

Validation Opinion for Post Registration Changes

Report for:
Gangadhar Narsingdas Agrawal

CDM project for
Renewable Wind Power Generation for promoting
Energy Security (Ref 5553)

LRQA Reference : CDM-MUM-0062113
Date : 27/03/2015

Verification Team

Name	Competences
Ankush Jain	Team Leader
Imran Ustad	Team Member

Technical Reviewer :
Ketan S Deshmukh : Technical reviewer, Sector expert
and Decision maker

Validation opinion

Lloyd's Register Quality Assurance Limited (LRQA) has been contracted by Gangadhar Narsingdas Agrawal, the project participant (PP), to undertake the first verification of the registered project activity "Renewable Wind Power Generation for promoting Energy Security", project reference number, 5553, registered as a CDM project activity on 15/03/2012.

LRQA conducted an independent third party assessment of the Post Registration Changes of the project activity as described in the registered revised Project Design Document (PDD) following the VVS, section 9.5 and the PS section 13.8 for Post Registration Changes.

LRQA confirms that the permanent changes from the registered monitoring plan reflect the application of the approved guidance of the CDM Executive Board (EB) regarding the deviation from the provisions of the monitoring plan (MP).

LRQA, by means of an on-site inspection and a review of the revised PDD, specifically the revised Monitoring Plan, can confirm that:

- (a) the proposed revision of the monitoring plan ensures that the level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revisions
- (b) the proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity
- (c) the proposed revision does not impact the conservativeness of the monitoring and verification process, including the related emission reductions calculations.
- (d) the findings of previous verification reports, if any, have been taken into account.

LRQA confirms that the information in the PDD, Version 3.1 dated: 10/10/2014, using latest form at the time of submission of this report, was materially the same as described in the registered PDD, Version 3.0 dated: 07/02/2012. LRQA further confirms that the changes in PDD, Version 3.3 dated: 26/03/2015 reflects the changes to the registered project design of a type listed in appendix 1 of the Project standard.

LRQA therefore requests the approval, by the CDM EB, of the post registration changes of the project activity as described above, in accordance to the guidance of the EB in the PCP.



Ketan Deshmukh
CDM Quality Manager

31 March 2015

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Findings

1. Validation of the permanent changes from the registered MP

The calibration frequency was revised from 'annual' as stated in the registered monitoring plan to 'once in five years'. Revised calibration frequency of once in five years is in accordance with the national regulation. This information was consistently revised to state that calibration of substation meter was done once in five years.

The change in calibration frequency from annual to once in five years does not lead to changes in (i) the frequency of measurements, (ii) quality of monitoring equipment (iii) QA/QC procedures.

Change in calibration frequency is in accordance with the regulations in India and does not lead to reducing the level of accuracy in monitoring.

Minor correction related to symbol used in apportioning described in the section related to "corrections" below..

2. Validation findings for temporary deviation

2.1 Accuracy of the calculation of emission reductions

Not applicable

2.2 Exact period to which the deviation applies

Not applicable

3. Validation findings for corrections

3.1 Corrected information

The apportioning procedure for the Karnataka site incorrectly mentions 'X' instead of 'X1'. 'X' was not described in the apportioning procedure in the monitoring plan for Karnataka site. There was no change in the procedure for apportioning.

3.2 Corrected parameters

As discussed above, the parameter was 'X1' which was defined as reading of energy meter installed at the project site. The parameter 'X' which was mentioned in the registered PDD was incorrect and not defined in the monitoring plan.

4. Validation findings for changes to the start date of the crediting period

4.1 New starting date of the crediting period

Not applicable

4.2 Baseline

Not applicable

4.3 Progress made to start the project activity

Not applicable

5. Validation findings for permanent changes from the registered Monitoring Plan

5.1 Level of accuracy and completeness

Change in calibration frequency does not impact level of accuracy and completeness.

5.2 Conformance to approved monitoring methodology

The monitoring methodology does not specify calibration frequency. Therefore, change in calibration frequency does not impact the conformance to approved monitoring methodology.

5.3 Findings of previous verification reports related to the changes (if any)

Not applicable

6. Validation findings and resolution for changes to the project design of a registered project activity

6.1 Description of the changes

Not applicable

6.1 Additionality of the project activity

Not applicable

6.2 Scale of CDM project activity in the new PDD, if changes affect the scale of a small scale Project activity

Not applicable

6.3 Applicability and application of approved baseline methodology

Not applicable

7. Appendix

Appendix 1: List of documents reviewed

1. Registered PDD, Version 3.0 dated: 07/02/2012
2. Validation report (No. 53210408 – 08/395) dated: 05/03/2012
3. ACM0002, Consolidated baseline methodology for grid-connected electricity generation from renewable sources, Version 12.2.0
4. PDD, Version 3.1 dated: 10/10/2014 (Registered PDD in VVS track)
5. Revised PDD, Version 3.2 dated: 10/10/2014, Version 3.3 dated: 26/03/2015
6. Power Purchase Agreement
7. CDM Validation and Verification Standard, Version 07.0
8. CDM Project Standard, Version 07.0
9. CDM Project Cycle Procedure, Version 07.0
10. Central Electricity Authority (Installation and Operations of Meters) Regulations, 2006 (http://powermin.nic.in/whats_new/pdf/Metering_Regulations.pdf)

Appendix 2: List of persons interviewed and on site assessment



Date	Location	Team Members on site	Subjects covered	Persons interviewed
05/05/2014	Project site, Sangli Maharashtra	Imran Ustad	Opening meeting	Mr. Sanjay Thorat, Suzlon Mr. Sagar Patil, Suzlon
			Project implementation and management	
			Site tour	
			Data management and reporting systems	Mr. Bajirao Potkule, Local villager Mr. Ganesh Zade, Local villager
			Data verification	
			QA/QC, management systems and data archiving	
			Environmental and social issues	
			Issues with local stakeholders	
			Closing meeting	
07/05/2014	Project site, Bellary, Karnataka	Imran Ustad	Opening meeting	Mr. Basava Kumar, Site-in-charge, Suzlon Mr. K. Shivakumar, Suzlon Mr. Vishwanathan, Suzlon
			Project implementation and management	
			Site tour	
			Data management and reporting systems	Mr. Jayappa, Local villager Mr. Kumarasamy, Local villager Mr. Changappa, local villager
			Data verification	
			QA/QC, management systems and data archiving	
			Environmental and social issues	
			Issues with local stakeholders	
			Closing meeting	
09/05/2014	Project site; Kutch, Gujarat	Imran Ustad	Opening meeting	Mr. Jignesh Desai, RRB Energy Mr. Jayeshbhai, RRB Energy
			Project implementation and management	
			Site tour	
			Data management and reporting systems	Mr. Balbhai Singh Jadeja, Local villager
			Data verification	
			QA/QC, management systems and data archiving	Mr. Savdasbhai Karangiya, Local villager
			QA/QC, management systems and data archiving	
			Environmental and social issues	
			Issues with local stakeholders	
			Closing meeting	

7.1 Appendix B: Certificate of Appointment

Post registration changes of "Renewable Wind Power Generation for promoting Energy Security" (UNFCCC Ref: 5553)

We hereby certify that the following personnel have engaged in the verification process that has fully satisfied the competence requirements of the validation of post registration changes of the CDM project activity.

Name of Person**Assigned Roles**

Ankush Jain
Imran Ustad

Team Leader, Sector Expert
Team Leader, Sector Expert

Ketan Deshmukh

Technical Reviewer, Sector Expert
and Decision Maker

Signed by

Decision Maker

Ketan Deshmukh
CDM Quality Manager

31 March 2015

Protocol

This document has been produced by the LRQA Verification Team or the Post Registration changes validation team after the desk review and the site visit, as applicable, have been completed.

It outlines the verified situation in relation to a number of criteria, including those defined in the Validation and Verification Standard (VVS) and the Project Standard (PS) produced by the CDM Executive Board.

Where LRQA has identified issues requiring corrective action or clarification, **a reference is made in the 'Conclusion' column, and details** are stated in the section marked 'Findings'.

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|--------|--|
| Part 1 | Validation of temporary deviations from the registered monitoring plan and/or monitoring methodology |
| Part 2 | Validation of corrections |
| Part 3 | Validation of changes to the start date of the crediting period of the Project Activity or CPA |
| Part 4 | Validation of permanent changes from the registered monitoring plan or monitoring methodology |
| Part 5 | Validation of changes to the project design of a registered project activity |
| Part 6 | Validation of changes to the project design of a registered PoA |

1- Validation of temporary deviations

Team conclusions	
1-1. Documentation from the PP	
1-1.1. Is the alternative monitoring proposal completed?	Not applicable
1-1.2. Has the supplemental documentation been submitted as appropriate, especially when further explanation is necessary on the alternative monitoring?	Not applicable
1-2. Level of accuracy (Section 9.5.1.2 of the VVS)	
1-2.1. Determine whether the deviation is likely to lead to a reduction in the accuracy of the calculation of emission reductions: Have the project participants applied conservative assumptions or discount factors to the calculations to the extent required to ensure that emission reductions will not be over-estimated as a result of the deviation?	Not applicable

2- Validation of corrections

Team conclusions	
2-1. Documentation from the PP	
2-1.1. Is the revised PDD with the corrections completed in clean and track change versions?	Yes.
2-1.2. Has the supplemental documentation been submitted as appropriate?	Yes, Power Purchase Agreement.
2-2. Means of verification (Section 9.5.2.2 of the VVS)	

<p>2-2.1. Determine whether the corrected information is an accurate reflection of actual project information.</p>	<p>Yes. The apportioning procedure for the Karnataka site incorrectly mentions 'X' instead of 'X1'. 'X' was not described in the apportioning procedure in the monitoring plan for Karnataka site. Team further confirmed that the apportioning procedure in the corrected PDD is in accordance with the Power Purchase Agreement.</p> <p>The apportioning procedure in the corrected PDD is $DE = X1 - (X1 * Z\%)$</p> <p>Where DE is the delivered energy pertaining to the project. X1 is the reading of the energy meter installed at the project site. Z is the percentage transmission line loss incurred in the transmission line between the project and the receiving station and shall be</p> $Z = \left\{ \frac{(X1 + X2 + X3 + X4 + \dots) - Y}{(X1 + X2 + X3 + X4 + \dots)} \right\} * 100$ <p>Where Y is the reading of the bulk energy meter installed on the 66 KV side of the receiving station. X1, X2, X3, X4 etc., are the readings of the energy meters installed at various individual windmill power projects being developed/proposed to be set up in the area and connected to the receiving station.</p>
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2-2.2. Determine whether the corrected parameters are in accordance with the applied methodology and/or selected monitoring plan.	Yes. The applied methodology does not specify any condition for apportioning. Minor correction in the apportioning procedure is in accordance with the Power Purchase Agreement.
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3- Validation of changes to the starting date of the crediting period of the Project Activity or CPA

	Team conclusions
3-1. Documentation from the PP or the CME	
3-1.1. Is a demonstration of no changes to the project activity or CPA that would result in a less conservative baseline provided?	Not applicable
3-1.2. Has supplemental documentation been submitted to demonstrate that substantive progress has been made by the project participants or the CME to start the project activity?	Not applicable
3-2. Assessment of the demonstration (Section 13.8.3.2 of the PS)	
3-2.1. Determine whether the baseline is affected by the delay in the starting day of the crediting period. If it is affected, verify if the new baseline is less conservative or not.	Not applicable
3-2.2. Assess if the PPs have implemented actions to start the project activity or CPA. List these actions and determine if the new start date of the crediting period can be met.	Not applicable

4- Validation of permanent changes from the registered monitoring plan and/or monitoring methodology

	Team conclusions
4-1. Documentation from the PP	
4-1.1. Does the revised PDD contain a revised monitoring plan completed in clean and track change versions?	Yes.
4-1.2. Has the supplemental documentation been submitted as appropriate, especially when further explanation is necessary on the revised monitoring plan?	Yes, the change in monitoring frequency is supported by the Central Electricity Authority (Installation and Operations of Meters) Regulations, 2006. Central Electricity Authority is the statutory body constituted under the Indian law and has powers over the state utilities including specifying the details of electricity meters. (For details refer: http://www.cea.nic.in/documents/citizen_charter.pdf) Section 18 (1) (b) of this regulation describes that meters will be calibrated once in five years.
4-2. Level of accuracy (Section 9.5.4.2 VVS)	

<p>4-2.1. Did the revision of the monitoring plan ensure that the level of accuracy in the monitoring and verification process was not reduced as a result of revision?</p> <ol style="list-style-type: none"> 1) frequency of measurements 2) quality of monitoring equipment 3) calibration requirements 4) QA/QC procedures. 	<p>Yes.</p> <p>Calibration frequency was revised to correct the calibration frequency from annual to once in five years. This change does not lead to change in</p> <ol style="list-style-type: none"> 1. Frequency of measurements 2. Quality of monitoring equipment 3. QA/QC procedures. <p>Change in calibration frequency is in accordance with the regulations in India. Change in calibration frequency does not lead to reducing in level of accuracy in monitoring.</p>
<p>4-3. Completeness (Section 9.5.4.2 VVS)</p>	
<p>4-3.1. Ensure that the permanent changes are not likely to lead to a reduction in the accuracy of the calculation of emission reductions</p> <p>4-3.2. In case the permanent changes will lead to a reduction in the accuracy of the calculation of emission reductions, request the PPs to apply conservative assumptions or discount factors to the calculations to the extent required to ensure that emission reductions will not be over-estimated as a result of the permanent change.</p>	<p>Change in calibration frequency does not lead to change in accuracy of the calculation of emission reduction.</p>

4-4. Compliance with approved monitoring methodology (Section 9.5.4.2 VVS)	
4-4.1. If the proposed revision refers to a later version of the applied methodology, does the revised monitoring plan ensure that the application does not compromise the conservativeness in the monitoring and verification process and of the ER calculations?	There was no change in the methodology version.
4-5. Findings of previous verification reports	
4-5.1. If there are findings in the previous verifications related to the proposed revision of the monitoring plan, have the findings been taken into account?	Not applicable as this is first verification.

5- Validation of changes to the project design of a registered project activity

Team conclusions	
5-1. Background (Section 13.8 of the PS)	
5-1.1. Identify concerns related to the conformity of the actual project activity and its operation with the registered PDD.	Not applicable
5-1.2. If the identified changes fall in the following, check the elements in 5-2 below. <ul style="list-style-type: none"> (a) Changes in the effective output capacity due to increased installed capacity or increased number of units, or installation of units with lower capacity or units with a technology which is less advanced than that described in the PDD (b) Addition of component or extension of technology (c) Removal or addition of one (or more) sites of a project activity registered with multiple sites (d) Different values of those actual operational parameters relevant to 	Not applicable

	Team conclusions
<p>determination of emission reduction which are within the control of project participant and which result in the IRR passing the benchmark as described in the registered PDD.</p> <p>(Section 13.8.3.4 of the PS)</p>	
<p>5-1.3. If the identified changes cause a project activity to no longer meet the criteria for small-scale CDM project activities, check the elements in 5-3 below.</p> <p>(Section 13.8.3.4 of the PS)</p>	Not applicable
<p>5-1.4. If the identified changes in the implementation of project activity result in the following, check the elements in 5-4 below.</p> <ul style="list-style-type: none"> (a) the original methodology would no longer be applicable, or (b) another methodology would have been applicable, or (c) another baseline scenario would be more appropriate. <p>(Section 13.8.3.4 of the PS)</p>	Not applicable

Team conclusions	
5-2. Changes which may impact the additionality of the project activity	
5-2.1. Check the impact of the change on the additionality of the project activity established at the time of registration and the specific conditions (investment / costs variables, barriers, relevant regulations).	Not applicable
5-2.2. Review the investment analysis, if applicable, based on all original input data and check if the PPs have only modified the key parameters in the original spreadsheet calculations.	Not applicable
5-2.3. Check, if applicable, that the barriers are still valid under new circumstances, if only barriers were claimed to demonstrate additionality at the registration stage.	Not applicable
5-3. Changes in the scale of CDM project activity	
5-3.1. Check the changes against the applicable SSC criteria for Type I, Type II or Type III.	Not applicable
5-4. Changes which impact the applicability/application of baseline methodology	
5-4.1. Check the applicability and application of baseline methodology with which the project has been registered.	Not applicable

6- Validation of changes to the project design of a registered PoA

Team conclusions	
6-1. Changes allowed (Section 6.2.1 of the PCP)	
6-1.1. PoA boundary: Check that the change is only: i. to expand geographical coverage and/or ii. to includes additional host parties	Not applicable
6-1.2. Eligibility criteria: Check that these changes are under the circumstances indicated in the “Standard for Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for PoA”	Not applicable
6-1.3. .Addition of specific case CPA: i. Check that the PoA include more than one generic CPA-DD ii. Check that the new Specific CPA correspond to a generic CPA for which no specific CPA was submitted at the time of registration.	Not applicable

	Team conclusions
6-1.4. Application of provisions of the most recent version of the "Standard for sampling and surveys of for CDM PAs and PoAs"	Not applicable
6-2. Eligibility criteria	
6-2.1. Check that the CME has updated the Eligibility criteria for inclusion of CPAs in the PoA to reflect the changes above and has included them in new versions of PoA-DD and generic CPA-DD.	Not applicable
6-2.2. Assess the new eligibility criteria in the table below and determine whether the eligibility criteria are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA. (Delete or add rows in the table below as applicable)	

Eligibility criteria in the Standard	Eligibility criteria in the PoA-DD	Validated situation	Conclusion
<p>The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA</p> <p>Conditions that avoid double counting of emission reductions like unique</p>			

Eligibility criteria in the Standard	Eligibility criteria in the PoA-DD	Validated situation	Conclusion
<p>identifications of product and end-user locations (e.g. programme logo); The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications; Conditions to check the start date of the CPA through documentary evidence Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs; The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as follows:</p> <ul style="list-style-type: none"> - PoAs that consist of one or more microscale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of the “Guidelines for demonstrating additionality of microscale project activities”. - PoAs that consist of one or more small-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of attachment A of Appendix B of the “Simplified modalities and procedures for small-scale CDM project activities”. - PoAs that consist of one or more large scale projects as CPAs shall include eligibility criteria derived from all the 			

Eligibility criteria in the Standard	Eligibility criteria in the PoA-DD	Validated situation	Conclusion
<p>relevant requirements contained in the additionality section of the large scale methodologies.</p> <p>The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;</p> <p>Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance</p> <p>Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation);</p> <p>Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys</p> <p>Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria and remains within those thresholds throughout the crediting period of the CPA</p> <p>Where applicable, the requirements for the debundling check, in case CPAs belong to</p>			

Eligibility criteria in the Standard
small-scale (SSC) or microscale project
categories

Eligibility criteria in the PoA-DD

Validated situation

Conclusion