

VERIFICATION REPORT OF “WIND ENERGY PROJECT IN SAMANA, GUJARAT AND SAUNDATTI, KARNATAKA”

Document Prepared By Earthood Services Private Limited

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Summary:

Earthood has performed the VCS third verification of the project “Wind energy project in Samana, Gujarat and Saundatti, Karnataka” (VCS Ref. Number 910).

The scope of verification includes confirming the implementation of the monitoring plan of the registered VCS PD (version 3.0) and the application of the monitoring methodology Approved consolidated baseline and monitoring methodology ACM0002 (Version 13.0.0)

The verification is consisted of three phases: i) desk review of the project; ii) follow-up onsite visit and interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted following Earthood internal quality procedures.

The project deals with utilisation of wind energy for the generation of electricity. Electricity generated from such renewable sources of energy will help displace the energy produced from non-renewable sources of energy such as fossil fuels. Hence will lead to emission reductions of mainly GHGs. Benefits arising from such emission reduction will also lead to optimal usage of energy source.

During the verification process 02 CARs, 01 CL and 00 FARs were raised and are discussed in detail in Appendix 4. Therefore, the emission reductions from the project activity “Wind energy project in Samana, Gujarat and Saundatti, Karnataka” in India during the period 01/01/2014 – 31/03/2018 (including both days) could be verified.

Vintage wise representation of the emission reductions is as follows:

Period	Baseline Emissions (tCO ₂ e)	Project Emissions (tCO ₂ e)	Leakages (tCO ₂ e)	Emission Reductions (tCO ₂ e)
2014 (01-Jan-14 to 31-Dec-14)	19,297.00	0.00	0.00	19,297.00
2015 (01-Jan-15 to 31-Dec-15)	21,681.00	0.00	0.00	21,681.00
2016 (01-Jan-16 to 31-Dec-16)	31,747.00	0.00	0.00	31,747.00
2017 (01-Jan-17 to 31-Dec-17)	93,332.00	0.00	0.00	93,332.00
2018 (01-Jan-18 to 31-Mar-18)	13,150.00	0.00	0.00	13,150.00
Total	179,207.00	0.00	0.00	179,207.00

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1 INTRODUCTION

1.1 Objective

CLP Wind Farms (India) Private Limited has commissioned Earthood Services Private Limited (Earthood) to perform third verification of the “Wind energy project in Samana, Gujarat and Saundatti, Karnataka” (hereafter called project) for the monitoring period 01/01/2014 to 31/03/2018 with VCS Ref number 910. The objective of this verification is a thorough and independent verification for the emission reductions reported for “Wind energy project in Samana, Gujarat and Saundatti, Karnataka” and managed by CLP Wind Farms (India) Private Limited.

The verification is the periodic independent review and ex post determination by Earthood Services private limited of the monitored reductions in GHG emissions that have occurred as a result of the registered VCS project activity during a defined monitoring period. Certification is the written assurance by Earthood that, during a specific period in time, a project activity achieved the emission reductions as verified.

1.2 Scope and Criteria

The scope of the verification is to establish and verify that;

- a) The project activity has been implemented and operated as per the registered PD or any approved revised PD, and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- b) The monitoring report and other supporting documents provided are complete in accordance with the latest applicable version of the completeness checklist for requests for issuance of VERs, verifiable, and in accordance with applicable VCS requirements;
- c) The actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan, any revised approved monitoring plan, the approved methodology including applicable tool(s) and/or, where applicable, the approved standardized baseline;
- d) The data recorded and stored as per the monitoring methodology including applicable tool(s) and, where applicable, the standardized baseline

1.3 Level of Assurance

A draft verification report that is prepared by assessment team will be reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by Earthood were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable VCS and CDM (Clean Development Mechanism) requirements as appropriate. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the validation team. The report approved by Quality Manager is endorsed by Managing Director, who is overall responsible to ensure quality, before final release. The further details of applicable procedures and responsibilities about Earthood Quality Management System (QMS) are available on its website (www.earthood.in).

Earthood's verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. Earthood planned and performed the verification by obtaining evidence and other information and explanations that Earthood considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 01/01/2014 – 31/03/2018 are fairly stated in the Monitoring Report Version 03 dated 23/05/2018. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM0002, Version 13.0.0, and the VCS standard.

For more information, please refer to section 6 of this verification report.

1.4 Summary Description of the Project

This greenfield project activity involves the use of wind energy to generate electricity with the help of 67 WTGs installed in the state of Karnataka, and Gujarat. Total WTGs in Samana, Gujarat, in the project's scope are 12 whereas for Saundatti in Karnataka, it is 55. Electricity produced by project activity is then sold to the NEWNW (for Samana site) and Southern (for Saundatti) grid respectively. All the WTGs are 0.8 MW in capacity/10/ and total capacity installed is 53.6 MW with 9.6 MW in Samana and 44 MW in saundatti/10/.

Wind turbine work on the principle where the incoming wind turns the blades around the rotor thereby producing mechanical energy from the kinetic energy created by the wind. The generator then converts this mechanical energy into electrical energy. Energy generated by the wind potential leads to cleaner production of electricity and also displaces the electricity that would have been otherwise produced from the fossil fuel based sources.

Wind World (India) Limited, under the O&M contract/13/ with CLP, is responsible for the operation and maintenance of the project for the entire crediting period. Total capacity of the project activity is 53.6 MW as per the registered PD/01/. Duration of this third periodic verification of the project activity is from 01/01/2014 to 31/03/2018 and total emission reductions achieved during this monitoring period is 179,207 tCO₂e.

Both sites of this project activity are registered separately as CDM projects. WTGs under Samana wind farm have been included in the registered project ref no. 8955, however no emission reductions have been claimed so far the CDM project activity. <http://cdm.unfccc.int/Projects/DB/RWTUV1355987533.33/view>.

Further, the WTGs under the Saundatti wind farm were also included in CDM project ref no. 6794 for the monitoring period 01/01/2013 to 01/10/2016. Thus, in this periodic verification (01/01/2014 - 31/03/2018), PP has not considered electricity generation from 01/01/2014 to 01/10/2016 to avoid double counting of emission reductions. Net GHG emission reductions generated by this project activity will not be used for compliance with an emission trading program. Declaration/16/ has been provided by the PP pertaining to above information also verified by the assessment team and found acceptable. Commissioning dates for the WTGs located in Gujarat and Karnataka are given in the appendix 5.

The commissioning details of the WTGs mentioned in appendix 5 were verified from the commissioning certificates provided/10/ by the PP. All the WTGs used in this project are Enercon make and E-53 model with individual capacity of 0.8 MW. Technical description was found to be consistent with the on-site observation and registered monitoring plan/01/. The company's website (<https://www.clpindia.in/renewables.html>) also confirmed the same.

2 VERIFICATION PROCESS

The registered VCS project is undergoing third verification, the approach adopted to ensure the quality of emission reductions is described in the following sections.

2.1 Method and Criteria

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Earthood internal procedures.

The Project was verified against the latest requirements and guidance set out in VCS and CDM standards.

No sampling approach has been applied by the verification team as all the monthly reported figures in the MR/02/ and the ER sheet/03/ were checked from the actual records.

2.2 Document Review

The verification is performed primarily as a document review of the documents submitted at various stages of assessments. The review is performed by assessment team using dedicated protocols. The assessment team cross checks the information provided in the documents (PDD, MR, validation report) and information from sources other than those used, if available, and also conducts independent background investigations. Earthood conducted a desk review as under;

- a) A review of the data and information presented to verify their completeness.
- b) A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures.
- c) An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

2.3 Interviews

Earthood performed an on-site visit and interviews on 30/04/2018 and 03/05/2018 with project stakeholders to confirm selected information and to resolve issues identified in the document review. During the on-site visit, the PP representatives of were interviewed.

No.	Interviews			Date	Subject	Team Member
	Last Name	First Name	Affiliation			
1.	Kandani	Abhay	CLP-SSI	30/04/2018	Project implementation	Harshita Kulshrestha
2.	Chauhan	Zeel	CLP-Operator	30/04/2018	Emission reduction calculation	Harshita Kulshrestha

No.	Interviews			Date	Subject	Team Member
	Last Name	First Name	Affiliation			
3.	Undhud	Ashwin	SS Technecian	30/04/2018	Monitoring procedure	Harshita Kulshrestha
4.	Singh	Dharmendra	ASL	30/04/2018	WTG maintenance schedule and PLF	Harshita Kulshrestha
5.	Chaudhary	Abhsihek	ASL	30/04/2018	Data compilation.	Harshita Kulshrestha
6.	Sharma	Pritish	Asset Manager	30/04/2018	WTG maintenance schedule and PLF	Harshita Kulshrestha
7.	Kumar	Pritam	Asset Manager	03/05/2018	Emission reduction calculation	Harshita Kulshrestha
8.	Kumar	Neeraj	ASL	03/05/2018	Monitoring procedure	Harshita Kulshrestha

In addition, the location specified for the WTG were verified from the registered PD/01/ along with the help of <https://www.itouchmap.com/latlong.html>/18/. The operation of the WTGs was checked through the credit notes/05/ issued from the government authorities. Based on the site visit and desk review, the verification team is sufficiently confident of the implementation of the project activity as per registered PD/01/.

2.4 Site Inspections

A site visit was undertaken by Earthood from on 30/04/2018 and 03/05/2018 to carry out following;

- An assessment of the implementation and operation of the registered project activity as per the registered PD/01/.
- A review of information flows for generating, aggregating and reporting the monitoring parameters.
- Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PD.
- A cross check between information provided in the monitoring report and data from other sources such as invoices.
- A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PD, the applied methodology including applicable tool(s), and, where applicable, the applied standardized baseline.
- A review of calculations and assumptions made in determining the GHG data and emission reductions.
- An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

Site visit was conducted where random sampling was applied and 90/30 precision and confidence level. A total of 6 WTGs from Samana site and 7 from Saundatti site were visited. The approach was found to be justified as per the CDM standard of sampling version 7.0 and VCS standard/14,15/. Technical descriptions as seen on site was found to be in line with the registered monitoring plan/01/. The following WTGs were visited by the DOE and their location was recorded through app called "getgeocoordinates" and through website/18/.

Site	Reference Number	Latitude	Longitude
Samana	EIL/800/09-10/1695	22° 05' 45.4" N	70° 05' 46.2" E
Samana	EIL/800/09-10/1696	22° 05' 35.8" N	70° 05' 53.6" E
Samana	EIL/800/09-10/1697	22° 05' 27.8" N	70° 05' 46.6" E
Samana	EIL/800/09-10/1699	22° 05' 13.5" N	70° 05' 44.2" E
Samana	EIL/800/09-10/1700	22° 05' 04.8" N	70° 05' 40.8" E
Samana	EIL/800/09-10/1698	22° 05' 22.0" N	70° 05' 44.3" E
Saundatti	CLP-40	15° 47' 40.6" N	75° 09' 56.9" E
Saundatti	CLP-41	15° 47' 46.2" N	75° 09' 54.9" E
Saundatti	CLP-43	15° 48' 01.1" N	75° 09' 57.5" E
Saundatti	CLP-02	15° 49' 15.8" N	75° 06' 31.1" E
Saundatti	CLP-03	15° 49' 23.5" N	75° 06' 47.8" E
Saundatti	CLP-04	15° 49' 17.1" N	75° 06' 49.1" E
Saundatti	CLP-05	15° 49' 10.4" N	75° 06' 49.8" E

2.5 Resolution of Findings

The objective of this step is to identify, discuss and conclude on the issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the registered project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions. This is done based on the desk review and onsite assessment. The verification team prepares and/or updates a verification protocol (internal document) that records the conformities and nonconformities, which may be of following types;

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

- Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient
- Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions
- Change to the key sustainable development indicators
- Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

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

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

A total of 02 CAR and 01 CL were raised in the current verification. All the findings that are raised and communicated to project participant during the verification are included under Appendix 4. The section also includes the response, if provided, by the project participants and an assessment by the verification team if it was closed out or otherwise

2.5.1 Forward Action Requests

Not Applicable

2.6 Eligibility for Validation Activities

Not Applicable

3 VALIDATION FINDINGS

Not Applicable

3.1 Participation under Other GHG Programs

The project activity is registered under the VCS with Project ID 910. This project activity consists of separate sites and both the sites are registered under separate CDM projects. However, project proponent has provided a self-declaration in this regard which confirms that project proponent will not claim Emission reductions for current monitoring period 01/01/2014 to 31/03/2018 under any other GHG program except VCS, hence accepted by the assessment team.

3.2 Methodology Deviations

There is no methodology deviation identified during the current monitoring period.

3.3 Project Description Deviations

The deviations applicable to the current monitoring period are listed below:

- 1) In Samana site, WTGs under this project activity are connected to Sadodar grid substation and all the WTGs under the purview of Sadodar substation were connected to five feeders and these five feeders are connected to two main bus bar. Initially, five billing interface meters were installed with all feeders. However, on 11/11/2015, DISCOM changed the electrical connectivity system and installed two ABT meters on main bus bar as main billing meters and subsequently previous meters are now considered as check meters.

Further the previous and current metering system is explained in section 4.3 of this report.

The alteration of the interface metering system in the grid substation was found acceptable as the meters installed at the project metering point are under the custody of state DISCOM

and PP has no control over it. State DISCOM is altering the metering position time to time as per prevailing requirement/19/. The approach was found to be inline with and VCS standard/14/. The change in the metering system was discussed on-site with the interview personnel which was verified by the calibration certificates for meters/04/, onsite interviews and single line diagram. The deviation was found to be not impacting the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in compliance with the applied methodology.

- 2) For the Saundati site, Hubli Electricity Supply Company limited has replaced the billing meters during meter calibration as the display of the meters was not working properly. The change in the billing meter was accepted by the assessment team as the meters are under the custody of Hubli Electricity Supply Company and the meter change was discussed on-site with the interview personnel. Further, replacement of interface meter has been verified from calibration certificates/04/ and minutes of meeting which states that interface metes have been replaced due to display issue. The replacement of interface meter in the grid substation was found acceptable as the meters installed at the project metering point are under the custody of state DISCOM and PP has no control over it.

Further the previous and current metering system is explained in section 4.3 of this report.

The changes in the project description were found acceptable to the assessment team as the changes have no impact on the applicability of the methodology or additionality of the project, or on the appropriateness of the baseline scenario. The changes were found conformance to VCS 3.4 requirements and therefore the changes were founding acceptable.

3.4 Grouped Project

Not Applicable

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

This project activity involves installation of WTG's to generate electricity from wind energy. The installed capacity of the project activity is 53.6 MW consisting of 67 WTG's (800 MW each) in the state of Karnataka, and Gujarat, which was verified on site/09/ and through commissioning certificates/10/.

The installation and specification of WTGs have been checked with commissioning certificates/10/ and during on-site assessments/09/. There was no major breakdown or shut downs during the monitoring period which might affect the applicability of methodology or might cause material errors in emission reductions.

Assessment team concludes the following:

- a) The implementation status of project activity was found to be in compliance with registered PD
- b) DOE has conducted the on-site visit to confirm the implementation status of the project.
- c) The commissioning date of the project activity was found to be accurately and consistently recorded.
- d) The actual operation of project activity was found to be in compliance with the flow diagram provided in registered PD.
- e) The emission reductions achieved during the current monitoring period are 179,207 tCO₂e.

The project activity contributes to the sustainable development by utilising wind energy for generating electricity which otherwise would have been generated through fossil fuels. Thereby reduction in usage of non-renewable sources used to generate energy.

Further the GHG emission reductions generated by the project activity has not been included by any other an emissions trading program or any other mechanism that includes GHG allowance trading. Also the project has not received any other form of environmental credit and has not been participated/rejected under any other GHG programs.

Sustainable Development- The project will contribute to the sustainable development in the following ways

1. Environmental: Since the project activity leads to cleaner production of energy, it is leading to displacement of fossil fuel based energy.
2. Social: Setting up of the project activity has created new job openings hence is supporting employment of the local people around.
3. Cleaner Air: Since the project activity leads to lesser GHG emission it results in better air quality.

Further the project has been implemented as described in the project description.

The total emission reductions achieved in this monitoring period i.e. from 01/01/2014 to 31/03/2018 are 179,207 tCO₂e.

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

The project monitoring has been carried in accordance with the registered VCS PD/01/ and the monitoring report/02/. The monitoring plan laid in the registered PD is being followed at the site/09/. The assessment team has verified the information flow (from data generation, aggregation, to recording, calculation and reporting for these parameters including the values) in the MR/02/.

The emission reductions are purely based on the net electricity generated and exported from the machines. PP has provided all the sufficient data for current monitoring period. The values of the parameter $EG_{PJ,y}$ used in deriving the GHG emission reduction could be very well correlated between the data sets and ER spreadsheet/03/ provided by PP. the verification of each monitoring parameter has been discussed later in section 4.3.

The calculation method and formulae used in calculating baseline emission is in compliance to the methodology used i.e. ACM0002 version 13.0.0 /07/. Since project activity is a wind power project, leakage emission and project emission has been considered as zero.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

The below tables describe how the parameter, that is to be measured according to the monitoring plan, has been verified to confirm that the actual monitoring complies with the monitoring plan, monitoring data has been thoroughly assessed and that the calibration requirements are fulfilled.

Parameter	EG _{Samana,WTG,i} (MWh) Quantity of electricity generated by <i>ith</i> WTG at Samana site	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is continuously measured and daily recorded.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered PD/01/ and monitoring methodology/07/.
	Monitoring equipment	LCS meter located at the WTG controller end

	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	Not applicable.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	NA
	Calibration frequency /interval:	The LCS meters do not require calibration as the energy readings of electricity generated at the LCS meter is cross verified by the energy calculated by inverting system installed in the WTGs. In case there is any mismatch in the energy values recorded by the LCS meter and the energy values calculated by the inverting system; the machine will stop working and generate the error report.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, Pending untill the findings are closed.or as per the manufacturer's specifications?	NA
	Is the calibration of measuring equipment carried out by an accredited person or institution?	NA

	Is(are) calibration(s) valid for the whole reporting period?	NA
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	NA
	How were the values in the monitoring report verified?	Values in the monitoring report were verified from the excel sheet provided. Thereafter the values were checked onsite from the SCADA reports. Final electricity generated by the project activity is 90,910.704 MWh. Furthermore monthly values of this parameter is reported in the monitoring report is verified with SCADA report and found to be consistent.
	If applicable, has the reported data been cross-checked with other available data?	The data was cross checked from the logbook maintained online for SCADA input data.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes the data ensure correct transfer of data and reporting of emission reductions management and QA/QC processes are in place.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	No findings	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

	The implementation of the project is as per the registered PD could be confirmed by the verification team.
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Parameter	EG _{Saundatti,WTG,i} (MWh) Quantity of electricity generated by <i>ith</i> WTG at Saundatti site	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is continuously measured and daily recorded.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered PD/01/ and monitoring methodology/07/.
	Monitoring equipment	LCS meter located at the WTG controller end
	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	Not applicable.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	NA
	Calibration frequency /interval:	The LCS meters do not require calibration as the energy readings of electricity generated at the LCS meter is cross verified by the energy calculated by inverting system installed in the WTGs. In case there is any mismatch in the energy values recorded by the

		LCS meter and the energy values calculated by the inverting system; the machine will stop working and generate the error report.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, Pending until the findings are closed.or as per the manufacturer's specifications?	NA
	Is the calibration of measuring equipment carried out by an accredited person or institution?	NA
	Is(are) calibration(s) valid for the whole reporting period?	NA
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	NA
	How were the values in the monitoring report verified?	Values in the monitoring report were verified from the excel sheet provided. Thereafter the values were checked onsite from the SCADA reports. Final electricity generated by the project activity is 108,975.435 MWh. Furthermore monthly values of this parameter is reported in the monitoring report is verified with SCADA report and found to be consistent.
	If applicable, has the reported data been cross-checked with	The data was cross checked from the logbook maintained online for

	other available data?	SCADA input data.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes the data ensure correct transfer of data and reporting of emission reductions management and QA/QC processes are in place.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	No findings	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. The implementation of the project is as per the registered PD could be confirmed by the verification team.	

Parameter	EG _{NEWNE, facility, y} (MWh) Quantity of net electricity generation supplied by the project activity to the NEWNE grid in year y	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is continuously measured and monthly recorded.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered PD/01/ and monitoring methodology/07/.
	Monitoring equipment	The electricity being generated by project WTGs are monitored

		at the Sadodar grid substation located Samana site. In the substation, two main meters and five check meters have been installed (static type Trivector meter, Accuracy class: 0.2.)
	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	Accuracy class of the equipment is 0.2s and is as per the registered monitoring plan.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes the accuracy class is valid for the entire measuring range.
	Calibration frequency /interval:	Calibration frequency is as per the registered monitoring plan i.e. once in three years.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, Pending until the findings are closed.or as per the manufacturer's specifications?	Calibration interval is as per the registered monitoring plan/01/ and the methodology/07/
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Yes the calibration/04/ of the equipment is done by an accredited institute i.e Paschim Gujarat Vij co. Ltd. The details of which can be checked in the this section below.

	Is(are) calibration(s) valid for the whole reporting period?	Calibration of energy meters is valid for whole reporting period.
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Yes. The calibration is carried out appropriately
	How were the values in the monitoring report verified?	Values in the monitoring report were verified from Share Certificate by State Load Despatch Centre (SLDC). The monthly reported values were further cross checked with the monthly invoices raised by the PP to state utility and found to be consistent. Final electricity generated by the project activity is 88,042.957 MWh. Net electricity is generated by wind farm is monitored by two main meters at the substation. The net electricity supplied by the wind farm to the NEWNE grid is determined as: =Net wind farm generation * (Electricity generation by project WTGs / Electricity generation by all WTGs connected to same grid substation). Here, electricity generation is calculated by taking into account LSC meter reading and Net wind farm generation is reported in the share certificates/06/.
	If applicable, has the reported data been cross-checked with other available data?	The data was cross checked from the invoices/05/
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes the data ensure correct transfer of data and reporting of emission reductions management and QA/QC processes are in place.

	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	No findings	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. The implementation of the project is as per the registered PD could be confirmed by the verification team. Values of electricity supplied to the grid mentioned in the ER sheet were verified with the “Share certificates” and LCS data provided by the project proponent. Since 100% data was verified, the team can ascertain that the values taken for emission reductions calculation are free from material errors.	

Parameter	EG _{South, facility, y} (MWh) Quantity of net electricity generation supplied by the project activity to the Southern grid in year y	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is continuously measured and monthly recorded.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered PD/01/ and monitoring methodology/07/.
	Monitoring equipment	The electricity being generated by project WTGs are monitored at the dedicated substation located at Saundatti site. In the substation, there are two sets of

		meters namely- Check Meter and Main Meter (static type Trivector meter, Accuracy class: 0.2.)
	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	Accuracy class of the equipment is 0.2s and is as per the registered monitoring plan.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes the accuracy class is valid for the entire measuring range.
	Calibration frequency /interval:	Calibration frequency is as per the registered monitoring plan i.e. once in three years.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, Pending until the findings are closed.or as per the manufacturer's specifications?	Calibration interval is as per the registered monitoring plan/01/ and the methodology/07/
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Yes the calibration/04/ of the equipment is done by an accredited institute i.e Hubly electricity supply Company. The details of which can be checked in the this section below.
	Is(are) calibration(s) valid for the whole reporting period?	Calibration of energy meters is valid for whole reporting period.

	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Yes. The calibration is carried out appropriately
	How were the values in the monitoring report verified?	The monthly values of this parameter were verified from the monthly JMRs issued by state utility and found to be consistent. The monthly reported values were further cross checked with the monthly invoices raised by the PP to state utility and found to be consistent. Final electricity generated by the project activity is 106,281.062 MWh. Net electricity is generated by wind farm is monitored by two main meters at the substation. The net electricity supplied by the wind farm to the Southern grid is determined as: =Net wind farm generation * (Electricity generation by project WTGs / Electricity generation by wind farm WTGs) Here electricity generation is calculated by taking into account LSC meter reading and Net wind farm generation is reported in the joint meter reading /06/.
	If applicable, has the reported data been cross-checked with other available data?	The data was cross checked from the invoices/05/
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes the data ensure correct transfer of data and reporting of emission reductions management and QA/QC processes are in place.

	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	No findings	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. The implementation of the project is as per the registered PD could be confirmed by the verification team. Values of electricity supplied to the grid mentioned in the ER sheet were verified with the “Joint Meter Reading” and LCS data provided by the project proponent. Since 100% data was verified, the team can ascertain that the values taken for emission reductions calculation are free from material errors.	

Parameters fixed ex ante:

$EF_{NEWNE,grid,OM,y}$: It is the operating margin emission factor of NEWNE grid at the time of project registration the mentioned value of 0.9842 tCO₂e/MWh is consistent with the registered PD/01/.

$EF_{NEWNE,grid,BM,y}$; tCO₂e/MWh: it is build margin emission factor of NEWNE grid fixed and at the time of project registration the mentioned value of 0.8587 tCO₂e/MWh is consistent with the registered PD/01/.

$EF_{NEWNE,grid,CM,y}$; tCO₂e/MWh: it is the combined margin emission factor of NEWNE grid fixed at the time of project registration the mentioned value of 0.9528 tCO₂e/MWh is consistent with the registered PD/01/.

$EF_{South,grid,OM,y}$: It is the operating margin emission factor of Southern grid fixed at the time of project registration the mentioned value of 0.9513 tCO₂e/MWh is consistent with the registered PD/01/.

$EF_{South,grid,BM,y}$; tCO₂e/MWh: it is build margin emission factor of Southern grid at the time of project registration the mentioned value of 0.7339 tCO₂e/MWh is consistent with the registered PD/01/.

$EF_{South,grid,CM,y}$; tCO₂e/MWh: it is the combined margin emission factor of Southern grid fixed at the time of project registration the mentioned value of 0.8969 tCO₂e/MWh is consistent with the registered PD/01/.

Calibration of meters:

During the verification assessment of the project activity, accuracy of all the metering were checked. The installation and working conditions of the meters were checked during the on-site inspection. Calibration details of the meter is given below.

Samana Site:

Sl. No.	Meter Type	Meter Identification No	Meter Make	Accuracy Class	Calibration Date	Calibration Expiry Date	Delay in Calibration Y/N
01	Main Meter	GJU 01475	Secure	0.2s	06/09/2013	05/09/2016	N
02		GJU 04176	Secure	0.2s	06/09/2013	05/09/2016	N
03		GJU 01470	Secure	0.2s	06/09/2013	05/09/2016	N
04		KAB 11082	Secure	0.2s	06/09/2013	05/09/2016	N
05		GJU 67589	Secure	0.2s	06/09/2013	05/09/2016	N
06		GJ-2458-A	L&T	0.2s	11/11/2015	10/11/2018	N

Sl. No.	Meter Type	Meter Identification No	Meter Make	Accuracy Class	Calibration Date	Calibration Expiry Date	Delay in Calibration Y/N
07		GJ-2459-A	L&T	0.2s	11/11/2015	10/11/2018	N
01	Check Meter	GJU 01475	Secure	0.2s	30/09/2016	29/09/2019	N
02		GJU 04176	Secure	0.2s	30/09/2016	29/09/2019	N
03		GJU 01470	Secure	0.2s	30/09/2016	29/09/2019	N
04		KAB 11082	Secure	0.2s	30/09/2016	29/09/2019	N
05		GJU 67589	Secure	0.2s	30/09/2016	29/09/2019	N

Since the commissioning of the project there were 5 main meters at the substation with 5 feeders with individual TOD metering system. The meters were:

1. GJU 01475 was connected to Feeder-1,
2. GJU 04176 was connected to Feeder-2,
3. GJU 01470 was connected to Feeder-3,
4. KAB 11082 was connected to Feeder-4 and
5. GJU 67589 was connected to Feeder-5

However, on 11/11/2015 GETCO had installed two ABT meters into upstream of five TOD meters to meet the GERC notification. Post installation, old TOD meters (which were previously used as main meters) are now considered check meters. The above information was verified with single line diagrams and GERC notification/20/. The same has also been considered as deviation and presented in section 3.3. Hence, current metering system in Samana site has two new main meters (installed in 11/11/2015) and 5 check meters which were previously the main meters (prior to 11/11/2015).

Thus, same change in energy meters has been accounted as Project Description deviations by PP in line with section 3.6.1 of VCS standard version 3.7. However, this project deviation doesn't have an adverse impact in the applicability of the methodology, additionally or the appropriateness of the baseline scenario. Thus, same is acceptable to the assessment team.

Saundatti Site:

Sl. No.	Meter Type	Meter Identification No	Meter Make	Accuracy Class	Calibration Date	Calibration Expiry Date	Delay in Calibration Y/N
1	Main Meter	09141842 (Main Meter)	L&T	0.2s	09/11/2012	08/11/2015	N

Sl. No.	Meter Type	Meter Identification No	Meter Make	Accuracy Class	Calibration Date	Calibration Expiry Date	Delay in Calibration Y/N
		13196460 (Main Meter)	L&T	0.2s	14/08/2014	13/08/2017	N
		14194656 (Main Meter)	L&T	0.2s	10/04/2015	09/04/2018	N
	Check Meter	09141846 (Check Meter)	L&T	0.2s	09/11/2012	08/11/2015	N
		13196467 (Check Meter)	L&T	0.2s	14/08/2014	13/08/2017	N
		14194675 (Check Meter)	L&T	0.2s	10/04/2015	09/04/2018	N
2	Main Meter	09141848 (Main Meter)	L&T	0.2s	09/11/2012	08/11/2015	N
		13195786 (Main Meter)	L&T	0.2s	14/08/2014	13/08/2017	N
		14194483 (Main Meter)	L&T	0.2s	15/04/2015	14/04/2018	N
	Check Meter	09141852 (Check Meter)	L&T	0.2s	09/11/2012	08/11/2015	N
		13195795 (Check Meter)	L&T	0.2s	14/08/2014	13/08/2017	N
		14194487 (Check Meter)	L&T	0.2s	15/04/2015	14/04/2018	N

The following meter replacement took place at saundatti site which has also been reported as deviation in the section 3.3 of this report;

Sl no.	Old Meter Number	Replaced on	New meter number	Reason if change
01	09141842	14/08/2014	13196460	Display issue
02	09141846	14/08/2014	13196467	Display issue
03	13196460	14/08/2014	14194656	Display issue
04	13196467	14/08/2014	14194675	Display issue
05	09141848	14/08/2014	13195786	Display issue
06	09141852	14/08/2014	13195795	Display issue
07	13195786	14/08/2014	14194483	Display issue
08	13195795	14/08/2014	14194487	Display issue

The above details about meter change were verified from the respective calibration reports and Minuets of Meeting document/20/. Thus, same change in energy meters has been accounted as Project Description deviations by PP is in line with section 3.6.1 of VCS standard version 3.7. However, this project deviation doesn't have an adverse impact in the applicability of the

methodology, additionally or the appropriateness of the baseline scenario. Thus, same is acceptable to the assessment team.

In line with the registered PD, calibration frequency of the billing meters are once in three years and no delay in calibration has been observed in this periodic verification. Further, there was not any significant period of shut-down or break-down period during this monitoring period.

GHG Calculations

The emission reduction as per the applied methodology equals the baseline emissions (project emissions and leakage emissions for such project activities is considered zero). The formula provided for the calculation of baseline emissions is:

$$BE_y = EG_{PJ, y} * EF_{grid, CM, y}$$

Where:

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

$EG_{PJ, y}$: Quantity of net electricity generation supplied by the project (Wind) plant/unit to the grid in year y (MWh/yr)

$$EG_{PJ, y} = EG_{facility, y}$$

Where:

$EG_{PJ, y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh)

$EG_{facility, y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh)

Baseline emissions (BE_y) are calculated as follows:

$$BE_y = EG_{NEWNE, facility, y} * EF_{NEWNE, grid, CM, y} + EG_{South, facility, y} * EF_{South, grid, CM, y}$$

Baseline emissions for Samana Site:

Vintage Period	Net Electricity Export (MWh)	Emission Factor (tCO ₂ /MWh)	Baseline Emissions (tCO ₂)
2014 (01-Jan-14 to 31-Dec-14)	20,253.218	0.9528	19,297.000
2015 (01-Jan-15 to 31-Dec-15)	22,755.738	0.9528	21,681.000
2016 (01-Jan-16 to 31-Dec-16)	20,171.962	0.9528	19,219.000
2017 (01-Jan-17 to 31-Dec-17)	21,193.468	0.9528	20,193.000
2018 (01-Jan-18 to 31-Mar-18)	3,668.571	0.9528	3,495.000
	88,042.957		83,885.000

Baseline emissions for Saundatti Site:

Vintage Period	Net Electricity Export (MWh)	Emission Factor (tCO ₂ /MWh)	Baseline Emissions (tCO ₂)
2014 (01-Jan-14 to 31-Dec-14)	0.000	0.8969	0.000
2015 (01-Jan-15 to 31-Dec-15)	0.000	0.8969	0.000
2016 (01-Jan-16 to 31-Dec-16)	13,968.214	0.8969	12,528.000
2017 (01-Jan-17 to 31-Dec-17)	81,547.176	0.8969	73,139.000
2018 (01-Jan-18 to 31-Mar-18)	10,765.671	0.8969	9,655.000
	106,281.062		95,322.000

As detailed in section 1.4 of this verification report, Saundatti site were also registered in CDM scheme with project ref no. 6794 and PP has issued CERs for the duration of 01/01/2013 to 01/10/2016. Thus in this periodic verification (01/01/2014 to 31/03/2018), PP has not considered electricity generation from 01/01/2014 to 01/10/2016 to avoid double counting. Assessment team has checked with the monitoring report published in UNFCCC and found acceptable.

Baseline Emissions for Project activity:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2014 (01-Jan-14 to 31-Dec-14)	19,297.00	0.00	0.00	19,297.00
2015 (01-Jan-15 to 31-Dec-15)	21,681.00	0.00	0.00	21,681.00
2016 (01-Jan-16 to 31-Dec-16)	31,747.00	0.00	0.00	31,747.00
2017 (01-Jan-17 to 31-Dec-17)	93,332.00	0.00	0.00	93,332.00
2018 (01-Jan-18 to 31-Mar-18)	13,150.00	0.00	0.00	13,150.00
Total	179,207.00	0.00	0.00	179,207.00

4.4 Non-Permanence Risk Analysis

Not applicable.

5 SAFEGUARDS

5.1 No Net Harm

Not applicable

5.2 Local Stakeholder Consultation

Local stakeholder consultation has been conducted at the time of project registration hence not applicable in the current monitoring period.

6 VERIFICATION CONCLUSION

Earthood Services Private Limited (Earthood), contracted by CLP Wind Farms (India) Private Limited, has performed the independent verification of the emission reductions for the VCS project activity reference number 910 “Wind energy project in Samana, Gujarat and Saundatti, Karnataka” in India for the monitoring period 01/01/2014 – 31/03/2018 reported in the Monitoring Report Version 03 dated 23/05/2018.

It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity.

Earthood commenced the verification on the basis of the baseline and monitoring methodology ACM0002 (Version 13.0.0), the monitoring plan contained in the PD Version 03 and VCS guidelines version 3.7, Monitoring Report Version 03 dated 23/05/2018 as per the process described under Section 2 of this report.

Earthood’s verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. Earthood planned and performed the verification by obtaining evidence and other information and explanations that Earthood considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

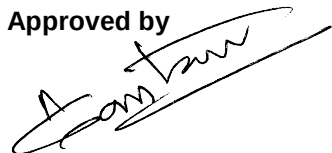
In our opinion the GHG emissions reductions reported for the project activity for the period 01/01/2014 – 31/03/2018 are fairly stated in the Monitoring Report Version 03 dated 23/05/2018. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM0002, Version 13.0, and the VCS standard.

Monitoring period: 01/01/2014 – 31/03/2018 (both days inclusive)

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

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2014 (01-Jan-14 to 31-Dec-14)	19,297.00	0.00	0.00	19,297.00
2015 (01-Jan-15 to 31-Dec-15)	21,681.00	0.00	0.00	21,681.00
2016 (01-Jan-16 to 31-Dec-16)	31,747.00	0.00	0.00	31,747.00
2017 (01-Jan-17 to 31-Dec-17)	93,332.00	0.00	0.00	93,332.00
2018 (01-Jan-18 to 31-Mar-18)	13,150.00	0.00	0.00	13,150.00
Total	179,207.00	0.00	0.00	179,207.00

Approved by



Ashok Kumar Gautam
Director-Environmental Services
Earthood Services Privated Limited

Date: 30/05/2018
Place: Gurgaon, Haryana

APPENDIX 1: References

S.No	Title of Document	Version	Date
1.	Registered VCS PD	3.0	19/06/2012
2.	VCS Monitoring Report	3.0	23/05/2018
3.	ER spreadsheet (corresponding to the final monitoring report)	-	-
4	Certificates of Calibration for all the meters belongs to project activity	-	-
5.	Invoice issued by PP for the duration of 01/01/2014 to 31/03/2018	-	-
6.	Share certificates issued for the duration of 01/01/2014 to 31/03/2018 for Samana0II site Joint Meter Readings for the duration of 01/01/2014 to 31/03/2018 for Saundatti site	-	-
7.	"Consolidated baseline methodology for grid-connected electricity generation from renewable sources", ACM0002,	13.0.0	-
8.	CO ₂ Baseline Database for the Indian Power Sector published by the Central Electricity Authority (CEA), Ministry of Power, Govt.	version 7.0	-
9.	On-site assessment, interviews of plant staff	-	30/04/2018 and 03/05/2018
10.	Commissioning certificate for all the WTGs of the project activity	-	-
11.	Power Purchase Agreements	-	-
12.	VCS webpage for the project, VCS ID 910; http://www.vcsprojectdatabase.org/#/project_details/910	-	Last accessed on 23/05/2018
13.	O&M contract between Wind World (India) Limited and CLP Wind Farms (India) Private Limited	-	-
14.	VCS Standard	Version 3.7	Last accessed on 23/05/2018
15.	VCS Program Guide	Version 3.7	Last accessed on 23/05/2018
16	Letter of declaration dated from PP regarding not having created or sought any other form of environmental credit for the same period and double counting	-	14/05/2018
17	Invoices for electricity generation for the duration of 01/01/2014 to 31/03/2018	-	-
18	https://www.itouchmap.com/latlong.html/	-	Last accessed on 23/05/2018
19	Regulation for meter change by GERC http://www.gercin.org/uploaded/document/en_1344430244.pdf	-	Last accessed on 23/05/2018
20	Minutes of Meeting for meter change at Saundatti	-	-

APPENDIX 2: Competency Statement

Competence Statement			
Name	Amit Ranjan Mandal		
Country	India		
Education	Master of Science (Energy Management)		
Experience	9.5 yrs		
Field	Environmental, Energy, CDM		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	ACM0002, AMS.I.D		
Local expert	YES (India)		
Financial Expert	YES		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Abhishek Mahawar	Date	01/03/2018
Approved by	Ashok Kumar Gautam	Date	01/03/2018

Competence Statement			
Name	Harshita Kulshrestha		
Country	India		
Education	M.Sc. (Environmental Studies and Resource Management), TERI University		
Experience	1 Year +		
Field	Climate Change		
Approved Roles			
Team Leader	NO		
Validator	YES		
Verifier	YES		
Methodology Expert	NO		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert	NO		
Reviewed by	Abhishek Mahawar	Date	01/03/2018
Approved by	Ashok Kumar Gautam	Date	01/03/2018

Competence Statement			
Name	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., ACM0002, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Abhishek Mahawar	Date	01/03/2018
Approved by	Ashok Gautam	Date	01/03/2018

APPENDIX 3: Abbreviations

BEF	Baseline Emission Factor
BM	Build Margin
CAR	Corrective Action Request
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CL	Clarification Request
CMS	Central Monitoring System
CO ₂	Carbon dioxide
EB	Executive Board
FAR	Forward Action Request
GHG	Green House Gas
ISO	International Standards Organization
JMR	Joint Meter Reading
kW	Kilowatt
kWh	Kilowatt hour
MR	Monitoring Report
MW	Megawatt
MWh	Megawatt-hour
NEWNE	Northern Eastern Western Northern-Eastern
PD	Project Description
PP	Project Proponent
PPA	Power Purchase Agreement
QA/QC	Quality Assurance and Quality Control
WTG	Wind Turbine Generator
VCS	Voluntary Carbon Standard
VCSA	Voluntary Carbon Standard Association
VCS PD	VCS Project Description
VCUs	Voluntary Carbon Units

APPENDIX 4: Verification Findings

Remaining FAR from validation and/or previous verification

FAR ID	01	Section no.	E.2	Date : DD/MM/YYYY
Description of FAR				
<i>There is no FAR from the previous verification.</i>				
Project participant response				Date : DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY
NA				

Table 1. CL from this verification

CL ID	02	Section no.	1.4	Date : 09/05/2018
Description of CL				
The following documents needs to be provided:				
1. Commissioning certificates for Saundatti site with either unique identification no or CEIG number mentioned in the certificate 2. Calibration certificates for all the meters 3. Letter of declaration for double counting. 4. MOM of as and when meters were changed/replaced 5. JMR and invoices for Samana site for the duration of Oct16 to March18. 6. JMR and invoices for Saundatti site for the entire monitoring period.				
Project participant response				Date : 12/05/2018
1. Commissioning certificates for Saundatti site has now been attached with this submission. 2. Calibration certificates for all the meters are now attached with this submission. 3. Letter of declaration for double counting are now attached with this submission. 4. Minuets of Meeting pertaining to meter change are attached with this submission. 5. JMR and invoices for Samana site for the duration of Oct'16 to March'18 are now been attached with this submission. 6. JMR and invoices for Saundatti site for this monitoring period are now been attached with this submission				
Documentation provided by project participant				
1) Commission Certificates 2) Calibration certificates 3) Letter of declaration 4) Minuets of Meeting pertaining to meter change 5) JMR and invoices for Samana and Saundatti.				
DOE assessment				Date: 20/05/2018
1) Commissioning certificates were provided by the PP were inline to the MR and PD. 2) Calibration certificates have been submitted. 3) Letter of declaration to avoid double counting has been provided. 4) MOM for meter change has been submitted. 5) JMR and invoices submitted for Samana and Saundatti are inline to the values mentioned in ER sheet. CL # 02 is CLOSED.				

Table 2. CAR from this verification

CAR ID	03	Section no.	3.3	Date : 09/05/2018
Description of CAR				
As per site visit conducted in Samana, Gujarat, it was found that point of billing comprised of 5 main meters earlier, although as of now only two main meters and 5 check meters are used for billing. Kindly explain the deviation and state the reason and date for change of meters. Also it was found that the make as stated in MR was inconsistent with the ones seen on site.				
Project participant response				Date : 12/05/2018
The meters installed at the project metering point are under the custody of state DISCOM. State DISCOM is altering the metering position time to time as per latest requirement and all project developers connected to the same substation have to follow the same system. Initially, WTGs under Sadodar substation previously connected to 5 feeders where 5 main meters were installed respectively. However, on 11/11/2015, DISCOM changed the electrical connectively and installed two new main meters as billing meters and subsequently previous meters are now considered as check meters.				
Thus, same change in energy meter has been accounted as Project Description deviations in line with section 3.6.1 of VCS standard version 3.6. However, this project deviation doesn't have an adverse impact in the applicability of the methodology, additionally or the appropriateness of the baseline scenario.				
Documentation provided by project participant				
Revised monitoring report				
DOE assessment				Date: 20/03/2018
The above change in the metering system and the addition of two new main meters have been accepted as the change does not have any impact on the additionality and emission reductions. Further since the change occurred by state grid authority, thus same is beyond the control of PP. thus same acceptable to the assessment team. CAR #03 is CLOSED.				

CAR ID	04	Section no.	3.3	Date : 09/05/2018
Description of CAR				
As per onsite observation in Saundatti, it was observed that new main meter (Sr no 14194656 and 14194483) were replacement to two meters before them. PP is requested to provide details of all the meters that were present in the this monitoring period in a chronological order with date of change.				
Project participant response				Date : 12/05/2018
During meter calibration it was found that meter display were not working properly. Thus, Hubli Electricity Supply Company Limited replaced the billing meters to maintain the appropriateness in electricity monitoring in line with section 4.3 of registered PD. Thus, same is incorporated in MR as deviation and meter calibration dates are mentioned as chronological order.				
Documentation provided by project participant				
Revised monitoring report				
DOE assessment				Date: 20/03/2018
Assessment team checked the minutes of meetings pertaining to meter replacement issued by state grid authority and found that meters have been replace due to display issues. Thus same is acceptable to the assessment team. CAR #04 is CLOSED.				

Table 3. FAR from this verification

FAR ID	05	Section No.		Date : DD/MM/YYYY
Description of FAR				
<i>there is no FAR from this verification.</i>				
Project participant response				Date : DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

APPENDIX 5: Commissioning dates of the WTGs**Site 1: Samana Site**

Sr. No.	Unique Identification No.	GEDA Ref No.	Date of Commissioning
1	CLPSM-38	EIL/800/09-10/1615	12-Jul-10
2	CLPSM-39	EIL/800/09-10/1616	12-Jul-10
3	CLPSM-40	EIL/800/09-10/1695	28-Jan-11
4	CLPSM-44	EIL/800/09-10/1696	28-Jan-11
5	CLPSM-45	EIL/800/09-10/1697	28-Jan-11
6	CLPSM-47	EIL/800/09-10/1699	28-Jan-11
7	CLPSM-48	EIL/800/09-10/1700	28-Jan-11
8	CLPSM-49	EIL/800/09-10/1701	28-Jan-11
9	CLPSM-46	EIL/800/09-10/1698	31-Jan-11
10	CLPSM-50	EIL/800/09-10/1702	31-Jan-11
11	CLPSM-51	EIL/800/09-10/1703	31-Jan-11
12	CLPSM-53	EIL/800/09-10/1704	31-Jan-11

Site 2: Saundatti Site

Sr. No.	Unique Identification No.	CEIG Ref. No.	Date of Commissioning
1	CLPSN-36	CLP-40	23-Jun-10
2	CLPSN-37	CLP-41	23-Jun-10
3	CLPSN-38	CLP-43	23-Jun-10
4	CLPSN-39	CLP-51	23-Jun-10
5	CLPSN-40	CLP-52	23-Jun-10
6	CLPSN-41	CLP-53	23-Jun-10
7	CLPSN-42	CLP-54	23-Jun-10
8	CLPSN-43	CLP-55	23-Jun-10
9	CLPSN-44	CLP-56	23-Jun-10
10	CLPSN-45	CLP-65	23-Jun-10
11	CLPSN-46	CLP-66	23-Jun-10
12	CLPSN-47	CLP-67	23-Jun-10

Sr. No.	Unique Identification No.	CEIG Ref. No.	Date of Commissioning
13	CLPSN-48	CLP-68	23-Jun-10
14	CLPSN-49	CLP-69	23-Jun-10
15	CLPSN-50	CLP-59	23-Jun-10
16	CLPSN-51	CLP-60	23-Jun-10
17	CLPSN-52	CLP-61	23-Jun-10
18	CLPSN-53	CLP-62	23-Jun-10
19	CLPSN-54	CLP-63	23-Jun-10
20	CLPSN-55	CLP-64	23-Jun-10
21	CLPSN-56	CLP – 58	03-Aug-10
22	CLPSN-57	CLP – 70	03-Aug-10
23	CLPSN-58	CLP – 71	03-Aug-10
24	CLPSN-59	CLP – 72	03-Aug-10
25	CLPSN-60	CLP – 73	03-Aug-10
26	CLPSN-61	CLP – 74	03-Aug-10
27	CLPSN-62	CLP – 75	03-Aug-10
28	CLPSN-63	CLP – 76	03-Aug-10
29	CLPSN-64	CLP – 77	03-Aug-10
30	CLPSN-65	CLP – 79	03-Aug-10
31	CLPSN-66	CLP – 80	03-Aug-10
32	CLPSN-67	CLP – 81	03-Aug-10
33	CLPSN-68	CLP – 82	03-Aug-10
34	CLPSN-69	CLP – 83	03-Aug-10
35	CLPSN-70	CLP – 84	03-Aug-10
36	CLPSN-71	CLP – 85	03-Aug-10
37	CLPSN-72	CLP – 86	03-Aug-10
38	CLPSN-73	CLP-92	03-Aug-10
39	CLPSN-74	CLP-91	03-Aug-10
40	CLPSN-75	CLP-90	03-Aug-10
41	CLPSN-76	CLP-95	15-Sep-10
42	CLPSN-77	CLP-96	15-Sep-10

Sr. No.	Unique Identification No.	CEIG Ref. No.	Date of Commissioning
43	CLPSN-78	CLP-97	15-Sep-10
44	CLPSN-79	CLP-98	15-Sep-10
45	CLPSN-80	CLP-99	15-Sep-10
46	CLPSN-81	CLP-57	15-Sep-10
47	CLPSN-82	CLP-103	03-Dec-10
48	CLPSN-83	CLP-102	03-Dec-10
49	CLPSN-84	CLP-02	03-Dec-10
50	CLPSN-85	CLP-03	03-Dec-10
51	CLPSN-86	CLP-04	03-Dec-10
52	CLPSN-87	CLP-05	03-Dec-10
53	CLPSN-88	CLP-08	03-Dec-10
54	CLPSN-89	CLP-09	03-Dec-10
55	CLPSN-90	CLP-10	03-Dec-10