with sufficient evidence to validate the fulfilment of the stated criteria.

During the verification 01 CL, 01 CAR is identified in relation to all relevant VCS requirements and the applied baseline monitoring methodology; RINA thus request the resolution of the findings prior to proceeding with the verification process. The PPs are invited to respond to the issued listed in Appendix II.

In conclusion, it is RINA's opinion that the project activity "44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India", in "India", as described in the Monitoring Report version 02 of 20/06/2021, meets all relevant requirements for CDM and VCS activities and all relevant host Party criteria and correctly applies the baseline and monitoring methodology ACM0002, Consolidated methodology for "Grid-connected electricity generation from renewable sources" version 17.0 of 13/05/2016. Hence RINA is able to certify that the emission reductions from the project activity "44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India" in India during the VCS monitoring period 01/01/2020 to 31/12/2020 (including both days) amount to 44,197 tons of CO₂e.

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1 INTRODUCTION

1.1 Objective

RINA has been commissioned by “Wind World (India) Limited” to perform an independent verification of its VCS project, “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India”, already registered under VCS with Project ID. 489 for the reported GHG emission reductions for the given monitoring period 01-01-2020 to 31-12-2020 (both days inclusive). The VCS projects must undergo independent third-party verification and certification of emission reductions as the basis for issuance of Voluntary Emission Reductions (VERs/VCUs).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The project activity has been implemented and operated as per the project description (PD) and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- Monitoring report and other supporting documents are complete;
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.
- To confirm that the monitoring system is implemented and fully functional to generate Voluntary Emission Reductions (VERs/VCUs) without any double counting, and
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.

1.2 Scope and Criteria

The scope of the verification is to verify that:

The project activity has been implemented and operated in accordance with the registered PD or any approved revised PD;

- The monitoring plan, including compliance with any guidance provided by the VCS Board regarding deviations from the provisions of a registered plan and/or methodology;
- The data and calculation of GHG emission reductions have been assessed to correctly support the emission reductions being claimed.

The verification shall ensure that reported emission reductions are complete and accurate in order to be certified.

Verification is conducted using RINA procedures in line with the VCS Standard Version 4.1 and related rules and guidance available and applying standard auditing techniques. RINA has also reviewed the documents against the CDM VVS and PS for project activities version 2.0.

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.

1.3 Level of Assurance

In line with Guidelines for Application of materiality in verifications /13/, 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.

The draft final verification report before being submitted to the client 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 VCS and CDM validation and verification. The verification team and the technical reviewers consist of the following personnel.

Role	Last Name	First Name	Country
Team Leader, Verifier & Technical Expert TA 1.2	Mathew	Vijay	India
Technical Reviewer	Amalorpavanathan	Cyril Augustus A	India

1.4 Summary Description of the Project

The purpose of the proposed project is to sufficiently utilize the wind energy to generate electricity, which is delivered to National grid. All the electricity supplied by the proposed project to the grid substitutes the equivalent electricity of the National grid, which is dominated by fossil-fuel fired power plants, to avoid GHG emissions.

The proposed project is a newly-built wind power project involves the installation of total capacity of 44 MW power plant consisting of 55 machines of E-48 machines of Wind World make of 800 KW each. The project also contributes to sustainable development of the local community with environmental and economic benefits. The project is located at Satara, Sangli, Nasik, and Ahmednagar districts of Maharashtra state, India.

Location/geographical coordinates were also confirmed in Google Earth application/02/. The WTGs have been commissioned between 07/02/2006 and 10/12/2008. The same was verified against the registered VCS PD/02/, previous verification report/09/ and validation report/08/. The emission reductions from the project activity during the period 01-01-2020 to 31-12-2020 (both days inclusive) amount to 44,197 tCO_{2e}.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification was conducted using RINA procedures in line with the requirements specified in the VCS Requirements, i.e. VCS Program Guide, VCS Version 4 (v4.0) of 19/09/2019 and VCS Standard, VCS Version 4.1 (v4.1) of 22/04/2021. The GHG emission reductions are on the basis of the approved Baseline and monitoring methodology “ACM0002”, version 17, Large-scale Consolidated Methodology for “Grid-connected electricity generation from renewable sources” of 13/05/2016. The verification consisted of the following three phases,

- Document review;
- Remote audit including Interviews and video conferencing;
- Resolution of Any Material Discrepancy and the issuance of the final verification report and certification.

The following sections outline each step in more detail.

2.2 Document Review

The monitoring report, Version 01.0 of 12/02/2021, Version 02.0 of 20/06/2021/**/01/**, the emission reduction calculations provided in the form of a spreadsheet (VCS-489)_Version 02_20June2021.xls) version 01 of 12/02/2021 and version 02 of 20/06/2021 **/03/**, were assessed as part of the verification. In addition, the VCS Project Description (VCS PD) **/02/** in particular the baseline estimations and the monitoring plan and the validation report **/08/** for the project were reviewed.

The following table lists the documentation that was reviewed during the verification

/01/	Wind World (India) Limited: VCS monitoring report for the project activity “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India”, version 01 of 12/02/2021 and version 02 of 20/06/2021 covering monitoring period 01/01/2020 to 31/12/2020.
/02/	Wind World (India) Limited: VCS project description for project activity “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India” in India, version 03 of 01/02/2017
/03/	Wind World (India) Limited: Emission Reduction spread sheet titled “(VCS-489)_Version 02_20June2021.xls” version 01 of 12/02/2021 and version 02 of 20/06/2021 covering monitoring period 01/01/2020 to 31/12/2020..
/04/	VCS: VCS Program Guide, VCS Version 4 (v4.0), Requirements Document of 19/09/2019

/05/	VCS: VCS Standard, VCS Version 4.1 (v4.1), Requirements Document of 22/04/2021
/06/	CDM Executive Board: Approved consolidated baseline and monitoring methodology “ACM0002, Large-scale Consolidated Methodology for “Grid-connected electricity generation from renewable sources” version 17 of 13/05/2016
/07/	VCS: Monitoring report form (MONITORING REPORT: VCS Version 4) , version 4.0 dated 19/09/2019
/08/	Earthood: Validation report (VCS.VAL.16.17) for the project activity “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India” dated version 02 dated 22/02/2017
/09/	Applus+Certification: Verification (GCEES0320) for the project activity “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India” dated version 01 dated 12/04/2020
/10/	Central Electricity Authority (CEA): CO ₂ Baseline Database for the Indian Power Sector User Guide, Version 11, January 2016.
/11/	CEA: Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 dated 17/03/2006
/12/	MSEDCL: Group credit note (Generation report) from WTGs of 44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India from 01/01/2020 to 31/12/2020
/13/	UNFCCC Guideline: Application of materiality in verifications, Version 02 of 20/02/2015
/14/	MSEDCL: Meter Calibration reports for the 44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India.
/15/	VERRA: COVID-19 Travel Guidance for Projects dated 18/03/2020; and email communication with Programme office VERRA for exemption of site visit.
/16/	ERPA Signed between M/s Wind World (India) Limited and the Buyer dated 08/07/2020.

2.3 Interviews

Interviews: Audit team has conducted the interview process via videoconference (Zoom call). The key personnel interviewed, and the main topics of the interviews are summarized in the table below

	Date	Name and Role	Organization	Topic
1	18/03/2021	Mr. J.H Saiyad Senior Manager, project sites (Technical)	Wind World (India) Limited	Project description, evidences for proof of title, Monitoring plan, ownership and coordinates of projects WTGs, Project Start Date, Commercially Sensitive Information, Other Programs. Monitoring plan & QA/QC procedures. Day to day monitoring, O & M procedures, calibration of energy meter, JMR records, billing, etc.
2	18/03/2021	Mr. Nilesh Kamble Project site Manager (Technical)		

3	18/03/2021	Mr. Deep Borah (Carbon Consultant)	Wind World (India) Limited	Project description, evidences for proof of title, Monitoring plan, ownership of GHG emission reductions, Project Start Date, Commercially Sensitive Information, Other Programs. VCS documentation, requirements, VER ownership etc. Monitoring plan & QA/QC procedures. Day to day monitoring, O & M procedures, calibration of energy meter, JMR records etc.
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2.4 Site Inspections

Audit team has conducted a remote site inspection via videoconference (Zoom) with PP on different topics as mentioned under section 2.3 of this report. The team has conducted a video call with the site Project Managers (technical) Mr. Saiyad and Mr. Nilesh on 18/03/2021; who was at the project site. During the live video call using the software Zoom, team was able to check the WTG as well as the monitoring equipment i.e. energy meters. Based on the videoconference, MR review, as the review of VCS requirements, RINA Verification team has proceeded to skip the presential site visit due to the COVID-19 pandemic **Error! Reference source not found..** 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 MR. Details of interviewees, topics covered and additional information presented in the below section “2.3 – Interviews”.

The following justification is provided by the verification team for not conducting the site visit.

Conditions	Verification team justification
Verification techniques used to justify the lack of a site visit and additional evidence to demonstrate; how a reasonable level of assurance was attained.	Verification team has done the follow-up actions by: Team has carried out interviews with relevant personals to verify the implementation and operation of the registered VCS project activity as per the registered VCS PD. For the project ‘44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India’ this is continued/successive verification under 2 nd VCS

	crediting period; hence, previous periodic monitoring report and verification reports are assessed. The verification team has carried out interviews using Zoom application with video camera function, in order to assess the information on registered monitoring plan in the VCS PD. Team has reviewed the information flows for generating, aggregating and reporting the monitoring parameters. The ex post parameters are sourced from monthly generation report, issued by MSEDCL (a public utility company). All the generation reports are provided and verified. PP presented during the videoconference all documents related to monitoring and equipment calibration. The calculations and assumptions made in determining the CERs were reviewed and discussed with PP by videoconference.
Alternative Measures relating to on-site visits for verification of the project activity	The site visit cannot be postponed since a delay on performing the on-site visit for the project activity VCS 489, will impact on a delay in VERs delivery against the ERPA signed on 08/07/2020 with the buyer /16/ .

2.5 Resolution of Findings

The objective of this phase of the verification is to resolve any outstanding issues which need to be clarified for RINA's positive conclusion on the project description. To guarantee transparency any findings raised regarding to the validation are incorporated in the Verification Protocol and Verification Protocol Tables in Appendix II to this report.

CAR (Corrective Action Request) is raised if one of the following occurs:

- Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
- Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;

- Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met. All CARs and CLs raised by RINA during verification shall be resolved prior to submitting a request for issuance.

FAR (Forward Action Request) is raised during verification if the monitoring and reporting require attention and/or adjustment for the next verification period.

During the current verification, 01 Corrective Action request (CARs), 00 Forward Action Request (FAR) and 01 Clarification request (CLs) were raised and successfully closed.

2.5.1 Forward Action Requests

The project activity is undergoing third verification under VCS; there were no FARs raised during the validation or previous verification. Also during the current verification no FAR is raised.

2.6 Eligibility for Validation Activities

Not applicable.

3 VALIDATION FINDINGS

Not applicable.

3.1 Participation under Other GHG Programs

The project activity is registered under the VCS Program (VCS Project ID 489) and not seeking registration under any GHG program (eg, CDM); hence no further gap validation is required.

RINA has confirmed that the particular project activity is not listed under any other GHG program viz. REC Registry of India. The Project Proponent “Wind World (India) Limited” is only the O&M provider and is only acting as the bundle representative of this VCS project. The Wind Energy Converter(s) owners are different from Wind World (India) Limited. The details of the project owners are listed in the latest Monitoring report.

Additionally, RINA would like to reconfirm that if the project activity/WECs are registered under REC mechanism, the same will be reflected in the monthly statements (i.e. JMR/credit note of the individual machines). As per Indian REC practice each device needs to be separately registered under REC to enable REC issuance; and such REC issuance will be reflected under the monthly generation statement and invoices. RINA has checked the documents during the verification process and found that the project WECs are not part of REC mechanism and hence not registered under REC Registry of India.

Further, RINA has verified the previous monitoring reports and validation reports and confirmed that the project activity is not registered under any other GHG programs or under other mechanism.

3.2 Methodology Deviations

Not Applicable.

3.3 Project Description Deviations

There has not been any Project Description related deviation during the current monitoring period. However, during this monitoring period, a PP has opted for a permanent deviation with respect to the frequency of calibration. Previously, PP has been following the calibration norms of state electricity utility MSEDCL, which is once in a year. However, due to the present pandemic situation, and also the past trend of meter testing, it has been observed that, the calibration authority MSEDCL does not conduct the meter testing as per prescribed frequency of the VCS-PD. PP has no control over delay in Calibration; as calibration is under the direct purview and control of MSEDCL. So, PP has decided to follow the national norms with respect to the frequency of meter testing/calibration; i.e. Central Electricity Authority (CEA) guideline for meter testing. Hence, PP has referred to the CEA notification dated 17 March 2006, which confirms that energy meters test/calibration can be performed once in five years. Necessary revisions have been made in the monitoring report, version 02 dated 20/06/2021 by the PP with respect to calibration frequency of the meters.

The verification team has reviewed the CEA guidelines and evaluated the current practice of meter calibration at project site. The verification team could confirm that the calibration is not under direct control of PP; which is mentioned in the power purchased agreement signed with state utility, also the application of CEA guidelines is reliable and acceptable in the host country as per prevailing practices. . Thus, the verification team is able to confirm that change in calibration frequency to once in 5 years following CEA Guideline is completely reliable. Further, the same is in-line with paragraph 3.18.2 (2) of VCS standard 4.1. Hence, this deviation is accepted and VVB is able to confirm the same for the project activity.

Project description deviations were associated with the previous monitoring periods are discussed as follows.

Deviation 1:

There is no permanent project description deviation taken for the project for previous monitoring period “01 Feb 2017 to 31 March 2018 (i.e. during the 1st monitoring period of the current crediting period (i.e. 2nd CP)). However, during that particular monitoring period there was delay in meter calibration for three sites, the delay in meter calibration were identified and reported under the Appendix to previous monitoring report. Hence, these delays have been considered under temporary project description deviation for the project. However, the delays have been addressed by applying required error factors (i.e. for both export and import values) for the entire months of concerned delay conservatively.

The assessment team is able to confirm from the last verification report, that an assessment has been performed w.r.t. the deviation and is appropriately described and justified and the project remains in compliance with the VCS rules. The deviation does not have an impact on the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

Deviation 2:

During the previous monitoring period “01 Apr 2018 to 31 Oct 2018”, there was delay in energy meter calibration identified for few machines as mentioned in appendix of the approved MR; therefore PP has followed the conservative approach and applied the maximum permissible error of the energy meter over the export & import values for conservative estimation of energy generation for the entire months falls in delay period.

The assessment team is able to confirm from the last verification report, that an assessment has been performed w.r.t. the deviation and is appropriately described and justified and the project remains in compliance with the VCS rules. The deviation does not have an impact on the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

Deviation 3:

During the last monitoring period “01 Nov 2018 to 31 Dec 2019”, there have been delays in energy meter calibration identified for few machines as mentioned in the appendix of this MR; therefore PP has followed the conservative approach and applied the maximum permissible error of the energy meters over the export & import values for conservative estimation of energy generation for the entire months falls in delay period for the respective machines.

The assessment team is able to confirm from the last verification report, that an assessment has been performed w.r.t. the deviation and is appropriately described and justified and the project remains in compliance with the VCS rules. The deviation does not have an impact on the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

3.4 Grouped Project

The verification team confirms that the project is not a grouped project and hence this is not applicable to the project activity.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

On the basis of the remote audit and the reviewed project documentation, the verification team confirms that the project was implemented as described in the registered VCS PD /02/. All the physical components and project boundary are in conformity with the description in registered VCS PD. During the verification it is confirmed that, actual implementation of the project against the description in its registered VCS-PD /02/ and found that all 55 WECs were in operation with a total installed capacity of 44 MW, which is in line with the registered VCS-PD /02/.

Each WECs is of 800 kW capacity. Type and capacity of individual WECs were confirmed from previous verification reports /09/ and Generation Statement /12/. It was further assessed through the technical specifications of the WEGs model E-48. 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 /06/. The monitoring of the project activity is found to be in accordance with the monitoring methodology described in ACM0002, Version 17/06/. The monitoring mechanism is effective and reliable. During the remote audit, the personnel involved in the operation of the project activity have been interviewed to confirm, that the plant personnel are conscious of the importance of the monitoring activities. The required monitoring systems have been installed and are operational. The meters comply with appropriate quality standards applicable for the used technology. The accuracy class of the meters installed for the project activity was verified against the registered VCS PD/02/; VCS MR/01/ and validation report for renewal crediting period /08/ and cross-checked against the previous verification report /09/. The description in MR /01/ is also consistent with the actual implementation confirmed as above. Therefore RINA confirmed that there is no material discrepancy between the actual project information and the project description. The net electricity generation by the project from 01-01-2020 to 31-12-2020, is taken into consideration.

The project being a wind power project there are few associated sustainable development benefits viz. social well being (local job creation), technical well being (clean energy technology), environmental well being (no emission associated) etc. This information was already a part of registered VCS PD/02/; and the same was also discussed during the remote site visit and found consistent. During the remote assessment local employment was discussed, and project being in continuous operation; hence, technical wellbeing (clean energy technology) and environmental wellbeing (no emission associated) is also established. Hence, the sustainable development related details included in the VCS PD /02/ is found applicable.

4.2 Safeguards

4.2.1 No Net Harm

The verification team confirms that during this verification no potential negative environmental and socio-economic impacts have been identified.

As per the notifications issued by Ministry of Environment and Forest dated 01/12/2009, Environmental Impact Assessment for the wind projects is not required to be done. This project activity will not involve any negative environmental or socio-economic impacts, as the WTGs are installed for generation of power using wind which is a clean source of energy.

Hence no mitigation measures are required.

4.2.2 Local Stakeholder Consultation

Local stakeholders are having a positive opinion about the project activity /02/. No complaints/negative comments received during the monitoring period. The same has confirmed during the remote site visit.

4.3 AFOLU-Specific Safeguards

Not applicable.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

According to the applied methodology “ACM0002”, “Consolidated baseline methodology for grid connected electricity generation from renewable sources”, version 17 of 13/05/2016 /06/, the emission reductions have been calculated based on the following formula:

$$ER_y = BE_y - PE_y - L_y$$

Where,

ER_y : Emission reductions in year y (tCO₂e/yr)

BE_y : Baseline emissions in year y (tCO₂e/yr)

PE_y : Project emissions in year y (tCO₂e/yr)

L_y : Leakage in year y (tCO₂e/yr)

The baseline emissions (BE_y) for the project activity are calculated as follows:

$$BE_y = EG_{,y} \times EF_{,y}$$

Where,

$EG_{,y}$: Quantity of net electricity generation supplied by the project plant/unit to the grid in year, y

$EF_{,y}$: Combined margin emission factor for grid connected power generation in year calculated ex-ante, as 0.9777 tCO₂ /MWh /02/, /10/.

Combined margin emission factor was fixed ex-ante at the time of validation. The value was cross checked with the registered VCS-PD and found to be consistent.

Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the VCS project activity (EG,y)

$$EG_y = 45,205.87 \text{ MWh}$$

$$BE_y = EG_y \times EF_y$$

$$BE_y = 45,205.87 \times 0.9777 = 44,197 \text{ tCO}_2\text{e.}$$

As per the clause 36 of applied methodology ACM0002 version 17, “For most renewable energy power generation project activities”, $PE_y = 0$. Since the project activity is renewable energy power generation hence the values of the $PE_y = 0$.

Also the project activity is Greenfield power plant, hence no leakage emissions is to be considered, thus $LE_y = 0$

Therefore,

$$ER_y = BE_y - 0 - 0$$

$$\text{i.e. } ER_y = BE_y$$

$$= 44,197 \text{ tCO}_2\text{e.}$$

The following parameters were available at validation as per the registered VCS-PD /02/ and the validation report /08/:

DATA/PARAMETER	Source of data	Reported value for the project period	Assessment/Observation
Simple Operating Margin emission factor for National grid (EFgrid,OM,y)	CO ₂ baseline database (Version 11.0) published by CEA in January 2016	0.9941 tCO ₂ /MWh	The verification team has verified the value from the registered VCS-PD/02/ and validation report /08/ and found to be correct and consistent. Hence accepted.

Build Margin emission factor for National grid (EFgrid,BM,y)	CO ₂ baseline database (Version 11.0) published by CEA in January 2016	0.9285 tCO ₂ /MWh	The verification team has verified the value from the registered VCS-PD/02/ and validation report /08/ and found to be correct and consistent. Hence accepted.
Combined margin CO ₂ emission factor for National grid (EFgrid,CM,y)	As per the "Tool to calculate the emission factor for an electricity system".	0.9777 tCO ₂ /MWh	The verification team has verified the value from the registered VCS-PD/02/ and validation report /08/ and found to be correct and consistent. Hence accepted.

Data and parameters monitored ex-post:

Data/Parameter	Assessment																																
Data Unit	EG _{y, net} ; MWh																																
Description	Net Electricity supplied to the Grid by Project Activity.																																
Source of data to be used	Calculated from EG _{export} and EG _{import} as (EG _{export} – EG _{import})/12/.																																
Value of monitored parameter for the monitoring period	45,205.87																																
Monitoring equipment	Export Import energy meters of Elster make, which are state utility owned, are installed at substation. The serial number and the technical details of the meters are specified in the MR/01/ are found consistent. These meters are seen at site and the details of the meters are as follows. <table><tr><th>Meter Serial Number</th><th>Accuracy Class</th><th>Make</th><th>Last Calibration</th></tr><tr><td>4760188</td><td>0.2</td><td>Elster</td><td>13/08/2018</td></tr><tr><td>5269382</td><td>0.2</td><td>Elster</td><td>29/05/2018</td></tr><tr><td>16595516</td><td>0.2</td><td>Elster</td><td>24/04/2018</td></tr><tr><td>04862747</td><td>0.2</td><td>Elster</td><td>01/05/2019</td></tr><tr><td>14831531</td><td>0.2</td><td>Elster</td><td>18/03/2019</td></tr><tr><td>14831520</td><td>0.2</td><td>Elster</td><td>18/03/2019</td></tr><tr><td>14831522</td><td>0.2</td><td>Elster</td><td>18/03/2019</td></tr></table>	Meter Serial Number	Accuracy Class	Make	Last Calibration	4760188	0.2	Elster	13/08/2018	5269382	0.2	Elster	29/05/2018	16595516	0.2	Elster	24/04/2018	04862747	0.2	Elster	01/05/2019	14831531	0.2	Elster	18/03/2019	14831520	0.2	Elster	18/03/2019	14831522	0.2	Elster	18/03/2019
Meter Serial Number	Accuracy Class	Make	Last Calibration																														
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04862747	0.2	Elster	01/05/2019																														
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14831520	0.2	Elster	18/03/2019																														
14831522	0.2	Elster	18/03/2019																														

	14831533	0.2	Elster	27/03/2019
Accuracy of the monitoring equipment	Electronic Tri-vector meter with accuracy class 0.2S. The same was confirmed during the remote audit and from calibration/meter test certificates and previous verification report /14/,/09/.			
Measuring/Reading/Recording frequency	Continuous measurement. The same is in line with the methodology requirement and is hence accepted. The parameter is calculated by the using the export and import values of electricity provided in the monthly energy statement/credit note /12/. The values of electricity exported and imported are monthly recorded/12/. It is confirmed that, the measuring and reporting frequency are in line to registered VCS PD/02/.			
Calculation method (if applicable)	The parameter is calculated and recorded on monthly basis. Calculated from EG,export and EG,import as $EG_{\text{export}} - EG_{\text{import}}$.The same is in-line with the registered VCS PD/02/.			
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The remote audit of the project activity confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable.			
Calibration				
Calibration frequency/interval Is the calibration interval in line with the monitoring plan of the PD?	Energy meters will be calibrated once in 5 years. The same is in line with the calibration frequency defined according to the Central Electricity Authority (CEA) guideline for meter testing /11/. However, there is a deviation w.r.t. registered VCS PD /02/. The deviation is mentioned in the section 3.2.2 of the monitoring report. The justification w.r.t. deviation is found acceptable; the same is detailed in the above section 3.3.			
Does the calibration cover the monitoring period? Has the calibration frequency been respected?	As per the deviation applied, the meters will be calibrated once in 5 years. The same is in line with the calibration frequency defined according to the registered VCS PD /02/. This is according to the Central Electricity regulations /11/. The monitoring period from 01/01/2020 to 31/12/2020; and the last calibration of meters performed on 24/04/2018, 29/05/2018, 13/08/2018, 18/03/2019, 27/03/2019 and 01/05/2019. As per the Central Electricity regulations /11/ the next calibration is due on 24/04/2023, 29/05/2023, 13/08/2023, 18/03/2024, 27/03/2024, and 01/05/2024 respectively. Hence it is confirmed that the calibration covers this monitoring period. Further, for changed meters the test reports are provided /14/.			
Does the calibration of meters have been done by an accredited person or institution?	The calibration is conducted by state utility i.e. MSEDCL which is NABL Accredited entity/14/. Calibration is in line with the requirement of calibration is in line with national requirement /11/.			

Data/Parameter	Assessment																																				
Data Unit	EG _{Export} ,; MWh																																				
Description	Electricity exported to the grid by the project activity in year y																																				
Source of data to be used	Monthly certificates issued by MSEDCL (Credit Note)																																				
Value of monitored parameter for the monitoring period	45,274.15																																				
Monitoring equipment	Export Import energy meters of Elster make, which are state utility owned, are installed at substation. The serial number and the technical details of the meters are specified in the MR/01/ are found consistent. These meters are seen at site and the details of the meters are as follows. <table><tr><th>Meter Serial Number</th><th>Accuracy Class</th><th>Make</th><th>Last Calibration</th></tr><tr><td>4760188</td><td>0.2</td><td>Elster</td><td>13/08/2018</td></tr><tr><td>5269382</td><td>0.2</td><td>Elster</td><td>29/05/2018</td></tr><tr><td>16595516</td><td>0.2</td><td>Elster</td><td>24/04/2018</td></tr><tr><td>04862747</td><td>0.2</td><td>Elster</td><td>01/05/2019</td></tr><tr><td>14831531</td><td>0.2</td><td>Elster</td><td>18/03/2019</td></tr><tr><td>14831520</td><td>0.2</td><td>Elster</td><td>18 /03/2019</td></tr><tr><td>14831522</td><td>0.2</td><td>Elster</td><td>18/03/2019</td></tr><tr><td>14831533</td><td>0.2</td><td>Elster</td><td>27/03/2019</td></tr></table>	Meter Serial Number	Accuracy Class	Make	Last Calibration	4760188	0.2	Elster	13/08/2018	5269382	0.2	Elster	29/05/2018	16595516	0.2	Elster	24/04/2018	04862747	0.2	Elster	01/05/2019	14831531	0.2	Elster	18/03/2019	14831520	0.2	Elster	18 /03/2019	14831522	0.2	Elster	18/03/2019	14831533	0.2	Elster	27/03/2019
Meter Serial Number	Accuracy Class	Make	Last Calibration																																		
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14831522	0.2	Elster	18/03/2019																																		
14831533	0.2	Elster	27/03/2019																																		
Accuracy of the monitoring equipment	Electronic Tri-vector meter with accuracy class 0.2S. The same was confirmed during the remote audit and from calibration/meter test certificates and previous verification report /14/,/09/.																																				
Measuring/Reading/Recording frequency	Continuous measurement. The same is in line with the methodology requirement and is hence accepted. The parameter is calculated by the using the export and import values of electricity provided in the monthly energy statement/credit note /12/. The values of electricity exported and imported are monthly recorded/12/. It is confirmed that, the measuring and reporting frequency are in line to registered VCS PD/02/.																																				
Calculation method (if applicable)	Not applicable. Measured value.																																				
Does the data management (from monitoring equipment to emission reduction calculation)	The remote audit of the project activity confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable.																																				

ensure correct transfer of data and reporting of emission reductions?	
Calibration	
Calibration frequency/interval Is the calibration interval in line with the monitoring plan of the PD?	Energy meters will be calibrated once in 5 years. The same is in line with the calibration frequency defined according to the Central Electricity Authority (CEA) guideline for meter testing /11/. However, there is a deviation w.r.t. registered VCS PD /02/. The deviation is mentioned in the section 3.2.2 of the monitoring report. The justification w.r.t. deviation is found acceptable; the same is detailed in the above section 3.3.
Does the calibration cover the monitoring period? Has the calibration frequency been respected?	As per the deviation applied, the meters will be calibrated once in 5 years. The same is in line with the calibration frequency defined according to the registered VCS PD /02/. This is according to the Central Electricity regulations /11/. The monitoring period from 01/01/2020 to 31/12/2020; and the last calibration of meters performed on 24/04/2018, 29/05/2018, 13/08/2018, 18/03/2019, 27/03/2019 and 01/05/2019. As per the Central Electricity regulations /11/ the next calibration is due on 24/04/2023, 29/05/2023, 13/08/2023, 18/03/2024, 27/03/2024, and 01/05/2024 respectively. Hence it is confirmed that the calibration covers this monitoring period. Further, for changed meters the test reports are provided /14/.
Does the calibration of meters have been done by an accredited person or institution?	The calibration is conducted by state utility i.e. MSEDCL which is NABL Accredited entity/14/. Calibration is in line with the requirement of calibration is in line with national requirement /11/.

Data/Parameter	Assessment								
Data Unit	EG _{Import} ; MWh								
Description	Electricity imported from the grid by the project activity in year y.								
Source of data to be used	Monthly certificates issued by MSEDCL (Credit Note) /12/.								
Value of monitored parameter for the monitoring period	68.29								
Monitoring equipment	Export Import energy meters of Elster make, which are state utility owned, are installed at substation. The serial number and the technical details of the meters are specified in the MR/01/ are found consistent. These meters are seen at site and the details of the meters are as follows. <table><tr><th>Meter Serial Number</th><th>Accuracy Class</th><th>Make</th><th>Last Calibration</th></tr><tr><td>4760188</td><td>0.2</td><td>Elster</td><td>13/08/2018</td></tr></table>	Meter Serial Number	Accuracy Class	Make	Last Calibration	4760188	0.2	Elster	13/08/2018
Meter Serial Number	Accuracy Class	Make	Last Calibration						
4760188	0.2	Elster	13/08/2018						

	5269382	0.2	Elster	29/05/2018
	16595516	0.2	Elster	24/04/2018
	04862747	0.2	Elster	01/05/2019
	14831531	0.2	Elster	18/03/2019
	14831520	0.2	Elster	18/03/2019
	14831522	0.2	Elster	18/03/2019
	14831533	0.2	Elster	27/03/2019
Accuracy of the monitoring equipment	Electronic Tri-vector meter with accuracy class 0.2S. The same was confirmed during the remote audit and from calibration/meter test certificates and previous verification report /14/,/09/.			
Measuring/Reading/Recording frequency	Continuous measurement. The same is in line with the methodology requirement and is hence accepted. The parameter is calculated by the using the export and import values of electricity provided in the monthly energy statement/credit note /12/. The values of electricity exported and imported are monthly recorded/12/. It is confirmed that, the measuring and reporting frequency are in line to registered VCS PD/02/.			
Calculation method (if applicable)	Not applicable. Measured value.			
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The remote audit of the project activity confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable.			
Calibration				
Calibration frequency/interval Is the calibration interval in line with the monitoring plan of the PD?	Energy meters will be calibrated once in 5 years. The same is in line with the calibration frequency defined according to the Central Electricity Authority (CEA) guideline for meter testing /11/. However, there is a deviation w.r.t. registered VCS PD /02/. The deviation is mentioned in the section 3.2.2 of the monitoring report. The justification w.r.t. deviation is found acceptable; the same is detailed in the above section 3.3.			

Does the calibration cover the monitoring period? Has the calibration frequency been respected?	As per the deviation applied, the meters will be calibrated once in 5 years. The same is in line with the calibration frequency defined according to the registered VCS PD /02/. This is according to the Central Electricity regulations /11/. The monitoring period from 01/01/2020 to 31/12/2020; and the last calibration of meters performed on 24/04/2018, 29/05/2018, 13/08/2018, 18/03/2019, 27/03/2019 and 01/05/2019. As per the Central Electricity regulations /11/ the next calibration is due on 24/04/2023, 29/05/2023, 13/08/2023, 18/03/2024, 27/03/2024, and 01/05/2024 respectively. Hence it is confirmed that the calibration covers this monitoring period. Further, for changed meters the test reports are provided /14/.
Does the calibration of meters have been done by an accredited person or institution?	The calibration is conducted by state utility i.e. MSEDCL which is NABL Accredited entity/14/. Calibration is in line with the requirement of calibration is in line with national requirement /11/.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

The Monthly generation sheets/credit notes for the project activity issued by the state utilities readings from which have been used for the calculations were reviewed by the assessment team. Every month, MSEDCL (State Government company) takes the meter readings. The monthly readings present the net electricity export to grid /12/. Base on the Meter Readings/credit note (Generation report) from WTGs of 44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India issued by MSEDCL/12/, the emission reduction is calculated. Since 100% data was verified, the team can ascertain that the values taken for emission reduction calculation are free from material errors.

CO₂ emission factor has been taken as 0.9777 tCO₂ /MWh. The verification team has verified the value with the report published by CEA /11/and registered VCS-PD /02/ and found to be correct and consistent. The baseline emission is calculated as 44,197 tCO₂e. As per the methodology and the registered VCS-PD, the project does not need to consider project emissions and leakage. Thus, the emission reductions are 44,197 tCO₂e for this monitoring period.

4.6 Non-Permanence Risk Analysis

Not applicable for the project activity.

5 VERIFICATION CONCLUSION

RINA Service Spa (RINA) has performed verification of the emission reductions reported for the project activity “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India”

in India, VCS Registry Project ID VCS489, for the period 01/01/2020 to 31/12/2020 (both days inclusive), with regard to the relevant requirements for VCS activities. The project participants of the “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India” project are responsible for:

- the preparation of greenhouses 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 VCS project description version 03 of 01/02/2017
- 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 VCS Standard version 4.1 (v4.1) and GHG program applied, on the reported greenhouse gas emission reductions from the project.

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

- the project has been implemented and operated as per the registered VCS-PD;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS Standard version 4.1 requirements;
- the monitoring is in place as per the applied baseline and monitoring methodology;
- the monitoring plan in the registered VCS-PD is as per the applied baseline and monitoring methodology.

It is RINA’s opinion that the GHG emission reduction stated in the monitoring report version 02 of 20/06/2021 for the “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India” in India for the period 01/01/2020 to 31/12/2020 are fairly stated. The GHG emission reductions were calculated correctly on the basis of the approved monitoring methodology ACM0002, Consolidated methodology for “Grid-connected electricity generation from renewable sources” version 17.0 of 13/05/2016 and the monitoring plan contained in the registered VCS-PD.

Hence RINA is able to certify that the emission reduction from the project during the monitoring period 01/01/2020 to 31/12/2020 is amount to 44,197 tCO_{2e}.

Verification period: From 01-01-2020 to 31-12-2020.

Verified GHG emission reductions and removals in the above verification period:

For non-AFOLU projects, use the following table:

Year	Baseline emissions or removals (tCO _{2e})	Project emissions or removals (tCO _{2e})	Leakage emissions (tCO _{2e})	Net GHG emission reductions or removals (tCO _{2e})
2020 (01/01/2020 to 31/12/2020)	44,197	0	0	44,197

Total	44,197	0	0	44,197
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APPENDIX I: ABBREVIATIONS

Abbreviations	Full texts
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER(s)	Certified Emission Reduction(s)
CL	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EF	Emission Factor
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
HTSC	High Tension Service Connection
IPCC	Intergovernmental Panel on Climate Change
MR	Monitoring Report
MSEDCL	Maharashtra State Electricity Distribution Company Limited
PD	Project Description
PE	Project Emission
CEA	Central Electricity Authority
PP(s)	Project Participant(s)
Ref.	Document Reference
RINA	RINA Services S.p.A.
SS(s)	Sectoral Scope(s)
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCU	Verified Carbon Unit
VER	Voluntary Emission Reductions
VVS	Validation and Verification Standard
WEC	Wind electric converters

APPENDIX II: RESOLUTION OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS

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

FAR ID	Xx	Section no.	Xx	Date: DD/MM/YYYY
Description of FAR				
<i>No remaining FAR to be addressed.</i>				
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.	4.4	Date: 31/03/2021
Description of CR				
1) <i>PP is requested to submit all the monthly supporting docs for all clients.</i> 2) <i>The documents related to meter calibration is not available. PP is requested to submit meter calibration records.</i>				
Project participant response				Date: 25/06/2021

1) PP hereby confirms that all monthly supporting documents for all the clients have been submitted to DOE. 2) PP would like to inform that due to prevailing pandemic, the authority who conducts energy meter calibration could not physically done the meter testing/calibration in the year 2020. Hence the calibration details for the year 2020 are not available. Therefore, during this monitoring period, a deviation has been taken consider the delay in meter calibration. The calibration is not under the purview of the Project Participant (PP) and is performed by the MSEDCL Testing Division; which is the authorized body for meter testing. The meters are tested, sealed and maintained by MSEDCL only in the presence of authorized representative of the PP who also signs the results. However, due to ongoing pandemic situation and intermittent lockdown in the state, this regular procedure for meter testing could not be performed. However, PP has referred to the CEA notification dated 17 March 2006. Which confirms that energy meters test/calibration can be performed once in five years. Thus, PP has revised the calibration frequency of the meters as once in five years as per the CEA Notification. Now with the deviation the next due calibration for energy meters will be in the year 2023 and 2024. The required information under the VCS-MR has been updated. Also the deviation has been explained under the section 3 of the MR.	
Documentation provided by project participant	
1) All monthly generation records. 2) Energy meters' previous calibration certificates	
DOE assessment	Date: 30/06/2021
1) PP has submitted all the supportive documents; and the documents found appropriate. 2) PP has revised the MR and applied for a permanent deviation w.r.t. calibration. Due to the present pandemic situation the state utility is not performing the calibration on time. The same is not in the control of PP. Hence, PP has now opted for following the national guidelines i.e. Central Electricity Authority notification w.r.t. calibration. As, per the CEA notification calibration of energy meters to be performed once in 5 years. So, under this guideline the energy meter calibration reports are covering the monitoring period. Hence CL 01 is closed.	

CAR ID	01	Section no.	4.1	Date: 31/03/2021
Description of CAR				
1) <i>For some customers the original name was changed previously, the MR includes this information. However, in the ER sheet new names are not updated for couple of clients. PP is requested to correct the same.</i> 2) <i>Further, the generation data mentioned for few months is not in-line with the JMRs submitted. The same is highlighted in the ER sheet. PP is requested to correct the same.</i>				
Project participant response				Date: 25/06/2021

1) The changes in names for the particular clients have been addressed under the ER sheet. The revised ER sheet (version 02) is now submitted to DOE. 2) PP has cross checked all values in the ER sheet for each Project Developer. The values in the ER sheet are now consistent with the monthly credit notes. The updated ER sheet (version 02) is now submitted to DOE. The energy values and the ER results are now also updated in the MR (version 02).	
Documentation provided by project participant	
1) Updated ER sheet, version 02, dated 20/06/2021 2) Updated MR, version 02, dated 20/06/2021	
DOE assessment	Date: 30/06/2021
PP has revised the MR and ER sheet. The corrections made in line with the documents submitted; and now the emission reduction calculations is in line with the documents submitted. Hence, CAR 01 is closed.	



CERTIFICATO DI QUALIFICA PER GLI SCHEMI VOLONTARI*
QUALIFICATION CERTIFICATE FOR VOLUNTARY SCHEMES*

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

Cyril Augustus Arokiasamy Amalorpavanathan

è qualificato come:
 is qualified as:

TEC, VAL, VER, TL, Local Expert, ITRP

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

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
5.1	Chemical Industry	5
13.1	Solid Waste and wastewater	13

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	19/07/2016	First issue with new template (this certificate is linked to CDM qualification)
2	09/10/2017	Qualification update as ITRP

Responsabile di schema
 Scheme Leader
 Laura SEVERINO



*SCHEMI VOLONTARI/ VOLUNTARY SCHEMES: ACR American Carbon Registry, CCB The Climate, Community & Biodiversity Alliance, GS Gold Standard, JI Joint Implementation, SCS Soda Carbon Standard, VCS Verified Carbon Standard.

TEC: Technical expert, VAL: Validator, VER: Verifier, TL: Team leader, FIN EXP: Financial Expert, ITRP: Independent technical reviewer

RINA Services S.p.A. è accreditato/ricosciuto da

RINA Services S.p.A. is accredited /recognized by

UNFCCC	quali Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects
VCSA	per condurre la Validazione e la Verifica di Progetti VCS to carry out Validation and Verification of VCS Projects
GS Foundation	per condurre la Validazione e la Verifica di Progetti GS to carry out Validation and Verification of GS Projects
Ecologica Institute	per condurre la Validazione e la Verifica di rapporti SCS to carry out Validation and Verification of SCS Reports
American Carbon Registry ACR	per condurre la Validazione e la Verifica di Progetti ACR to carry out Validation and Verification of ACR projects
The Climate, Community & Biodiversity Alliance CCB	per condurre la Validazione e la Verifica di Progetti co-benefit CCB to carry out Validation and Verification of co-benefit CCB projects



CERTIFICATO DI QUALIFICA PER GLI SCHEMI VOLONTARI*
QUALIFICATION CERTIFICATE FOR VOLUNTARY SCHEMES*

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

Vijay Mathew

è qualificato come:
is qualified as:

TEC, VAL, VER, TL, ITRP

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

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

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	19/07/2016	First issue with new template (this certificate is linked to CDM qualification)
1	18/04/2017	Update qualification as VER and ITRP

Responsabile di schema
Scheme Leader
Laura Severino



*SCHEMI VOLONTARI/ VOLUNTARY SCHEMES: ACR American Carbon Registry, CCB The Climate, Community & Biodiversity Alliance, GS Gold Standard, JI Joint Implementation, SCS Social Carbon Standard, VCS Verified Carbon Standard.

TEC: Technical expert; VAL: Validator; VER: Verifier; TL: Team leader; FIN EXP: Financial Expert; ITRP: Independent technical reviewer

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GS Foundation	per condurre la Validazione e la Verifica di Progetti GS to carry out Validation and Verification of GS Projects
Ecologica Institute	per condurre la Validazione e la Verifica di rapporti SCS to carry out Validation and Verification of SCS Reports
American Carbon Registry ACR	per condurre la Validazione e la Verifica di Progetti ACR to carry out Validation and Verification of ACR projects
The Climate, Community & Biodiversity Alliance CCB	per condurre la Validazione e la Verifica di Progetti co-benefit CCB to carry out Validation and Verification of co-benefit CCB projects