




## Validation report form for post-registration changes for CDM project activities

(Version 01.0)

## VALIDATION REPORT ON POST-REGISTRATION CHANGES (PRCs)

<b>Title and reference number of the project activity</b>	Vaayu India Wind Power Project in Tamilnadu UNFCCC Ref no. 4930
<b>Process track</b>	<input type="checkbox"/> Prior approval <input checked="" type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
<b>Version number of the validation report on PRCs</b>	01
<b>Completion date of the validation report on PRCs</b>	07/03/2016
<b>Type(s) of PRCs</b>	<input type="checkbox"/> Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline <input checked="" type="checkbox"/> Corrections <input type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of a monitoring plan to a registered project activity <input checked="" type="checkbox"/> Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline <input type="checkbox"/> Changes to the project design of a registered project activity <input type="checkbox"/> Types of changes specific to afforestation and reforestation project activities
<b>Version number of PDD to which this report applies</b>	Version 06, dated 28/12/2015
<b>Project participant(s)</b>	Vaayu (India) Power Corporation Private Limited
<b>Host Party</b>	India
<b>Sectoral scope(s), selected methodology(ies), and where applicable, selected standardized baseline(s)</b>	Sectoral Scope 1 – Energy industries (renewable/ non-renewable sources), ACM0002, Version 12.1.0
<b>Name of DOE</b>	Earthood Services Private Limited
<b>Name, position and signature of the approver of the validation report on PRCs</b>	 Dr. Kaviraj Singh Managing Director

**SECTION A. Executive summary**

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The project activity consists of 63 WTGs (0.8 MW capacity each), making the total installed capacity to be 50.4 MW in the Tirunelveli district in Tamil Nadu, India. The WTGs are of Enercon (E-53) make. The WTGs have been commissioned between 29/09/2010 and 11/07/2011.

All 63 WTGs are fully functional and the assessment team verified this during the site visit.

The basic details of the project activity are mentioned below:

Project title	Vaayu India Wind Power Project in Tamilnadu
UNFCCC registration number	4930
Date of registration	19/07/2011
Sectoral scope	1 – Energy industries (renewable/ non-renewable sources).
Methodology/ies applied	Approved consolidated baseline methodology ACM0002, Version 12.1.0
Project participant	Vaayu (India) Power Corporation Private Limited
Location of Project Activity	Tirunelveli district, Indian State of Tamil Nadu

**Scope of validation**

Vaayu (India) Power Corporation Private Limited has contracted Earthood Services Private Limited (Earthood) to conduct the verification and certification of emission reductions reported for the CDM project activity 4930 “Vaayu India Wind Power Project in Tamilnadu ” in India for the period 12/09/2013 to 15/06/2015 (including both days).

During the course of verification, the PP has decided to propose PRCs in order to address the findings raised as part of verification. The scope of validation remains limited to the proposed changes in the registered PDD. This validation is an independent and objective review of the post registration changes proposed in revised PDD against latest CDM Validation and Verification Standard (VVS), Project Standard (PS), Project Cycle Procedures (PCP) and other related requirements, as appropriate.

**Validation process**

The validation process is undertaken by verification team that involved the desk review of proposed changes as submitted by the PP, undertaking site visit (if necessary), interview or interactions with the representative of PP, reporting and closure of findings, as appropriate and preparing a draft validation report complying with the CDM requirements. An independent Technical Review team reviews the validation report prepared by the team. The final validation report that is accepted by Technical Reviewer is then approved on behalf of Earthood Services Private Limited and processed further as per CDM procedures.

**Conclusion**

The description in the revised PDD, Version 06 dated 28/12/2015 meets all relevant UNFCCC requirements for the CDM and correctly applies the selected baseline and monitoring methodology. This report is the assessment opinion for all the changes that are proposed in the registered PDD and request is submitted as part of issuance, as all the changes identified are accordance with the Appendix 1, paragraph 5(a) of the Project Standard version 9.0, change does not require prior approval of the board.

**SECTION B. Validation team, technical reviewer and approver****B.1. Validation team member**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader	IR	Soni	Ravi Kant	Central Office	Y	Y	Y	Y
2.	Verifier	IR	Soni	Ravi Kant	Central Office	Y	Y	Y	Y
3.	Technical Expert (TA1.2)	IR	Soni	Ravi Kant	Central Office	Y	Y	Y	Y
4.	Financial/	N	-	-	Not required	NA	NA	NA	NA

	Other Expert	A							
5.	Trainee	N A	Gupta	Anshika	Central Office	Y	N	Y	Y

**B.2. Technical reviewer and approver of the validation report on PRCs**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Garg	Shreya	Central Office
2.	Technical Expert (TA1.2)	IR	Garg	Shreya	Central Office
3.	Approver	IR	Singh	Kaviraj	Central Office

**SECTION C. Means of validation****C.1. Desk review**

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Earthood conducted a desk review as under;

- A review of the data and information presented to verify their completeness;
- 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;
- 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;

In addition to the monitoring documentation, Earthood has reviewed;

- The registered PDD Version 04 dated 15/03/2011, revised PDD version 06, dated 28/12/2015 and the monitoring plan;
- The Validation Report Version 02 dated 16/06/2011;
- The applied monitoring methodology (ACM0002 Version 12.1.0);
- The monitoring report (all versions) to verify that it is as per the standardized format;
- Any other information and references relevant to the project activity's emission reductions (e.g. IPCC reports, data on electricity generation in the national grid or laboratory analysis and national regulations).

The complete list of documents reviewed is included under Appendix 3.

**C.2. On-site inspection**

Duration of on-site inspection: 20/11/2015				
No.	Activity performed on-site	Site location	Date	Team member
1.	<p>An assessment of the implementation and operation of the registered project activity as per the registered PDD or any approved revised PDD;</p> <p>A review of information flows for generating, aggregating and reporting the monitoring parameters;</p> <p>Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PDD;</p> <p>A cross check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources;</p> <p>A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PDD, the applied methodology including applicable tool(s), and, where applicable, the applied standardized baseline;</p> <p>A review of calculations and assumptions made in determining the GHG data and emission reductions;</p> <p>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</p>	Tirunelveli	20/11/2015	Ravi Kant Soni

**C.3. Interviews**

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Saha	Sandip	Vaayu (India) Power Corporation Private Limited	20/11/2015	Electricity Generation Records ( monthly energy statements, Invoices and break up sheets), Reliability & accuracy of readings considered for emission reduction calculations, Calibration procedure	Ravi Kant Soni
2.	Thyagarajan	S.	Vaayu (India)	20/11/2015	Monitoring and measuring	Ravi Kant Soni

			Power Corporation Private Limited		system, Collection of measurements, Observations of established practices and Data Verification of monitoring parameters	
3.	Kumar	J.N	WWIL	20/11/2015	Calibration procedure of meters	Ravi Kant Soni
4.	T	Pradeep.	WWIL	20/11/2015	QA/QC procedures, data management, internal audits to maintain data quality & reliability, maintenance Practices Consideration of monitoring period, monitoring methodology, project documentation and emission reduction calculations	Ravi Kant Soni
5.	P	Ram Kumar	WWIL	20/11/2015	Calibration procedure of meters	Ravi Kant Soni

#### C.4. Clarification requests, corrective action requests and forward action requests raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form	-	-	-
Compliance of the project implementation with the registered PDD	-	-	-
Post-registration changes	-	CAR #4	-
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline	-	-	-
Compliance of monitoring activities with the registered monitoring plan	-	-	-
Compliance with the calibration frequency requirements for measuring instruments	-	CAR #3	FAR #1
Assessment of data and calculation of emission reductions or net removals	CL#2	-	-
Others (please specify)	-	-	-
<b>Total</b>	<b>1</b>	<b>2</b>	<b>1</b>

## SECTION D. Validation findings

### D.1. Compliance with PDD form

<b>Means of validation</b>	The project participants used a later version of the PDD form for the revised PDD than the version of the PDD form of the registered PDD. By means of checking updated PDD with the latest applicable and available PDD template form, version
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	06, the DOE can confirm that the information transferred to the later version of the PDD form is materially the same as that in the registered PDD besides those changes highlighted and assessed under this report.
<b>Findings</b>	No finding was raised
<b>Conclusion</b>	The updated PDD is in line with the latest applicable PDD from.

#### D.2. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

<b>Means of validation</b>	Not applicable
<b>Findings</b>	Not applicable
<b>Conclusion</b>	Not applicable

#### D.3. Corrections

<b>Means of validation</b>	There is a correction in the registered PDD with respect to change of name of equipment supplier/O&M contractor. With effect from 01/01/2013, the company name of Enercon (India) Limited (equipment supplier/O&M contractor) has been changed to 'Wind World (India) Limited'/18/. The change of name has been reported in the revised PDD/1/.
<b>Findings</b>	CAR #3 was raised and resolved
<b>Conclusion</b>	The assessment team is of the opinion that the correction made in the project information of the registered CDM project activity does not affect the design of the project activity and are therefore in line with section 1, paragraph 1 of appendix 1 of the Project Standard version 09/09/, the correction does not require prior approval by the Board. It is to be noted that this project is registered under the previous regulatory framework (VVM track), and the old information is transferred to the new VVS track form. The verification team confirms that the material (information) included in the new form is materially the same as the information in the registered PDD.

#### D.4. Changes to the start date of the crediting period

<b>Means of validation</b>	Not applicable
<b>Findings</b>	Not applicable
<b>Conclusion</b>	Not applicable

#### D.5. Inclusion of a monitoring plan to a registered project activity

<b>Means of validation</b>	Not applicable
<b>Findings</b>	Not applicable
<b>Conclusion</b>	Not applicable

#### D.6. Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline

<b>Means of validation</b>	<p>Permanent changes from the registered monitoring plan are identified during the current monitoring period. The monitoring plan outlined in the registered PDD mentions that the meters will be calibrated and tested once in a year. In the revised PDD the PP has updated the calibration frequency as once in 5 years.</p> <p>It is to be noted that the registered PDD also mentions that the meters will be calibrated as per the provisions of power purchase agreement (PPA) signed with state electricity authority (state utility).</p> <p>In accordance with the section 4 para (vi) of the PPA, the main and check meters shall be tested as per the Central Electricity Authority (CEA) Regulations 2006. The CEA regulations 2006 (considered as national standard) issued by the Central Electricity Authority, Ministry of Power, Government of India Notification No. 502/70/CEA/DP&amp;D dated 17/03/2006/19/ clearly states that "All interface meters shall be tested at least once in five years."</p> <p>In Section 4 paragraphs (iv) and (v) of the PPA, it is stated that the meters shall be sealed by the state utility and that any meter seal shall be broken only by the representative of state utility whenever the metering systems is to be inspected, tested, adjusted, repaired or replaced. Hence it can be concluded that calibration of meters is completely under jurisdiction of state utility and PP has no control over</p>
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	<p>the same.</p> <p>In actual practice the government officials (representative of state utility) conduct the calibration as per their convenience/ requirement and which may or may not be annually. This is verified through the interview of PPs representative and site personnel during the site visit. It is also noted that the calibration certificates issued by calibration entity (state utility) does not mention any validity date for the calibration conducted and the applied methodology ACM0002 version 12.1.0 does not specify any specific time period for conducting the calibration/testing of the equipment.</p> <p>Since calibration procedure is under the scope of state utility and not the project participant, hence the calibration practice mentioned in the registered monitoring plan cannot be followed and thus, the calibration frequency has been changed to once in a five year.</p> <p>Furthermore to maintain the accuracy of energy meters is in the interest of both the power off-takers (state utility) and the PP. Hence the state utility ensures that the energy meters are in proper working condition, since it has to make payments based on these meter readings.</p> <p>As per the section 4 ,paragraph 7 &amp; 8 of the PPA , the energy meters shall be regularly checked by both the PP and the state utility representative and appropriate corrective actions would be taken in case if any malfunctioning or reasonable discrepancy in the main and check meters reading observed.</p> <p>It can be concluded that accuracy of the energy meter readings will not be compromised in any way by changing the calibration frequency from annual to once in a five year.</p>
<b>Findings</b>	CAR #3 was raised and resolved
<b>Conclusion</b>	<p>In view of the above assessment, the validation team able to confirm that:</p> <ul style="list-style-type: none"> <li>• Change of calibration frequency or practice for monitoring equipment is not within the control of project participant.</li> <li>• Change of calibration frequency or practice for monitoring equipment as per the applied national standard;</li> </ul> <p>Accordance with the Appendix 1, paragraph 5(a) and 5(f) of the Project Standard version 9.0 /09/ this change does not require prior approval of the board and revised PDD will be submitted along with the request for issuance for this monitoring period.</p> <p>In line with the guidelines prescribed under paragraph 327 of VVS version 09, the assessment team able to confirm that:</p> <p>(a) The proposed revisions ensure that the level of accuracy and completeness in the monitoring and verification process is not reduced as a result of the revision.</p> <p>(b) The monitoring methodology clearly states that "All measurements should be conducted with calibrated measurement equipment according to relevant industry standards". Hence the proposed revisions are in accordance with the monitoring methodology ACM 0002 Version 12.1.0</p> <p>A revised PDD reflecting this permanent change in the monitoring system is being submitted as per procedure. This is also in line with the paragraph 313 of VVS version 9.0/08/</p>

**D.7. Changes to the project design of a registered project activity**

<b>Means of validation</b>	Not applicable
<b>Findings</b>	Not applicable
<b>Conclusion</b>	Not applicable

**D.8. Types of changes specific to afforestation and reforestation project activities**

<b>Means of validation</b>	Not applicable
<b>Findings</b>	Not applicable
<b>Conclusion</b>	Not applicable

**SECTION E. Internal quality control**

A draft validation report that is prepared by validation team is 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 CDM rules/requirements. 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 verification team.

During the technical review process additional findings may be identified or the closed out findings may be opened, which needs to be satisfactorily resolved before the request for issuance is submitted to UNFCCC. The independent technical reviewer may either approve the report as such or reject/return the same in such case providing the comments/findings/issues that needs to be resolved by the validation team. The decision taken by the Technical Reviewer is final and is authorized by the Quality Manager on behalf of Earthood Services Private Limited.

**SECTION F. Validation opinion**

Earthood Services Private Limited (Earthood) has performed the validation of the post registration changes of the project activity 4930 "Vaayu India Wind Power Project in Tamilnadu". The validation was performed on the basis of rules and requirements defined by UNFCCC for the CDM project activities. The review of the revised PDD, supporting documentation and subsequent follow-up actions (including onsite visit and interviews), have provided Earthood with sufficient evidence to determine the fulfilment of stated criteria. The changes proposed are summarized in section D.3 and D.6 of this report.

The description in the revised PDD, Version 06 dated 28/12/2015 meets all relevant UNFCCC requirements for the CDM and correctly applies the selected baseline and monitoring methodology. This report is the assessment opinion for all the changes that are proposed in the registered PDD and request is submitted as part of issuance, as all the changes identified are accordance with the Appendix 1, paragraph 5(a) of the Project Standard version 9.0, change does not require prior approval of the board.



Kaviraj Singh  
Managing Director

10/03/2016  
Gurgaon, Haryana, India



## Appendix 1. Abbreviations

Abbreviations	Full texts
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CDM VVS	Clean Development Mechanism Validation and Verification Standard
EB	Executive Board
EF	Emission Factor
EPC	Engineering ,Procurement and Construction
ER	Emission Reductions
CEA	Central Electricity Authority
CER	Certified Emission Reduction
CL	Clarification Request
DOE	Designated Operational Entity
DNA	Designated National Authority
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GOI	Government of India
HTSC	High Temperature Superconductor
IPCC	Intergovernmental Panel on Climate Change
JMR	Joint Meter Reading
MP	Monitoring Plan
MR	Monitoring Report
MWh	Megawatt hour
PDD	Project Design Document
PPA	Power Purchase Agreement
PP	Project Participant
PRC	Post Registration Changes
PS	Project Standard
RMP	Revised Monitoring Plan
SLDC	State Load Dispatch Center
TANGEDCO	Tamil Nadu Generation and Distribution Corporation
TNEB	Tamil Nadu Electricity Board
TNERC	Tamil Nadu Electricity Regulatory Commission
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard
UID	Unique Identification number
UNFCCC	United Nations Framework Convention on Climate Change
VIPCL	Vaayu (India) Power Corporation Private Limited
WTG	Wind Turbine Generator
WEC	Wind Energy Convertor
WWIL	Wind World (India) Limited

## Appendix 2. Competence of team members and technical reviewers

Competence Statement			
<b>Name</b>	Ravi Kant Soni		
<b>Country</b>	India		
<b>Education</b>	B. Tech. (Mechanical Engineering) M. Tech. (Energy Management)		
<b>Experience</b>	7 Years		
<b>Field</b>	Energy and Climate Change		
Approved Roles			
<b>Team Leader</b>	YES		
<b>Validator</b>	YES		
<b>Verifier</b>	YES		
<b>Financial Expert</b>	NO		
<b>Technical Reviewer</b>	YES		
<b>TA Expert (1.2)</b>	YES		
<b>Reviewed by</b>	Abhishek Mahawar	<b>Date</b>	01/07/2015
<b>Approved by</b>	Kaviraj Singh	<b>Date</b>	01/07/2015

Competence Statement			
<b>Name</b>	Anshika Gupta		
<b>Country</b>	India		
<b>Education</b>	M.Sc. (Climate Science & Policy), TERI University		
<b>Experience</b>	9 months		
<b>Field</b>	Climate Change		
Approved Roles			
<b>Team Leader</b>	NO		
<b>Validator</b>	YES (trainee)		
<b>Verifier</b>	YES (trainee)		
<b>Financial Expert</b>	NO		
<b>Technical Reviewer</b>	NO		
<b>TA Expert (1.2, 3.1)</b>	YES (trainee)		
<b>Reviewed by</b>	Abhishek Mahawar	<b>Date</b>	01/07/2015
<b>Approved by</b>	Ashok Kumar Gautam	<b>Date</b>	01/07/2015

Competence Statement	
<b>Name</b>	Shreya Garg
<b>Country</b>	India
<b>Education</b>	M.Sc. (Climate Science & Policy), TERI University
<b>Experience</b>	4 Years

<b>Field</b>	Climate Change		
<b>Approved Roles</b>			
<b>Team Leader</b>	YES		
<b>Validator</b>	YES		
<b>Verifier</b>	YES		
<b>Financial Expert</b>	NO		
<b>Technical Reviewer</b>	YES		
<b>TA Expert (1.2)</b>	YES		
<b>Reviewed by</b>	Abhishek Mahawar	<b>Date</b>	29/12/2014
<b>Approved by</b>	Ashok Gautam	<b>Date</b>	29/12/2014

### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	PP	Revised PDD	Version 6.0 ,Dated 28/12/2015	Other
1.1	PP	Registered PDD	Version 4.0 ,Dated 15/03/2011	Other
1.2	PP	Revised PDD	Version 5.0,dated 02/12/2015	Other
1.3	BVC	Verification report (previous monitoring period)	Report No-BVC-India /VR/577.49/2013,dated 09/01/2014	Other
2	DNV	Validation Report	Report No. 2010–0459 Revision 02 dated 16/06/2011	Other
3	UNFCCC	Approved Consolidated Methodology ACM0002	Version 12.1.0	Other
4	PP	Monitoring Report (publication)	Version 01,dated 27/07/2015	PP
4.1	PP	Monitoring Report	Version 02,dated 02/12/2015	
5	PP	Monitoring Report (final)	Version 2.1,dated 28/12/2015	PP
6	PP	ER Spreadsheet	Version 01,dated 27/07/2015	PP
7	PP	ER spreadsheet (final)	Version 02, dated 02/12/2015	PP
8	UNFCCC	CDM VVS	Version 09	Other
9	UNFCCC	CDM PS	Version 09	Other
10	TANGEDCO	Monthly Statements issued by state utility	-	PP
11	PP	Monthly invoices raised by the PP to state utility	-	PP
12	TNEB	Calibration certificates of main meters and check meters	-	PP
13	TNEB	Commissioning certificates (for all 63 WTGs)	-	PP
14	TNEB	Power Purchase Agreement between TANGEDCO and Vaayu (India) Power Corporation Private Limited	<ul style="list-style-type: none"> <li>• Dated 15/09/2011 for 24 MW</li> <li>• Dated 30/03/2012 for 26.4 MW</li> </ul>	PP
15	CEA	CO <sub>2</sub> Baseline Database for Indian Power Sector	Version 05	Others
16	UNFCCC	UNFCCC webpage for the project activity	<a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1308823376.98/view">http://cdm.unfccc.int/Projects/DB/DNV-CUK1308823376.98/view</a>	Others
18	Ministry of corporate Affairs, GOI	Name change consent issued by Government of India, dated 01/01/2013	-	PP
19	CEA	CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006	-	Others

### Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. Remaining FAR from validation and/or previous verification

<b>FAR ID</b>	01	<b>Section no.</b>	E.7	<b>Date:</b> 20/11/2015
<b>Description of FAR</b>				
<p>FAR from previous verification:</p> <p>"It was also noted by the verification team that the calibration of all energy meters was carried out between November-December 2012 and has validity till November-December 2013 and hence beyond the end date of this monitoring period viz. 11 September 2013. However, to ensure that all the energy meters were working appropriately for the current verification period, the verification team has raised FAR 1 to ensure that the verification team for the next monitoring period verifies the calibration carried out in November-December 2013 i.e. after the end of this monitoring period. And if the calibration is delayed or an error is observed then the necessary adjustments in ERs should be made".</p>				
<b>Project participant response</b>				<b>Date :</b> 15/12/2015
<p>In the registered PDD, calibration frequency has been mentioned as once in a year and in the state of Tamilnadu, state utility is responsible for conducting calibration of all energy meters located at grid interface. In this project activity, last calibrations of the energy meters were conducted in November-December 2012. However, in line with para 18.1.b of notification issued by Central Electricity Authority dated 17<sup>th</sup> March, 2006 (<a href="http://www.aegcl.co.in/Metering_Regulations_Of_CEA_17_03_2006.pdf">http://www.aegcl.co.in/Metering_Regulations_Of_CEA_17_03_2006.pdf</a>), all interface energy meters shall be tested at least once in five years. As the calibration of energy meter is the responsibility of state utility, thus, same is beyond the control of project proponent. Thus, in line with above notification, next calibration of energy meter would be actually due on November-December 2017. Thus, a post registration change (PRC) has been proposed and PDD has been revised in line with the actual calibration practice adopted at site. Revised PDD has been attached with this submission.</p>				
<b>Documentation provided by project participant</b>				
<p>Revised PDD version 05,dated 02/12/2015</p> <p>Revised monitoring report ,version 02,dated 02/12/2015</p>				
<b>DOE assessment</b>				<b>Date:</b> 25/12/2015
<p>The PP has requested to change the calibration frequency from annual to once in 5 years as the same is not under control of PP. Accordance with the guidelines as state under section 3.2.3 of CEA Notification No. 502/70/CEA/DP&amp;D dated 17/03/2006 which is considered as national standard "All interface meters shall be tested at least once in five years."</p> <p>As per the PPA, state utility is the sole authority responsible for calibration of meters and the PP has no control over the same.</p> <p>The validation team also checked the calibration certificates issued by state utility till date and confirmed that the certificates only indicate the date of calibration without its validity. Also during the onsite visit, the site personnel clarified that the state utility officials conduct the calibration as per their convenience/ requirement and which may or may not be annually. Hence it can be concluded that the calibration frequency as annual as mentioned in the registered monitoring plan cannot be followed and the revised frequency as once in 5 years is appropriate, hence accepted.</p> <p>It is also confirmed that the PP receives payment, for the electricity supplied to the grid, from the state utility (which is a Government Organisation and a 3<sup>rd</sup> party with respect to this CDM project). This electricity supplied is obtained from the monthly statements issued by the state utility. Hence the state utility ensures that the energy meters are in proper working condition, since it has to make payments based on these meter readings. Hence the assessment team can be confirms that the calibration frequency of once in 5 year, mentioned in the revised PDD for the meters is appropriate.</p> <p>As per the paragraph 5(a) of appendix 1 PS version 09,the changes made in the registered PDD don't require prior approval of the board, hence revised PDD will be submitted together with request for issuance. FAR #1 is closed.</p>				

**Table 2. CL from this verification**

<b>CL ID</b>	02	<b>Section no.</b>	C	<b>Date :</b> 20/11/2015
<b>Description of CL</b>				
<p>1) The current monitoring period starts from 12/09/2013, however the MR/ER sheet mentions the first month as Oct 2013. Please clarify the same.</p> <p>2) First and last month of current monitoring period does not include the whole month, however same is not reflected in the MR/ER sheet.</p>				
<b>Project participant response</b>				<b>Date :</b> 15/12/2015
<p>1) Monitoring report and the emission reduction sheet have been revised in line with the actual duration of the monitoring period.</p> <p>2) Duration (i.e. starting and ending date) of the Joint Meter Reading which is the basis for emission</p>				

reduction calculation now mentioned in the monitoring report and emission reduction sheet for better clarity.	
<b>Documentation provided by project participant</b>	
1) Revised monitoring report version 02, dated 02/12/2015 2) Revised ER sheet, version 02, dated 02/12/2015	
<b>DOE assessment</b>	<b>Date: 25/12/2015</b>
The PP has mentioned the actual dates for each month covered in the current monitoring period in the revised MR and ER calculation sheet, the same is found to be appropriate, hence accepted. CL #2 is closed.	

**Table 3. CAR from this verification**

<b>CAR ID</b>	03	<b>Section no.</b>	E.7	<b>Date</b>	:20/11/2015
<b>Description of CAR</b>					
1) Name of O&M contractor has been changed from Enercon (India) Limited (EIL) to Wind World (India) Limited, however the same is not updated in the MR. Please clarify					
2) Calibration frequency of energy meters mentioned in the MR is not consistent with the registered monitoring plan.					
3) Latest calibration dates for the HTSC meters and substation meters are not reported in the MR. Please clarify.					
<b>Project participant response</b>					<b>Date : 02/12/2015</b>
1) Name of O&M contractor has been changed from Enercon (India) Limited (EIL) to Wind World (India) Limited. Same has been now mentioned in section C of the revised MR.					
2) In the state of Tamilnadu, state utility is responsible for conducting calibration of all energy meters located at grid interface and in this project activity, last calibrations of the energy meters were conducted in November-December 2012. Further, in line with para 18.1.b of notification issued by Central Electricity Authority dated 17 <sup>th</sup> March, 2006 ( <a href="http://www.aegcl.co.in/Metering_Regulations_Of_CEA_17_03_2006.pdf">http://www.aegcl.co.in/Metering_Regulations_Of_CEA_17_03_2006.pdf</a> ), all interface energy meters shall be tested at least once in five years. However, in the registered PDD, calibration frequency has been mentioned as once in a year and in line with above notification, next calibration would be actually due on November-December 2017. As the calibration of energy meter is responsibility of state utility, thus, same is beyond the control of project proponent. Thus, a post registration change (PRC) has been proposed and PDD has been revised in line with the actual calibration practice adopted at site. Revised PDD has been attached with this submission.					
3) Last calibration of the energy meters was conducted in 2012 and state utility is responsible for conducting calibration of all energy meters located at grid interface. Further, in line with para 18.1.b of notification issued by Central Electricity Authority dated 17 <sup>th</sup> March, 2006 ( <a href="http://www.aegcl.co.in/Metering_Regulations_Of_CEA_17_03_2006.pdf">http://www.aegcl.co.in/Metering_Regulations_Of_CEA_17_03_2006.pdf</a> ), all interface energy meters shall be tested at least once in five years. Thus, in line with above notification, next calibration would be due in 2017. As the calibration of energy meter is responsibility of state utility, thus, same is beyond the control of project proponent. Thus, a post registration change (PRC) has been proposed and PDD has been revised in line with the actual calibration practice adopted at site and respective due date of calibrations of the energy meters are now mentioned in section C of the revised MR.					
<b>Documentation provided by project participant</b>					
Revised PDD, version 05, dated 02/12/2015 Revised MR, version 02, dated 02/12/2015 Revised ER sheet, version 02, dated 02/12/2015					
<b>DOE assessment</b>					<b>Date: 25/12/2015</b>
Name of O&M contractor is updated in the revised MR, in line with comment raised, hence accepted. Calibration frequency of meters is revised as once in 5 years in the revised MR. The PP has requested to change the calibration frequency from annual to once in 5 years as the same is not under control of PP. Accordance with the guidelines as state under section 3.2.3 of CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006 which is considered as national standard "All interface meters shall be tested at least once in five years." Hence, the calibration frequency of once in 5 year, mentioned in the					

revised PDD for the meters is appropriate.

As per the paragraph 5(a) of appendix 1 PS version 09, the changes made in the registered PDD don't require prior approval of the board, hence revised PDD will be submitted together with request for issuance. CAR #3 is closed.

CAR #3 re-opened

Date: 02/03/2016

**Description of CAR**

The registered PDD mentions that the calibration will be conducted as per the provisions PPA (CEA regulations 2006) that allows calibration at least once in 5 years, but the same PDD also mentions the calibration frequency as annual. Please clarify the reason for contradictory information identified in the PDD.

It is not clear, in order to ensure accuracy, at what interval the regular inspections of meters will be done by state utility, if the calibration frequency could be considered as once in 5 years as per the national standard (CEA regulations 2006) quoted in the revised PDD.

**Project participant response**

Date : 03/03/2016

Clause no 4 of the PPA clearly stated that interface meters would be calibrated in accordance with Central Electricity Authority (Installation and Operation of Meter) Regulation, 2006. Further to this, para 18.1.b of notification issued by Central Electricity Authority dated 17<sup>th</sup> March, 2006 stipulates that all interface energy meters shall be tested at least once in five years. As per the prevailing practice at site during registration of project activity, electricity board conducted the meter calibration once in a year. Thus, PDD has also mentioned the same. However, due to installation of large number of wind projects in Southern India, respective electricity boards have started energy meter calibration once in five year, which is also in line with the Central Electricity Authority (Installation and Operation of Meter) Regulation, 2006. This is entirely under the jurisdiction of electricity boards and beyond the control of project proponent. It is notable that the calibration certificates issued by the state utility does not mention the validity date of calibration and the responsible entity(state utility) conduct the calibration as per their convenience/ requirement and which may or may not be annually.

Thus to address the same change in project monitoring, PRC has been requested.

Further, assessment team is requested to kindly refer UNFCCC project no 5553 (Renewable Wind Power generation for promoting energy security) which was registered on 15/03/2012 considering the calibration frequency of once in one year. However, during verification, a PRC has been proposed to change to calibration frequency once in a year to once in five year to adopt the actual practice at site. Same PRC has been approved by UNFCCC and CERs have been issued accordingly.

As a normal practice at site, during Joint Meter Reading, both main meter and check meter readings are noted on a fixed day of every month by officials of state utility in presence of project proponent and if any discrepancy found in the meter readings, state utility immediately conduct the accuracy check of meters. Considering the above practice, more than three years has passed by from the last calibration of energy meters and additional calibration check has not been conducted by Tamilnadu Electricity Board. This indicates that energy meters are accurately operating. However, state utility can conduct the formal calibration check any time within 5 year.

**Documentation provided by project participant**

Not applicable

**DOE assessment**

Date: 07/03/2016

It is verified through the PPA (Section 4 paragraphs iv and v) that the calibration procedure is under the scope of state utility and not the project participant, hence the calibration practice mentioned in the registered monitoring plan cannot be followed and thus, the calibration frequency has been changed to once in a five year.

Furthermore to maintain the accuracy of energy meters is in the interest of both the power off-takers (state utility) and the PP. Hence the state utility ensures that the energy meters are in proper working condition, since it has to make payments based on these meter readings.

Accordance with the Appendix 1, paragraph 5(a) and 5(f) of the Project Standard version 9.0 /09/ this change does not require prior approval of the board and revised PDD will be submitted along with the request for issuance for this monitoring period.

CAR #3 is closed

CAR ID 04

Section no. E.4

Date : 25/12/2015

**Description of CAR**

All the post registration changes are neither indicated in track change mode in the revised PDD nor listed in appendix 6 of PDD.

**Project participant response**

Date : 28/12/2015

Post registration changes are now included in appendix 6 of CDM-PDD and all the necessary changes are now mentioned in track change mode for better clarity.

**Documentation provided by project participant**

Revised CDM-PDD in track change mode, version 06,dated 28/12/2015  
 Revised MR Version 2.1 ,dated 28/12/2015

**DOE assessment****Date:** 28/12/2015

The PP has revised the PDD reflecting all the post registration changes in track change, hence accepted.  
 CAR #4 is closed.

**Table 4. FAR from this verification**

<b>FAR ID</b>	NA	<b>Section No.</b>	NA	<b>Date :DD/MM/YYYY</b>
<b>Description of FAR</b>				
No FAR raised during the verification.				
<b>Project participant response</b>				<b>Date :DD/MM/YYYY</b>
NA				
<b>Documentation provided by project participant</b>				
NA				
<b>DOE assessment</b>				<b>Date: DD/MM/YYYY</b>
NA				

**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
01.0	23 March 2015	Initial publication.
Decision Class: Regulatory		
Document Type: Form		
Business Function: Registration		
Keywords: post-registration change, project activities, validation report		