



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

Complete this form in accordance with the "Attachment: Instructions for filling out the validation report form for post-registration changes for CDM project activities" at the end of this form.

VALIDATION REPORT ON POST-REGISTRATION CHANGES (PRCs)

Title and reference number of the project activity	Wind based power generation by Panama Wind Energy Private Limited in Maharashtra, India, UNFCCC ref no: 8524
Process track	<input type="checkbox"/> Prior approval <input checked="" type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
Version number of the validation report on PRCs	01
Completion date of the validation report on PRCs	07/09/2015
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 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 2.0
Project participant(s)	Panama Wind Energy Private Limited
Host Party	India
Sectoral scope(s), selected methodology(ies), and where applicable, selected standardized baseline(s)	Selected Methodology: ACM0002 "Consolidated baseline methodology for grid connected electricity generation from renewable sources. (Version 12.3.0)
Name of DOE	EPIC Sustainability Services Private Limited (E-0062)
Name, position and signature of the	K. Sudheendra, Head Operations, 

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

EPIC Sustainability Services Private Limited (EPIC) has performed the Validation of Post Registration Changes to the Project Design Document (PDD) of the registered project activity titled “Wind based power generation by Panama Wind Energy Private Limited in Maharashtra, India”, with UNFCCC reference number of 8524, registration date of 05/12/2012 and crediting period from 05/12/2012 to 04/12/2022. The Validation of the Post Registration Changes has been performed based on the document review of the Monitoring Report^{/01/}, Registered PDD^{/02/}, supporting documents and on-site assessment.

The project activity involves the installation and operation of wind power project of aggregate capacity of 100.8 MW comprising of 63 WEGs in Satara district of Maharashtra state, India. For the first monitoring period, out of proposed 100.8 MW capacity in the registered PDD^{/02/}, 72 MW (45 WEGs) are implemented and has been supplying electricity to the grid and the remaining 28.8 MW (18*1.6 MW) are expected to be implemented by 30th September 2016.

The EPIC validation team identified, through the validation process, permanent changes which required a revision of the registered PDD^{/02/} and which did not require prior approval by the board as per Appendix 1 (CDM PS, version 9.0)^{/04/}. The PP has taken actions and submitted to EPIC, the revised PDD^{/03/} version 02.0 dated 14/08/2015 and supporting evidence. The EPIC validation team, further confirms that the information in the revised PDD^{/03/} is correct and leads to better representation and transparency, and is in line with the requirements of the approved monitoring methodology, ACM 0002, version 12.3.0 Therefore, EPIC requests the CDM-EB to accept these Post Registration Changes.

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)	Validation findings
1.	Team Leader	IR	Anbalagan	Prabu Das	Central office, Bangalore	√	√	√	√
2.	Team Member	IR	Gowda	Madhukar	Central office, Bangalore	√	√	√	√

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	Radhamadhavan	Vijayaraghavan	Central office, Bangalore
2.	Approver-Head Operations	IR	Krishnachar	Sudheendra	Central office, Bangalore

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

The validation of Post Registration Changes (PRC) was performed primarily based on the review of the Monitoring Report^{/01/}, Registered PDD^{/02/}, supporting documents and on-site assessment. This process included review of information presented to verify their completeness and review of the revised PDD^{/03/} and verifying compliance applied the applied methodology.

The initial revised PDD^{/03/} version 2.0 submitted by the project participant and additional background documents related to the corrections leading to PRC are reviewed as an initial step of the PRC validation process. The subsequent step involved the identification of corrective action requests and clarification requests (CAR and CR) which are presented in Appendix 4 of this report. A complete list of all documents and records reviewed is as attached in Appendix 03 of this report.

C.2. On-site inspection

Duration of on-site inspection: 13/07/2015 to 14/07/2015				
No.	Activity performed on-site	Site location	Date	Team member
1.	<p>The validation team conducted visits to the project site on 13th and 14th July 2015 to confirm the project information and to resolve issues identified in the document review. An on-site assessment was conducted as a part of validation activity and involved:</p> <p>1) an assessment of the project activity information with specific focus to WEG location information and geo-coordinates</p> <p>2) Interviews with relevant personnel to confirm the corrections reported as PRC in comparison to registered PDD</p> <p>3) a cross-check between information provided in the MR, registered PDD and data from other sources</p>	Project site	13/07/2015 and 14/07/2015	All team members

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Shintre	Ashok	Panama (PP)	13/07/2015 and 14/07/2015	As above	All team members
2.	Sapkal	Amit	GE (Sr. Manager)	13/07/2015 and 14/07/2015	As above	All team members
3.	Pawar	Yuvaraj	GE (O&M Technician)	13/07/2015 and 14/07/2015	As above	All team members
4.	Surve	Shivaji	GE (O&M Technician)	13/07/2015 and 14/07/2015	As above	All team members
5.	Aundhkar	Yogesh	GE (O&M Technician)	13/07/2015 and 14/07/2015	As above	All team members
6.	Natu	Rucha	CDM Consultant	13/07/2015 and 14/07/2015	As above	All team members

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	00	00	00
Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline	00	00	00
Corrections	00	00	01
Changes to the start date of the crediting period	00	00	00
Inclusion of a monitoring plan to a registered project activity	00	00	00
Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline	00	00	00
Changes to the project design of a registered project activity	00	00	00
Types of changes specific to afforestation and reforestation project activities	00	00	00
Others (please specify)	00	00	00

Total	00	00	01
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SECTION D. Validation findings

D.1. Compliance with PDD form

Means of validation	The validation team has determined whether the revised PDD ^{/03/} , version 2.0, was completed using the valid version of the applicable CDM-PDD-FORM. The validation team has checked whether all the sections of the revised PDD follows the guidelines provided in the CDM-PDD-FORM template.
Findings	No CAR/CLs is raised in this section.
Conclusion	PP has used the version 6.0 of the CDM-PDD-FORM ^{/05/} which is the current and active version. The revised PDD ^{/03/} has been prepared as per the instructions provided in the CDM-PDD-FORM ^{/05/} template. The validation team has concluded that the revised PDD ^{/03/} was completed using the valid version of the applicable CDM-PDD-FORM ^{/05/} and followed the guidelines contained in the template. All the changes in the revised PDD ^{/03/} in comparison to the registered PDD ^{/02/} are captured in track change mode, and both the clean PDD and track change PDD are submitted by the client.

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

Means of validation	Not applicable, as the PRC assessment is limited to corrections in geo-coordinates of the WEGs which is reported in sec D.3 of this report.
Findings	No CAR/CLs is raised in this section.
Conclusion	Monitoring plan for this monitoring period is as per the registered PDD ^{/02/} , version 1.10. No deviations is observed, compliance of the monitoring plan is assessed and reported in the verification report ^{/06/} submitted along with this issuance submission.

D.3. Corrections

Means of validation	The validation team has determined whether the corrections made by the PP in the revised PDD ^{/03/} , Version 02 dated: 14/08/2015, comply with the requirements of section 13.8 referring to Post Registration Changes of CDM Project Standard ^{/04/} (CDM PS, Version 9.0
Findings	Refer Verification report submitted along with this PRC opinion
Conclusion	<p>The validation team has verified that the corrections made by the PP in the revised PDD^{/03/}, Version 02 dated: 14/08/2015, comply with the requirements of the CDM PS^{/04/}, version 9.0 and accurately reflects the actual project information. During periodic verification from 05/12/2012 to 01/05/2015, it was found that information provided in the registered PDD^{/01/} regarding geo-coordinates (latitude and longitude details) of 41 WEGs out of total 63 WEGs, are not matching with the actual geo-coordinates of WEGs.</p> <p>EPIC confirms that the information in the revised PDD^{/03/}, Version 02.0, dated: 14/08/2015, using latest CDM-PDD-FORM^{/05/} at the time of submission of this report, was materially the same as described in the registered PDD^{/02/}, Version 1.10 dated: 28/11/2012, the project has been implemented as per the approved methodology ACM0002 version 12.3.0^{/07/} valid at the time of registration.</p> <p>EPIC is of the opinion that the post registration changes of the project activity, as described above, is as per Appendix 1 (CDM PS, version 9.0)^{/04/} – ‘Changes that do not require prior approval by the board’. Therefore, in line with section 6.3.1 of CDM PCP, Version 9.0^{/08/}, EPIC submits the post registration changes of the project activity, for acceptance by the CDM EB, as part of the request for issuance.</p> <p><u>Detailed Findings</u></p> <p>The project activity envisaged phase wise implementation of 100.8 MW, comprising of 63 WEGs of 1.6 MW each, in Satara district, Maharashtra, India as per registered PDD^{/02/}. However, for this monitoring period only 72 MW (45 * 1.6 MW) out of 100.8 MW is commissioned^{/09/} and the remaining 18 WEGs are expected to be</p>

commissioned by 30th September 2016 (please refer to the implementation plan for the remaining 18 WEGs explained in sec D.7 of this report and the verification report^{/06/} submitted along with this issuance request)

Section A.2.4 of the registered PDD^{/02/} clearly indicates that the geo-coordinates are only approximate, considering that the WEGs are not commissioned at the time of validation. During implementation of the project activity, the actual precise geographical coordinates of 41 WEGs out of proposed 63 WEGs are not in-line with that mentioned in the registered PDD^{/02/}, Version 1.10, however the location number by which the WEGs are identified at site, is the same as in registered PDD^{/03/}. Further, of the 41 WEGs which require corrections in geo-coordinates, 34 WEG are commissioned and 07 WEGs are yet to commission. However the project activity is same as provided in the registered PDD^{/02/}, Version 1.10.

Location numbers of WEGs whose precise geo-coordinates are corrected in the revised PDD^{/03/}, version 2.0, are detailed as below:-

As per Registered PDD^{/02/}, version 1.10

S.No	WTG Location no non no:	Latitude (N)	Longitude (E)
1	3	17° 18' 07"	73° 46' 35"
2	4	17° 18' 15"	73° 46' 37"
3	5	17° 18' 15"	73° 46' 38"
4	6	17° 18' 23"	73° 46' 21"
5	7	17° 18' 31"	73° 46' 46"
6	8	17° 18' 41"	73° 46' 35"
7	11	17° 19' 03"	73° 46' 48"
8	13	17° 19' 17"	73° 47' 00"
9	16	17° 19' 36"	73° 47' 19"
10	17	17° 19' 41"	73° 47' 28"
11	18	17° 19' 24"	73° 47' 34"
12	19	17° 19' 30"	73° 47' 40"
13	20	17° 19' 41"	73° 47' 45"
14	22	17° 18' 25"	73° 47' 10"
15	23	17° 18' 29"	73° 47' 23"
16	25	17° 18' 23"	73° 46' 21"
17	28	17° 19' 05"	73° 47' 19"
18	30	17° 19' 11"	73° 47' 45"
19	31	17° 19' 18"	73° 47' 57"
20	32	17° 19' 26"	73° 48' 02"
21	33	17° 19' 33"	73° 48' 06"
22	34	17° 18' 14"	73° 47' 24"
23	35	17° 19' 01"	73° 47' 54"
24	37	17° 19' 11"	73° 48' 21"
25	38	17° 19' 19"	73° 48' 23"
26	39	17° 19' 27"	73° 48' 27"
27	40	17° 19' 24"	73° 48' 39"
28	41	17° 19' 38"	73° 48' 52"
29	42	17° 19' 47"	73° 48' 58"
30	43	17° 18' 53"	73° 48' 34"
31	47	17° 19' 24"	73° 48' 48"
32	48	17° 19' 30"	73° 48' 49"
33	49	17° 19' 36"	73° 49' 12"
34	50	17° 18' 18"	73° 48' 44"

35	51	17° 18' 26"	73° 48' 46"
36	52	17° 18' 33"	73° 48' 51"
37	55	17° 18' 56"	73° 49' 02"
38	56	17° 19' 02"	73° 49' 06"
39	57	17° 19' 11"	73° 49' 09"
40	58	17° 19' 17"	73° 49' 15"
41	61	17° 18' 48"	73° 49' 23"

As per Revised PDD ^{/03/}, version 2.0

Sr. No	Location No	Geo-coordinate ^{/10/}		COD ^{/09/}
		Latitude	Longitude	
1	Location No 3	N17 17 59.8	E73 46 32.3	Yet to commission
2	Location No 30	N17 19 09.1	E73 47 48.7	
3	Location No 33	N17 19 18.1	E73 47 27.0	
4	Location No 35	N17 18 59.5	E73 47 54.8	
5	Location No 39	N17 19 50.4	E73 48 40.3	
6	Location No 57	N17 19 12.7	E73 49 08.7	
7	Location No 58	N17 19 22.7	E73 49 15.5	
8	Location No 4	N17 18 18.2	E73 47 19.8	01/01/2014
9	Location No 5	N17 19 52.2	E73 48 58.8	02/07/2013
10	Location No 6	N17 19 37.4	E73 48 50.2	02/07/2013
11	Location No 7	N17 18 56.2	E73 49 19.9	02/07/2013
12	Location No 8	N17 18 43.3	E73 46 48.0	22/04/2013
13	Location No 11	N17 19 02.3	E73 46 49.5	22/02/2013
14	Location No 13	N17 19 16.1	E73 46 59.4	22/02/2013
15	Location No 16	N17 19 34.8	E73 47 19.5	22/04/2013
16	Location No 17	N17 19 39.8	E73 47 28.0	10/05/2013
17	Location No 18	N17 19 00.7	E73 49 33.5	28/05/2013
18	Location No 19	N17 19 30.8	E73 47 35.6	06/03/2013
19	Location No 20	N17 19 36.6	E73 47 45.0	22/04/2013
20	Location No 22	N17 18 26.1	E73 47 14.7	28/05/2013
21	Location No 23	N17 18 27.7	E73 47 27.0	28/05/2013
22	Location No 25	N17 18 45.3	E73 47 00.6	06/03/2013
23	Location No 28	N17 19 06.7	E73 47 18.1	06/03/2013

24	Location No 31	N17 18 56.4	E73 50 01.9	13/06/2013
25	Location No 32	N17 18 33.6	E73 48 31.8	26/10/2013
26	Location No 34	N17 18 10.1	E73 47 24.3	28/05/2013
27	Location No 37	N17 18 41.0	E73 48 37.3	28/05/2013
28	Location No 38	N17 19 44.8	E73 47 37.7	22/04/2013
29	Location No 40	N17 19 39.7	E73 48 33.6	13/02/2014
30	Location No 41	N17 19 44.9	E73 48 56.0	28/05/2013
31	Location No 42	N17 19 31.8	E73 49 09.3	07/07/2013
32	Location No 43	N17 18 54.7	E73 47 25.7	22/04/2013
33	Location No 47	N17 19 19.9	E73 48 52.8	13/06/2013
34	Location No 48	N17 19 27.6	E73 48 59.3	13/06/2013
35	Location No 49	N17 18 50.6	E73 47 56.6	01/01/2014
36	Location No 50	N17 18 20.0	E73 48 54.6	13/02/2014
37	Location No 51	N17 18 25.2	E73 48 47.2	13/02/2014
38	Location No 52	N17 18 31.6	E73 48 53.1	01/01/2014
39	Location No 55	N17 18 57.1	E73 49 02.3	28/05/2013
40	Location No 56	N17 19 04.4	E73 49 07.2	01/01/2014
41	Location No 61	N17 18 48.5	E73 49 22.2	07/07/2013

The geo-coordinates in the registered PDD^{/02/}, Version 1.10, are in degree, minutes and seconds format with seconds value being rounded off to nearest higher value and the same is presented with actual decimal values without rounding off in the revised PDD^{/03/}, Version 02.0. So the geo-coordinates (seconds value) for the WEGs with following location nos (1,2,21,24,26,29,36,44,45,53,54,59,60,9,10,12,14,15,27,46,62,63) presented in the revised PDD^{/03/}, Version 02.0, might not match exactly with the registered PDD^{/02/}, this is not to be construed as corrections.

The EPIC team confirms that the project activity has not changed, and there has been no change in location of the actually planned project activity. The project WEGs geo-coordinates recorded in the registered PDD^{/02/}, Version 1.10, is as per the initial information shared with PP by the equipment supplier during the conceptualisation of the project activity before commissioning and they are only approximates. The first WEG in the project was commissioned on 22/02/2013^{/09/} whereas the CDM registration of the project activity was on 05th Dec 2012. Now during PRC assessment, the EPIC team has verified the equipment supplier, GE India Industrial Pvt. Ltd. letter^{/10/}, dated 10/08/2015, wherein it clearly mentions the 63 WEGs information viz (a) location numbers, (b) latitude and longitude and (c) WEG no as written over the commissioned WEGs. The location numbers as in registered PDD^{/02/} and revised PDD^{/03/} are the same, the change is observed in the geo-coordinates of the 41 WEGs which are described as above. The validation team has verified the WEGs commissioning certificates^{/09/} (22-Feb-13, 22-Apr-13, 13-Jun-13, 22-Apr-13, 01-Jan-14, 07-Jul-13, 13-Feb-14, 02-Jul-13, 10-May-13, 28-May-13, 26-Oct-13, 06-Mar-13) for their location numbers and the location

	<p>information.</p> <p>PP has corrected the information in section A.2.4 of the revised PDD^{/03/}, version 02.0, with the actual geo-coordinates of the installed WEGs and the yet to commission WEGs. PP has submitted the letter^{/10/} provided by the equipment supplier which contains WEG location details, location number and Geo coordinates. The EPIC validation team confirmed the same by checking the coordinates during site visit and the location information from commissioning certificates^{/09/}, and the information related to geo-coordinates of the yet to commission 18 WEGs is also raised as FAR (FAR 01) for its conformance during subsequent verification. The validation team thus confirmed that WEGs which were validated are the one which are part of the project activity, and only the information of geo-coordinates of the above mentioned WEGs were corrected.</p> <p>Commissioning details of the WEGs have been updated in Sec 2.4 of the revised PDD^{/03/}, and section B.8 of the revised PDD^{/03/}, have been updated in line with the revised CDM-PDD-FORM^{/05/}, hence this does not affect the content of the registered PDD^{/02/}.</p> <p>This correction does not affect the project design. These corrections, therefore, fall under paragraph 1 of Appendix 1 of the CDM PS, version 7.0^{/04/}. The correction made in geo coordinates were confirmed from letter^{/10/} provided by equipment supplier who is also the O&M service provider. The EPIC validation team cross verified the same by checking the coordinates observed during site visit and the location information from commissioning certificates^{/09/}.</p> <p>The project is commissioned (45 out of 63 WEGs i.e 70% capacity commissioned) and has been generating electricity for more than 2 and half years, the actual electricity generation of the project is down by 42% in comparison to the annual generation assumed at registration time, for this monitoring period. The EPIC validation team has assessed whether the current change in information of location of the WEGs are having an impact on the additionality in terms of the PLF. It was observed that the PLF study estimated in the registered CDM PDD^{/02/}, Version 1.10, and validated is valid for the wind site. Also, the current PLF verified based on the actual generation from the project in this monitoring period is less than that estimated in the registered CDM PDD^{/02/}, version 1.10. Hence the validation team is of the opinion that there is no impact on additionality of the project due to change in information of location details.</p>
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D.4. Changes to the start date of the crediting period

Means of validation	Not applicable, as the PRC assessment is limited to corrections in geo-coordinates of the WEGs which is reported in sec D.3 of this report.
Findings	No CAR/CLs is raised in this section.
Conclusion	Start date of the crediting period determined at the time of registration of the project activity is followed.

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

Means of validation	Not applicable, as 'Monitoring plan' was part of the registered PDD ^{/02/} .
Findings	No CAR/CLs is raised in this section.
Conclusion	Not applicable, as 'Monitoring plan' was part of the registered PDD ^{/02/} Version 1.10.

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

Means of validation	Not applicable, as the PRC assessment is limited to corrections in geo-coordinates of the WEGs which is reported in sec D.3 of this report.
Findings	No CAR/CLs is raised in this section.
Conclusion	Monitoring plan for this monitoring period is as per the registered PDD ^{/02/} , version 1.10. No deviations is observed, compliance of the monitoring plan is assessed and reported in the verification report submitted along with this issuance submission.

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

Means of validation	The validation team determined the conformity of the actual implemented project activity and its operation with the registered project design document ^{02/} . EPIC has, by means of a desk review and an on-site visit, assessed whether the physical features of the CDM project activity including the project capacity as proposed in the registered PDD ^{02/} are in place.
Findings	No CAR/CLs is raised in this section.
Conclusion	<p>The validation team has reviewed the commissioning certificates^{09/} and Energy Purchase Agreements (EPA)^{11/}. The verification team has concluded that out of proposed 100.8 MW capacity in the registered PDD^{02/}, 72 MW (45 WEGs) are implemented (commissioned between 22nd Feb 13 and 13th Feb 14) during the first monitoring period and the remaining 28.8 MW (18*1.6 MW) are expected to be implemented by 30th September 2016. The implemented 45 WTGs physical features viz individual MW capacity, make, model and its operation, connected sub-station, monitoring equipment are as per the registered PDD^{02/}.</p> <p>For the project activity, the implementation plan of entire set of 63 WEGs as per WEG supply order^{12/} by the equipment supplier (GE India Industries Private Limited), dated 04/05/2011, is broadly divided into two phases i.e phase I comprising of 45 WEGs in private land and phase II comprising of 18 WEGs in forest land (public land). All the 45 WEGs in Phase I are commissioned, the remaining 18 WEGs proposed in forest land are not yet commissioned. Installation of WEGs in forest land requires mandatory clearance from the forest department (Maharashtra State Forest department as well as Ministry of Environment & Forest (MoEF), Govt of India. Procedural delay in according mandatory clearance by the Forest department has contributed the delay in commissioning of the remaining 18 WEGs.</p> <p>The verification team has verified the steps taken by the PP in securing the forest clearance and execution of the remaining WEGs:-</p> <ol style="list-style-type: none"> 1. Submission of proposal to Maharashtra State Forest Department to accord clearance of forest land for the project activity by the PP (dated 02/08/2011) 2. Recommended for approval by the State Forest Dept. and proposal forwarded to MoEF (dated 14/05/2012) 3. Stage I approval by the MoEF (dated 20/06/2013) 4. Stage II approval by the MoEF (dated 05/03/2014) 5. Pursuant to the in-principle approval by MoEF, the board of directors of Ms Panama Wind Energy Private Limited (PP) has decided to take necessary steps and initiate action for the completion of the project to its full capacity i.e 100.8 MW (63*1.6) 6. Memorandum Of Understanding signed between (PP) and GE, dated 17th July 2015, that seeks revision to the implementation plan for the remaining 18 WEGs (i.e phase II) defined in the supply order dated 04/05/2011. It is mutually agreed to sign the revised change order indicating, revised implementation schedule, before 30th Sep 2015 and to commission the remaining 18 WEGs by 30th Sep 2016. <p>The verification team, based on the site visit, document review and interview with PP, was able to conclude that (45 out of 63 WEGs) project activity has been commissioned in a phased manner and the remaining 18 WEGs are expected to be commissioned by 30th Sep 2016. Hence, no changes to project design are reported. Refer to the verification report, submitted along with this issuance request, for the complete assessment on the project implementation.</p>

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

Means of validation	Not applicable, as the project is not related to afforestation or reforestation activity
Findings	No CAR/CLs is raised in this section.
Conclusion	Not applicable, as the project is not related to afforestation or reforestation activity

SECTION E. Internal quality control

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After the completion of assessment by the verification team all the relevant documentation is submitted to a qualified, Independent Technical reviewer as part of EPIC' internal quality control system. A Technical reviewer team is appointed to review the draft final PRC report (Draft FVR). The comments made by the Technical reviewer team are taken into consideration and incorporated in the final FVR. The technical reviewer team assesses whether all the reporting requirements have been fulfilled and whether all the issues raised were closed satisfactorily by the verification team with justification. The technical review process can also raise issues in this regard which is resolved further by the verification team to the satisfaction of the technical reviewer. The technical reviewer team either accepts or rejects the report made by the verification team. The final report (after resolutions of all findings) is then submitted to the Head-operations for review and approval.

SECTION F. Validation opinion

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EPIC Sustainability Services Private Limited (EPIC) has been contracted by M/s Panama Wind Energy Private Limited to undertake the initial periodic independent verification of the registered CDM project activity titled "*Wind based power generation by Panama Wind Energy Private Limited in Maharashtra, India*" (UNFCCC reference number: 8524).

EPIC conducted an independent third party assessment of the Post Registration Changes from the project activity as described in the registered PDD^{/02/} following the CDM Validation and Verification Standard (CDM VVS, Version 9.0)^{/13/}, section 9.5 and the CDM Project Standard (CDM PS, Version 9.0)^{/04/} section 13.8 for Post Registration Changes.

The validation team has verified that the corrections made by the PP in the revised PDD^{/03/}, Version 02 dated: 14/08/2015, comply with the requirements of the CDM PS^{/04/}, version 9.0 and accurately reflects the actual project information. During periodic verification from 05/12/2012 to 01/05/2015, it was found that information provided in the registered PDD^{/01/} regarding geo-coordinates (latitude and longitude details) of 41 WEGs out of total 63 WEGs, are not matching with the actual geo-coordinates of WEGs.

EPIC confirms that the information in the revised PDD^{/03/}, Version 02.0, dated: 14/08/2015, using latest CDM-PDD-FORM^{/05/} at the time of submission of this report, was materially the same as described in the registered PDD^{/02/}, Version 1.10 dated: 28/11/2012, the project has been implemented as per the approved methodology ACM0002 version 12.3.0^{/07/} valid at the time of registration.

EPIC is of the opinion that the post registration changes of the project activity, as described above, is as per Appendix 1 (CDM PS, version 9.0)^{/04/} – 'Changes that do not require prior approval by the board'. Therefore, in line with section 6.3.1 of CDM PCP, Version 9.0^{/08/}, EPIC submits the post registration changes of the project activity, for acceptance by the CDM EB, as part of the request for issuance.

Appendix 1. Abbreviations

Abbreviations	Full texts
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CER	Certified Emission Reduction(s)
CL	Clarification request
CMS	Central Monitoring Station
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
FAR	Forward Action Request
GHG	Greenhouse gas(es)
MP	Monitoring Plan
MR	Monitoring Report
O&M	Operation and Management
PDD	Project Design Document
EPA	Energy Purchase Agreement
UNFCCC	United Nations Framework Convention on Climate Change
WEG	Wind Electric Generators
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Clean Development Mechanism Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers

The following validation team has been assigned to carry out the verification of the project.

Name	Mr. A. Prabu Das	Dr. R. Madhukar	Mr. R. Vijayaraghavan
Role	Team Lead Auditor	Auditor	Technical Reviewer
Competence in relevant sectors	SS 1: Energy industries (renewable/non-renewable sources)	SS 1: Energy industries (renewable/non-renewable sources)	SS 1: Energy industries (renewable/non-renewable sources)
Responsibility	Doc review, onsite, DVR preparation, DVR resolution, FVR preparation	Doc review, onsite, DVR preparation, DVR resolution, FVR preparation	Technical review

Mr. A Prabu Das, holds a M.Tech Degree in Energy Conservation and Management and B. Tech Degree in Petro-chemical Technology. He is a certified Energy Auditor by Bureau of Energy Efficiency (BEE), Government of India. He has around 8 years of work experience in Design of biomass Power plants, preparing Techno Economic Feasibility Reports (TEFR), carrying out energy audits, of which last six years have been in CDM consultancy and validation services. He has undergone extensive training on CDM validation and verification and is a qualified lead auditor for Sectoral Scope 1 under Technical Area "TA 1.2 Renewables" in accordance with procedures of EPIC Sustainability Services Pvt. Ltd. He is also an ISO 26000 lead auditor certified by Professional Evaluation and Certification Board (PECB).

Dr. R. Madhukar, holds a Doctoral in Environmental Science. He has more than 9 years of experience in different industries, consultancy and research and development in Environmental Impact Assessment. He has three years' experience and has participated in the validation / verification of various CDM/VCS/GS/GHG globally. He has undergone extensive training on CDM validation and verification and has been qualified as Auditor for Sectoral Scope 1 under Technical Area "1.2-Renewables". He is also an ISO 26000 lead auditor certified by Professional Evaluation and Certification Board (PECB).

Mr. R. Vijayaraghavan holds BE in Mechanical Engineering, M.Tech in Energy Conservation and Management and MBA in Technology Management. He is certified as Energy Auditor by Bureau of Energy Efficiency (BEE), Government of India. He has 10 years of working experience in energy sector including validation / verification of fifty CDM and VCS/GS projects and has undergone extensive training on CDM validation and verification and has been qualified as Lead Auditor with Sectoral Scope 1 and 13. He is also an ISO 26000 lead auditor certified by Professional Evaluation and Certification Board (PECB)

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	PP	Webhosted monitoring report version 1.0	1	Publicly available / PP
2	PP	Registered PDD, version 1.10 http://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1354531234.95/view	2	Publicly available
3	PP	Revised PDD, version 2.0	3	PP
4	UNFCCC	CDM Project Standard, Version 9.0 http://cdm.unfccc.int/filestorage/e/x/t/extfile-20150225165200470-reg_stan01.pdf/reg_stan01.pdf?t=dmV8bnVnZXJyZDCwskTJwTRbrR8n1vmkh6R1	4	Publicly available
5	UNFCCC	CDM-PDD-FORM, Version 6.0 http://cdm.unfccc.int/filestorage/e/x/t/extfile-20150630102531042-PDD_form05.doc/PDD_form05.doc?t=a1V8bnVnZXIhfdAyzQTy51X7pNWG-b6b1xzn	5	Publicly available
6	EPIC	Verification report submitted along with this issuance request	6	EPIC
7	UNFCCC	Consolidated methodology for grid-connected electricity generation from renewable sources --- Version 12.3.0 - ACM0002	7	Publicly available
8	UNFCCC	CDM Project Cycle Procedure, Version 9.0 http://cdm.unfccc.int/filestorage/e/x/t/extfile-20150226145114663-pc_proc01.pdf/pc_proc01.pdf?t=aWJ8bnVnZW41fDDkjpCKWRIMAv7h7f9I UIQ	8	Publicly available
9	PP	Commissioning certificates	9	PP
10	PP	Actual geo-coordinates by GE	10	PP
11	PP	Energy Purchase agreements	11	PP
12	PP	Supply order by GE (WTG supplier) dated 04/05/2011 for the 63 WEGs	12	PP
13	UNFCCC	Validation and Verification Standard, Version 9.0 https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20150225165215954/accr_stan02.pdf	13	Publicly available

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

Table 1. CL from this validation

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

Table 2. CAR from this validation

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

Table 3. FAR from this validation

FAR ID	FAR 01	Section no.	D.3	Date: 01/09/2015
Description of FAR				
The actual geo-coordinates of the remaining yet to commission 18 WEGs with location following numbers (1,2,3,21,24,29,30,33,35,36,44,53,54,59,60,39,57,58) shall be verified in the subsequent verification.				
Project participant response				Date: 02/09/2015
Post commissioning the commissioning certificates of the remaining 18 WEGs shall be submitted to the verifying DoE.				
Documentation provided by project participant				
DOE assessment				Date: 03/09/2015
The commissioning certificates and the actual geo-coordinates shall be verified during subsequent verification for the remaining yet to commission 18 WEGs				

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Document information

Version	Date	Description
01.0	23 March 2015	Initial publication.

<i>Version</i>	<i>Date</i>	<i>Description</i>
Decision Class: Regulatory		
Document Type: Form		
Business Function: Registration		
Keywords: post-registration change, project activities, validation report		