WIND ENERGY PROJECT IN MAHARASHTRA BY M/S SHAH PROMOTERS & DEVELOPERS

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Summary:

The scope of this verification covers the determination of voluntary greenhouse gas emission reductions generated by the above mentioned project. The verification is based on the registered CDM PDD[/PDD/], VCS PD[/VCS-PD/] (supplementary), Final validation report of CDM[/VAL/], Monitoring report[/MR/] supporting emission reduction calculation sheet[/XLS/] and other supporting documents made available to the verifiers by the project proponent.

The project activity is a small-scale project activity involving small-scale project activity involving installation of 09 wind electric generators (WTGs) of individual capacities 0.8 MW located in Ahmednagar district of Maharashtra state, India. The electricity thus produced is exported to the integrated North, East, West and North Eastern (NEWNE) regional grid of India.

In the course of the verification 07 Corrective Action Requests (CARs) and no Clarification Requests (CLs) or Forward Action Request (FAR) was raised during this verification.

As a result of the verification, the verifier confirms that:

- All operations of the project are implemented and installed as planned and described in the project document [/PDD/, /CAL/, /CC/]. The installed equipment essential for generating emission reductions runs reliable.
- The monitoring plan is in accordance with the applied approved CDM methodology AMS I.D, Version 16
- The installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately except some meters where respective state utility has missed the calibration schedule for which EB 52 Annex 60 was applied for conservative emission reduction calculations.
- The monitoring system is in place and functional. The project has generated GHG emission reduction and the emission reduction from the project activity is real, credible and long term for the whole crediting period [/JMR/]
- GHG emission reductions are calculated without any material misstatements in a conservative and

appropriate manner.

Also, all the documents checked during on-site visit and verification process will be kept confidential and will not be disclosed at any time other than the project proponent consent or as required by VCSA.

Reporting period: **From 2009-03-30 to 2011-02-13 (incl. both days)**

Verified GHG emission reductions or removals in the above reporting period:

GHG Emission Reductions or Removals	**tCO_2e**
Baseline Emissions	**19180**
Project Emissions	0
Leakage	0
Net GHG emission reductions or removals	**19180**

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1 INTRODUCTION

1.1 Objective

The objective of the verification is the review and ex-post determination by an independent entity of the GHG emission reductions. It includes the verification of the:

- implementation and operation of the project activity as given in the PDD /PDD/,
- compliance with applied approved methodology and the provisions of the monitoring plan,
- data given in the monitoring report by checking the monitoring records, the emissions reduction calculation and supporting evidence,
- accuracy of the monitoring equipment,
- quality of evidence,
- Significance of reporting risks and risks of material misstatements.

1.2 Scope and Criteria

The 1st periodic verification of this registered project (under CDM) is based on the validated project design document /PDD/, the monitoring report /MR/, emission reduction calculation spread sheet /XLS/, VCS PD /VCS-PD/ (supplementary) supporting documents made available to the verifier and information collected through performing interviews and during the on-site assessment. Furthermore publicly available information was considered as far as available and required.

The verification is carried out on the basis of the following requirements, applicable for this project activity:

- Article 12 of the Kyoto Protocol /KP/,
- VCS Version 03 requirements
- guidelines for the implementation of Article 12 of the Kyoto Protocol as presented in the Marrakech Accords under decision 3/CMP.1 /MA/, and subsequent decisions made by the Executive Board and COP/MOP,
- other relevant rules, including the host country legislation,
- CDM Validation and Verification Manual /VVM/,
- monitoring plan as given in the registered PDD under CDM /PDD/,
- Approved CDM Methodology AMS I.D – Grid connected renewable electricity generation (Version 16)

1.3 Level of assurance

The verification report is based on PDD /PDD/, supplementary VCS-PD /PDD/, Monitoring report /MR/ and Final Validation report /VAL/, the monitoring report /MR/, emission reduction calculation spread sheet /XLS/, supporting documents made available to the verifier and information collected through performing interviews and during the on-site assessment. The verification opinion is assured provided the credibility of all above.

1.4 Summary Description of the Project

The project activity by SPD is a small-scale project activity involving installation of 09 wind electric generators (WTGs) of individual capacities 0.8 MW. The project activity is installed in Ahmednagar district of Maharashtra state, India. The electricity generated is fed to the NEWNE electricity grid of India through Maharashtra State Electricity Distribution Company Limited (MSEDCL) which is a part of NEWNE grid of India.

The sum of the output capacity of project activity within the sub-bundle does not exceed the maximum output capacity limit for its type (i.e. renewable energy project activity with a capacity < 15 MW), hence this project activity qualify as a small scale as per CDM guidelines. This project activity is using class E-53 wind turbines manufactured & supplied by Enercon India Limited.

Table 1-1: Technical data of the project

Parameter	Unit	Value
Make		Enercon
Model No		E-53
Rating	kW	800
Rotor Diameter	m	53
Highest hub Height	m	75
No of Blades	-	3
Power Regulation(Pitch/Stall)	-	Independent pitch system for each blade.
Type of Generator(Synchronous/asynchronous)	-	Sync. – Wound rotor
Rated Voltage(V)	V	400
Geared/Gearless	-	Gearless
Cut-In-Wind speed	m/s	2.5
Cut-out-Wind Speed	m/s	28-34
Rated Wind Speed	m/s	12

Table 1-2: Project Characteristics

Item	Data
Project title	Wind Energy Project in Maharashtra by M/s Shah Promoters & Developers
Project owner	M/s Shah Promoters & Developers
Any specific project categories	☐ Mega project (> 10^6 t CO_{2eq} / a) ☐ Micro project (< 5000 t CO_{2eq} / a) ☐ AFOLU project ☐ Grouped project ☒ No specific project category

VCS PD dated	Draft:	-	Final:	2011-11-08[1]
Applied Methodology	AMS I.D – Grid connected renewable electricity generation (Version 16)			
Project starting date	2009-03-30			
Crediting period	☒ Renewable Crediting Period (10 years)			
Start of crediting period	2009-03-30			

Project Location

The details of the project location are given in table 1-3-A and table 1-3-B:

Table 1-3-A: Project Location

No.	Project Location
Host Country	India
Region:	Maharashtra
Project location address:	Village Baradari, Khandke, Jamb, Agadgaon; District: Ahmednagar
Latitude:	Detailed for each WECs are described under below mentioned table
Longitude:	Detailed for each WECs are described under below mentioned table

1-3-B: Geogriphical details of WTG's

Loc No WTG	Capacity (MW)	Village/ District	Latitude	Longitude	Commissioning Date
E-53/12	0.8	*Baradari, Ahmednagar*	19°06' 20.9''N	74°50' 01.1''E	31/03/2009
E-53/13	0.8	*Baradari, Ahmednagar*	19°06' 28.8''N	74°50' 01.6''E	30/03/2009
E-53/14	0.8	*Baradari, Ahmednagar*	19°06' 35.3''N	74°50' 00.6''E	30/03/2009
E-53/118	0.8	*Khandke,* Ahmednagar	19°07' 36.6''N	74°52' 57.2''E	31/03/2009
E-53/128	0.8	*Jamb, Ahmednagar*	19°06' 07.3''N	74°53' 34.8''E	31/03/2009
E-53/129	0.8	*Jamb, Ahmednagar*	19°06' 00.5''N	74°53' 37.2''E	31/03/2009
E-53/70	0.8	*Agadgaon, Ahmednagar*	19°10' 32.0''N	74°52' 55.2''E	30/03/2009
E-53/97	0.8	*Agadgaon, Ahmednagar*	19°09' 29.6''N	74°52' 51.4''E	01/07/2009
E-53/100	0.8	*Agadgaon, Ahmednagar*	19°09' 32.6''N	74°52' 25.4''E	01/07/2009

[1] The project is already registered with UNFCCC on date 2011-02-14, the registered CDM-PDD details are as follows: version 03 dated 2011-01-29. The above date pertains to the supplementary VCS-PD[/VCS-PD/].

2 VALIDATION PROCESS, FINDINGS AND CONCLUSION

2.1 Validation Process

The project is registered as a CDM project which is an approved GHG Program under VCS and the steps are as follows;

- *Method and Criteria:* The validation has been carried out to cover the sections 1.2, 1.3, 1.5, 1.6, 1.7, 1.9, 1.10, 1.12.1, 1.12.2, 1.12.3, 1.12.4 and 1.13 of the VCS Project Description Template (para 3.12.8.1 of VCS Standard version 3.2).
- *Document Review:* A document review w.r.t to project implementation and actual operation was carried out. A site visit was conducted to confirm the actual installations and working of the WECs. The monitoring procedures are detailed in the below sections of this report.
- *Interviews:* During the site visit interviews with the operational personnel have been conducted, the roles and responsibility have been discussed and found in line with the description in the registered PDD.
- *Resolution of Any Material Discrepancy:* During the validation process 1 CAR has been raised, the details of the issue raised and its closure are described under section 2.2.1.

2.2 Validation Findings

2.2.1 Gap Validation

A Gap validation has been carried out for to cover the sections 1.2, 1.3, 1.5, 1.6, 1.7, 1.9, 1.10, 1.12.1, 1.12.2, 1.12.3, 1.12.4 and 1.13 of the VCS Project Description[/VCS-PD/]. The project description is in accordance with the Registered CDM PDD, the additional information w.r.t issues covered under Gap validation are as follows;

Ownership:
The project proponent M/s Shah Promoters & Developers has submitted the Purchase orders, Power purchase agreements and commissioning certificates to the Verification team to validate the proof of title. The verification team has checked the documents and confirms that the proof of title belongs to M/s Shah Promoters & Developers.

Start date:
Based on the review of the submitted commissioning certificates, the earliest commissioning date of project WEC is 30th March 2009, which represents the start date (inline with para 3.8.1 of VCS version 3). The project activity registered on UNFCCC website in date 2011-02-14, thus the eligibility under VCS is established as the validation activity was completed 2 years later than the start date. Thus the project is eligible to participate under VCS standard version 3.2.

Participation in other GHG programs:
The project is registered under an approved GHG program, i.e. CDM process registration number 4489.

Other Environmental Credits:

The project proponent has provided a written undertaking which confirms that the project activity has not generated any other form of GHG-related environmental credit for GHG emission reductions or removals claimed under the VCS Program, or that any such credit has been or will be cancelled from the relevant program for the monitoring period applied monitoring period of 2009-03-30 to 2011-02-13 (incl. both days).

Commercially sensitive information:
The project activity does not have any commercially sensitive information; the CDM PDD is publicly available and has been cross-checked to confirm the same.

During the course of Gap Validation CAR 2.2.1 has been raised and subsequently closed out based on the assessments detailed below:

Finding:	**2.2.1**		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	As per provisions under VCS Standard: VCS Version 3.2 dated 01 February 2012 further validation shall be completed under clauses 1.2, 1.3, 1.5, 1.6, 1.7, 1.9, 1.10, 1.12.1, 1.12.2, 1.12.3, 1.12.4 and 1.13 of the VCS Project Description template.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	As per the VCS Standard: VCS Version 3.2, the cover page and sections 1.2, 1.3, 1.5, 1.6, 1.7, 1.9, 1.10, 1.12.1, 1.12.2, 1.12.3, 1.12.4 and 1.13 of the VCS Project Description has been completed and the same has now been submitted to the DOE for verification.		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The VCS-PD/VCS-PD/ dated 14th April 2012 has been submitted; the same is checked and confirms to the requirements under the Gap validation. For detailed assessment of the gap validation please refer assessment under section 2.2.1 of this report. CAR 2.2.1 has been CLOSED.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☐ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

2.2.2 Methodology Deviations

There are no deviation applied w.r.t methodology applied to the project activity.

2.2.3 New Project Activity Instances

The project is not a grouped project; however there are no instances of new WECs added to the project activity. The project capacity remains the same as per the registered PDD, i.e. 7.2 MW.

2.3 Validation Conclusion

A Gap validation has been carried out for to cover the sections 1.2, 1.3, 1.5, 1.6, 1.7, 1.9, 1.10, 1.12.1, 1.12.2, 1.12.3, 1.12.4 and 1.13 of the VCS Project Description. The project confirms to the requirements under VCS Version 3.2 w.r.t to the gap validation.

3 VERIFICATION PROCESS

The project is registered under CDM project no. 4489 (http://cdm.unfccc.int/Projects/DB/RWTUV1297334687.42/view) and the present verification covers the period 2 years prior to the CDM registration.

3.1 Method and Criteria

The verification of the project was carried out from November 2010 to June 2012

Topic	Time
Assignment of verification	2011-02-21
On-site visit	2011-03-19
Draft reporting finalised	2011-03-19
Technical review on draft reporting finalised	-
Final reporting finalised	2012-06-28
Technical review on final reporting finalised	XXXX-XX-XX
Final corrections	2012-06-28

The verification consists of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Desk review of the Monitoring Report/MR/, emission reduction worksheet/XLS/, registered CDM PDD/PDD/ submitted by the client and additional supporting documents.
- Verification planning,
- On-Site assessment,
- Background investigation and follow-up interviews with personnel of the project developer and its contractors,
- Draft verification reporting
- Resolution of corrective actions (if any)
- Final verification reporting
- Technical review
- Final approval of the verification.

The criteria of this verification include the relevant rules and steps as set out in the VCS version 3.2.

3.2 Document Review

The submitted MR[/MR1/], emission reduction worksheet[/XLS/], registered PDD[/PDD/], validation report[/VAL/] and supporting background documents related to the project design and monitoring were reviewed.

Furthermore, the assessment team used additional documentation by third parties like host party legislation, QA/QC procedures, technical reports referring to the project design or to the basic conditions and technical data.

3.3 Interviews

The assessment team has carried out interviews in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for VCS.

Representative of PP[/IM01/] and the O&M contractor[/IM03/] were interviewed. Details of the interviewed personnel are provided under table-4 of Annexure 2 of this report.

3.4 Site Inspections

During verification the verification team has performed site visit and interviews to confirm selected information and to resolve issues identified in the document review. The main topics of the interviews are summarized in table 1.

As most essential part of verification exercise it is indispensable to carry out an inspection in site in order to verify that the project is implemented in accordance with the applicable criteria. Furthermore, the onsite assessment is necessary to check the monitoring data with respect to accuracy to ensure the calculation of emission reductions. The main tasks covered during the site visit include, but not limited to:

- The on-site assessment included an investigation of whether all relevant equipment is installed and works as anticipated.
- The operating staff was interviewed and observed in order to check the risks of inappropriate operation and data collection procedures.
- Information processes for generating, aggregating and reporting the selected monitored parameters were reviewed.
- The duly calibration of all metering equipment was checked.
- The monitoring processes, routines and documentations were audited to check their proper application.
- The monitoring data were checked completely.
- The data aggregation trails were checked via spot sample down to the level of the meter recordings.

Table 1: Interviewed persons and interview topics during the verification site visit

Interviewed Persons / Entities	Interview topics
Representatives of M/s Shah Promoters & Developers [/IM01/]	- General aspects of the project - Technical equipment and operation - Changes since validation

Interviewed Persons / Entities	Interview topics
O & M Contractor, Enercon/[IM03/] Please refer table 4 for more details	- Monitoring and measurement equipment - Calibration procedures - Quality management system - Involved personnel and responsibilities - Training and practice of the operational personnel - Implementation of the monitoring plan - Monitoring data management - Data uncertainty and residual risks - GHG calculation - Procedural aspects of the verification - Maintenance - Environmental aspects - Editorial issues of the Monitoring Report

3.5 Resolution of Any Material Discrepancy

1. Definition: A Corrective Action Request (CAR) will be established where:

- mistakes have been made in assumptions, application of the methodology or the project documentation which will have a direct influence the project results,
- the requirements deemed relevant for validation of the project with certain characteristics have not been met or
- There is a risk that the project would not be registered by the UNFCCC or that emission reductions would not be able to be verified and certified.

A **Clarification Request (CL)** will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A **Forward Action Request (FAR)** will be issued when certain issues related to project implementation should be reviewed during the first verification.

2. Draft Verification Report

After reviewing all relevant documents and taken all other relevant information into account, the assessment team issues all findings in the course of a draft verification report and hands this report over to the project proponent in order to respond on the issues raised and to revise the project documentation accordingly.

3. Final Verification Report

The final verification starts after issuance of the proposed corrective action (CA) of the CARs CLs and FARs by the project proponent. The project proponent has to reply on those and the requests are “closed out” by the assessment team in case the response is assessed as sufficient. In case of raised FARs the project proponent has to respond on this, identifying the necessary actions to ensure that the topics

raised in this finding are likely to be resolved at the latest during the subsequent verification. The assessment team has to assess whether the proposed action is adequate or not.

In case the findings from CARs and CLs cannot be resolved by the project proponent or the proposed action related to the FARs raised cannot be assessed as adequate, no positive validation opinion can be issued by the assessment team.

The CAR(s) / CL(s) / FAR(s) are documented in chapter 4 below.

4. Technical review

Before submission of the final verification report a technical review of the whole verification procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the validation team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the verification opinion and the topic specific assessments as prepared by the verification team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

5. Final approval

After successful technical review of the final report an overall (esp. Procedural) assessment of the complete validation will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

Only after this step the request for issuance can be started (in case of a positive validation opinion).

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4 VERIFICATION FINDINGS

In this section the assessments and findings from the desk review of the VCS PDD[/PDD/], site visit, interviews and supporting documents as well as the final assessments are summarised. Table 3-1 includes an overview of all raised CARs, CLs and FARs.

Table 3-1: Overview of CARs, CLs and FARs issued

No.	Topic / Chapter	CAR	CL	FAR
4.1	Project Implementation Status	3	-	-
4.2	Accuracy of GHG Emission Reduction or Removal Calculations	4	-	-
4.3	Quality of Evidence to Determine GHG Emission Reductions or Removals	-	-	-
4.4	Management and Operational System	-	-	-
-	**SUM**	**7**	**0**	**0**

4.1 Project Implementation Status

The proposed project activity by M/s Shah Promoters & Developers is a small-scale project activity involving installation of 9 MW wind electric generators (WTGs) of individual capacities 0.8 MW each. The WTGs are located in Ahmednagar district of Maharashtra. The electricity generated is fed to the NEWNE electricity grid of India through Maharashtra State Electricity Distribution Company Limited (MSEDCL).The assessment team found that the project has been implemented/IM01,03/ as described in the PDD/PDD/. There are no changes in the installed key equipment since the project inception (refer section 1.4 for more details).

During the desk review it was observed that the Monitoring report template for VCS version 3.1 was not followed, further the project WEC commissioning details, references to geographical coordinates, schematic diagram of WTG, responsible entity for preparation of monitoring report, information regarding operational performance of project activity, information regarding situation or events that may affect the applicability of project activity, and the breakdown details were not incorporated in the monitoring report.

Nevertheless, assessment team raised CAR 4.1.1, CAR 4.1.2 and CAR 4.1.3 which was closed successfully during the verification process.

The methodology followed for present verification is approved small scale methodology AMS I.D version 16. No deviation is sought w.r.t the applicability of the methodology after the registration of the project activity.

During the monitoring period 2009-03-30 to 2011-02-13 (incl. both days), the net electricity exported to the grid by the project activity is **21,193 MWh** and thus the total baseline emission for this monitoring period is computed to be **19180 tCO_2e**.

It was verified during the site visit and the subsequent review of the, Commissioning Certificates/CR/ in the course of this verification that the actual project activity was implemented in accordance with the registered CDM PDD, the details of the project location and commissioning dates are described under section 1.4 of this report.

Following CARs were raised during the verification process and thus closed successfully.

Project implementation	**4.1.1**		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The MR report template shall confirm the VCS V3.1.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	MR has also been revised to new format		

Project implementation	**4.1.1**
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The MR dated 28th June 2012 has been submitted and inline with VCS Monitoring Report Template version 3.1/MR/. CAR 4.1.1 has been CLOSED
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☐ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	**4.1.2**		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Reference of the latitude and longitude is missing under table A.3.1. Furthermore, under the section A.3 the location map is missing.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	In the VCS Monitoring Report Version 3.1 the reference for the latitude and longitude has now been included in section 1.7 “Project Location” of VCS Monitoring Report. The location map has been incorporated in section 1.7 “Project Location” of VCS Monitoring Report.		
IAE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and IAE assessments (#2, #3, etc.) shall be added.*	The reference of latitude and longitude is letter issued by Enercon (India) Ltd. The Verification team confirms the consistent application of the coordinates in the monitoring report is now appropriately included under section 1.7 of monitoring report. Furthermore, location map is now appropriately included under section 1.7 of monitoring report. CAR 4.1.2 has been CLOSED		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☐ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

Finding:	**4.1.3**		
Classification	☒ CAR	☐ CL	☐ FAR

Finding:	4.1.3
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	1. The schematic diagram of WTG is missing under section A.4. 2. The section A.8 of the monitoring report is incomplete as the name of the entity responsible for preparing the monitoring report is missing. 3. The section B.1 of the monitoring report lacks the information regarding the actual operation of the project activity during this monitoring period, including information on special events. 4. The Section B.1 of the monitoring report lacks information regarding brief description of events or situations that could occurr during the monitoring period and impact the applicability of the methodology.
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	**1.** In the VCS Monitoring Report Version 3.1, the schematic diagram of WTG has now been included under section 1.1 "Summary Description of Project" of the VCS Monitoring Report. **2.** In the VCS Monitoring Report Version 3.1, the name of the entity responsible for preparing the monitoring report has now been included in section 1.3 "Project Proponent" of the VCS Monitoring Report. **3.** In the VCS Monitoring Report Version 3.1, the actual operation of the project activity during this monitoring period has now been included in the section 2.1 "Implementation Status of the Project Activity" of VCS Monitoring Report. 4. In the VCS Monitoring Report Version 3.1, information regarding brief description of events or situations that could occur during the monitoring period and impact on the applicability of the methodology has now been included in the section 2.1 "Implementation Status of the Project Activity" of VCS Monitoring Report.
IAE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and IAE assessments (#2, #3, etc.) shall be added.*	1. The schematic diagram of WTG is appropriately included under section 1.1 of revised monitoring report in VCS Monitoring Report Version 3.1 format. 2. The section 1.3 of revised monitoring report in VCS Monitoring Report Version 3.1 format appropriately stated SPD as the entity responsible for preparing the monitoring report. 3. The section 2.1 of revised monitoring report in VCS Monitoring Report Version 3.1 format provides the information regarding the actual operation of the project activity during this monitoring period, including information on special events. This is checked based on document review of revised monitoring report, submitted calibration report and daily generation reports. 4. The Section 2.1 of the monitoring report in VCS Monitoring Report Version 3.1 format confirms that no events or situations occurred during the monitoring period which will impact the applicability of the methodology. CAR 4.1.3 has been CLOSED
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☐ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

4.2 Accuracy of GHG Emission Reduction or Removal Calculations

Description

The emission reductions ER_y due to the project activity during the year is calculated as the difference between baseline emissions (BE_y), project emissions (PE_y) and emissions due to leakage (L_y) as per the formula given below:

$ER_y = BE_y - PE_y - L_y$

Baseline emissions are the product of kWh of electricity produced by the renewable generating unit and emission coefficient (measured in kg CO_2e/kWh) calculated in a transparent and conservative manner as the weighted average emissions (in kg CO_2e/kWh).

$BE_y = EG_y * EF_y$

Since the project activity is a renewable energy project which generates electricity using wind power and hence does not result in project emissions. No leakage is considered from the project activity as per small scale methodology, AMS I.D. The verification team raised CAR 4.2.4 as the MR was deficient with respect to the formula used and description of baseline calculation. Furthermore inconsistent values of emission reduction were reported in the monitoring report. The PP has appropriated corrected the monitoring report and CAR 4.2.4 was closed by verification team. Please refer closure of CAR 4.2.4 for more details.

The net electricity supplied to the grid by WTGs (EG_y)for each month has been cross checked with the JMR[/JMR/] sheets issued by MSEDCL and which is an authentic document. Also the values were cross checked with the invoices raised by the project participant to the MSEDCL. The project proponent applied for the VCS verification prior to the registration of project activity with UNFCCC, therefore the start date of the monitoring period and hence the verification team seek substantiation on the selection of crediting period and corresponding monitoring period under VCS (please refer CAR 4.2.1). After the registration of project activity under CDM, appropriate start date of crediting and monitoring period is included in revised monitoring report.

The verification team checked the calibration certificates of main meter issued by MSEDCL. The verification team found that there was delay in the calibration of WTG with location numbers E-53/12, E-53/13, E-53/14, E-53/70, E-53/118, E-53/128, E-53/129, E-53/97 and E-53/100 with initial date of calibration: 2009-07-02 and date of subsequent calibration: 2010-07-14. The Verification Team followed the step wise approach to verify the emission reduction calculation presented by the PP in the revised emission reduction sheet. The verification team through the document review confirmed that the accuracy of the main meter did not exceed the specified limits i.e. 0.2 class. Thus, the verification team checked and confirms that factors (1+(0.2/100)) and (1-(0.2/100)) are appropriately applied to the readings of electricity export and import registered by main meter for the months April to July 2009 and July 2010. Please also refer closure of CAR 4.2.3.

The total net electricity supplied by WTGs during the monitoring period is **21,193 MWh** /XLS/. The baseline emission factor has been fixed ex-ante as 0.905 tCO_2/MWh based on the CEA data for NEWNE Grid/CEA/. Based on the net electricity supplied and the emission factor the baseline emissions are computed to be **19180 tCO_2e**. All the figures as per the monitoring plan were cross-checked by the verification team against basic monitored data and the calculations were found to be correct. All the figures as per the monitoring plan were cross checked by the assessment team against basic monitored data/XLS/ and the calculations were found to correct. The verification team also identified that the monitoring report lacked appropriate remarks on the difference between the estimated and achieved emission reductions thus CAR 4.4.2 has been raised. The PP has appropriately updated section 5.1 of the revised monitoring report. For more details please refer closure of finding CAR 4.2.2.

Below CARs were raised by verification team:

Finding:	**4.2.1**		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The project has applied but not registered under CDM mechanism. The verification team requests the basis of claim of registration date under section A.6 of monitoring report. Furthermore, the PP has incorrectly mentioned the crediting period under section A.7 of the monitoring report.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The project activity was registered on 14/02/2011. Hence, the date of registration has now been corrected on cover page of VCS Monitoring Report revised VCS Monitoring Report Version 3.1 format (http://cdm.unfccc.int/Projects/DB/RWTUV1297334687.42/view). The CDM crediting period start from 2009-03-30 to 2019-03-29 (Fixed). The project was registered with CDM EB on dated 14/02/2011 and as per the VCS policy VCU can be registered back two year from the date of registration. Hence, crediting period i.e. 2009-03-30 to 2019-03-29 now has been corrected in section 1.6 “Project Crediting Period” of VCS Monitoring Report.		
IAE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and IAE assessments (#2, #3, etc.) shall be added.*	The verification team checked section 1.6 of the monitoring reports and deems the applied monitoring period as correct after review of the revised monitoring period, registration date of project with UNFCCC and the earliest commissioning date of installed WTG’s i.e. the date of which project began generating GHG emission reductions (2009-03-30). Furthermore, the verification team confirms that the consistent date of crediting period is applied under the monitoring period. CAR 4.2.1 has been CLOSED		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☐ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

Emission Reduction Calculations	**4.2.2**		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The section E.6 does not transparently provide the reasons for difference between the estimated and actual emission reductions.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The difference in emission reduction for the project activity is justified under section 5 "Additional Information" under para 5.1 "Comparison of the actual emission reduction with estimate in the CDM-PDD" of revised VCS Monitoring Report under Version 3.1 format. The major part of the difference is due to Down Time (10,583 Hours) & poor wind velocity which is reflected from overall CUF for the project activity.		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The verification team undertook the document review of revised monitoring report, revised emission reduction sheet and the record of down time submitted by the PP. The verification team checked the work sheet "Consolidated Down Time" which provides the consolidated down time of all the WTGs and found it correct. The verification team confirms that the project activity did not achieve the expected generation as envisaged in the PDD due to the down times and poor wind velocities which is reflected by lower CUF (18.85 % compared to 20 % [based on net electricity exported to grid]). The Verification Team also acknowledged that at the time of project conceptualization, the PP considered transmission losses as 0% (for conservative calculation of IRR)/VAL/ whereas in actual operation the transmission losses exist. Thus, the Verification team confirms that the downtime of WTGs, lower wind velocities, lower emission factor compared to envisaged value in the PDD are attribute to lower emission reductions compared to PDD. CAR 4.2.2 has been CLOSED		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☐ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

Project implementation	**CAR 4.2.3**		
Classification	☒ CAR	☐ CL	☐ FAR

Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The monitoring report does not provide any details as to how the EB52, Annex-60 guidance is complied for the delayed calibration. Furthermore, the supportive data/ document pertaining to the WTG controller accuracy for WTG of PP and other promoters connected to common bulk meters is missing in the monitoring report. The MR also does not demonstrate the close agreement for parameter "Net Electricity export to the grid by the project activity" based on the JMR issued by MSEDCL and actual application of apportioning mechanism. Emission reduction sheet needs to be submitted to the Verification team.
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The emission reduction sheet under worksheet "Apportioning SPD 7.2 MW" and "Annex I" of VCS Monitoring Report (Version 3.1 format) clearly provides clarity on outcome of application of EB 52, Annex 60. Furthermore the WTG controller accuracy for WTG and other promoters connected to the common bulk meters certificate has now been provided in "Annex I" of VCS Monitoring Report and same has to be submitted to DOE for verification. The close agreement for parameter "Net Electricity export to the grid by the project activity" based on the JMR issued by MSEDCL and actual application of apportioning mechanism has now been included in the annex II of the VCS Monitoring Report. Emission reduction sheet has now been submitted to the DOE.
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The verification team checked the calibration certificates of main meter issued by MSEDCL and the submitted emission reduction worksheet. The verification team found that there was delay in the calibration of WTG with location numbers 12, 13, 14, 70, 118, 128, 129, 97 and 100 with initial date of calibration: 2009-07-02 and date of subsequent calibration: 2010-07-14. The Verification Team followed the step wise approach to verify the emission reduction calculation presented by the PP in the revised emission reduction sheet. The verification team through the document review confirmed that the accuracy of the main meter did not exceed the specified limits i.e. 0.2 class. Thus, the verification team checked and confirms that factors (1+(0.2/100)) and (1-(0.2/100)) are appropriately applied to the readings of electricity export and import registered by main meter for the months April to July 2009 and July 2010. This is verified based on the check of worksheet "Apportioning SPD 7.2 MW" and "Annex I" of VCS Monitoring Report. The Verification team also acknowledges the close agreement in value of net electricity exported by WTG to NEWNE grid and confirms that the minor mis-match is due to decimal rounding. With successful closure of CAR 4.2.3 verification team confirms appropriate application of EB52, Annex60 guidance which has resulted in the emission reduction as 19180 tCO_2 /MR2/. CAR 4.2.3 has been CLOSED

Conclusion *Tick the appropriate checkbox*	☐ To be checked during the First periodic verification ☐ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding:	**4.2.4**		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The section E.1 does not include all the formulae used and description to calculate the baseline emissions. The value applied for ex-ante calculation of emission reduction under section E.5 is incorrect.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The formula used for the calculation of baseline emission reductions has now been included in section 4.1 "Baseline Emissions "of VCS Monitoring Report(Version 3.1 format). Also the consistent value of ex-ante calculation of emission reduction has now been applied under section 5 "Additional Information" under para 5.1 "Comparison of the actual emission reduction with estimate in the CDM-PDD" of VCS Monitoring Period.		
IAE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and IAE assessments (#2, #3, etc.) shall be added.*	The appropriate formula (editorially correct) used for the calculation of baseline emission reductions has now been included in section 4.1 "Baseline Emissions "of VCS Monitoring Report (Version 3.1 format). Consistent and correct values of the ex-ante calculation of emission reduction based on the estimates made registration of project activity under CDM are appropriately included under section 5.1 of monitoring report (Version 3.1 format). CAR 4.2.4 has been CLOSED		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☐ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

4.3 Quality of Evidence to Determine GHG Emission Reductions or Removals

Proper data management including data acquisition and aggregation, data management system is being followed for the project activity. All records needed for monitoring are archived in line with the requirements of the registered monitoring plan /PDD/.

Following calibration routines were observed during the monitoring period:

Substation/ Feeder No.	Meter (Main Meter / check Meter)	Meter Details	Calibration Frequency	Date of last Calibration	Validity
Khandke Substation Feeder No. 03	Main Meter	Serial No. : 04880816 Type: Tri Vector Accuracy Class: 0.2	Yearly	02-07-2009 14-07-2010	One Year
Khandke Substation Feeder No. 04	Main Meter	Serial No. : 04880818 Type: Tri Vector Accuracy Class: 0.2	Yearly	02-07-2009 14-07-2010	One Year

No abnormality was found in the metering system[/CAL/]. The main meters installed at the site are of accuracy class of 0.2. All the meters were calibrated before installation by MSEDCL. The calibration during the monitoring were not carried out as per the frequency stated in the registered PDD, thus a correction factor inline with EB 52, Annex 60 has been applied in emission reduction calculations. The details are described under section 4.2 of the report.

No significant, lack of evidence and missing data were detected during on-site verification. It is evident from the monitoring data that the monitoring system ensures for continuous (except some routine breakdowns or outage) operation.

All internal data are subjected to QA/QC measures. Enercon (India) Limited (EIL) is ISO 9001:2008[/ISO/] certified and has proper procedures for data handling i.e. periodic data review by the management, internal audits etc. The ISO certificate is checked by the verification team to ensure that the QA/QC procedure is followed as per the ISO standard.

The monitoring personnel at site are well trained and follow reproducible routines; this was checked based on site visit interviews undertaken by the Verification Team and the certificate stating the training imparted to personnel issued by Enercon (India) Ltd[/TRA/]. The verification team concluded that personnel of O & M contractor are competent to carry out the relevant tasks with sufficient accuracy. All necessary monitored and measured raw data were checked during on-site verification. The electricity exported to the grid and imported from the grid are the basic monitoring parameters. The basis of emission reduction i.e. JMR is issued by MSEDCL which is statutory body and independent third party.

4.4 Management and Operational System

The allocation of responsibilities is documented in a written form and is followed as described in the registered CDM PDD[/PDD/] and supplementary VCS-PD[/VCS-PD/]. Routines for the archiving of data are defined and documented. Calculations laid down in the monitoring report are in line with PDD. Proper data management inclusive of data acquisition and aggregation, data management system is being

followed for the project activity. During the site visit the verification team noted that the generation from the WTG's commented to main and check meter is monitored at CMS. The electricity import and export to the grid is monitored by the main and check meters. Apportioning procedure is followed to calculated electricity exported and imported from grid. This procedure is already mentioned in the PDD/PDD/ registered under CDM. The monthly JMR's (with the signature of representative of O & M operator and authorized representative of MSEDCL) capturing all the data necessary as per monitoring plan and corresponding invoices needed for monitoring are archived in line with the requirements of the registered monitoring plan. No significant, lack of evidence and missing data were detected during on-site verification. It is evident from the monitoring data that the monitoring system ensures for continuous (except some routine breakdowns or outage) operation. All internal data are subjected to QA/QC measures. ENERCON has proper procedures for data handling which is cross checked by the verification team to ensure that the QA/QC procedure is followed. The monitoring personnel at site are well trained and follow reproducible routines. The conformance to training and maintenance needs/TRA/ of the personals have been cross checked and found OK.
The overall authority of the project site belongs to EPC contractor EIL. The Joint meter readings are noted in presence of officials from plant personnel and the MSEDCL officials.

The data archiving of gross generation is directly measured from SCADA system. The monthly export and import values are maintained in monthly JMR sheets, which are signed by both the parties and documented which are subject to QA/QC measures. All monitored data are archived in Physical and Electronic form. The data will be kept for the whole crediting period and additional 2 years as given in the PDD.

5 VERIFICATION CONCLUSION

The scope of this verification covers the determination of voluntary greenhouse gas emission reductions generated by the above mentioned project. The verification is based on the registered PDD[/PDD/] under CDM, Final validation report[/VAL/], monitoring report[/MR/], VCS PD[/VCS-PD/] (supplementary), supporting emission reduction calculation sheet[/XLS/] and other supporting documents made available to the verifiers by the project proponent.

As a result of the verification, the verifier confirms that:

- All operations of the project are implemented and installed as planned and described in the project document. The installed equipment essential for generating emission reductions runs reliable.
- The monitoring plan is in accordance with the applied approved CDM methodology AMS I.D – Grid connected renewable electricity generation (Version 16)
- The installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately except some WTGs where respective state utility has missed the annual calibration schedule for which EB 52 Annex 60 was applied for conservative emission reduction calculations.
- The monitoring system is in place and functional. The project has generated GHG emission reduction and the emission reduction from the project activity is real, credible and long term for the whole crediting period.
- GHG emission reductions are calculated without any material misstatements in a conservative and appropriate manner.

Also, all the documents checked during on-site visit and verification process will be kept confidential and will not be disclosed at any time other than the project proponent consent or as required by VCSA.

Reporting period: From 2009-03-30 to 2011-02-13 (incl. Both days)

Verified GHG emission reductions or removals in the above reporting period:

GHG Emission Reductions or Removals	tCO_2e
Baseline Emissions	19180
Project Emissions	0
Leakage	0
Net GHG emission reductions or removals	**19180**

Manojkumar Borekar

Assessment team Leader

Pune, 2012-06-28

Dr. Jochen Schubert

Final approval

Essen, 2012-06-28

Annexure 1

Abbreviations

BAU	Business as usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CO_2	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
CL	Clarification Request
DNA	Designated National Authority
EB	CDM Executive Board
EIA	Environmental Impact Assessment
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
MR	Monitoring Report
MSCDCL	Maharashtra State Electricity Distribution Company Ltd.
QC/QA	Quality control/Quality assurance
SPD	M/s Shah Promoters & Developers
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Voluntary Carbon Standard
VCS - PD	VCS - Project Description
VCU	Voluntary Carbon Unit
VVM	Validation and Verification Manual

Annexure 2

Table1: Documents provided by the project participant

Reference	Document
/CAL/	Calibration certificates issued by MSEDCL of the main energy meter for the entire monitoring period: 1. Testing of the windmill billing meters by MSEDCL for main meter dated 2009-08-18, certificate reference: EE/TD/ANR/TECH /287 for calibration done on date 2009-07-02 for main meters 04880816 and 04880818. The same certificates also contain confirmation that all load test results tallied with respective check meter also. 2. Testing of the windmill billing meters by MSEDCL for main meter dated 2010-07-28, certificate reference: EE/TD/ANR/TECH /435 for calibration done on date 2010-07-14 for main meters 04880816 and 04880818. The same certificates also contain confirmation that all load test results tallied with respective check meter also.
/CC/	• Certificate of Commissioning of 2 X 800 KW wind Electric Generators, issued by MSEDCL, reference number: SE/ANRC/TECH/008033 issued on date 2 Jul 2009. • Certificate of Commissioning of 1 X 800 KW wind Electric Generators, issued by MSEDCL, reference number: SE/ANRC/TECH/04260 issued on date 31 Mar 2009. • Certificate of Commissioning of 2 X 800 KW wind Electric Generators, issued by MSEDCL, reference number: SE/ANRC/TECH/04262 issued on date 31 Mar 2009. • Certificate of Commissioning of 3 X 800 KW wind Electric Generators, issued by MSEDCL, reference number: SE/ANRC/TECH/04306 issued on date 1 Apr 2009. • Certificate of Commissioning of 1 X 800 KW wind Electric Generators, issued by MSEDCL, reference number: SE/ANRC/TECH/04305 issued on date 1 Apr 2009.
/CON/	VCS Verification contracts between PP and TUV Nord dated 2011-02-21
/JMR/	• Monthly electricity generation certificates by MSEDCL (JMR) & Invoices against JMR for the entire monitoring period (2009-03-30 to 2011-02-13) • Windmill Energy Breakup Report

/MR/	• Monitoring Report for the 1st periodic verification of the project activity "Wind Energy Project in Maharashtra by M/s Shah Promoters & Developers", draft version-1 • Monitoring Report for the 1st periodic verification of the project activity "Wind Energy Project in Maharashtra by M/s Shah Promoters & Developers", final version-02
/PO/	• Purchase order for supply of 3 Nos. Enercon Make 800 KW, Type E-53, Wind Energy Converters. Reference No.: SPD/EIL/Order/MH- Khandke/07-08/Supply-C dated 20th March, 2008 • Purchase order for supply of 3 Nos. steel towers. Reference No.: SPD/EIL/Order/MH- Khandke/07-08/Supply-B dated 20th March, 2008 • Purchase order for supply of 3 Nos. Enercon Make 800 KW, Type E-53, Wind Energy Converters ex-work at site Khandke. Reference No.: SPD/EIL/Order/MH-Khandke/07-08/Supply-A dated 20th March, 2008 • Order for civil and industrial works for 3 nos Enercon make 800 kW Type E-53 Wind Energy Converters. Reference No.: SPD/EIL/Order/MH- Khandke/07-08/Civil & Indus dated 20th March, 2008 • Order for installation, commissioning and other services for 3 nos Enercon make 800 kW Type E-53 Wind Energy Converters at site Khandke. Reference No.: SPD/EIL/Order/MH- Khandke/07-08/Comm. dated 20th March, 2008 • Order for expenses to be incurred for the transportation, land and statutory and nodal agency fees for 3 nos Enercon make 800 kW Type E-53 Wind Energy Converters at site Khandke. Reference No.: SPD/EIL/Order/MH- Khandke/07-08/Expenses dated 20th March, 2008 • Purchase order for supply of 6 Nos. Enercon Make 800 KW, Type E-53, Wind Energy Converters. Reference No.:SPD/EIL/Order/MH- Khandke/07-08/Supply-A dated 20th March, 2008 • Order for civil and industrial works for 6 nos Enercon make 800 kW Type E-53 Wind Energy Converters. Reference No.: SPD/EIL/Order/MH- Khandke/07-08/Civil & Indus dated 20th March, 2008 • Purchase order for supply of steel sections, transformers & DP structure of the specification mentioned below for 6 nos Enercon make 800 kW type E-53 wind energy converters ex-works at site Khandke. Reference No.: SPD/EIL/Order/MH-Khandke/07-08/Supply-C dated 20th March, 2008 • Order for supply of 6. Nos concrete towers for Enercon Make 800 kW, Type E-53 wind energy converters at site Khandke. Reference No.: SPD/EIL/Order/MH-Khandke/07-08/Supply-B dated 20th March, 2008 • Order for expenses to be incurred for the transportation, land and statutory and nodal agency fees for 6 nos Enercon make 800 kW Type E-53 Wind Energy Converters at site Khandke. Reference No.: SPD/EIL/Order/MH- Khandke/07-08/Expenses dated 20th March, 2008 • Order for installation, commissioning and other services for 6 nos Enercon make 800 kW Type E-53 Wind Energy Converters at site Khandke. Reference No.: SPD/EIL/Order/MH- Khandke/07-08/Comm. dated 20th March, 2008
/PRO/	• Purchase Order, Technical Specification for the WTG model no. E-53 by M/s Enercon (India) Ltd.

/PPA/	• Wind Energy Purchase agreement between M/s Shah Promoters & Developers and MSEDCL dated 20th April 2009 for 3 X 0.8 MW WTGs at Village Agadgaon, Baradari (khandke), Tal & District: Ahmednagar. • Wind Energy Purchase agreement between M/s Shah Promoters & Developers and MSEDCL dated 25th April 2009 for 4X 0.8 MW WTGs at Village Jamb, Baradari (Khandke), Tal & District: Ahmednagar • Wind Energy Purchase agreement between M/s Shah Promoters & Developers and MSEDCL dated 26 November 2009 for 2 X 0.8 Mw at village Agadgaon, , Baradari (Khandke), Tal & District: Ahmednagar.
/SD/	Starting date of project activity based on commissioning date of E-53/13, E-53/14, E-53/70.
/TRA/	The certificate stating the training process imparted to personnel issued by Enercon (India) Ltd upon request of SPD.
/XLS/	Excel – Calculation sheets (baseline and emission reduction calculation along with CUF, downtime calculation) provided by the project participant for the periodic verification of the project activity "Wind Energy Project in Maharashtra by M/s Shah Promoters & Developers"

Table2: DOE background investigation and assessment documents

Reference	Document
/AMS I.D./	Grid Connected renewable electricity generation, version 16
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/IPCC-GP/	IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories, 2006
/KP/	Kyoto Protocol (1997)
/MA/	Decision 17/CP.7 (Marrakech Accords)
/PDD/	CDM registered PDD: version 03 dated 2011-01-29 (http://cdm.unfccc.int/Projects/DB/RWTUV1297334687.42/view)
/VAL/	1. Validation Report for CDM project "Wind Energy Project in Maharashtra by M/s Shah Promoters & Developers" issued by TÜV NORD JI/CDM Certification Program; UNFCCC Ref number: 4489 (http://cdm.unfccc.int/Projects/DB/RWTUV1297334687.42/view) 2. IRR calculation sheet for the project activity "Wind Energy Project in Maharashtra by M/s Shah Promoters & Developers"; UNFCCC Ref number: 4489 (http://cdm.unfccc.int/Projects/DB/RWTUV1297334687.42/view)
/VCS/	• The Voluntary Carbon Standard Version 3.2 • The Voluntary Carbon Standard 2007.1 • The Voluntary Carbon Standard 2007

	• The Voluntary Carbon Standard (Version 1)
/VCS-PD/	The VCS PD filled with para 1.2, 1.3, 1.5, 1.6, 1.7, 1.9, 1.10, 1.12.1, 1.12.2, 1.12.3, 1.12.4 and 1.13 of the VCS Project Description template dated 14th April 2012.
/VVM/	CDM Validation and Verification Manual, version 01.2, Annex 1, EB 55.

Table3: Website referred during the verification process

Reference	Link	Organisation
/cea/	www.cea.nic.in	Central Electricity Authority
/vcs/	www.v-c-s.org	VCSA
/unfccc/	http://cdm.unfccc.int	UNFCCC

Table 4: Interviewed Person

Reference	MoI[1]		Name	Organisation / Function
/IM01/	V	☒ Mr. ☐ Ms	Vishal Mahadeshwar	Senior Engineer, SPD
/IM01/	V	☒ Mr. ☐ Ms	Mr. Hemant Mahajan	Account Head, SPD
/IM03/	V	☒ Mr. ☐ Ms	Prashant Patil	Area Service Incharge, ENERCON India Private Limited

1) Means of Interview: (**T**elephone, **E**-Mail, **V**isit)