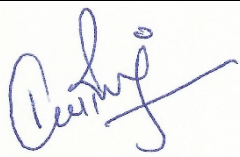




Validation report form for post-registration changes for CDM project activities
(Version 01.0)

VALIDATION REPORT ON POST-REGISTRATION CHANGES (PRCs)

Title and reference number of the project activity	20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra UNFCCC Ref no. 3854
Process track	<input checked="" type="checkbox"/> Prior approval <input type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
Version number of the validation report on PRCs	03
Completion date of the validation report on PRCs	12/09/2017
Type(s) of PRCs	<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
Version number of PDD to which this report applies	Version 08, dated 12/09/2017
Project participant(s)	Wind World (India) Limited
Host Party	India
Sectoral scope(s), selected methodology(ies), and where applicable, selected standardized baseline(s)	Sectoral Scope 1 – Energy industries (renewable/ non-renewable sources), Consolidated baseline methodology for grid-Connected electricity generation from renewable sources, ACM0002, Version 11
Name of DOE	Earthood Services Private Limited
Name, position and signature of the	Dr. Kaviraj Singh, Managing Director

approver of the validation report on PRCs	
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SECTION A. Executive summary

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The project activity consists of 25 WTGs (0.8 MW capacity each), making the total installed capacity to be 20 MW in the Ahmednagar district in Maharashtra, India. The WTGs are of Enercon (E-48) make. The WTGs have been commissioned between 28/02/2007 and 17/03/2009.

All 25 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	20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra
UNFCCC registration number	3854
Date of registration	14/12/2010
Sectoral scope	1 – Energy industries (renewable/ non-renewable sources).
Methodology/ies applied	Approved consolidated baseline methodology ACM0002, Version 11
Project participant	Wind World (India) Limited
Location of Project Activity	Ahmednagar district, Indian State of Maharashtra

Scope of validation

Wind World (India) Limited has contracted Earthood Services Private Limited (Earthood) to conduct the verification and certification of emission reductions reported for the CDM project activity 3854 “20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra” in India for the period 01/01/2013 to 28/02/2017 (including both days).

During the course of verification, the PP has decided to propose Post Registration Changes to the project activity in order to address the findings raised as part of verification. The scope of validation remains limited to the proposed changes to the registered PDD. This validation is an independent and objective review of the post registration changes proposed in the 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, 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 08 dated 12/09/2017 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 monitoring plan and corrections in the registered PDD; the changes are permanent in nature and therefore there is no temporary deviation from the registered monitoring plan. The proposed changes to the registered PDD are not covered under Appendix of the CDM Project Standard for project activities version 1.0(EB 93, Annex 04) and hence require prior approval by the Board.

SECTION B. Validation team, technical reviewer and approver

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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)	Validation findings
1.	Team Leader	EI	Soni	Ravi Kant	Central Office	Y	Y	Y	Y

2.	Verifier	EI	Soni	Ravi Kant	Central Office	Y	Y	Y	Y
3.	Methodology Expert, Local Expert & Technical Expert (TA1.2)	EI	Soni	Ravi Kant	Central Office	Y	Y	Y	Y
4.	Financial/ Other Expert	NA	-	-	Not required	NA	NA	NA	NA
5.	Trainee	NA	NA	NA	Central Office	NA	NA	NA	NA

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	Mahawar	Abhishek	Central Office
2.	Technical Expert (TA1.2)	IR	Mahawar	Abhishek	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 05 dated 19/09/2012, revised PDD version 08, dated 12/09/2017 and the monitoring plan;
- Validation opinion on changes in PDD, dated 03/10/2012
- The applied monitoring methodology (ACM0002 Version 11);
- 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: 06/06/2017				
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>	Ahmednagar	06/06/2017	Ravi Kant Soni

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Joshi Shenoy	Poorvi	Wind World (India) Limited	06/06/2017	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.	Rai	Amit	WWIL	06/06/2017	Monitoring and measuring	Ravi Kant Soni

					system, Collection of measurements, Observations of established practices and Data Verification of monitoring parameters	
3.	Vagchaure	Vaibhav	WWIL	06/06/2017	Calibration procedure of meters	Ravi Kant Soni

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

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	-	-	-
Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline	-	-	-
Corrections	-	-	-
Changes to the start date of the crediting period			
Inclusion of a monitoring plan to a registered project activity	-	-	-
Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline	-	CAR #1	-
Changes to the project design of a registered project activity	-	-	-
Types of changes specific to afforestation and reforestation project activities	-	-	
Others (please specify)	-	-	-
Total	-	1	-

SECTION D. Validation findings

D.1. Compliance with PDD form

Means of validation	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 10.1, 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.
Findings	No finding was raised
Conclusion	The updated PDD is in line with the latest applicable PDD form.

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

Means of validation	Not applicable
Findings	Not applicable
Conclusion	Not applicable

D.3. Corrections

Means of validation	<p>Following corrections are incorporated in the revised PDD:</p> <ol style="list-style-type: none"> 1. Name of the company Enercon (India) Ltd (EIL) changed to Wind World (India) Ltd (WWIL), effective from 01/01/2013. Hence, the PP has revised name of EIL to WWIL throughout in the revised PDD/1/. This is verified through the fresh certification of incorporation issued by Ministry of corporate Affairs GOI/18/ and from the company website http://www.windworldindia.com/background-note.jsp. 2. Under sections A.2.4, B.5, E.1 the PP has changed "Appendix" to "Annex" and in
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	<p>sections B.6, B.7.1, “Annex” to “Appendix”. This is in line with the instructions for filling the PDD form version 10.1. Hence, this change does not affect the content of the registered PDD/2/.</p> <p>3. Under section B.7.1 the PP has revised the section number from “B.7.2” to “B.7.3”. This is in line with the instructions for filling the PDD form version 10.1. Hence, this change does not affect to the content of the registered PDD/2/.</p> <p>4. Section B.3: flow diagram of the project boundary and description of the same is included in this section of the revised PDD in line with the instructions for filling the PDD form for CDM PAs/19/. The assessment team has verified the information provided under section B.3 of the revised PDD is general elaboration of the information on the project boundary identified at the time of registration of project activity. The validation team confirmed that the corrected information doesn't have any impact on project design.</p> <p>5. Web link for CEA database is updated. Central Electricity Authority, Ministry of Power, Government of India, which is the sole entity responsible to publish CO2 baseline database, usually make changes in the source website site time to time. The latest website link for the CEA database available at the time of revised PDD/1/ submission is updated to provide required information. This is checked and confirm from www.cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver2.pdf</p> <p>6. Contact information of PP is updated under Appendix-1 of the PDD.As discussed above, the changes incorporated in revised PDD as “Corrections” were assessed by the validation team and found to be reflecting the actual project information and do not raise any concern with respect to project design or monitoring plan.</p>
Findings	CAR #1 was raised and resolved
Conclusion	<p>The assessment team has verified the revised PDD and confirmed that all the minor editorial changes made in the revised PDD/1/ are in line with the actual scenario observed at the site and represent current scenario at the time of submission of the revised PDD/1/. This is in line with paragraph 287-289 of the VVS for project activities version 1.0/09/. These corrections do not require prior approval as per paragraph 1 Appendix of the CDM Project Standard for project activities version 1.0(EB 93, Annex 04)/10/. However, these corrections are being submitted with the post registration changes for approval. Further, it is confirmed that, the changes do not affect the project design and comply with Appendix of the CDM project standard for project activities version 1.0/10/.</p> <p>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.</p>

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

Means of validation	Not applicable
Findings	Not applicable
Conclusion	Not applicable

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

Means of validation	Not applicable
Findings	Not applicable
Conclusion	Not applicable

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

Means of validation	<p>The permanent changes in the monitoring plan as outlined under registered PDD are a result of a CAR raised during the fourth periodic verification of the project activity. The revision in the monitoring plan has been proposed by the PP in response to the CAR, along with the revised PDD/1/ and the changes are summarized in the below table (Validation assessment of all the changes in the PDD is provided in fore coming part of this section)</p> <p>Table-1: List of Changes to the Registered Monitoring Plan</p>
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	Change	Parameters in the registered monitoring plan	Remarks/changes/revisions incorporated
	#1	Net electricity supplied to the grid by the Project (EG_y) [Refer section B(i) of Appendix 7 of PDD]	Source of data is revised as the "break-up sheet". QA/QC procedure is updated with inclusion of the crosschecking of the net electricity supplied value from the invoices.
	#2	Electricity exported by the project activity to the grid (EG_{export}) [Refer section B(i) of Appendix 7 of PDD]	Source of data is mentioned as the "break-up sheet". QA/QC procedures are described more correctly and transparently.
	#3	Electricity imported by the project activity from the grid (EG_{import}) [Refer section B(i) of Appendix 7 of PDD]	Source of data is mentioned as the "break-up sheet". QA/QC procedures are described more correctly and transparently.
	#4	Electricity exported, as recorded by the main meter at the MSEDCL substation ($EG_{\text{JMR, export}}$) [Refer section B(ii) of Appendix 7 of PDD]	Both the parameters are removed in the revised PDD.
	#5	Electricity import by project activity & non project activity recorded by main meter installed at DISCOM substation ($EG_{\text{JMR, import}}$) [Refer section B(ii) of Appendix 7 of PDD]	
	#6	Summation of $EG_{\text{gross},y}$ is the electricity generated from individual wind turbines other than the project activity connected to common MSEDCL meter measured through its panel located in WTG tower. $M \sum_{y=0} EG_{\text{gross},y}$ [Refer section B(ii) of Appendix 7 of PDD]	This parameter is removed in the revised PDD/01/.
	#7	Summation of $EG_{\text{gross},y}$ is the electricity generated from wind turbines of the project activity measured through its panel located in WTG tower. $N \sum_{y=0} EG_{\text{gross},y}$ [Refer section B(ii) and B(iii)]	Source of data is described more correctly and transparently. Monitoring frequency is included as continuously. Description of measurements methods and procedures are updated. QA/QC procedures to be applied are updated.

	of Appendix 7 of PDD]	
#8	Description of Monitoring Plan [Refer B.7.3 and Appendix 5 of PDD]	The description of apportioning procedures is revised in line to above changes in section B.7.3 of PDD. Line Diagram of metering system has been included in Appendix 5.
<p><u>A. Validation of Changes to the registered Monitoring Plan</u></p> <p><u>(i) Actual Monitoring Procedures</u></p> <p>The electricity monitoring is governed by the Terms and Conditions of the PPA signed by the PP with the respective state utilities. As per the conditions of the PPA/15/, project participants cannot interfere into the monitoring and metering process followed at site. The meters installed to measure electricity generated, exported and imported are completely under the control of the state utility and PP does not have any influence over the same.</p> <p>As reported in section B.7.3. of the revised PDD, the apportioning of electricity generated from the various wind turbines is done by DISCOM (Maha Vitran) based on the standard apportioning procedures and formulae followed by DISCOM. All the apportioning procedures are described in the revised PDD and were confirmed by the validation team by reviewing the PPA /15/. The validation team confirmed that the apportioning procedures implemented for determination of net electricity generation from each WTG is in compliance with the terms and conditions of the PPA.</p> <p>During the site visit, the assessment team noted that there are other WTGs also installed at the project site, which are maintained by different O&M contractors (O&M contractors managing other WTGs which are not part of project activity). Therefore, as a standard practice, DISCOM, after collecting data from each O&M contractor and applying the apportioning procedures, issues break-up sheets reflecting net electricity supplied by each WTG to the grid. Thus, the break-up sheets are effectively prepared from the monthly Joint Meter Reading (JMR) recorded by DISCOM. Based on the net electricity as reported in the break-up sheets, project developers then raise invoice to MSEDCL. The implementation of the same procedure was confirmed by the validation team by means of review of the break-up sheets.</p> <p><u>(ii) Changes #1-3 of Table 1</u></p> <p>PP proposed revision of source of data for parameters – EG_y (Net electricity supplied to the grid by the Project), EG_{export} (Electricity exported by the project activity to the grid) and EG_{import} (Electricity imported by the project activity from the grid). The source of data for respective parameters was not mentioned transparently in the registered monitoring plan. In the revised PDD, source of data has been described as “monthly breakup sheets” which are prepared and issued by MSEDCL on monthly basis.</p> <p>QA/QC procedure applicable for the parameter “EG_y” is updated with respect to cross checking of monthly values of “net electricity supplied to the grid – EG_y” as the same was missing in the registered monitoring plan. As per the revised PDD, monthly values of parameter EG_y shall be crosschecked with the tariff invoices raised by the Project Participant to the State Electricity Utility.</p> <p>The assessment team has reviewed the changes and confirmed that:</p> <ul style="list-style-type: none"> • The proposed changes are in compliance with the applied methodology and do not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan • There is no impact on accuracy of the calculation of GHG emission reductions due to proposed revisions. <p><u>(iii) Changes #4-6 of Table 1</u></p> <p>Parameters $EG_{\text{JMR,export}}$, $EG_{\text{JMR,import}}$ and $\sum_{y=0}^M EG_{\text{gross,y}}$ were included in the</p>		

registered monitoring plan and used in the apportioning procedure to determine value of net electricity supplied to the grid by project activity (EGy). However, the monitoring as well as relevant apportioning related to these parameters is solely under jurisdiction of DISCOM and not under control of the PP. Besides, these parameters include electricity generation values of other WTGs, which are not part of the project activity, and hence are not shared with the PP by the DISCOM. Thus, it is not feasible for PP to monitor the same; hence these parameters have been removed from the registered monitoring plan. The assessment team verified the same by reviewing the monthly break-up sheets which are prepared and signed by DISCOM. The assessment team confirmed that the break-up sheets did not provide the generation details of other WTGs which are not part of the project activity.

The assessment team has reviewed the changes and confirmed that:

- The proposed changes are in compliance with the applied methodology and do not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan
- There is no impact on accuracy of the calculation of GHG emission reductions due to proposed revisions.

(iv) Change #7 of Table 1

In the registered monitoring plan, source of data, measurement method and QA/QC procedure for the parameter $\sum_{y=0}^N EG_{gross,y}$ (electricity generated from wind turbines of the project activity measured through its panel located in WTG tower) were not stated appropriately as per the actual implementation. Therefore, these aspects are updated in the revised monitoring plan to make it consistent with the actual monitoring activities.

By means of physical site visit, the assessment team confirmed that the proposed changes incorporated for this parameter are in line with the actual monitoring procedure followed at site.

The assessment team has reviewed the changes and confirmed that:

- The proposed changes are in compliance with the applied methodology and do not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan
- There is no impact on accuracy of the calculation of GHG emission reductions due to proposed revisions.

(v) Change #8 of Table 1

In line with the requirement of latest PDD template form/19/, the PP has added line diagram indicating the monitoring points under Appendix 5 of the revised PDD.

In line with the actual monitoring practice implemented at site, detailed description on apportioning procedure being followed by DISCOM to calculate "Net electricity generation supplied to the grid by the Project activity" is updated in section B.7.3 of the revised PDD. The revision of section B.7.3 was found to be consistent with other proposed changes in the revised PDD. The assessment team is able to confirm that the changes incorporated in the monitoring plan improves the transparency and completeness of monitoring procedure, also keeping compliance with the applied Monitoring Methodology ACM0002 version 11.0/05/.

The proposed changes in the monitoring plan do not amend any of the monitoring parameters that are essential for the calculation of the emission reductions.

The proposed changes to the monitoring plan are done because some of the requirements described in the registered monitoring plan did not comply with the actual practice at site. The proposed revision to the monitoring plan boost simplicity and transparency to the overall monitoring, as already explained in this section.

The registered monitoring plan and hence the proposed revision to it are consistent with the approved monitoring methodology ACM0002 version 11, applicable to the project activity. It is further assured that there will be no effect on original chosen baseline mentioned in the registered PDD/02/ due to the revision in the monitoring plan.

Since the approach was followed during the previous verifications of the project activity; hence, there is no impact of proposed revised monitoring plan on the CERs issued during earlier verifications of the project activity.

	The proposed revised monitoring plan will be applicable to project from fourth monitoring period onwards once approved by EB.
Findings	CAR #1 was raised and resolved
Conclusion	<p>In line with the guidelines prescribed under paragraph 296-299 of CDM VVS for project activities version 01, the assessment team able to confirm that:</p> <ul style="list-style-type: none"> (a) The changes to the registered monitoring plan are permanent in nature and do not deviates from the relevant requirements applied methodology and comply with the in the “CDM project standard for project activities”. (b) The changes to the registered monitoring plan described in the revised PDD are in compliance with the applied methodology ACM0002 version 11, and do not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan. (c) The permanent changes to the registered monitoring plan are not likely to lead to a reduction in the accuracy of the calculation of GHG emission reductions or net anthropogenic GHG removals. (d) The permanent changes comply with the relevant requirements related to the permanent changes to the registered monitoring plan in the “CDM project standard for project activities”. <p>A revised PDD reflecting the permanent changes in the monitoring plan is being submitted in line with the requirements outlined under paragraph 133-134 of CDM PCP for project activities version 1.0/11/</p>

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

Means of validation	Not applicable
Findings	Not applicable
Conclusion	Not applicable

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

Means of validation	Not applicable
Findings	Not applicable
Conclusion	Not applicable

SECTION E. Internal quality control

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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 reviews a draft validation report that is prepared by validation team. 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

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Earthood Services Private Limited (Earthood) has performed the validation of the post registration changes of the project activity 3854 “20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra”. 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 08 dated 12/09/2017 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, the changes are permanent in nature and therefore there is no temporary deviation from the monitoring plan. All the proposed changes to the registered PDD are not covered under paragraph 1 of Appendix of the CDM Project Standard for project activities version 01 and hence require prior approval by the Board.

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
DISCOM	Distribution Company
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
IPCC	Intergovernmental Panel on Climate Change
JMR	Joint Meter Reading
MP	Monitoring Plan
MR	Monitoring Report
MSEDCL	Maharashtra State Electricity Distribution Company Limited
MWh	Megawatt hour
NEWNE	Northern Eastern Western Northern-Eastern
O&M	Operation and Maintenance
PDD	Project Design Document
PPA	Power Purchase Agreement
PP	Project Participant
PRC	Post Registration Changes
PS	Project Standard
RMP	Revised Monitoring Plan
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
WTG	Wind Turbine Generator
WEC	Wind Energy Converter
WWIL	Wind World (India) Limited

Appendix 2. Competence of team members and technical reviewers

Competence Statement			
Name	Ravi Kant Soni		
Country	India		
Education	B. Tech. (Mechanical Engineering) M. Tech. (Energy Management)		
Experience	7 Years		
Field	Energy and Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-I.C., ACM0002		
Local Expert	YES(India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert (1.2)	YES		
Reviewed by	Abhishek Mahawar	Date	09/09/2016
Approved by	Kaviraj Singh	Date	09/09/2016

Competence Statement			
Name	Abhishek Mahawar		
Country	India		
Education	B. Tech. (Chemical Engineering) MBA (Finance)		
Experience	8 Years +		
Field	Climate Change & Environment		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D and ACM0002		
Local expert	YES (India)		
Financial Expert	YES		
Technical Reviewer	YES		
TA Expert	YES (1.2)		
Reviewed by	Ashok Gautam	Date	07/09/2016
Approved by	Kaviraj Singh	Date	07/09/2016

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	PP	Revised PDD (changes are summarized in the following section of report)	Version 6,Dated 15/06/2017 Version 7 Dated 28/06/2017 Version 8 Dated 12/09/2017	Other
2	PP	Registered PDD	Version 5.0 , Dated 19/09/2012	Other
3	BVC	Verification report (3 rd monitoring period)	REPORT NO.BVC/INDIA - VR/576.49/2013 REVISION NO. 01	Other
4	URS	Validation Opinion on PRC	dated 03/10/2012	Other
5	UNFCCC	Approved Consolidated Methodology ACM0002	Version 11	Other
6	PP	Monitoring Report (publication)	Version 01, dated 03/05/2017	PP
7	PP	Monitoring Report	Version 2, dated 10/06/2017	PP
8	PP	ER Spread sheet	Version 01, dated 03/05/2017	PP
09	UNFCCC	CDM VVS for project activities	Version 01	Other
10	UNFCCC	CDM PS for project activities	Version 01	Other
11	UNFCCC	CDM PCP for project activities	Version 01	Other
12	MSEDCL	Monthly Breakup sheets issued by state utility	For the period 01/01/2013 to 28/02/2017	PP
13	PP	Monthly invoices raised by the PP to state utility	For the period 01/01/2013 to 28/02/2017	PP
14	MSEDCL	Calibration certificates of main meters and check meters	-	PP
15	MSEDCL	Power Purchase Agreement between MSEDCL and WWIL	-	PP
16	CEA	CO ₂ Baseline Database for Indian Power Sector	Version 02	Others
17	UNFCCC	UNFCCC webpage for the project activity	https://cdm.unfccc.int/Projects/DB/DNV-CUK1279516994.31/view	Others
18	Ministry of corporate Affairs, GOI	Name change consent issued by Government of India,	dated 01/01/2013	PP
19	UNFCCC	Project design document form for CDM PAs	Version 10.1, dated 28/06/2017	Others

Main changes and reason for revisions between the final PDD and original registered PDD	
PDD versions	Description and reason for changes done
Version 05, dated 19/09/2012	Registered PDD
Version 06, dated 15/06/2017	In line with the post registration changes identified, the PP has incorporated the proposed changes as described under section D.3 and D.6 of this report. (Please refer CAR #1 for further details)
Version 07, dated 28/06/2017	Further corrections/modifications in the relevant sections of PDD were done in response to the issues identified during validation of changes. (Please refer CAR #1 for further details)
Version 08, dated 12/09/2017	<p>Following clarification received from UNFCCC: <i>“The revised PDD (page 22) mentions that the conservative value between “Net electricity supplied to the grid by the Project (EG_y) and summation of the electricity generated from wind turbines of the project activity measured through its panel located in WTG tower ($EG_{gross,y}$)” will be used for emission reduction calculations. However, it is noted that EG_y is net of the imported electricity whereas $EG_{gross,y}$ is not. The PP/DOE shall provide more information on how they considered the comparison appropriate”.</i></p> <p>In response to the above clarification the PP has removed the following paragraph from QA/QC procedure of parameter summation $EG_{gross,y}$ in the revised PDD: <i>“The value of this parameter shall be compared with the value of EG_y and the conservative approach would be taken by the PP for estimating the net electricity supplied value for the calculation of emission reduction”.</i></p> <p>In accordance with proposed revised monitoring plan, value of parameter EG_y will be cross verified with the invoice raised to the state utility that is in line with the requirement of applied methodology ACM0002 version 11. Since the above statement was neither part of registered monitoring plan nor required by the applied methodology, hence removal of statement do not have any impact on accuracy of the monitoring compared with the requirements contained in the registered monitoring plan. The assessment team is able to confirm that the proposed changes incorporated for this parameter (Summation $EG_{gross,y}$) are in line with the applied methodology and actual monitoring procedure followed at site as verified during the physical site visit.</p>

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

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

FAR ID		Section no.		Date :DD/MM/YYYY
Description of FAR				
N/A				
Project participant response				Date :DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

Table 2. CL from this verification

CL ID	-	Section no.	-	Date : DD/MM/YYYY
Description of CL				
NA				
Project participant response				Date : DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

Table3. CAR from this validation

CAR ID	01	Section no.	E.6	Date : 07/06/2017
Description of CAR				
As per the registered monitoring plan (PDD, section B.7.1), $EG_{JMR,Export}$ & $EG_{JMR,Import}$ and electricity generation from non-project WTGs are monitoring parameters, it is not clear why these parameters are not reported in section D.2 of the MR.				
Project participant response				Date : 15/06/2017

PP is taking revision in monitoring plan, as per revised monitoring plan

- Under section B.7.1 of revised PDD, description of source of data has been changed for EG_y EG_{Export}

$$\sum_{y=1}^N EG_{gross,y}$$

, EG_{Import} &

- As per revised monitoring plan, value of EG_y is sourced from the break-up sheet based on Joint Meter Reading (JMR) prepared & signed by DISCOM, based on which invoice is raised by PP to the

$$\sum_{y=1}^M EG_{gross,y}$$

DISCOM. Hence, $EG_{JMR, Export}$ & $EG_{JMR, Import}$

cannot be used as monitoring

$$\sum_{y=1}^N EG_{gross,y}$$

parameters and have been removed from Section B.7.1 & for EG_y , EG_{Export} , EG_{Import} , measurement method & procedures has been described in detail.

- Due to revision in monitoring plan, QA/QC procedure under section B.7.1 of revised PDD has been updated for more transparency.
- Correction has been made under section B.7.3 & Appendix 5 of PDD to make it more understanding and transparent.
- In Appendix 1 contact details have been updated.

For the revision in monitoring plan, revised PDD has been submitted along with revised MR.

Documentation provided by project participant

Revised PDD, version 06, dated 15/06/2017

DOE assessment

Date: 23/06/2017

Parameters $EG_{JMR, Export}$ & $EG_{JMR, Import}$ and generation data of non-project WTGs are not available to PP, therefore cannot be monitored. The PP has proposed revision in the registered monitoring plan and submitted revised PDD with updated monitoring plan. In addition there are some corrections also incorporated in the revised PDD and summarized under Appendix 7 of the PDD.

In line with the instructions for filling out the project design document form for CDM project activities, version 10.1, required information's are added in section B.3 of PDD and line diagram showing all monitoring points is included under Appendix 5 of the revised PDD.

In the revised PDD, the PP has clearly mentioned that, four of the parameters ($EG_{JMR, Export}$, $EG_{JMR, Import}$ and summation of electricity generated by WTGs other than project activity) which are used for apportioning of the electricity by DISCOM and O&M contractor are removed in the revised PDD. The PP has clarified that monitoring of these parameters are not under control of the PP, however the apportioning procedure is provided in the revised PDD for better transparency in the actual monitoring implemented at site, hence accepted.

Please address the following issues identified in the revised PDD:

- Section B.3 of the PDD is updated, it is not clear why the changes are not summarized under Appendix 7 of the revised PDD
- Font size in section B.6.1 of the revised PDD is not in line with the instructions for filling the PDD form.
- Web link for CO2 Baseline Database for the Indian Power Sector published by CEA is not accessible (section B.6.1 of PDD)
- Grid identification mentioned in the PDD is not consistent with CEA database referred to determine baseline scenario.

CAR #1 is open.

Project participant response

Date: 28/06/2017

- The changes in Section B.3 are summarized under Appendix 7 of the revised PDD.
- Font Size in Section B.6.1 of the revised PDD has been made consistent in line with the instructions for filling the PDD form.
- Web link for CO2 Baseline Database for the Indian Power Sector published by CEA has been corrected in Section B.6.1 of revised PDD.
- Grid identification mentioned in the PDD has been made consistent with CEA database referred to determine baseline scenario.

Documentation provided by project participant

PDD version 07,dated 28/06/2017	
DOE assessment	Date : 30/06/2017
<ol style="list-style-type: none"> 1. All the post registration changes done in Section B.3 are summarized under Appendix 7 of the revised PDD. 2. The PP has corrected the font size in section B.6.1 of the revised PDD in line with the instructions for filling the PDD form. 3. Web link for CO2 Baseline Database for the Indian Power Sector published by CEA is updated in Section B.6.1 of revised PDD. 4. Grid identification mentioned in the revised PDD is found consistent with CEA database referred to determine baseline scenario. <p>The assessment team has verified the revised PDD and confirms that the proposed changes reflect the actual scenario observed at the site with reference to the monitoring procedure. CAR #1 is closed.</p>	

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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		