

VERIFICATION REPORT FOR 'BUNDLED WIND POWER PROJECT IN TAMIL NADU MANAGED BY ENERCON INDIA LIMITED-II'



Document Prepared by Earthhood Services Private Limited

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Summary:

Earthood has performed the verification of the VCS project “Bundled Wind Power Project in Tamil Nadu managed by Enercon India Limited – II” VCS Ref. Number 404.

The scope of verification includes confirming the implementation of the monitoring plan of the registered PD (version 02) and the application of the monitoring methodology Consolidated baseline methodology for grid-connected electricity generation from renewable sources, ACM0002, Version 10. 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.

During the verification process 03 CARs, 01 CL and 00 FARs were raised.

Earthood confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements. The emission reductions from the VCS project activity 404 “Bundled Wind Power Project in Tamil Nadu managed by Enercon India Limited – II” in India during the period 16/05/2015-31/03/2016 (including both days) amount to 23,676 tonnes of CO₂e.

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)
2015(16/05/2015 to 14/12/2015)	21,684	0	0	21,684
2016(15/12/2016 to 31/03/2016)	1,992	0	0	1,992
Total	23,676	0	0	23,676

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1 INTRODUCTION

1.1 Objective

Wind World (India) Limited has contracted Earthood Services Private Limited (Earthood) to conduct the verification and certification of emission reductions reported for the VCS project activity VCS Ref number 404 “Bundled Wind Power Project in Tamil Nadu managed by Enercon India Limited – II” in India for the period 16/05/2015 – 31/03/2016 (both days inclusive). This report contains the findings of the verification process and a certification statement for the certified emission reductions.

The verification is the periodic independent review and ex post determination by Earthood 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.

The objective of this verification was to verify and certify emission reductions reported for “Bundled Wind Power Project in Tamil Nadu managed by Enercon India Limited – II” for the monitoring period 16/05/2015 – 31/03/2016.

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;

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

The level of assurance is reasonable for the project activity. The threshold for materiality in this assignment is 2%, which is in accordance with EB 69 Annex 6 para 10 (c) “Guidelines on the application of the materiality in verifications,” Version 1.

1.4 Summary Description of the Project

The project activity is a bundled wind power project. The purpose of project activity is generation of electricity for captive consumption. The project activity involves wheeling of electricity using the state transmission system. The project leads to reduction in GHG emissions as it is using wind energy to generate electricity and thereby replaces the fossil fuels based power plants.

The project activity involved installation of 45 WEGs of 800 kW capacity. However, a subproject of Bannari Amman Spinning Mills (14 WEGs) has not been monitored in this project activity as same was registered with UNFCCC. Therefore, the total capacity of 31 WEGs is 24.8 MW. The WEGs are of E-48 make. On site assessment by the verification team confirms that all the WEGs were found in working condition.

The WEGs were commissioned between the period of 26/02/2007-11/05/2007 and the expected operation lifetime of the project is for 20 years/09/.

The total emission reductions achieved during the current monitoring period 16/05/2015-31/03/2016 are 23,676 tCO₂e/06/.

2 VERIFICATION PROCESS

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.

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 (PD, 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

On site assessment was carried on 04/05/2016 by Earthood. Interviews with the project stakeholders and representatives of Wind World (India) Limited were conducted to confirm the selected information and to resolve the issues identified in the document review.

The stakeholders interviewed are:

S.N	Name	Organisation
1.	N. Duraiswami	Dy. Manager, WWIL
2.	Sandip Saha	Dy. Manager, VICPL
3.	R. Nagaraj	Sr. Manager, WWIL
4.	A. Suresh Kumar	Manager, WWIL

The topics covered during interview ranges from general features and implementation of project to technical details of the project like calibration details, monitoring and measuring system and data collection, recording and archiving procedures. The assessment was drawn based on the feedback received during interview coupled with the documentation and on-site observations

2.4 Site Inspections

A site visit was undertaken by Earthood on 04/05/2016 to carry out following;

- a. An assessment of the implementation and operation of the registered project activity as per the registered PD or any approved revised PD;
- b. A review of information flows for generating, aggregating and reporting the monitoring parameters;
- c. Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PD;
- d. A cross check between information provided in the monitoring report and data from other sources such as plant logbooks, energy statements issued by TNGDC or similar data sources;
- e. 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;
- f. A review of calculations and assumptions made in determining the GHG data and emission reductions;
- g. 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.

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:

- a) 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
- b) Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants
- c) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions
- d) Change to the key sustainable development indicators

- e) 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 GS 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.

All the findings that are raised and communicated to project participant during the verification are included under Appendix 2. 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

Not Applicable

3.2 Methodology Deviations

Not Applicable

3.3 Project Description Deviations

The deviations identified by the PP in the previous monitoring periods are listed below:

1. The Panel meter or the controller meter does not require any calibration. The deviation has been accepted by the assessment team because in case of any mismatch of values between the LCS meter and energy calculated by inverting system, the machine immediately stops working, giving an error on display. It is a system designed verification method. Moreover, the final readings of electricity are sourced from the JMRs (joint meeting readings) which is the basis of invoicing to the grid company. The deviation is described in section 2.2.2 of the monitoring report and justification for the same has been also included. The deviation falls under category 2 “deviation does not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in compliance with the applied methodology” as stated in paragraph 3.6.1 of the VCS standard 3.5; hence was accepted by the team.
2. As there is a separate metering system for individual wind turbine in Tamil Nadu, apportioning would not be required. The metering system was verified during the onsite assessment by the verification team. The export and import values for the project activity are not calculated instead obtained from the individual meters installed at the WTGs. These individual meters are state utility owned and form the basis of monetary transactions. The deviation has been included in the monitoring report along with the justification. Therefore, the deviation was accepted as it falls under category 2 specified in paragraph 3.6.1 of VCS standard 3.5.
3. In third Monitoring period, the total capacity of the project activity was reduced from 36 MW to 24.8 MW after exclusion of WEGs installed by the investor Bannari Amman Spinning Mills. As per the registered documents the capacity of the project activity was 36 MW but a bundle of the project 14 WTGs owned by Bannari Amman Spinning Mills got registered with UNFCCC as a CDM project (UN Ref no 4877). Therefore, the WTGs of this investor have been excluded from the project activity and monitoring. The deviation been included in the monitoring report and is in accordance to VCS guidelines since the deviation does not impact any of the following;
 - a. Applicability of methodology: The change does not impact the applicability of applied methodology and the same (ACM0002, Version 10) is still applicable
 - b. Additionality: The additionality at the time of registration was demonstrated for all the investors separately, therefore the exclusion of one investor does not impact the additionality of the project anyway.

- c. Appropriateness of the baseline scenario: Exclusion of bundle doesn't change the baseline scenario in the current setup which still remains the electricity generated by the grid.

The deviation has been included in section 2.2.2 of the MR and the verification team therefore accepted these deviations in accordance with para 3.6.1 of VCS standard 3.5.

4. As per national regulations of installation and operation of meters in accordance with section 18 subsection 1 (b), calibration and periodical testing of meters by Central Electricity authority of India; the energy meters shall be calibrated and tested once in five years. The calibration of meters installed for the WEGs under the project activity is done by the officials of the state utility, therefore meter calibration frequency was deviated and set according to the state norms i.e., once in five years/07/. The practice could be confirmed during the onsite assessment and the calibration is in the hands of the state authorities. The revised calibration frequency is in accordance with the national regulations of installation and operation of meters. The deviation has been included in section 2.2.2 of the MR, the verification team therefore accepted the deviation in accordance with para 3.6.1 of VCS standard 3.5.

The deviations stated above have been mentioned in the current monitoring report version 04, justification for the deviations have been included and the project was found compliant to the VCS rules and VCS standard 3.5.

3.4 Grouped Project

Not Applicable

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activity consists of 31 WEGs of make E-48, each of capacity 800 kW. The total capacity of the project activity is 24.8MW. The WEGs were commissioned between the period of 26/07/2007-11/05/2007/09/. The project is located at Pushpathur site in Dindigull district and Chinnakkampalayam in Erode district of Tamil Nadu. The coordinates of each WEG was verified with the hand handled device and re confirmed with the previous verification report and previous monitoring report/07,08/. The list of geo-coordinates of 31 WEGs installed under the project activity is provided in the Appendix 1 of this report.

The investors and the commissioning dates of the WEGs are listed in the table given below:

S. No.	Name of Customers	HTSC No.	Commissioning Date	Capacity (MW)
1	Premier Spg & Wvg Mills Pvt Ltd	D47	21-03-2007	0.8
2	Premier Spg & Wvg Mills Pvt Ltd	D49	21-03-2007	0.8
3	Premier Spg & Wvg Mills Pvt Ltd	D52	26-03-2007	0.8

S. No.	Name of Customers	HTSC No.	Commissioning Date	Capacity (MW)
4	Premier Spg & Wvg Mills Pvt Ltd	D54	26-03-2007	0.8
5	Premier Spg & Wvg Mills Pvt Ltd	D79	25-04-2007	0.8
6	Premier Spg & Wvg Mills Pvt Ltd	D80	25-04-2007	0.8
7	Premier Spg & Wvg Mills Pvt Ltd	D81	25-04-2007	0.8
8	Premier Spg & Wvg Mills Pvt Ltd	D82	09-05-2007	0.8
9	Premier Spg & Wvg Mills Pvt Ltd	D83	09-05-2007	0.8
10	Premier Spg & Wvg Mills Pvt Ltd	D84	11-05-2007	0.8
11	Premier Fine Yarns Pvt Ltd	D26	26-02-2007	0.8
12	Premier Fine Yarns Pvt Ltd	D27	26-02-2007	0.8
13	Premier Fine Yarns Pvt Ltd	D28	26-02-2007	0.8
14	Premier Fine Yarns Pvt Ltd	D29	26-02-2007	0.8
15	Premier Fine Yarns Pvt Ltd	D30	27-02-2007	0.8
16	Premier Fine Yarns Pvt Ltd	D30	27-02-2007	0.8
17	Premier Fine Yarns Pvt Ltd	D32	07-03-2007	0.8
18	Premier Fine Yarns Pvt Ltd	D32	07-03-2007	0.8
19	Premier Fine Yarns Pvt Ltd	D33	07-03-2007	0.8
20	Premier Fine Yarns Pvt Ltd	D34	07-03-2007	0.8
21	Coimbatore Twisted (Premier Mills)	D37	14-03-2007	0.8
22	Coimbatore Polytex (Premier Mills)	D38	14-03-2007	0.8

S. No.	Name of Customers	HTSC No.	Commissioning Date	Capacity (MW)
23	Coimbatore Polytex (Premier Mills)	D43	21-03-2007	0.8
24	Coimbatore Polytex (Premier Mills)	D43	21-03-2007	0.8
25	Coimbatore Polytex (Premier Mills)	D44	21-03-2007	0.8
26	Coimbatore Polytex (Premier Mills)	D45	29-03-2007	0.8
27	Coimbatore Polytex (Premier Mills)	D68	30-03-2007	0.8
28	Coimbatore Polytex (Premier Mills)	D73	30-03-2007	0.8
29	Coimbatore Polytex (Premier Mills)	D74	30-03-2007	0.8
30	Coimbatore Polytex (Premier Mills)	D75	16-04-2007	0.8
31	Coimbatore Polytex (Premier Mills)	D78	21-03-2007	0.8
	Total	31		24.8MW

No major breakdown has occurred during the current monitoring period. The WEGs were found functional. However, the WEGs have been shut down for some time to conduct the operation and maintenance activities. The O&M activities under the project activity are ISO certified and the log book for data of all the events are maintained at the project site.

The energy generated by the project activity is wheeled through state electricity transmission utility for captive consumption/05,15/. The electricity exported and imported from the WEGs is measured by the meters installed as HTSC yards. The details of the meters are provided in fore coming section of the report. 14 WEGs have been excluded from monitoring which was verified from previous monitoring reports and previous verification reports/04,07,08/. The energy generated from the excluded WEGs has not been considered for the calculation of emission reduction/06/.

No gap was observed between the start date of the current monitoring period and the previous monitoring period/03,08/.

Assessment concludes the following:

- The implementation status of project activity was found to be in compliance with registered PD
- 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. There was no increase in emission reduction from estimates made in registered PD, therefore no additional explanation was sought from PP regarding the same.
- f. The project is only registered under VCS program and is not participated or rejected under any other GHG programs

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

The project activity has been monitored as per the monitoring plan mentioned in the registered PD. All the deviations identified during the previous monitoring periods have been considered and implemented under the current monitoring period. The verification team confirms that the flow of information (from data generation, aggregation, to recording, calculation and reporting for these parameters including the values) is as per the MR/04/.

Parameters to be monitored:

The assessment of each parameter identified in the project activity to calculate the GHG emission reductions have been done in the tables given below. The assessment team confirms that each parameter has been checked and meets the calibration requirements. The actual monitoring complies with the monitoring plan.

a) Electricity exported to the grid by the project activity in year y, EG, Export in MWh

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	It is a measured parameter. The values of the parameter are recorded monthly.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The measuring and reporting frequency are in line to registered VCS PD/01/.
Monitoring equipment	Energy meters of Wallacy/Elster/L&T make, which are state utility owned, are installed at every HTSC (High Tension Service Connection) yard. Some of the meter were changed in last month of the current monitoring period. The serial number of the old and new meters are mentioned in the foregoing part of this section/11-14, 22,23/. The technical details of the meters are specified in the MR/04/ are found consistent with the actual records and on ground.

Criteria/Requirements	Assessment/Observation
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?	The accuracy for each meter installed is listed in the fore coming section of this report. The accuracy is found to be consistent with the registered VCS PD/11-14, 22,23, 01/.
Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes. The accuracy is valid for the entire range.
Calibration frequency /interval:	The calibration frequency defined according to the registered PD was once in an year, but the PP has requested for deviation in the calibration frequency to once in five years during previous verification which was accepted. Hence, the calibration is set as once in five years as per the CEA norms. The deviation has been also been described in the section 3.3 above.
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, or as per the manufacturer's specifications?	Yes. The calibration has been carried out in accordance with the new calibration frequency set under deviation. It was accepted during the previous verification. The meters are within the permissible range of error /11-14, 22,23/. Further details of the calibration has been mentioned in the fore coming part of this section.
Is the calibration of measuring equipment carried out by an accredited person or institution?	The calibration is conducted by Tamil Nadu Generation and Distribution Corporation Ltd., which is wholly owned by the Government of Tamil Nadu/11-14, 22,23/.
Is(are) calibration(s) valid for the whole reporting period?	Yes. The calibration covers the entire monitoring period /11-14, 22,23/.
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 by certified agency.
How were the values in the monitoring report verified?	The total value of the parameter is 25,762.85 MWh. The monthly reported values for electricity exported to the grid was verified by cross checking the values with the Monthly electricity stataments issued by

Criteria/Requirements	Assessment/Observation
	Tamil Nadu Generation & Distribution Corporation Ltd./18-21/. Necessary apportioning for the last month of the monitoring period has been conducted to match the end date of the monitoring period. Refer ER sheet for the monthly values of the parameter verified/06/. All the values were found consistent.
If applicable, has the reported data been cross-checked with other available data?	Not Applicable.
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	On site assessment of the project activity confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable.
In case project participants have temporarily not monitored the parameter?	Not applicable

b) Electricity imported from the grid, EG, Import in MWh

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	It is a measured parameter. The values of the parameter are recorded monthly.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The measuring and reporting frequency are in line to registered VCS PD/01/.
Monitoring equipment	Energy meters of Wallacy/Elster/L&T make, which are state utility owned, are installed at every HTSC (High Tension Service Connection) yard. Some of the meter were changed in last month of the current monitoring period. The serial number of the old and new meters are mentioned in the foregoing part of this section/11-14, 22,23/. The technical details of the meters are specified in the MR/04/ are found consistent with the actual records and on ground.

Criteria/Requirements	Assessment/Observation
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?	The accuracy for each meter installed is listed in the fore coming section of this report. The accuracy is found to be consistent with the registered VCS PD/11-14, 22,23/.
Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes. The accuracy is valid for the entire range.
Calibration frequency /interval:	The calibration frequency defined according to the registered PD was once in an year, but the PP has requested for deviation in the calibration frequency to once in five years during previous verification which was accepted. Hence, the calibration is set as once in five years as per the CEA norms. The deviation has been also been described in the section 3.3 above.
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, or as per the manufacturer's specifications?	Yes. The calibration has been carried out in accordance with the new calibration frequency set under deviation. It was accepted during the previous verification. The meters are within the permissible range of error /11-14, 22,23/.Further details of the calibration has been mentioned in the fore coming part of this section.
Is the calibration of measuring equipment carried out by an accredited person or institution?	The calibration is conducted by Tamil Nadu Generation and Distribution Corporation Ltd., which is wholly owned by the Government of Tamil Nadu/11-14, 22,23/.
Is(are) calibration(s) valid for the whole reporting period?	Yes. The calibration covers the entire monitoring period /11-14, 22,23/.
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 by certified agency.
How were the values in the monitoring report verified?	The total value of the parameter is 219.67 MWh. The monthly reported values for imported energy to the grid was verified by cross checking the values with the Monthly electricity stataments issued by Tamil

Criteria/Requirements	Assessment/Observation
	Nadu Generation & Distribution Corporation Ltd./18-21/. Necessary apportioning for the last month of the monitoring period has been conducted to match the end date of the monitoring period. Refer ER sheet for the monthly values of the parameter verified/06/. All the values were found consistent.
If applicable, has the reported data been cross-checked with other available data?	Not Applicable.
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	On site assessment of the project activity confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable.
In case project participants have temporarily not monitored the parameter?	Not applicable

c) Net electricity supplied to the grid by the Project, EG_y, Net, in MWh

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	The parameter is calculated by the using the export and import values of electricity provided in the monthly energy statement/18-21/. The values of electricity exported and imported are monthly recorded/18-21/.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency are in line to registered VCS PD/01/.
Monitoring equipment	Not Applicable
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	Not Applicable

Criteria/Requirements	Assessment/Observation
accuracy levels apply to different measuring ranges?	
Calibration frequency /interval:	Not Applicable
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, or as per the manufacturer's specifications?	Not Applicable
Is the calibration of measuring equipment carried out by an accredited person or institution?	Not Applicable
Is(are) calibration(s) valid for the whole reporting period?	Not Applicable
Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Not Applicable
How were the values in the monitoring report verified?	The total value of the parameter is 25,543.18 MWh. The monthly reported values for net electricity exported and imported to the grid data was verified by cross checking the values with the Monthly electricity statements issued by Tamil Nadu Generation & Distribution Corporation Ltd./18-21/. Refer ER sheet for the monthly values of the parameter verified/06/. All the values were found consistent.
If applicable, has the reported data been cross-checked with other available data?	Not Applicable.
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	On site assessment of the project activity confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable.
In case project participants have temporarily not monitored the parameter?	Not applicable

Through onsite audit and assessment of documents DOE can conclude the following:

- Monitoring results are consistently recorded as per approved frequency
- QA/QC procedures have been applied in accordance with the registered monitoring plan.
- No sampling approach has been followed for monitoring which is appropriate for the project activity.

Parameter fixed ex ante:

- a) **EF_{OM,y}: tCO₂e/MWh**: The parameter is Operating Margin Emission Factor of Southern Regional Electricity Grid. The value of the parameter is 0.998157 as per the registered VCS PD/01/.
- b) **EF_{BM,y}: tCO₂e/MWh**: The parameter is Build Margin Emission Factor of Southern Regional Electricity Grid. The value of the parameter is 0.7133 as per the registered VCS PD/01/.
- c) **EF_{CM,y}: tCO₂e/MWh**: The parameter is Combined Margin Emission Factor of Southern Regional Electricity Grid. The value of the parameter is 0.92694 as per the registered VCS PD/01/.

Calibration:

The on-site assessment conducted by the verification team confirms that the calibration of the meters has been done inline to the monitoring plan described in the VCS PD. The calibration details of each meter installed have listed in the table provided below:

Sl. No.	Name of Customers	HTSC No.	Meter Type	Meter No.	Calibration date	Due Date	Accuracy Class
1	Premier Spg & Wvg Mills Pvt Ltd	D47	SECURE	TN905549	13/11/2013	13/11/2018	0.2s
2	Premier Spg & Wvg Mills Pvt Ltd	D49	ELSTER	04890022 (old)	12/11/2013	12/11/2018	0.5s
			L&T	16195788(new)*	30/03/2016	30/03/2021	0.2s
3	Premier Spg & Wvg Mills Pvt Ltd	D52	SECURE	TN902732	13/11/2013	13/11/2018	0.2s
4	Premier Spg & Wvg Mills Pvt Ltd	D54	ELSTER	04865534 (old)	13/11/2013	13/11/2018	0.5s
			L&T	16195773 (new)*	30/03/2016	30/03/2021	0.2s
5	Premier Spg & Wvg Mills Pvt Ltd	D79	ELSTER	04865507 (old)	13/11/2013	13/11/2018	0.5s
			L&T	16194566(new)*	26/03/2016	30/03/2021	0.2s
6	Premier Spg & Wvg Mills Pvt Ltd	D80	SECURE	TNB02400 (old)	13/11/2013	13/11/2018	0.5s
			L&T	16194561(new)*	26/03/2016	30/03/2021	0.2s

Sl. No.	Name of Customers	HTSC No.	Meter Type	Meter No.	Calibration date	Due Date	Accuracy Class
7	Premier Spg & Wvg Mills Pvt Ltd	D81	ELSTER	04865535	13/11/2013	13/11/2018	0.5s
8	Premier Spg & Wvg Mills Pvt Ltd	D82	SECURE	TN905507	12/11/2013	12/11/2018	0.2s
9	Premier Spg & Wvg Mills Pvt Ltd	D83	ELSTER	04865503(old)	12/11/2013	12/11/2018	0.5s
			L&T	16194525(new)*	26/03/2016	26/03/2021	0.2s
10	Premier Spg & Wvg Mills Pvt Ltd	D84	SECURE	TN903448	12/11/2013	12/11/2018	0.2s
11	Premier Fine Yarns Pvt Ltd	D26	SECURE	TN902742	12/11/2013	12/11/2018	0.2s
12	Premier Fine Yarns Pvt Ltd	D27	SECURE	TN905284	12/11/2013	12/11/2018	0.2s
13	Premier Fine Yarns Pvt Ltd	D28	L&T	10287910(old)	12/11/2013	12/11/2018	0.5s
			L&T	16194534(new)*	27/03/2016	27/03/2021	0.2s
14	Premier Fine Yarns Pvt Ltd	D29	WALLABY	HT5100083(old)	12/11/2013	12/11/2018	0.5s
			L&T	1615782(new)*	30/03/2016	30/03/2018	0.2s
15	Premier Fine Yarns Pvt Ltd	D30	WALLABY	HT5110137(old)	12/11/2013	12/11/2018	0.5s
			L&T	1610059(new)*	24/03/2016	30/03/2021	0.2s
17	Premier Fine Yarns Pvt Ltd	D32	SECURE	TN903995	12/11/2013	12/11/2018	0.2s
19	Premier Fine Yarns Pvt Ltd	D33	ELSTER	04863762(old)	12/11/2013	12/11/2018	0.5s
			L&T	16190080(new)*	24/03/2016	30/03/2021	0.2s
20	Premier Fine Yarns Pvt Ltd	D34	SECURE	TN904584	12/11/2013	12/11/2018	0.2s
21	Coimbatore Twisted (Premier Mills)	D37	SECURE	TN904565	12/11/2013	12/11/2018	0.2s
22	Coimbatore Polytex (Premier Mills)	D38	ELSTER	04865383(old)	13/11/2013	13/11/2018	0.5s
			L&T	16194479(new)*	26/03/2016	26/03/2021	0.2s

Sl. No.	Name of Customers	HTSC No.	Meter Type	Meter No.	Calibration date	Due Date	Accuracy Class
23	Coimbatore Polytex (Premier Mills)	D43	ELSTER	04865533(old)	12/11/2013	12/11/2018	0.5s
			L&T	16194507(new)*	26/03/2016	26/03/2021	0.2s
25	Coimbatore Polytex (Premier Mills)	D44	SECURE	14197108	17/03/2015	17/03/2020	0.2s
26	Coimbatore Polytex (Premier Mills)	D45	SECURE	TN903117	13/11/2013	13/11/2018	0.2s
27	Coimbatore Polytex (Premier Mills)	D68	SECURE	TN905537	13/11/2013	13/11/2018	0.2s
28	Coimbatore Polytex (Premier Mills)	D73	ELSTER	04959599	13/11/2013	13/11/2018	0.5s
29	Coimbatore Polytex (Premier Mills)	D74	ELSTER	04865530(old)	13/11/2013	13/11/2018	0.5s
			L&T	16194505(new)*	27/03/2016	27/03/2021	0.2s
30	Coimbatore Polytex (Premier Mills)	D75	SECURE	TN901783	13/11/2013	13/11/2018	0.2s
31	Coimbatore Polytex (Premier Mills)	D78	WALLABY	208320441(old)	13/11/2013	13/11/2018	0.5s
			L&T	16194552(new)*	27/03/2016	27/03/2021	0.2s

* These meters were change in the month of march,2016 in the current monitoring period. The new meters were calibrated during the process of installation. Meter change certificates have been provided by the PP as an evidence to confirm the calibration of the new meters/22/. Thus, the calibration dates provided in the above table are also the dates on which the meters changed.

The calibration frequency was changed as project deviation to once in five years during the previous verification period/07/. As the calibration is conducted by the state utility, the frequency was set as per CEA metering code. The last calibration dates of new and old meter have been in the table given above/11-14, 22,23/. The dates of calibration and accuracy class were verified with the help of calibration certificates/11-14, 23/ and meter change certificates/22/ provided by the Project participant. The calibration frequency is in line to the frequency set as deviation under previous verification/11-14, 22,23/. The DOE confirms that the calibration covers the entire monitoring period.

GHG Calculations

The calculation of emission reduction has been done in accordance to the applied methodology/15/. As per the applied methodology, the values of project emission and leakages are considered as zero for the project activity/15,06/. The equation used for calculation of baseline emission is given below:

$$BE_y = EG_y * EF_y$$

Where, BE_y is the baseline emissions in year y , tCO_2e

EG_y is the net electricity supplied in MWh

EF_y is the Grid Emission Factor in tCO_2e/MWh

$$\begin{aligned} \text{Therefore, the baseline emissions} &= 25,543.18 \text{ MWh} * 0.92694 \text{ tCO}_2e/MWh \\ &= 23,676 \text{ tCO}_2e \end{aligned}$$

The calculation of the net emission reduction achieved is done using the equation provided below:

$$\text{Net Emission reduction} = BE_y - PE_y - Le_y$$

Where, BE_y is baseline emissions

PE_y are project emissions

Le_y are leakage emissions

As the values of the $PE_y = 0$ and $Le_y = 0$,

$$\begin{aligned} \text{Therefore, Net Emission Reductions} &= BE_y - 0 - 0 \\ &= 23,676 \text{ tCO}_2e \end{aligned}$$

The verification team confirms that appropriate methods and formulae for calculating baseline emissions have been followed. The assumptions, emission factors and default values that were applied in the calculations are justified. The actual emission reduction achieved during the current monitoring period are lesser than the estimated amount of emission reductions at the time of validation. The actual PLF achieved by the project activity is just 13.37% which is very low than the estimated PLF (23.86%) at the time of validation. All the data were made available and have monitored as per required monitoring frequency. The means of verification for the values of parameters, used for baseline emission calculation, is described above.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

The emission reduction calculation for the project activity is estimated based on the electricity supplied by the WEGs. Monthly values of electricity generated inserted in the ER sheet was verified with the Joint Meter Reading Report provided by the project proponent/18-21,06/. Since 100% data was verified, the team can ascertain that the values taken for emission reduction calculation are free from material errors.

4.4 Non-Permanence Risk Analysis

Not applicable

5 VERIFICATION CONCLUSION

Earthood Services Private Limited (Earthood), contracted by Wind World (India) Limited, has performed the independent verification of the emission reductions for the VCS project activity ref number 404 "Bundled Wind Power Project in Tamil Nadu managed by Enercon India Limited – II" in India for the monitoring period 16/05/2015- 31/03/2016 reported in the Monitoring Report Version 04 dated 16/07/2016. The Wind World (India) Limited is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

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 10, the monitoring plan contained in the PD Version 2 and VCS guidelines version 3.5, Monitoring Report Version 04 dated 16/07/2016 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 16/05/2015-31/03/2016 are fairly stated in the Monitoring Report Version 04 dated 16/07/2016. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM0002, Version 10, and the VCS standard.

Verification period: From 16/05/2015 to 31/03/2016 (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)
2015(16/05/2015 to 14/12/2015)	21,684	0	0	21,684
2016(15/12/2016 to 31/03/2016)	1,992	0	0	1,992
Total	23,676	0	0	23,676

Approved by



Dr. Kaviraj Singh
Managing Director

Earthood Services Privated Limited

Date: 21/07/2016

Place: Gurgaon, Haryana

APPENDIX 1: GEO COORDINATES AND UNIQUE IDENTIFICATION NUMBERS OF WIND TURBINE GENERATORS

S. No.	Name of Customers	HTSC No.	Latitude (North)	Longitude (South)	UIN
1	Premier Spg & Wvg Mills Pvt Ltd	D47	10°32'5.05"	77°25'20.91"	PSWMPLPU-02
2	Premier Spg & Wvg Mills Pvt Ltd	D49	10°32'9.02"	77°25'35.41"	PSWMPLPU-04
3	Premier Spg & Wvg Mills Pvt Ltd	D52	10°32'24.92"	77°25'1.08"	PSWMPLPU-05
4	Premier Spg & Wvg Mills Pvt Ltd	D54	10°34'22.31"	77°25'37.47"	PSWMPLPU-01
5	Premier Spg & Wvg Mills Pvt Ltd	D79	10°34'49.80"	77°26'35.98"	PSWMPLPU-07
6	Premier Spg & Wvg Mills Pvt Ltd	D80	10°34'57.15"	77°26'52.68"	PSWMPLPU-06
7	Premier Spg & Wvg Mills Pvt Ltd	D81	10°34'35.66"	77°24'6.33"	PSWMPLPU-03
8	Premier Spg & Wvg Mills Pvt Ltd	D82	10°34'58.52"	77°24'3.72"	PSWMPLPU-02
9	Premier Spg & Wvg Mills Pvt Ltd	D83	10°34'34.42"	77°23'41.60"	PSWMPLPU-09
10	Premier Spg & Wvg Mills Pvt Ltd	D84	10°34'29.82"	77°24'38.05"	PSWMPLPU-10
11	Premier Fine Yarns Pvt Ltd	D26	10°33'23.98"	77°24'45.82"	PMPLPU-09
12	Premier Fine Yarns Pvt Ltd	D27	10°33'31.11"	77°24'40.85"	PMPLPU-07
13	Premier Fine Yarns Pvt Ltd	D28	10°33'6.07"	77°25'30.66"	PMPLPU-06
14	Premier Fine Yarns Pvt Ltd	D29	10°33'11.92"	77°25'23.14"	PMPLPU-05
15	Premier Fine Yarns Pvt Ltd	D30	10°33'43.81"	77°25'35.03"	PMPLPU-01
16	Premier Fine Yarns Pvt Ltd	D30	10°33'56.76"	77°25'39.05"	PMPLPU-02
17	Premier Fine Yarns Pvt Ltd	D32	10°33'51.10"	77°25'13.65"	PMPLPU-03

S. No.	Name of Customers	HTSC No.	Latitude (North)	Longitude (South)	UIN
18	Premier Fine Yarns Pvt Ltd	D32	10°33'54.39"	77°25'4.11"	PMPLPU-04
19	Premier Fine Yarns Pvt Ltd	D33	10°33'55.90"	77°24'49.46"	PMPLPU-10
20	Premier Fine Yarns Pvt Ltd	D34	10°34'15.28"	77°24'60.00"	PMPLPU-08
21	Coimbatore Twisted (Premier Mills)	D37	10°34'32.85"	77°25'45.31"	CTPLPU-01
22	Coimbatore Polytex (Premier Mills)	D38	10°34'35.89"	77°25'26.63"	CPPLPU-03
23	Coimbatore Polytex (Premier Mills)	D43	10°34'43.51"	77°25'21.33"	CPPLPU-01
24	Coimbatore Polytex (Premier Mills)	D43	10°34'51.46"	77°25'45.95"	CPPLPU-02
25	Coimbatore Polytex (Premier Mills)	D44	10°35'3.85"	77°25'45.85"	CPPLPU-04
26	Coimbatore Polytex (Premier Mills)	D45	10°35'37.18"	77°25'26.49"	CPPLPU-05
27	Coimbatore Polytex (Premier Mills)	D68	10°35'44.64"	77°25'33.42"	CPPLPU-08
28	Coimbatore Polytex (Premier Mills)	D73	10°35'55.20"	77°26'9.54"	CPPLPU-09
29	Coimbatore Polytex (Premier Mills)	D74	10°36'2.31"	77°25'32.83"	CPPLPU-06
30	Coimbatore Polytex (Premier Mills)	D75	10°36'14.23"	77°25'30.99"	CPPLPU-07
31	Coimbatore Polytex (Premier Mills)	D78	10°34'8.51"	77°25'33.48"	CPPLPU-10
	Total	31			

APPENDIX 2: ABBREVIATIONS

Abbreviations	Full texts
CAR	Corrective Action Request
VCS	Verified Carbon Standard
CER	Certified Emission Reduction(s)
CL	Clarification Request
DOE	Designated Operational Entity
Earthood (ESPL)	Earthood Services Private Limited
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
MR	Monitoring Report
MW	Mega Watt
PD	Project Description
PP	Project Participants
QA/QC	Quality Assurance / Quality Control
tCO ₂ e	tonnes of Carbon dioxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
VCR	Verification and Certification Report
WWIL	Wind World India Limited
TNEB	Tamil Nadu Electricity Board
TANGEDCO	Tamil Nadu Generation and Distribution Corporation
HTSC	High Tension Service Connection

APPENDIX 3: DOCUMENTS REVIEWED OR REFERENCED

No.	Author	Title	Referenceres to the document	Provider
1.	WWIL	Registered VCS PD, Version 2.0	08/09/2009	Other
2.	TUV NORD	VCS Validation Report	10/11/2009	Other
3.	WWIL	Monitoring Report, Version 01	06/04/2016	PP
4.	WWIL	Monitoring report V04 (Final)	16/07/2016	
5.	WWIL	ER Spreadsheet (Version 01)	06/04/2016	PP
6.	WWIL	ER Spreadsheet (Final)	28/05/2016	
7.	ESPL	Verification Report for period 16/05/2014-15/05/2015	26/06/2015	Other
8.	WWIL	Monitoring report for period 16/05/2014-15/05/2015	11/06/2015	PP
9.	TNEB	Commissioning certificates (31) for all the WEGs of the project activity	26/07/2007-11/05/2007	PP
10.	CEA	CEA database for CO ₂ emission version 04	October- 2008	Other
11.	WWIL	Calibration Certificates for Premier Spg & Wvg Mills Pvt Ltd	Calibrated on 13/11/2013, 12/11/2013	PP
12.	WWIL	Calibration Certificates for Premier Fine Yarns Pvt Ltd	Calibrated on 12/11/2013	PP

No.	Author	Title	Referenceres to the document	Provider
13.	WWIL	Calibration Certificates for Coimbatore Polytex (Premier Mills)	Calibrated on 13/11/2013, 12/11/2013	PP
14.	WWIL	Calibration Certificates for Coimbatore Twisted (Premier Mills)	Calibrated on 13/11/2013	PP
15.	UNFCCC	Applied Methodology: ACM0002, ver 10	28/05/2009	PP
16.	VCS	VCS Standard Version 3.5	25/03/2015	PP
17.	CEA	Guideline for calibration and periodical testing of meters by Central Electricity Authority (CEA)	17/03/2006	PP
18.	TANGEDCO	Statements for energy generation for Premier Spg & Wvg Mills Pvt Ltd	16/05/2015-31/03/2016	PP
19.	TANGEDCO	Statements for energy generation for Premier Fine Yarns Pvt Ltd	16/05/2015-31/03/2016	PP
20.	TANGEDCO	Statements for energy generation for Coimbatore Twisted (Premier Mills)	16/05/2015-31/03/2016	PP
21.	TANGEDCO	Statements for energy generation for Coimbatore Polytex P Ltd.	16/05/2015-31/03/2016	PP
22.	TANGEDCO	Meter Change certificate for meter no. 16194534, 16195782, 16190059, 16195788, 16195773, 16194566, 16194561, 16194525, 16190080, 16194479, 16194507, 16194505	24/03/2016-30/03/2016	PP
23.	TANGEDCO	Meter change certificate for meter no. 14197108	17/03/2015	PP

APPENDIX 4: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUEST AND FORWARD ACTION REQUESTS

CL ID	01	Section no.	3.3	Date :21/04/2016
Description of CL				
PP is requested to provide the JMR sheets for March 2016(all sites) for assessment of the emission reductions.				
Project participant response				Date: 23/05/2016
TNEB statements for the month of March-2016 have now been attached with this submission. Duration of this monitoring period is from 16/05/2015 to 31/03/2016 (both days inclusive) and last date of the energy generation statement issued by TNEB for the month of March-16 was 14/03/2016. Thus, electricity export and import data for the remaining days has been apportioned from energy generation statement issued by TNEB for the month of April-2016. Estimation of days corresponding to the respective HTSC has now been incorporated in ER sheet and MR has been revised accordingly.				
Documentation provided by project participant				
JMR sheets of March 2016 for all the sites				
DOE assessment				Date: 26/05/2016
JMR sheets have been provided by the PP. (Closed).				

CAR ID	02	Section no.	4.2	Date :21/04/2016
Description of CAR				
- The value of net energy imported from Coimbatore Twisted, in sheet named "Summary VER Calculation" of the ER Sheet, was found inconsistent with the value of net energy imported provided in CELL 21 of sheet named "Coimbatore Twisted". - Many values inserted in the ER sheet were found inconsistent with the JMR sheet. For details please refer the ER sheet.				
Project participant response				Date :23/05/2016
- Net energy imported by Coimbatore Twisted mentioned in "Summary VER Calculation" sheet has now appropriately linked with the source. ER sheet now revised appropriately. - Inconsistent values are now corrected appropriately in revised ER sheet				
Documentation provided by project participant				
Revised ER sheet				
DOE assessment				Date:26/05/2016
- The value inserted in the cell has been corrected by the PP. (Closed). - Some values have not been corrected in the ER sheet. Please refer to the ER sheet for further details. Thus this CAR is open.				
Project participant response				Date : 28/05/2016
2. Identified values have been corrected and necessary TNEB statements are now attached with this submission				
Documentation provided by project participant				
NA				
DOE assessment				Date:30/05/2016
The values found inconsistent with the JMR have been corrected by the PP. Revised ER sheet has been submitted. Thus this CAR is closed.				

CAR ID	03	Section no.	4.2	Date	:21/04/2016
Description of CAR					
The PP has mentioned under section 3.3 of the MR that the WEGs are designated by the unique identification number. i.e. HTSC No. However, Table provided under section 2.1, has same HTSC numbers designated to different WEGs; the uniqueness of the HTSC numbers is not clear. Please Clarify.					
Project participant response					Date :23/05/2016
In section 3.3 of the MR it is mentioned that “The installed meters measure the electricity export and electricity import for each WEG or group of WEGs of the project which are designated by unique identification no. i.e. HTSC No”. This implied that one HTSC (High Tension Service Connection) is connected to either single WEG or group of WEGs, but each HTSC is connected with separate energy meter. Further, the table mentioned in section 2.1 of the MR mentioned the commissioning dates of each WEGs and the associated HTSC numbers have been repeated.					
Thus, the table has been revised for better clarity to maintain the uniqueness of the HTSC numbers and also mentioned the WEGs associated with the same HTSC.					
Documentation provided by project participant					
Revised MR					
DOE assessment					Date :26/05/2016
The justification was found satisfactory. Thus this CAR is closed.					

CAR ID	04	Section no.	4.2	Date	:21/04/2016
Description of CAR					
The meter details found in the monitoring report could not be conformed during the site visit. Various meter with accuracy class 0.5s were found to be replaced. However, the monitoring report does not contain any such information. Please Clarify.					
Project participant response					Date :23/05/2016
Monitoring report has been revised and details of new energy meters have been incorporated in the MR					
Documentation provided by project participant					
Revised MR Meter replacement report					
DOE assessment					Date :26/05/2016
1. Details of old meters have not been provided in the MR. However, they were used during the current monitoring period to measure energy generation parameter. (Open) 2. Calibration certificate of meter no. 14197108 installed at HTSC no. D44 has not been provided by the PP(Open)					
Project participant response					Date : 28/05/2016
1. Details of old meters used in this monitoring period have now been included in the revised monitoring report. 2. Calibration certificate of meter no. 14197108 installed at HTSC no. D44 has now been attached with this submission.					
Documentation provided by project participant					
1.Revised MR version 3.0 2.Calibration certificate for meter no.14197108					
DOE assessment					Date : 30/05/2016
1. Details of the old meters used d8uring the current monitoring period have been provided in the revised MR. (Closed) 2. Meter change certificate has been provided by the PP. The certificate also confirms that the meter was calibrated during the installation. (Closed).					

APPENDIX 5: COMPETENCE STATEMENTS OF THE TEAM

Competence Statement			
Name	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	4 Years		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert (1.2)	YES		
Reviewed by	Abhishek Mahawar	Date	29/12/2014
Approved by	Ashok Gautam	Date	29/12/2014

Competence Statement			
Name	Deepika Mahala		
Country	India		
Education	M.Sc. (Environment Management), Guru Gobind Singh Indraprastha University		
Experience	5 months		
Field	Environment Management		
Approved Roles			
Team Leader	NO		
Validator	YES (trainee)		
Verifier	YES (trainee)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (1.2)	YES (trainee)		
Reviewed by	Abhishek Mahawar	Date	12/10/2015
Approved by	Ashok Kumar Gautam	Date	12/10/2015

Competence Statement			
Name	Kaviraj Singh		
Country	India		
Education	Ph.D. (Environmental Engineering), IIT Delhi M.Phil. (Energy & Environmental), DAVV Indore		
Experience	8 Years		
Field	Climate Change & Environment		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert (1.1)	YES		
TA Expert (1.2)	YES		
TA Expert (13.1)	YES		
TA Expert (13.2)	YES		
TA Expert (15.2)	YES		
Reviewed by	Abhishek Mahawar	Date	29/12/2014
Approved by	Ashok Gautam	Date	29/12/2014