
VERIFICATION AND CERTIFICATION REPORT

Enercon (India) Limited

**Bundled wind energy generation
projects in Gujarat, India**

SGS Climate Change Programme

SGS United Kingdom Ltd
SGS House
217-221 London Road
Camberley Surrey
GU15 3EY
United Kingdom

Date of Issue:		Project Number:	
03/06/2011		CCP.VOL0824	
Project Title:			
Bundled wind energy generation projects in Gujarat, India			
Organisation:		Client:	
SGS United Kingdom Limited		Enercon (India) Limited	
Summary:			
SGS United Kingdom Ltd has performed the Voluntary Emission Reduction verification of the VCS project "Bundled wind energy generation projects in Gujarat, India". The verification includes confirming the implementation of the monitoring plan of the registered VCS PD (Project ID 412) and the application of the monitoring methodology as per ACM0002 version 6 dated 18/05/2006. A site visit was conducted to verify the data submitted in the monitoring report. The project activity involves the installation of 75 WTGs with an installed capacity of 59.4 MW. The break up of the 75 WTGs is as follows: 72 WTGs of 0.8 MW (E-48 Enercon) capacity each & 3 WTGs of 0.6 MW (E-40 Enercon). The generated electricity is being supplied to the Western Regional Grid. Thus, the project contributes towards reducing GHG emissions by replacing the same amount of electricity from the Western Regional Grid which would otherwise be generated by a fossil fuel based power plant. SGS confirms that the project is implemented in accordance with the validated and registered VCS PD. 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 registered project baseline and monitoring and its associated documents. Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 79,384 tCO₂e during period 01/08/2009 to 30/06/2010.			
Subject:		Indexing Terms	
VCS 2007.1 Verification			
Voluntary Team:		☒ No Distribution (without permission from the Client or responsible organisational unit)	
Ravi Kant Soni – Lead Assessor Sudeep Kodialbail – Assessor Sudeep Kodialbail – Local Assessor Harsh Raval – Sectoral Scope Expert			
Technical Review:		☐ Limited Distribution	
Date: 03/06/2011 Name: Kaviraj Singh			
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Abbreviations

ACM	Approved Consolidated Methodology
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CL	Clarification Request
EB	Executive Board
FAR	Forward Action Request
GEDA	Gujarat Energy Development Agency
GHG	Greenhouse Gas(es)
GUVNL	Gujarat Urja Vikas Nigam Limited
MP	Monitoring Plan
MR	Monitoring Report
OM	Operating Margin
PD	Project Design
PDD	Project Design Document
PLF	Plant Load Factor
PP	Project Proponent
QA/QC	Quality Assurance/Quality Control
UNFCCC	United Nation Framework Convention on Climate Change
VCS	Voluntary Carbon Standards
VCU	Voluntary Carbon Units
WTG	Wind Turbine Generator

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1. Introduction

1.1 Objective

Enercon (India) Limited has commissioned an independent verification by SGS United Kingdom Limited of its reported greenhouse gas emission reductions from the “Bundled wind energy generation projects in Gujarat, India” project as per VCS 2007.1 guidelines. The verifiers have reviewed the GHG data collected to date for the period from 01/08/2009 to 30/06/2010 (both days included).

The purpose of this verification exercise is to independently review the objective evidence:

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

1.2 Scope and Criteria

This engagement covers verification of emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of the “Bundled wind energy generation projects in Gujarat, India” project.

SGS’ 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. SGS’ 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.

1.3 VCS Project Description

The project activity involves electricity generation by WTGs and supplying the same to the Western Regional Grid. This is the renewable energy generation, which can replace the fossil fuel dominated grid connected electricity generation. The project activity consists of 75 WTGs with an installed capacity of 59.4 MW in the district of Jamnagar in Gujarat, India. The break up of the 75 WTGs is as follows: 72 WTGs of 0.8 MW (E-48) capacity each & 3 WTGs of 0.6 MW each (E-40). Both the models (E-40 & E-48) has been sourced from Enercon. The WTGs have been commissioned between June 2004 and September 2006. The same has been verified through the commissioning certificates^{9/}.

All 75 WTGs are fully functioning and the assessment team verified this during the site visit.

1.4 Level of Assurance

The parameters and values presented in the monitoring report were assessed through review of detailed project documentation and electricity generation records, interviews with Operations and Maintenance personnel, check of log books, and observations of monitoring and reporting practices and assessment of the reliability of measuring equipment.

Information which was not available during site visit was reported as Clarification Request (CL) or Corrective Action Request (CAR), following submission of additional information, monitoring and operational records, and the reconsolidation of all reported data was assessed again

1.5 Project Activity and Period Covered

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:	Bundled wind energy generation projects in Gujarat, India
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UNFCCC Registration Number (if applicable) :	Not applicable since the project has been validated under the VCS
Monitoring Period Covered in this Report:	01/08/2009 to 30/06/2010
Project Participants:	Enercon (India) Limited
Location of the Project Activity:	Sites: Bamnasa; Jodhapar; Kuranga; Navadra; Okha Madhi & Satapar District: Jamnagar State: Gujarat Country: India

2. Methodology

2.1 General Approach

SGS' approach to the verification is a two-stage process.

In the first stage, SGS completed a strategic review and risk assessment of the projects activities and processes in order to gain a full understanding of:

- Activities associated with all the sources contributing to the project emissions and emission reductions, including leakage if relevant;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of verifying reported data; and
- Compilation of the monitoring report.

At the end of this stage, SGS produced a Verification Checklist which, based on the risk assessment of the parameters, 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 for the period in question. This involved a site visit and a desk review of the monitoring report. This verification report describes the findings of this assessment.

2.2 Verification Team for this Assessment

Assessment Team	Role
Ravi Kant Soni	Lead Assessor
Sudeep Kodialbail	Assessor
Sudeep Kodialbail	Local Assessor
Harsh Raval	Sectoral Scope Expert

Technical Review Team

Name	Role
Kaviraj Singh	Technical Reviewer
Vikas Bankar	Sectoral Scope Expert to TR

2.3 Means of Verification

2.3.1 Review of Project Documentation

The validated & registered VCS PD; monitoring report 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 section 8 of this report.

2.3.2 Onsite Inspections

As part of the verification, the following on-site inspections have been performed by members of the assessment team

Location: Jamnagar district	Date: 15/12/2010
Coverage	Source of Information / Persons Interviewed
Electricity Generation Records (GEDA share certificates, Invoices)	Mr. Chandra Mouli Kadali – Executive, Enercon Mr. K D Baria – Senior Manager, Enercon
Reliability & accuracy of readings considered for emission reduction calculations, Calibration procedure	Mr. Chandra Mouli Kadali – Executive, Enercon Mr. K D Baria – Senior Manager, Enercon
Monitoring and measuring system - Collection of measurements - Observations of established practices - Data Verification of monitoring parameters	Mr. Chandra Mouli Kadali – Executive, Enercon Mr. K D Baria – Senior Manager, Enercon
QA/QC procedures, data management, internal audits to maintain data quality & reliability, maintenance Practices	Mr. Chandra Mouli Kadali – Executive, Enercon Mr. K D Baria – Senior Manager, Enercon
Consideration of monitoring period, monitoring methodology and emission reduction calculations	Mr. Chandra Mouli Kadali – Executive, Enercon Mr. K D Baria – Senior Manager, Enercon

2.3.3 Review of Monitoring Results and Verification of the Correct Application of Monitoring Methodology

The parameter “Net electricity supplied to the grid by the Project (EG_y)” is the main parameter that is used for the calculation of emission reductions. This parameter is directly obtained from the Share certificate^{/7/} for electricity produced by wind farm issued by GEDA to every customer. Since there are a number of WTGs connected to a single feeder, GEDA calculates the share of each customer through an apportioning procedure, which has been clearly described in the MR^{5.1/}. The project activity has been registered under the VCS (Project ID 412) and has correctly applied the CDM methodology ACM0002^{/2/} version 6 dated 18/05/2006 has been correctly followed by the project proponent.

2.3.4 Determinations of the Reductions in GHG Emissions

Parameter	Reported Value	Verified Value
Net electricity supplied to the grid by the Project (EG _y) MWh (Period from 01/08/2009 to 30/06/2010)	Not Available	84,431
Operating Margin Emission Factor of Western Regional Electricity Grid (EF _{OM,y}) (t CO ₂ /MWh)	0.9945	0.9945
Build Margin Emission Factor of Western Regional Electricity Grid (EF _{BM,y}) (t CO ₂ /MWh)	0.7772	0.7772

EF_{OM,y} and EF_{BM,y} have been fixed ex-ante for the entire crediting period.

The registered VCS PD of this project activity provides the value of EG_y for the period from June 2004 to December 2006 only, which is same as the monitoring period of the 1st verification. The WTGs for the project activity have been commissioned between June 2004 and September 2006. Hence, the values mentioned in the PD are specifically for this period and it is not appropriate to calculate an average annual reported value for EG_y from the data available in the registered VCS PD.

2.3.5 Review of Additional Data from Other Sources if Appropriate

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'. 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 the publicly available source i.e. "CO₂ Baseline Database for Indian Power sector" version 1.1^{11/} published by Central Electricity Authority, Ministry of Power, Government of India. The OM has been determined as the average of the previous 3 years values mentioned in the CEA database. The value of BM has been identified directly from the CEA database. The combined margin emission factor has been 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 0.9945 tCO₂/MWh and 0.7772 tCO₂/MWh respectively. Applying the weights, the grid emission factor has been calculated to be 0.94022 tCO₂/MWh.

The PP has referred to the correct version of the CEA database^{11/} to obtain the value of grid emission factor. The values have been checked against the database and found to be correct. Also, the calculation of the emission factor is in line with that mentioned in the registered VCS PD^{11/} and the applied methodology.

2.4 Reporting 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 CL may also lead to a CAR.

Observations 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 Observations.

2.5 Internal Quality Control

Following the completion of the assessment process and a recommendation by the Assessment Team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

3. Verification Findings

3.1 *Remaining Issues, including any Material Discrepancy, FARs from Previous Validation*

The project has been implemented and equipment installed as described in the registered VCS PD^{/1/}. The assessment team confirms that the monitoring plan is in accordance with the approved consolidated methodology ACM0002^{/2/} version 6 which was applied to the project activity and that the monitoring has been carried out in accordance with the monitoring plan. All the parameters used in calculation of net electricity supplied to the Western Regional Grid by project have been verified against monitoring plan and found to be complete and correct.

CL 03 was raised requesting the PP to clarify the following issue - The crediting period for the project activity as per the validated VCS PD is from 1st June 2004 to 31st December 2006. The PP is requested to clarify the appropriateness of the same. In response the PP clarified that, during the VCS validation of project activity in VCS version 1, the PP mentioned the crediting period based on the monitoring period in absence of proper guidelines of VCS validation, though the PP selected 10 years fixed crediting period of the project activity starting from 01 June 2004 to 31 May 2014. The assessment team has verified that, the project has been validated and 1st periodic verification has been conducted for the period 01/06/2004 to 31/12/2006 by DNV vide their report number 46072030 dated 14/02/2007. The 2nd periodic verification has been conducted for the period 01/01/2007 to 25/07/2009 by TUV NORD vide report number 8106140555-09/460 dated 05/01/2010. The generated VERs for both these verifications have already been issued to the PP. Hence the PP response that the crediting period was mentioned based on the 1st monitoring period is accepted. Thus, **CL 03 was closed out**.

3.2 *Project Implementation*

The project activity has been implemented and WTGs commissioned as described in the registered VCS PD^{/1/} Version 4 dated 22nd May 2007. The first WTG has been commissioned in June 2004 and last one in September 2006. The commissioning of all the WTGs have been cross checked against their commissioning certificates^{/9/}.

3.3 *Completeness of Monitoring*

The monitoring of the project activity is found to be in conformity with the monitoring methodology described in ACM0002^{/2/} version 6 dated 18/05/2006 and monitoring plan indicated in the registered VCS PD^{/1/} & the MR^{/5.1/} of the project activity. The monitoring mechanism is effective and reliable. During the site visit, personnel involved at various levels of operation of the project activity have been interviewed to confirm that the plant personnel are conscious of the importance of the monitoring activities. On-site verification of 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 is found to be in accordance with the Wheeling and Banking Agreements^{/12/} signed for the project activity.

The supporting records such as Share certificate^{/7/} for electricity produced by the wind farm issued by GEDA and invoices for the project activity were found to be sufficient to enable verification of emission reductions.

The parameter "Net electricity supplied to the grid by the Project (EGy)" has been verified for the calculation of emission reductions. EG_y has been considered as mentioned in the GEDA certificates and the same calculated by the apportioning procedure mentioned in the monitoring report. The WTGs belonging to the project activity are connected to the State Grid Authority sub-stations through different feeders where other WTGs of other customers (not part of the project activity) are also connected. Thus, apportioning of the generated electricity by the project WTGs at grid interface is carried out to calculate electricity supplied by the project activity. The apportioning of electricity generated by project activity is entirely under jurisdiction

of GUVNL and project participant has no role in computing and furnishing the apportioned electricity for themselves.

This parameter is used for the emission reduction calculations. Further, this parameter has been cross verified against the invoices^{/8/} raised by the PP and found correct, hence accepted. The value of this parameter for the current monitoring period is 84,431 MWh.

CAR 01 was raised requesting the PP to address the following issues:

1. The PP is requested to modify section C of the MR to reflect the actual monitoring procedure being followed on the site. In response, the PP has modified section C of the MR; this has been checked against the monitoring & metering system observed during the site visit and is found to be accurate.
2. The PP is requested to add a line diagram in section C of the MR to give a clear indication of the metering system. In response, PP has added a line diagram in section C of the MR which gives a clear indication of the metering point and reflects the actual situation on the site. This has been checked and accepted.

Hence, **CAR 01 was closed out.**

3.4 Accuracy of Emission Reduction Calculations

The calculation of emission reductions in the excel sheet^{/10.1/} is found to be correct.

CAR 02 was raised requesting the PP to address the following issues:

1. The PP is requested to mention the calibration details for the entire monitoring period in the MR. In response, the PP has mentioned the calibration details for the entire monitoring period in section C of the MR. The details have been cross checked against the calibration certificates^{/13/} and found to be accurate.
2. The PP is requested to submit clear scans/hard copies of the calibration certificates. In response, the PP has submitted clear hard copies of the calibration certificates. The details in the certificates have been cross checked against that mentioned in section C of the MR and are found to be accurate.
3. During the visit to the Bhogat sub-station it was noticed that a meter (GJU 4121) has been replaced. The PP is requested to mention the same in the MR also, giving the reason for the change. In response, the PP has mentioned the details of the replaced meter (GJU 4121) in the Bhogat sub-station in section C of the MR along with the reason for the change. The meter number & calibration details have been cross checked against the calibration certificate and the meter number noted during the site visit. It is found to be accurate and hence accepted. PP has also submitted an undertaking^{/6/} to support the meter change.
4. There has been a delay in the annual calibration for the year 2010 for the meters in the Bhogat sub-station. The PP is requested to address the delay based on the requirements of EB 52 Annex 60. (Guidelines for assessing compliance with the calibration frequency requirements). In accordance with paragraph 4(a) of EB 52 Annex 60, the PP has applied the maximum possible error of the instrument (i.e. 0.5%) to the value of net electricity export. To be conservative, the PP has applied this percentage error to all WTGs connected to the Bhogat sub-station for the entire monitoring period. The PP has correctly applied the percentage error in the excel sheet. This has been checked and hence is accepted.

Thus **CAR 02 has been closed out.**

3.5 Quality of Evidence to Determine Emission Reductions

The parameters used for the determination of the Emission Reductions are discussed in section 3.3 above. All the data recorded is in compliance with the monitoring report^{/5.1/}.

3.6 *Management and Operational System and Quality Assurance*

The operations, maintenance and monitoring of the project activity is being carried out by the WTG supplier, Enercon whose operation and maintenance activities are ISO certified. Hence it can be confirmed that the management system of the VCS project is in place; with the responsibilities properly identified.

4. Calculation of Emission Reductions

Parameter	Reported Value	Verified Value
Net electricity supplied to the grid by the Project (EGy) MWh (Period from 01/08/2009 to 30/06/2010)	Not Available	84,431
Operating Margin Emission Factor of Western Regional Electricity Grid ($EF_{OM,y}$) (t CO ₂ /MWh)	0.9945	0.9945
Build Margin Emission Factor of Western Regional Electricity Grid ($EF_{BM,y}$) (t CO ₂ /MWh)	0.7772	0.7772

$EF_{OM,y}$ and $EF_{BM,y}$ have been fixed ex-ante for the entire crediting period.

The combined margin emission factor has been arrived at by applying weights of 75% for OM and 25% for BM, as specified in the tool. Applying the weights, the grid emission factor has been calculated to be 0.94022 tCO₂/MWh.

The emission reduction is calculated as follows:

$$\begin{aligned}
 \text{Baseline emission} &= \text{Net electricity supplied to grid (MWh)} \times \text{Grid emission Factor (t CO}_2\text{/MWh)} \\
 &= 84,431 \times 0.94022 \\
 &= 79,384 \text{ t CO}_2\text{e}
 \end{aligned}$$

Project emission and leakage emissions are zero.

$$\begin{aligned}
 \text{Emission Reduction} &= \text{Baseline emissions} - \text{Project emissions} - \text{Leakage Emissions} \\
 &= 79,384 - 0 - 0 \\
 &= 79,384 \text{ t CO}_2\text{e}
 \end{aligned}$$

The vintage wise emission reductions verified are as follows:

Vintage	Emission Reductions (ERs)
2009 (1 st August 2009 – 31 st December 2009)	35,579
2010 (1 st January 2010 – 30 th June 2010)	43,805
Total	79,384

Total emission reductions for monitoring period from 01/08/2009 to 30/06/2010 are 79,384 t CO₂e.

5. Recommendations for Changes in the Monitoring Plan

No recommendation has been given to project proponent to improve their monitoring plan.

6. Overview of Results

Is the project documentation in accordance with the requirements of VCS2007.1

Yes. The results of the compliance assessment are recorded in the verification checklist which is used as an internal report only.

Have on-site inspections been performed that may comprise, inter alia, a review of performance records, interviews with project participants and local stakeholders, collection of measurements, observations of established practices and testing of the accuracy of monitoring equipment?

Yes. The verification team has visited the sites and undertook interviews, collected data, audited the implementation of procedures, checked calibration certificates and checked data, inter alia.

The results of the site visits are recorded in the verification checklist which is used as an internal report only.

The evidence has been checked and collected. The revised monitoring report is attached with this verification report.

Has data from additional sources been used? If yes, please detail the source and significance.

The grid emission factor has been taken from the registered VCS PD. This is the ex-ante parameter and remains constant throughout the crediting period.

Please review the monitoring results and verify that the monitoring methodologies for the estimation of reductions in anthropogenic emissions by sources have been applied correctly and their documentation is complete and transparent.

Yes. The monitoring methodology has been correctly applied and the monitoring report and supporting references are complete and transparent.

Have any recommendations for changes to the monitoring methodology for any future crediting period been issued to the project participant?

No recommendation has been given to project proponent regarding the change in the monitoring plan for the current verification.

Determine the reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the VCS project activity, based on the data and information using calculation procedures consistent with those contained in the registered project design document and the monitoring plan.

The data used in anthropogenic emission reduction calculation is consistent with those contained in the registered VCS PD and monitoring plan. The actual emission reduction has been verified as 79,384 tCO₂ for the period 01/08/2009 to 30/06/2010.

Identify and inform the project participants of any concerns related to the conformity of the actual project activity and its operation with the registered project description document. Project participants shall address the concerns and supply relevant additional information.

"No such non conformity of the actual project activity and its operation with the registered project description document has been observed."

7. Verification and Certification Statement

SGS United Kingdom Ltd has been contracted by Enercon (India) Limited to examine the greenhouse gas (GHG) emission reductions reported from the “Bundled wind energy generation projects in Gujarat, India” for the period, 01/08/2009 to 30/06/2010 equating to 79,384 tonnes of CO₂ equivalents. Our opinion relates to the project’s GHG emissions and resulting GHG emissions reductions reported for the period and the verification testing conducted against the GHG Assertion.

The management of the Enercon (India) Limited is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project Monitoring Report version 02 dated 22/12/2010. Calculation and determination of GHG emission reductions from the project is the responsibility of the management of the “Bundled wind energy generation projects in Gujarat, India”. The development and maintenance of records and reporting procedures are in accordance with the monitoring report.

It is SGS’ responsibility to express an independent GHG verification opinion on the GHG emissions from the project for the period 01/08/2009 to 30/06/2010 and on the calculation of GHG emission reductions from the project based on the verified emissions for the same.

The verification approach was based on the requirements as defined in Voluntary Carbon Standard VCS 2007.1. 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 period 01/08/2009 to 30/06/2010. 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 period 01/08/2009 to 30/06/2010, prepared on the basis of the Monitoring Report version 02 dated 22/12/2010, are fairly stated. We conducted our verification with regard to the client’s GHG PDD and monitoring report which included at “Bundled wind energy generation projects in Gujarat, India” project plan, baseline applied and baseline GHG emissions or removals, Monitoring and Verification Plan, GHG Emission reduction, removal enhancements. This assessment included collection of evidence supporting the reported data checking whether the provisions of the Monitoring and Verification Plan in the PDD were consistently and appropriately applied

We have verified whether the information included in the monitoring report representing the project baseline is current and has been extracted from the project site and the emission reduction achieved has been determined by correctly subtracting emissions for the monitoring period 01/08/2009 to 30/06/2010 from the baseline figures for the comparable

Reporting Period: From 01/08/2009 to 30/06/2010

Verified emission in the above reporting period:

Project Emissions:	0	tCO ₂ equivalents
Baseline Emissions:	79,384	tCO ₂ equivalents
Emission Reductions:	79,384	tCO ₂ equivalents

The assessment team has verified whether the information included in the attached appendix representing the emission reductions achieved has been determined correctly for the given period from the baseline figure.

Based on process and procedures conducted, in our opinion, Enercon (India) Limited assertion on GHG emission reductions for the “Bundled wind energy generation projects in Gujarat, India” project during the reporting period 01/08/2009 to 30/06/2010 is materially correct and is a fair representation of the GHG data and information and the emission reductions are fairly stated. The GHG emission reductions were calculated correctly on the basis of approved monitoring methodology ACM0002 version 6 dated 18/05/2006.

SGS confirms that the project is implemented as described in the validated and registered project design documents. Based on the information we have seen and evaluated, we confirm the following:

Project Title:	Bundled wind energy generation projects in Gujarat, India
UNFCCC Reference Number (if applicable):	Not applicable since the project has been validated under the VCS
Registered PDD and Approved Used for Verification:	VCS PD Version 4 dated 22 nd May 2007
Methodology Used for Verification:	ACM0002 version 6 dated 18/05/2006
Applicable Period:	01/08/2009 to 30/06/2010
Total GHG Emission Reductions Verified:	79,384 tCO ₂

Signed on behalf of the Verification Body by Authorized Signatory

SGS United Kingdom Limited

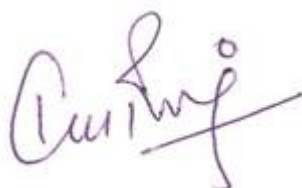
Signature of Lead Assessor:



Name: Ravi Kant Soni

Date: 3rd June 2011

Signature of Technical Reviewer:



Name: Kaviraj Singh

Date: 3rd June 2011

8. Document References

- /1/ VCS PD Version 4 dated 22/05/2007
(<https://vcsprojectdatabase1.apx.com/myModule/rpt/myrpt.asp?r=111>)
- /2/ Approved Consolidated Methodology 0002 (ACM0002), version 6 dated 18/05/2006
- /3.1/ 1st Verification Report (Period 01/06/2004 to 31/12/2006) issued by DNV with report number 46072030 dated 14/02/2007
- /3.2/ 2nd Verification Report (Period 01/01/2007 to 25/07/2009) issued by TUV NORD with report number 8106140555- 09/460 dated 05/01/2010
- /4/ VCS 2007.1 at <http://www.v-c-s.org/>
- /5/ Monitoring Report version 01 dated 02/12/2010
- /5.1/ Monitoring Report version 02 dated 22/12/2010
- /6/ Undertaking dated 30/12/2010 to confirm meter change at the Bhogat sub-station
- /7/ Share certificate for electricity produced by wind farm issued by GEDA (monthly, for the entire monitoring period)
- /8/ Invoices for the project activity (monthly, for the entire monitoring period)
- /9/ Commissioning Certificates (for all 75 WTGs)
- /10/ Excel spreadsheet for Emission Reduction Calculations Version 01
- /10.1/ Excel spreadsheet for Emission Reduction Calculations Version 02
- /11/ CEA data for emission factor (Version 1.1)
<http://www.cea.nic.in/planning/c%20and%20e/Government%20of%20India%20website.htm>
- /12/ Wheeling and Banking Agreements for the project activity (for all 34 customers)
- /13/ Test / Calibration Certificates of the sub-station meters
 - Bhogat sub-station
 - a. Meter number GJB 00486 dated 25/02/2009 and 23/11/2010
 - b. Meter number GJU 04121 dated 13/04/2009
 - c. Meter number GJU07452 dated 23/11/2010
 - Navadra sub-station
 - a. Meter number GJB 00267 dated 25/02/2009 and 29/05/2010
 - b. Meter number GJB 00269 dated 25/02/2009 and 29/05/2010

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