

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



Project Title	44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India Limited.
Version	05
Report ID	CCP.VOL0890 MP06 (VCS ID 489)

Report Title	Verification Report for “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India limited.”
Client	Wind World (India) Ltd (Formerly known as Enercon (India) Limited)
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Summary:

SGS United Kingdom Ltd has performed the verification of the project “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India limited.” and VCS Project ID: 489 against VCS Standard Version 3.4. The verification includes confirming the implementation of the monitoring plan of the VCS Project Description dated 16/09/2009 and the application of the monitoring methodology as per ACM0002 version 10 dated 28/05/2009. A site visit was conducted to verify the data submitted in the monitoring report.

This project activity is a bundled wind power generation project with total installed capacity of 44 MW. This project activity consists of the installation of 55 Wind Turbine Generators, each with a capacity of 800 kW. The electricity generated from these wind mills is being supplied to the NEWNE Grid; hence replacing fossil fuel dominated grid connected electricity generation.

The report describes a total of 03 findings which include:

- 03 Corrective Action Requests (CARs);
- 0 Clarification Requests (CLs);
- 0 Forward Action Requests (FARs); and

All findings have been closed satisfactorily and same has been discussed in Appendix 2 of this verification report.

SGS confirms that the project is implemented in accordance with the validated and registered VCS Project Description except for the deviation as described under section 3.3 of this report. The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the projects GHG emissions and the resulting GHG emission reductions reported and related to the valid and validated project baseline and monitoring and its associated documents. Based on the information seen and evaluated the assessment team confirm that the implementation of the project has resulted in **66,077** tCO₂e emission reductions during period 01/05/2013 up to 31/12/2013 (both days included).

Abbreviations

BEF	Baseline Emission Factor
BM	Build Margin
CAR	Corrective Action Request
CEA	Central Electricity Authority
CER	Certified Emission Reductions
CERC	Central Electricity Regulatory Commission
CL	Clarification Request
CMP	Conference of Parties Serving as Meeting of Parties
CO ₂	Carbon dioxide
DISCOM	Distribution Company
EB	Executive Board
EIL	Enercon India Limited
EPC	Engineering, Procurement and Construction
FAR	Forward Action Request
GHG	Green House Gas
ISO	International Standards Organization
JMR	Joint Meter Reading
kW	Kilowatt
kWh	Kilowatt hour
MFR	Multi-Function Relay
MR	Monitoring Report
MSEDCL	Maharashtra State Electricity Distribution Company Limited
MW	Megawatt
MWh	Megawatt-hour
NEWNE	Northern Eastern Western Northern-Eastern
O&M	Operation and Maintenance
OM	Operating Margin
PDD	Project Design Document
PLF	Plant Load Factor
PP	Project Proponent
PPA	Power Purchase Agreement
SCADA	Supervisory Control And Data Acquisition
SGS	SGS United Kingdom Limited
QA/QC	Quality Assurance and Quality Control
UNFCCC	United Nations Framework Convention on Climate Change
WTG/WEG/WEC	Wind Turbine Generator/Wind Energy Generator/Wind Energy Converter
VCS	Voluntary Carbon Standard
VCSA	Voluntary Carbon Standard Association
VCS PD	VCS Project Description
VCUs	Voluntary Carbon Units
WWIL	Wind World (India) Limited

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1 INTRODUCTION

1.1 Objective

SGS United Kingdom Ltd has been contracted by Wind World (India) Ltd to perform an independent verification of its project “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India Limited” (VCS ID 489) against VCS Standard Version 3.4^{/1/}. The assessment team have reviewed the GHG data collected to date for the period from 01/05/2013 to 31/12/2013 (both days included).

The purposes of this verification exercise are, by review of objective evidence, to independently review:

- Whether the project has resulted in emission reductions as declared by the organisation or GHG project’s GHG assertion;
- The data reported are accurate, complete, consistent, transparent and free of material error or omission.

1.2 Scope and Criteria

This engagement covers the VCS verification of emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India Limited” as per the registered VCS PD^{/4/}, version 01 dated 16/09/2009.

Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. Our examination includes assessment, on a test basis, of evidence relevant to the amounts and disclosures in relation to the project’s GHG emission reductions for the defined reporting period.

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 Level of Assurance

The level of assurance of the verification report falls under reasonable assurance engagements as selected by the Client. Materiality for the project is 5%.

1.4 Summary Description of the Project

This engagement covers emissions and emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of the following project and period:

Title of Project Activity:	44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India Limited
VCS ID	489
MP Covered in this Report	01/05/2013 to 31/12/2013

Project Proponents	Wind World (India) Ltd (Formerly known as Enercon (India) Limited)
Location of the Project Activity:	The project activity is located in Villages in Aundhewadi, Kadvekhurd, Varekarwadi, Bhambarwadi & Panchpatta, in Satara, Sangli, Nasik & Ahmednagar district in the state of Maharashtra (India).

The project activity is located in districts Satara, Sangli, Nasik and Ahmednagar in the state of Maharashtra, India. The project activity consists of the installation of 55 WTGs of capacity 800 kW each invested by 29 investors. The electricity generated from these wind mills is being supplied to Maharashtra State grid which is integral part of NEWNE Grid. The equivalent amount of electricity would have been generated through fossil fuel fired power plants connected to NEWNE Grid resulting in higher GHG emissions in absence of the project activity. Hence generation of power through the project activity contributes to GHG emission reductions. The project activity is already commissioned^{12/} and it is found to be running satisfactorily.

2 VERIFICATION PROCESS

2.1 Method and Criteria

SGS has produced a Verification Checklist which, based on the risk assessment of the parameters and data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan.

Using the Verification checklist, SGS verified the implementation of the monitoring plan and the data presented in the Monitoring Report^{3/} for the period in question. This involved a site visit and a desk review of the Monitoring Report^{3/}. This verification report describes the findings of this assessment.

2.2 Document Review

The registered VCS PD^{4/}, VCS MR^{3/}, VCS validation report^{10/} and additional supporting documents related to the project performance submitted by the client were reviewed. A complete list of all documents reviewed is mentioned in Appendix 1 of this report.

2.3 Interviews

The verification team has carried out interviews in order to verify the information included in the project documentation and to gain additional information regarding the compliance of the project with the VCS requirements. Before, during and after the on-site visit, the verification team has interviewed the representatives of the PP to confirm selected information and to clarify issues identified during the document review and the site visit. Representatives of WWIL (formerly known as EIL) (project consultant and O&M contractor) were also interviewed. The names and designations of the personnel interviewed are mentioned in section 2.4 of this report.

The main topics covered during the interview are as follows:

- General Aspects of the project
- Project Implementation
- Equipment and operation
- Staff Training procedures
- Calibration procedures
- Monitoring & Measuring System
- Data collection, recording and archiving procedure
- QA/QC procedures
- VCS documentation
- Emission reduction calculations

2.4 Site Inspections

As part of the verification, an on-site inspection has been performed by the Lead Assessor; Local Assessor and Sectoral Expert (TA1.2). The site visit was carried out on 26/03/2014 and 27/03/2014. During the site visit, representatives of the PP were interviewed; i.e. personnel responsible for monitoring of the project activity, data collection and management, and QA/QC procedure. The details of the people interviewed and the topics discussed are mentioned in the table below:

Location: Villages in Aundhewadi, Kadvekhurd, Varekarwadi, Bhambarwadi & Panchpatta, in Satara, Sangli, Nasik & Ahmednagar district in the state of Maharashtra.	Date: 26/03/2014 and 27/03/2014
Coverage	Source of Information / Persons Interviewed
Electricity Generation Records (Monthly Form B, Invoices and credit notes) Reliability & accuracy of readings considered for emission reduction calculations, Calibration procedure	Ms. Poorvi Joshi Shenoy (Executive, WWIL) Vaibhav Sharma (Astt. Engineer, WWIL)
Monitoring and measuring system • Collection of measurements • Observations of established practices • Data Verification of monitoring parameters	Ms. Poorvi Joshi Shenoy (Executive, WWIL) Ankit Sharma (Astt. Engineer, WWIL)
QA/QC procedures, data management, internal audits to maintain data quality & reliability, maintenance Practices Consideration of monitoring period, monitoring methodology, project documentation and emission reduction calculations	Ms. Poorvi Joshi Shenoy (Executive, WWIL)
Discussion to clarify issues identified during the document review and the site visit through the findings document	Ms. Poorvi Joshi Shenoy (Executive, WWIL)

2.5 Resolution of Findings

As an outcome of the verification process, the team can raise different types of findings.

In general, where insufficient or inaccurate information is available and clarification or new information is required the team shall raise a Clarification Request (CL) specifying what additional information is required.

Where a non-conformance arises the team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- I. The verification is not able to obtain sufficient evidence for the reported emission reductions or part of the reported emission reductions. In this case these emission reductions shall not be verified and certified;
- II. The verification has identified misstatements in the reported emission reductions. Emission reductions with misstatements shall be discounted based on the verifiers ex-post determination of the achieved emission reductions.

The verification process may be halted until this information has been made available to the assessors' satisfaction. Failure to address a CL may result in a CAR. Information or clarifications provided as a result of a CL may also lead to a CAR.

FARs may be raised which are for the benefit of future projects and future verification actors. These have no impact upon the completion of the verification activity.

Corrective Action Requests and Clarification Requests are detailed in Verification Checklist. The Project Developer is given the opportunity to "close" outstanding CARs and respond to CLs and FARs.

No clarification requests or forward action request was raised during current verification. However 03 corrective action requests have been raised during the verification process. Summary of findings have been provided under Appendix 2 of this report.

2.5.1 Forward Action Requests

No forward action request has been raised during this verification.

2.6 Eligibility for Validation Activities

Not applicable to this project activity.

3 VALIDATION FINDINGS

This project activity is registered under the VCS Version 2007.1. Thus it is concluded that all the rules and validation requirements set by VCS were already taken care of at the time of the VCS validation of the project activity. Thus no further validation is required for the project activity.

3.1 Participation under Other GHG Programs

Not applicable

3.2 Methodology Deviations

Not applicable as no methodological deviations are found.

3.3 Project Description Deviations

The following points covered under the deviation taken during third verification of project activity (MP from 01/10/2010 to 30/11/2011):

1. The Panama Wind Energy transferred WTGs to D.J. Malpani on April 2011.
2. The parameter EG_{Gross} is not considered as monitoring parameter because now the credit breakup is used as source for considering the values of EG_{Export} & EG_{Import} , the credit breakup is issued on monthly basis and is authorised by MSEDCL.

The deviation was accepted and approved by VCS board. The assessment team confirms that the deviations do not impact any of the following:

- The applicability of the methodology.
- Additionality.
- The appropriateness of the baseline scenario.

The assessment team also confirms that the deviation is appropriately described and justified, and the project remains in compliance with the VCS rules and hence concluded that the project deviation is valid.

There is no deviation observed during the current verification. During the site visit to the project activity, it is confirmed that the implementation of the project activity is in accordance with the project description mentioned in the registered VCS PD.

3.4 Grouped Project

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

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

Project activity is implemented and equipments are installed^{/12/} as described in the registered VCS PD.

This is the sixth verification for the project activity. The project activity has been commissioned^{/12/} and is operating satisfactorily. The same has been checked and verified during the site visit to the project activity. The commissioning of all the WTGs have been verified against their commissioning certificates^{/12/}.

It is noted that the name of the PP has changed from Enercon (India) Limited to Wind World (India) Limited, the same is verified thorough Certificate of Incorporation Consequent up on change of name issued by the Ministry of Corporate Affairs (GOI), dated 01/01/2013^{/18/}. The PP name is also updated as Wind World (India) Limited in the APX VCS registry account, snap shot of the registry account is checked and found to be correct.

The monitoring of the project activity is found to be in accordance with the monitoring methodology described in ACM0002, Version 10^{/6/}. The monitoring mechanism is effective and reliable. During the site visit, personnel involved at various levels of 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 on-site verification of the plant records also substantiate consistency in recording and reporting of monitored data.

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^{/4/}; VCS MR^{/3/} and report of the previous verification^{/10/} and cross-checked against the PPA^{/13/} signed for the project activity.

The actual VCUs achieved during the current monitoring period is 29.5% more than the same estimated in registered VCS PD. The reason for the same is that the current monitoring period involves high wind season months (May 2013 to December 2013) leading to higher PLF.

The meter details have been described in section 4.3 of this report. The supporting records of monthly JMR^{/8/} and monthly invoices^{/9/} for the entire monitoring period were checked and found to be sufficient to enable verification of emission reductions.

The following parameters have been verified for current monitoring period:

(1) Net electricity supplied to the grid by the Project, EG_y, net

This parameter is being calculated based on the values of electricity export and import at MSEDCL's meter at substation. The value of this parameter is being sourced from JMR reports^{/8/} and it is further crosschecked with invoices^{/9/} raised by individual investors involved in the project activity. This parameter is being used for the calculation of the emission reductions for the project activity. This is found to be consistent with the monitoring methodology as per registered VCS PD^{/4/}; hence this is accepted. Since MSEDCL is the third party government agency; this parameter has been considered from the JMR reports^{/8/} for emission reductions calculations for the project activity. The value of this parameter for the current monitoring period is 72944.94303MWh.

(2) Electricity exported to the grid by the project activity in year y, EG_{Export y}

The value of this parameter is being used for calculation net electricity supplied to grid by project activity. As per the registered VCS PD, this parameter is being monitored at energy meter located at MSEDCL's substation. However, this parameter is not directly being measured but it is apportioned value of electricity export measured at meter installed at the MSEDCL substation. Electricity is being measured hourly and same is being recorded monthly at substation. The PP calculated and reported electricity

exported to the grid by the project activity on monthly basis. This is in line with the applied methodology ACM0002 version 10. Joint Meter Reading is being taken on a monthly basis and it is signed by MSEDCL's and WWIL's. The value of this parameters is directly sourced from JMR Reports^{/8/} and this is further crosschecked with invoices^{/9/} raised by individual investors involved in the project activity. The value of this parameter for the current monitoring period is 72987.94269MWh.

(3) Electricity imported from the grid, EG_{Import y}

The value of this parameter is being used for calculation net electricity supplied to grid by project activity. As per the registered VCS PD, this parameter is being monitored at energy meter located at MSEDCL's substation. However, this parameter is not directly being measured but it is apportioned value of electricity import measured at meter installed at MSEDCL substation. Electricity is being measured hourly and same is being recorded monthly at substation. The PP calculated and reported electricity imported from the grid by the project activity on monthly basis. This is in line with the applied methodology ACM0002 version 10. Joint Meter Reading is being taken on a monthly basis and it is signed by MSEDCL's and WWIL's. The value of this parameters is directly sourced from JMR Reports^{/8/} and this is further crosschecked with invoices^{/9/} raised by individual investors involved in the project activity. The value of this parameter for the current monitoring period is 42.99966 MWh.

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

The calculation of the emission reductions is found to be correct. The details of the verified values for all parameters are provided in section 4.1 of this report.

The net electricity supplied to grid by the project activity is used for the emission reduction calculations. The project participant has provided a complete set of data for the specified monitoring period of 01/05/2013 up to 31/12/2013. The values of parameters reported in the ER spreadsheet^{/5/} by the PP and the same were checked and confirmed with the same mentioned in the JMR reports^{/8/} and invoices raised by the project participant^{/9/}. The values are found to be consistent and accurate.

The formula and method used to calculate the baseline emissions are appropriate. Since the project is a wind power generation project, project emissions and leakage emissions are not involved in the project activity. This is found to be in line with the approved methodology ACM0002 version 10 and as defined in the registered VCS PD^{/4/}.

The PP has calculated the grid emission factor as per the combined margin approach described in the 'Tool to calculate the emission factor for an electricity system', version 1.1^{/7/}. The grid emission factor has been calculated as the weighted average of OM & BM; and has been fixed ex-ante for the entire crediting period.

The OM and BM have been obtained from a publicly available source i.e. "CO₂ Baseline Database for Indian Power sector", version 4.0^{/11/} published by Central Electricity Authority, Ministry of Power, and Government of India. The OM has been determined as the average of the previous 3 years values obtained from the CEA database^{/11/}. The value of BM has been identified directly from the CEA database. The combined margin emission factor was arrived at by applying weights of 75% for OM and 25% for BM, as specified in the tool. The OM and BM have been calculated to be 1.00862 tCO_{2e}/MWh and 0.59771 tCO₂/MWh respectively. Applying the weights, the grid emission factor has been calculated to be 0.90589 tCO₂/MWh. The calculation of the grid emission factor has been validated and reported in the registered VCS PD^{/4/} of this project activity.

As per CER excel spreadsheet^{/5/} submitted by the PP, the net emission reductions for the current monitoring period was verified as 66,077 tCO_{2e} for the current monitoring period.

The assessment team confirms that the GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

All parameters used for the determination of the Emission Reductions are discussed in section 4.1 of this report. The data pertaining to the parameters mentioned in section 4.1 of this report are maintained in the identified records^{/8/, /9/}. The external sources data have been discussed in section 4.2 of this report. All the data is in compliance with the figures stated in the monitoring report^{/3/} and the ER calculation excel spreadsheet^{/5/}.

According to the registered VCS PD, the verification team has checked the JMR reports^{/8/} signed by MSEDCL's and WWIL officials. The same have being cross checked against the invoices submitted to MSEDCL by individual investors. Since the monthly JMRs and monthly invoices have been issued by state utility hence found to be reliable and authentic.

As per the registered VCS PD^{/4/} (version 01, dated 16/09/2009), the operations, maintenance and monitoring of the project activity is being carried out by the WWIL (Formerly known as Enercon (India) Limited) whose operation and maintenance activities are ISO 9001:2008 certified. Hence it is confirmed that the management system of the VCS project is in place; with the responsibilities properly identified. The same was also verified during the on-site verification.

During the verification assessment of the project activity, accuracy of all the metering have been checked and found appropriate. The installation and working conditions of the meters were checked during the on-site inspection and were found to be satisfactory. Details of meters are provided in below table.

Location	Meter Sr. No.	Feeder No.	Calibration Date	Calibration Due Date	Comments
Kadvekhurd	04760188	-	03/05/2012 and 20/04/2013	20/04/2014	ok
Varekarwadi	Old : 04760189 New: 1495367	F1	Old: 05/05/2012 New: 27/08/2012 and 27/09/2013	27/09/2014	New meter is installed on 27/08/2012
Bhambarwadi	Old:04862746 New : 16595516	F1	Old: 27/08/2012 New: 06/12/2013	06/12/2014	New meter is installed on 06/12/2013
Bhambarwadi	04862747	F3	27/8/2012 and 06/01/2014	06/01/2015	
Panchpatta	Old: 04862978 New: 14831531	F1	Old: 20/06/2012 New: 01/08/2012 and 19/11/2013	19/11/2014	New meter is installed on 01/08/2012
	Old: 04862987 New: 14831533	F6	Old: 20/06/2012 New: 29/10/2012 and 19/11/2013	19/11/2014	New meter is installed on

					29/10/2012
	Old: 04862983 New:14831522	F5	Old: 20/06/2012 New: 31/07/2012 and 16/01/2014	16/01/2015	New meter is installed on 31/07/2012
	Old: 04862984 New:14831520	F4	Old: 20/06/2012 New: 29/10/2012 and 19/11/2013	19/11/2014	New meter is installed on 29/10/2012

It is noted that meters located at Varekarwadi, Bhamburwadi and Panchpatta substation were changed. The assessment team has verified the meter replacement certificates^{/16/} and it is confirmed that the new meters were calibrated before installation and accuracy class of the older meter and the new meter are same.

All the meters used to measure the parameters are of accuracy class 0.2s as verified through calibration certificates^{/14/} and also physical inspection during the site visit. This is as per CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006^{/17.a/} and Amendments Notified on 26/06/2010^{/17.b/} No. 502/6/2009/DP&D/D-I which is considered as national standard, mentions that for interface meters 0.2 accuracy class is required. . Hence, the accuracy classes of 0.2s for the energy meters installed at the project activity site are found to be appropriate.

The details of monitoring equipments involved in the project activity and their calibration details^{/14/} are mentioned in the table under section 3.3 of the VCS MR^{/3/}. The meters have been physically inspected during the site visit and the meter details are found to be consistent with that observed during the site visit. The accuracy class of the meters are consistent with that mentioned in the registered VCS PD.

The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006^{/17.a/} which is considered as national standard mentions that "All interface meters shall be tested at least once in five years." Hence, the stipulated calibration frequency as once in a year is appropriate. As indicated through the dates of calibration mentioned in the table under section 3.3 of the VCS MR, all meters are calibrated once in a year. The date of calibration has been verified against the calibration certificates^{/14/}. It is observed that the calibrations of a few meters were not carried out in line with the calibration frequency as mentioned in registered VCS PD. The assessment team has verified the latest calibration certificate and confirmed that the results of delayed calibration don't show any error.

In line with the guidelines provided under paragraph 273(a) of VVS version 06, the PP has applied the maximum error factor to the measured values corresponding to delayed calibration period. This is verified through the ER calculation sheet and found to be appropriate and hence accepted.

In view of the above discussion the assessment team able to confirm that evidence used to determine the GHG reductions and removals are sufficient and appropriate with respect to quality and quantity.

4.4 Non-Permanence Risk Analysis

Not applicable in this project activity.

5 VERIFICATION CONCLUSION

The scope of the verification

SGS have been engaged by Wind World (India) Ltd to verify that the greenhouse gas (GHG) emission reductions reported for the “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India Limited” (VCS ID-489) for the period from 01/05/2013 to 31/12/2013 in the VCS Monitoring Report Version 04 dated 17/06/2014 are eligible for issuance as Verified Carbon Units.

This engagement covers the verification of emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of the project “44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India Limited” (VCS ID-489), as well as an additional confirmation of the compliance of the VCS PD^{/4/} with the requirements of VCS Standard version 3.4^{/1/}.

Our examination includes assessment, on a test basis, of evidence relevant to the amounts and disclosures in relation to the project’s GHG emission reductions for the defined reporting period.

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

Conclusions of the verification

(a) SGS is an entity accredited by the United Nations Framework Convention on Climate Change (UNFCCC) to undertake certification and verification services in the sector in which the Project is undertaken. The accreditation is accepted by VCSA as indicated in Clause 5 of VCS Program Guide Version 3.5^{/2/}.

(b) The VCS Monitoring Report, together with other information examined (Appendix 1 for full list), was prepared as per the VCS Monitoring Report Template, Version 3.3.

(c) The information in the VCS Monitoring Report together with other information examined by the assessment team (Appendix 1 for full list), including all the information necessary to determine that the emission reductions achieved have been determined correctly.

(d) Based on the examination of the VCS Monitoring Report and other relevant information (Appendix 1 for full list), the project meets all the requirements of the VCS Standard Version 3.4^{/1/}.

(e) Based on our examination of the VCS Monitoring Report^{/3/} and other relevant information (Appendix 1 for full list), the emission reductions during the monitoring period from 01/05/2013 to 31/12/2013 (both the days included) are verified as 66,077tCO₂e.

Liability statement with regards to the accuracy of the verification statement

The management of Wind World (India) Ltd is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions. SGS is responsible for verification and confirming emission estimates for the project, as described in the VCS Monitoring Report.

Our certification approach draws on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. Our examination includes an assessment of evidence, through desk review, and where necessary, interviews, stakeholder discussions and site visits, relevant to certifying the rightfulness of the amounts and disclosures in relation to the Project's GHG emission reductions.

We planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that the amount of GHG emission reductions for the given period, prepared on the basis of the Monitoring Report, are fairly stated.

This assessment included:

- Collection of evidence supporting the reported data;
- Checking whether the provisions of the Monitoring Plan in the registered VCS PD, were consistently and appropriately applied;
- Site visit and interview of relevant staff.

We have verified whether the information included in the VCS Monitoring Report representing the emission reductions achieved has been determined correctly for the given period from the baseline figure.

Certification statements

Based on process and procedures conducted, in our opinion, the VCS Monitoring Report Version 04 dated 17/06/2014 on emission reductions for "44 MW Bundled Wind Power Project in Maharashtra managed by Enercon India Limited", during the reporting period from 01/05/2013 to 31/12/2013 (both the days included), is materially correct and is a fair representation of the GHG data and information; and the emission reductions are fairly stated. All relevant facts have been found correct by our examination. The GHG emission reductions calculation is correct.

Therefore, SGS is able to certify that the project is in full compliance with the VCS Standard Version 3.4, and the quantity of the reported emission reductions during below reporting period are completely, comparably, accurately and correctly reported.

Verification period: From 01/05/2013 to 31/12/2013

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

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2013	66,077	0	0	66,077

Vintage Period	VCUs
1 st May 2013 to 31 st Dec 2013	66,077
Total VCUs (tCO₂e)	66,077

Statement of Confidentiality

SGS will hold all information confidential until the client instructs otherwise or until it has been released in accordance with the VCS Standard Version 3.4^{1/} requirements.

Signed on behalf of the Verification Body by Authorized Signatory

SGS United Kingdom Limited

Dated: 23/06/2014

Dated: 23/06/2014




Signature:

Lead Assessor

Ravi Kant Soni

Signature:

Technical Reviewer

Ramkrishna Patil

APPENDIX 1: Document References

1. VCS Standard Version 3.4
2. VCS Program Guide Version 3.5
3. VCS Monitoring Report, i. Version 01, dated 18/03/2014 ii. Version 02, dated 16/04/2014 iii. Version 03, dated 24/05/2014 iv. Version 04, dated 17/06/2014
4. Registered VCS PD version 01, dated 16/09/2009
5. Emission Reduction Spreadsheet, i. Version 01, dated 16/04/2014 ii. Version 02, dated 24/05/2014 iii. Version 03, dated 17/06/2014 iv. Version 04, dated 23/06/2014
6. Approved consolidated methodology ACM0002, Version 10 valid from 11/06/2009
7. Tool to calculate the emission factor for an electricity system, version 1.1
8. Monthly Joint Meter Reading(JMRs) for current monitoring period
9. Invoices for project activity for current monitoring period
10. VCS project web page https://vcsprojectdatabase2.apx.com/myModule/Interactive.asp?Tab=Projects&a=2&i=489&lat=17%2E554167&lon=73%2E924444&bp=1 VCS Validation Report - Report number - 53153808/08-08/486 dated 13/11/2009 Verification report for 5 th monitoring period ,dated 20/08/2013
11. CEA database Version 04
12. Commissioning certificates for project activity
13. Power Purchase Agreement, between Entities involved (other investors) and MSEDCL
14. Calibration Certificates for current monitoring period
15. CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006
16. Meter replacement certificates i. For Varekarwadi site, dated 01/09/2012 ii. For Panchpatta site, • Dated 26/09/2012 • Dated 08/11/2012 iii. For Bhambarwadi site, 18/12/2013
17. Central Electricity Authority (Installation and Operation of Meters) Regulations a. Notified on 17/03/2006 No. 502/70/CEA/DP&D b. Amendments Notified on 26/06/2010 No. 502/6/2009/DP&D/D-I
18. Fresh Certificate of Incorporation Consequent up on change of name issued by the Ministry of Corporate Affairs (GOI), dated 01/01/2013

Snap shot of APX VCS registry

APPENDIX 2: OVERVIEW OF FINDINGS

Findings Overview Summary

	CARs	CLs	OBSs
Total Number raised	03	00	00

Date:	29/03/2014	Raised by:	Assessment team		
Type:	CAR	Number:	01	Reference:	AU4
Lead Assessor Comment:					
1. Calibration details provided under section 3.3 of MR doesn't cover the current monitoring period, it is not clear if meters were calibrated during current monitoring period. 2. Please provide calibration certificates for current monitoring period. 3. During site visit it is found that meters installed at site are changed please clarify why new meters details is not mentioned in section 3.3 of MR.					
Project Participant Response:				Date: 16/04/2014	
1. In revised version of MR, Calibration details provided under section 3.3 of MR cover the current monitoring period 2. Calibration Certificate has been submitted along with revised version of MR. 3. In revised version of MR, new meter details have been provided under section 3.3.					
Documentation Provided by Project Participant:					
Revised MR version 2 dated 16/04/2014					
Calibration Certificate					
Information Verified by Lead Assessor:					
Revised MR version 2 dated 16/04/2014 is checked					
Calibration Certificate applicable for current monitoring period					
Reasoning for not Acceptance or Acceptance and Close Out:				Date: 30/04/2014	
1. Under section 3.3 of the revised MR the PP has provided calibration details in line with the calibration certificates. Hence accepted. 2. The PP has provided calibration certificate for all the meters involved in the current monitoring period. Hence accepted. 3. New meter details are provided under section 3.3 of the revised MR. Hence accepted.					
Thus CAR #1 is closed out.					
Acceptance and Close out by Lead Assessor:				Date: 30/04/2014	

Date:	29/03/2014		Raised by:	Assessment team	
Type:	CAR	Number:	02	Reference:	AU4
Lead Assessor Comment:					
Please provide the Emission reduction (ER) calculation sheet for current monitoring period.					
Project Participant Response:				Date:	
ER Calculation sheet has been provided along with revised version of MR.					
Documentation Provided by Project Participant:					
ER Calculation sheet version 01,dated 16/04/2014					
Information Verified by Lead Assessor:					
ER calculation sheet, version 01, dated 16/04/2014 is verified					
Reasoning for not Acceptance or Acceptance and Close Out:				Date: 30/04/2014	
The PP has provided ER calculation sheet. The values provided in the ER sheet are consistent with the MR and hence accepted.					
Thus CAR #2 is closed out.					
Acceptance and Close out by Lead Assessor:				Date: 30/04/2014	

Date:	23/05/2014		Raised by:	Assessment team	
Type:	CAR	Number:	03	Reference:	AU4
Lead Assessor Comment:					
Description of project activity deviation is not mentioned transparently in MR.					
Delay in calibration is not addressed appropriately in line with the paragraph 273(a) of VVS version 06.					
Project Participant Response:				Date: 24/05/2014	
Description of project activity deviation taken in third monitoring period is mentioned in revised version of MR. In revised version of MR, delay in calibration is mentioned in Section 3.3.					
Documentation Provided by Project Participant:					
Revised MR version 03,dated 24/05/2014					
Revised ER sheet, version 02,dated 24/05/2014					
Information Verified by Lead Assessor:					
Following documents are verified:					
Revised MR version 03, dated 24/05/2014					
Revised ER sheet, version 02, dated 24/05/2014					
Reasoning for not Acceptance or Acceptance and Close Out:				Date: 29/05/2014	
PP has transparently described the deviation in revised monitoring report. Closed					
The delay in calibration is correctly addressed in ER calculation sheet. Closed					
CAR #3 is closed					
Acceptance and Close out by Lead Assessor:				Date: 29/05/2014	
CAR #3 re-opened					
Lead Assessor Comment:				Date: 16/06/2014	

Section 1.8: Font size is not in line with the MR completion guidelines. Section 2.2.2 MR: Description of deviation is not in line with VCS MR template guidelines. Source web link for CEA database is not working. Value of EF reported in ER sheet is not consistent with the same mentioned in MR. Tab generation details: Values reported in columns AG and AH are the same, please clarify.	
Project Participant Response:	Date: 17/06/2014
Under Section 1.8, in the revised version of MR, font is in line with MR completion guideline. Section 2.2.2 is updated in line with VCS MR template guidelines. In the revised version of MR, web link for CEA database is working. Value of EF reported in revised ER sheet is consistent with the same mentioned in MR. Tab generation details: Values reported in columns AG and AH are the same, in revised version of ER Sheet column AH has been deleted.	
Documentation Provided by Project Participant:	
MR version 4 ,dated 17/06/2014	
ER Calculation Sheet, version 03,dated 17/06/2014	
Information Verified by Lead Assessor:	
Following documents are verified against response provided by PP:	
MR version 4, dated 17/06/2014	
ER Calculation Sheet, version 03, dated 17/06/2014	
Reasoning for not Acceptance or Acceptance and Close Out:	Date: 23/06/2014
Section 1.8 of the MR is completed in line with MR completion guidelines. Closed PP has updated the section 2.2.2 of MR in line with VCS MR template guidelines. Closed Web links for CEA database is working in the revised MR. Closed Value of EF reported in revised ER sheet is consistent with the same mentioned in MR. Closed PP has removed column AH in the revised ER sheet as it was irrelevant. Closed Tab electricity generation: capacity of WTG mentioned in cell D3 is not consistent with the same mentioned in registered VCS PD.Please clarify.	
Project Participant Response:	Date: 23/06/2014
Tab electricity generation: capacity of WTG mentioned in cell D3 is consistent with the same mentioned in registered VCS PD in revised version of ER Calculation Sheet.	
Documentation Provided by Project Participant:	
ER Calculation Sheet, version 04,dated 23/06/2014	
Information Verified by Lead Assessor:	
ER Calculation Sheet, version 04,dated 23/06/2014 is checked	
Reasoning for not Acceptance or Acceptance and Close Out:	Date: 23/06/2014
PP has corrected the capacity of WTG in cell D3, found to be consistent with registered VCS PD. CAR #3 is closed.	
Acceptance and Close out by Lead Assessor:	Date: 23/06/2014

APPENDIX 3: TEAM MEMBERS STATEMENTS OF COMPETENCY

Name: Ravi Kant Soni

Status

- Lead Assessor	x	- Expert	x
- Assessor	x	- Financial Expert	
- Local Assessor	India	- Technical Reviewer	x

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	x
Technical Area(s): TA 1.2 Energy generation from renewable energy sources	
2. Energy Distribution	
Technical Area(s):	
3. Energy Demand	
Technical Area(s):	
4. Manufacturing	
Technical Area(s):	
5. Chemical Industry	
Technical Area(s):	
6. Construction	
Technical Area(s):	
7. Transport	
Technical Area(s):	
8. Mining/Mineral Production	
Technical Area(s):	
9. Metal Production	
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	
Technical Area(s):	
12. Solvent Use	
Technical Area(s):	
13. Waste Handling and Disposal	
Technical Area(s):	
14. Afforestation and Reforestation	
Technical Area(s):	
15. Agriculture	
Technical Area(s):	

Approved Member of Staff by: Siddharth Yadav Date: 12/10/2012

Statement of Competence

Name: Vijaybhai Shankarbhai Patel

Status

- Lead Assessor		- Expert	
- Assessor	x	- Financial Expert	
- Local Assessor	India	- Technical Reviewer	

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	
Technical Area(s):	
2. Energy Distribution	
Technical Area(s):	
3. Energy Demand	
Technical Area(s):	
4. Manufacturing	
Technical Area(s):	
5. Chemical Industry	
Technical Area(s):	
6. Construction	
Technical Area(s):	
7. Transport	
Technical Area(s):	
8. Mining/Mineral Production	
Technical Area(s):	
9. Metal Production	
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	
Technical Area(s):	
12. Solvent Use	
Technical Area(s):	
13. Waste Handling and Disposal	
Technical Area(s):	
14. Afforestation and Reforestation	
Technical Area(s):	
15. Agriculture	
Technical Area(s):	

Approved Member of Staff by: Siddharth Yadav Date: 0/11/2012

Statement of Competence

Name: Ramkrishna
Patil

Status

- Lead Assessor	x	- Expert	x
- Assessor	x	- Financial Expert	
- Local Assessor	India	- Technical Reviewer	x

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	x
Technical Area(s):	
TA 1.2 Energy generation from renewable energy sources	
2. Energy Distribution	x
Technical Area(s): TA 2.1 Electricity distribution	
TA 2.2 Heat distribution	
3. Energy Demand	x
Technical Area(s): TA 3.1 Energy Demand	
4. Manufacturing	
Technical Area(s):	
5. Chemical Industry	
Technical Area(s):	
6. Construction	
Technical Area(s):	
7. Transport	
Technical Area(s):	
8. Mining/Mineral Production	
Technical Area(s):	
9. Metal Production	
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	
Technical Area(s):	
12. Solvent Use	
Technical Area(s):	
13. Waste Handling and Disposal	
Technical Area(s):	
14. Afforestation and Reforestation	
Technical Area(s):	
15. Agriculture	
Technical Area(s):	
Approved Member of Staff by: Siddharth Yadav	Date: 02/07/2012