



**Verification and certification report form for  
CDM project activities  
(Version 02.0)**

**BASIC INFORMATION**

<b>Title and UNFCCC reference number of the project activity</b>	20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra UNFCCC ref.No- 3854
<b>Version number of the verification and certification report</b>	2.0
<b>Completion date of the verification and certification report</b>	23/11/2017
<b>Monitoring period number and duration of this monitoring period</b>	Monitoring Period No: 04 Duration: 01/01/2013 to 28/02/2017 (including both days)
<b>Version number of the monitoring report to which this report applies</b>	Version 3, dated 30/10/2017
<b>Crediting period of the project activity corresponding to this monitoring period</b>	Type: Fixed Start date: 14/12/2010 Length: 10 years (14/12/2010 to 13/12/2020)
<b>Project participants</b>	Wind World (India) Limited
<b>Host Party</b>	India
<b>Applied methodologies and standardized baselines</b>	Methodology: ACM0002 Version 11 Title: "Consolidated methodology for grid-connected electricity generation from renewable sources"
<b>Mandatory sectoral scopes linked to the applied methodologies</b>	Sectoral Scope 1 - Energy industries (renewable/ non-renewable sources)
<b>Conditional sectoral scope(s) linked to the applied methodologies</b>	NA
<b>Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the registered PDD</b>	138,874 tCO <sub>2</sub> e
<b>Certified amount of GHG emission reductions or GHG removals for this monitoring period</b>	102,778 tCO <sub>2</sub> e
<b>Name and UNFCCC reference number of the DOE</b>	Earthood Services Private Limited UNFCCC ref.No- E-0066

**Name, position and signature of the approver of the verification and certification report**



Dr. Kaviraj Singh  
Managing Director

## SECTION A. Executive summary

### >> Brief summary of the project activity

The project activity involves electricity generation by wind electric convertors and supplying the generated electricity to the NEWNE Grid. The project being a renewable energy generation activity, it leads to removal of fossil fuel dominated electricity generation. The project activity results in reductions of greenhouse gas (GHG) emissions that are real, measurable, and verifiable and plays beneficial role in the mitigation of climate change. The project activity consists of 25 WTGs (0.8 MW capacity each), making the total installed capacity to be 20 MW in Ahmednagar district in Maharashtra, India. The WTGs are of Enercon (E-48) make. Enercon India Limited is the supplier of WTGs and the O&M contractor for the project activity. It is to be noted that name of company "Enercon India Limited" is changed as "Wind World (India) Limited from 01/01/2013 onwards, the same is verified through the name change consent issued by Government of India/18/.

The WTGs have been commissioned between 28/02/2007 and 17/03/2009. The same was verified against the commissioning certificates/13/.

All 25 WTGs are fully functional and the assessment team verified this during the site visit. The assessment team confirms that the total emission reductions achieved under this monitoring period 01/01/2013 – 28/02/2017 (including both days) is 102,778 tCO<sub>2</sub>e.

The basic details of the project activity are mentioned below:

Project title	20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra
Earthhood reference number	CDM.VER.17.16
UNFCCC registration number	3854
Date of registration	14/12/2010
Sectoral scope	1 - Energy industries (renewable/ non-renewable sources).
Methodology/ies applied	Consolidated methodology for grid-connected electricity generation from renewable sources ,ACM0002, Version 11
Project participant	Wind World (India) Limited
Location of Project Activity	Ahmednagar district, Indian State of Maharashtra

### Scope of verification

The scope of the verification was limited to the monitoring period covered under the current monitoring period 01/01/2013 to 28/02/2017 of the registered CDM PA "20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra" to determine whether;

- The project activity has been implemented and operated as per the registered PDD or any approved revised PDD, and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- The monitoring report and other supporting documents provided are complete in accordance with the latest applicable version of the completeness checklist for requests for issuance of CERs, verifiable, and in accordance with applicable CDM requirements;
- The actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan, any revised approved monitoring plan, the approved methodology including applicable tool(s) and/or, where applicable, the approved standardized baseline;
- The data recorded and stored as per the monitoring methodology including applicable tool(s) and, where applicable, the standardized baseline.

### Verification process

The verification process involved following;

- Contract with Wind World (India) Limited for the scope of verification;
- Publication of monitoring report
- Desk review
- Physical on-site inspection
- Issuance of verification findings
- Reporting, calculation checks, QA/QC and resolution of findings
- Issuance of draft verification report
- Independent technical review of the project documentation
- Issuance of the final verification report
- Submission of the request for issuance, as appropriate

## Conclusion

ESPL has performed the verification of the CDM PA “20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra” having UNFCCC Ref. Number 3854 for the monitoring period 01/01/2013 to 28/02/2017. The verified emission reductions amount to 102,778 tCO<sub>2</sub>e in the aforesaid monitoring period.

The verification concluded that the registered CDM PA complies with all relevant CDM procedures/standards/guidance and therefore request for issuance is being submitted in accordance with the CDM procedures.

## SECTION B. Verification team, technical reviewer and approver

### B.1. Verification team member

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

### B.2. Technical reviewer and approver of the verification and certification report

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	IR	Mahawar	Abhishek	Central Office
3.	Approver	IR	Singh	Kaviraj	Central Office

## SECTION C. Application of materiality

### C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	

1.	Omissions and misstatements in data transfer from hand written data in the JMR to ER calculation sheet.	Low	Ineffective quality control of data transfer due to unclear QA/QC procedure.	<p>Quality procedure followed at site to be checked.</p> <p>It is to be demonstrated by the PP that how to transfer data and how this can be crosschecked.</p> <p>Relevant site personnel has been interviewed to confirm whether procedure is actually conducted.</p>
2.	Missing data due to failure of measurement equipment	Low	The monitoring plan defines emergency procedures in case malfunctioning or failure of meter. Further, check meters are also installed onsite.	<p>It is to be checked if related main meters are installed as per monitoring plan.</p> <p>Relevant site personnel has been interviewed to confirm whether the emergency procedure is known to them.</p> <p>To be checked if the equipment is malfunctioning and the accuracy and reliability of data for the concerned period cannot be ensured, the relevant emission reductions have been claimed or not.</p>

## C.2. Consideration of materiality in conducting the verification

>> In accordance with CDM VVS for PAs, Version 01.0 para 329 the prescribed thresholds for materiality for CDM PAs are as under;

Emission Reductions (tCO <sub>2</sub> e)/year	500,000 or more	300,001 to 499,999	300,000 or less	Small Scale CDM PAs	Micro Scale CDM PAs
Materiality Threshold (para 361)	0.5%	1.0%	2.0%	5.0%	10.0%

The applicable materiality threshold is 2% as project activity.

Particulars / Monitoring Report	MR Version (Public)	MR Version (Revised/Final)
Emission Reductions Achieved (tCO <sub>2</sub> e) in this monitoring period	102,778 tCO <sub>2</sub> e	102,778 tCO <sub>2</sub> e
Applicable Threshold (%) as per para 329 of CDM VVS for PAs Version 01.0	2%	2%

The verification team has identified the impact of errors observed and those were corrected by PP during verification for all monitoring parameter at individual level. The extrapolated impact on ERs is also provided for parameters individually and in aggregated manner in the end.

Monitored Parameter (Symbol / Description*)	Reporting Frequency	Number of Discrete Data (Total)	Sample selected for verification	Type of error identified	Impact on ERs	
					ERs impacted (Sample)	ERs impacted (Population based on extrapolation)
EG <sub>Export</sub>	Monthly	50(100%)	50 (100%)	No errors were identified during the	No impact	No impact

				verification of data from there source.		
EG <sub>Import</sub>	Monthly	50(100%)	50(100%)	No errors were identified during the verification of data from there source.	No impact.	No impact
$N \sum_{y=0} EG_{gross,y}$	Monthly	50(100%)	50(100%)	No errors were identified during the verification of data from there source.	No impact.	No impact
EG <sub>y</sub>	Monthly	50(100%)	50(100%)	No errors were identified during the verification of data from there source.	No impact.	No impact.

Description of monitoring parameters is provided under section E.6.2 of this report.

Based on the above table it can be confirmed that the materiality threshold is not breached applicable for the registered PA as per CDM VVS.

## SECTION D. Means of verification

### D.1. Desk/document review

>> A desk review was conducted by the verification team that included

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

A complete list of documents/evidences reviewed is included as Appendix 3.

**D.2. On-site inspection**

Duration of on-site inspection: 06/06/2017				
No.	Activity performed on-site	Site location	Date	Team member
1	An assessment of the implementation and operation of the registered CDM project activity as per the registered PDD or any approved revised PDD;	Ahmednagar	06/06/2017	Ravi Kant Soni
2	A review of information flows for generating, aggregating and reporting the monitoring parameters;	Ahmednagar	06/06/2017	Ravi Kant Soni
3	Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the registered monitoring plan;	Ahmednagar	06/06/2017	Ravi Kant Soni
4	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;	Ahmednagar	06/06/2017	Ravi Kant Soni
5	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;	Ahmednagar	06/06/2017	Ravi Kant Soni
6	A review of calculations and assumptions made in determining the GHG data and emission reductions;	Ahmednagar	06/06/2017	Ravi Kant Soni
7	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;	Ahmednagar	06/06/2017	Ravi Kant Soni

**D.3. Interviews**

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			

1.	Joshi Shenoy	Poorvi	WWIL	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.	Vagchare	Vaibhav	WWIL	06/06/2017	Monitoring and measuring system, Collection of measurements, Observations of established practices and Data Verification of monitoring parameters	Ravi Kant Soni
3.	Rai	Amit	WWIL	06/06/2017	QA/QC procedures, data management, internal audits to maintain data quality & reliability, maintenance Practices Consideration of monitoring period, monitoring methodology, project documentation and emission reduction calculations	Ravi Kant Soni

**D.4. Sampling approach**

&gt;&gt; Not applicable.

**D.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised**

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form	-	CAR #5	-
Compliance of the project implementation with the registered PDD	-	-	-
Post-registration changes	-	CAR#04	-



Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline	-	-	-
Compliance of monitoring activities with the registered monitoring plan	-	CAR #3	-
Compliance with the calibration frequency requirements for measuring instruments	-	CAR #5	-
Assessment of data and calculation of emission reductions or net removals	CL #1	CAR #5	-
Others (typo error)	-	CAR #2	-
<b>Total</b>	<b>1</b>	<b>4</b>	<b>-</b>

## SECTION E. Verification findings

### E.1. Compliance of the monitoring report with the monitoring report form

<b>Means of verification</b>	The monitoring report form used is CDM-MR-FORM version 06.0, which was the appropriate form, and the latest version available at the time of verification. All the sections of the form were filled as per the guidelines and gave all the relevant details.
<b>Findings</b>	CAR #5 was raised and resolved.
<b>Conclusion</b>	The monitoring report is found to be complying with the monitoring report form.

### E.2. Remaining forward action requests from validation and/or previous verifications

>> This is fourth verification of the project activity. There are no FAR(s) from validation/2/ or previous verification/2.1/ that needs to be closed during this verification.

### E.3. Compliance of the project implementation and operation with the registered project design document

<b>Means of verification</b>	<p>This project activity is the generation of electricity from WTGs supplying the generated electricity to the NEWNE grid of India. The project is located at Panchpatta village in Akole Taluk of Ahmednagar District of Maharashtra state in India and has an installed capacity of 20 MW (25 WTGs x 0.8 MW/WTG). This was confirmed from document review of commissioning certificates /13/.</p> <p>The commercial operation of the project activity had been started on 28/02/2007 – 17/03/2009, which was verified vide commissioning certificates/13/ and corroborated by monthly breakup sheets/10/ issued by state utility, indicating the start date of commercial operation.</p> <p>The technical specifications of WTGs were verified through the nameplate details (imprinted/placed at the bottom of WTG tower) available at the WTGs physically checked during the site visit and were found to be consistent with the details provided in the registered PDD (approved on 05/10/2017)/01/.</p> <p>The project is located between latitude 19°45'to 19°50' N and longitude 73°45' to 73°55'4'E. Location of the project was verified through Latlong.net (<a href="https://itouchmap.com/latlong.html">https://itouchmap.com/latlong.html</a>) and found consistent with the same mentioned in the registered PDD/01/ and MR/05/.</p> <p>During the site visit, the verification team randomly selected 11 numbers of WTGs to physically confirm the geographical locations/coordinates by using hand held device. The sample size (11) was determined in accordance with the 'Sampling and survey for CDM project activities and programmes of activities' V06/21/ as per the assumptions marked below;</p> <table border="1"> <tr> <td>Producer Risk</td><td>10%</td></tr> <tr> <td>Consumer Risk</td><td>10%</td></tr> <tr> <td>AQL</td><td>0.5%</td></tr> </table>	Producer Risk	10%	Consumer Risk	10%	AQL	0.5%
Producer Risk	10%						
Consumer Risk	10%						
AQL	0.5%						

UQL	20%
Sample Size	11
Acceptance Number	0 (No discrepancy allowed)

The verified geo-coordinates of WTGs are mentioned below;

Sr.No	Location No-	Latitude (N)	Longitude (E)	Remark
1	524	19° 30' 36"	73° 46' 4"	Accuracy 7 meters
2	79	19° 44' 54"	73° 44' 19"	Accuracy 5 meters
3	527	19° 40' 45"	73° 49' 52"	Accuracy 9 meters
4	523	19° 40' 44"	73° 48' 4"	Accuracy 5 meters
5	504	19° 38' 21"	73° 48' 10"	Accuracy 6 meters
6	514	19° 33' 6"	73° 40' 16"	Accuracy 9 meters
7	36	19° 40' 48"	73° 48' 57"	Accuracy 8 meters
8	39	19° 44' 57"	73° 51' 48"	Accuracy 6 meters
9	516	19° 39' 11"	73° 54' 18"	Accuracy 5 meters
10	518	19° 41' 16"	73° 45' 21"	Accuracy 7 meters
11	526	19° 32' 49 "	73° 47' 51"	Accuracy 9 meters

The geo coordinates of the remaining WTGs forming part of the project activity, which were not visited physically were verified using Latlong.net (Ref: <https://itouchmap.com/latlong.html> ) and were found to be consistent with the same reported under section A. 2 of the monitoring report and in section A.4.1.4 of registered PDD/01/.

It was observed during the site visit that, the WTGs belongs to the project activity are connected to DISCOM substation (33kV/132 kV) located at Panchpatta site (Bhandardarwadi village) through step-up transformers (400V to 33kV), these transformers are consecutively connected to 4 feeders and that ultimately lead to two-step up transformers (33kV to 132 kV) via two separate lines at DISCOM substation/20/. During the site visit it is observed that project WTGs are connected to feeder 02, feeder no- 03, feeder no- 04 and feeder 06 and WTGs of other promoters (not belongs to project) are also connected to these feeders. Hence, the electricity export and import from the project WTGs is apportioned based on the on LCS meter readings available from the individual WTGs.

The rated capacity of transformers were also indicated at the metering points located in the DISCOM substation/20/ and the same was found to be consistent with description given in the registered PDD. Furthermore, capacity of transformers verified through the specifications mentioned at the name plate of transformer/20/ and found consistent with registered PDD/01/ and MR.

The PP has signed PPA/14/ with state utility for the sale of electricity to the grid and has been supplying electricity in compliance with the PPA as confirmed from the monthly invoices /11/. The project was registered as a CDM project on 14/12/2010 /16/. The PP has considered a fixed crediting period for the project activity from 14/12/2010 to 13/12/2020. This is the fourth verification of the project activity covering the period from 01/01/2013 to 28/02/2017.

All 25 WTGs were fully functional and the assessment team verified this during the site visit/20/. In addition to the physical inspection of the site, the following documents have been reviewed by the assessment team during the site visit to verify the project implementation:

- i. Commissioning certificates/13/
- ii. Power Purchase Agreement/14/
- iii. Invoices raised by the PP to State utility /11/

	iv. Testing certificates of all energy meters/12/  The information relating to the project implementation, provided in the Monitoring Report/05/ is consistent with that stated in the registered PDD/01/. The data and variables provided in the monitoring report are the same as stated in the registered PDD. Total emission reductions achieved under this monitoring period 01/01/2013 to 28/02/2017 (including both days) is 102,778 tCO <sub>2e</sub> .
<b>Findings</b>	No finding was raised
<b>Conclusion</b>	<ul style="list-style-type: none"> <li>• In view of the information's verified during the site visit, the verification team is able to confirm that all physical features (technology, project equipment, and monitoring and metering equipment) of the registered CDM project activity are in place and that the project participants have operated the project activity as per the registered PDD.</li> <li>• No information with regard to data and variables was identified that may surpass the estimated quantity of ERs in the registered PDD.</li> <li>• The emission reductions achieved during the current monitoring period are (102,778 tCO<sub>2e</sub>), that is within the estimated quantity (138,874 tCO<sub>2e</sub>) in the registered PDD for the comparable period.</li> </ul>

#### **E.4. Post-registration changes**

##### **E.4.1. Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines**

>> There are no temporary deviations from registered monitoring plan or applied methodology. It was verified and confirmed from the registered PDD/01/; the applied methodology/3/ and the on-site verification.

##### **E.4.2. Corrections**

>> The corrections to the registered project activity have been approved on 05/10/2017 (PRC Ref: PRC-3854-002).

(Ref: Validation opinion on changes in PDD, version 03, dated 12/09/2017)/2.1/

CAR#04 was raised as the relevant information related to post-registration changes were not presented in the MR. CAR#04 was resolved in the revised MR and successfully closed.

##### **E.4.3. Change to the start date of the crediting period of the project activity**

>> There is no change to the start date of the crediting period. It was verified and confirmed from the UNFCCC project webpage/16/.

##### **E.4.4. Inclusion of a monitoring plan**

>> Not applicable

##### **E.4.5. Permanent changes from registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other applied standards or tools**

>> The board has approved permanent changes from the registered monitoring plan on 05/10/2017 (PRC Ref: PRC-3854-002).

(Ref: Validation opinion on changes in PDD, version 03, dated 12/09/2017)/2.1/

##### **E.4.6. Changes to the project design**

>> Not applicable

##### **E.4.7. Changes specific to afforestation and reforestation project activities**

>> Not Applicable

### E.5. Compliance of the registered monitoring plan with the methodology including applicable tools and standardized baselines

<p><b>Means of verification</b></p>	<p>The monitoring plan as contained in the registered PDD/01/ has been reviewed against the monitoring requirements of the applied methodology ACM0002 Version 11.</p> <p>Monitoring plan in the registered PDD (approved on 05/10/2017) includes the following parameters:</p> <ol style="list-style-type: none"> <li>1. Net electricity supplied to the grid by the project activity (<math>EG_y</math>)- This parameter is calculated as the difference of the apportioned electricity exported and imported by the WTGs involved in the project activity connected to the four feeders at grid- interconnection point. <math>EG_y = EG_{\text{export}} - EG_{\text{import}}</math></li> <li>2. Summation of <math>EG_{\text{gross},y}</math> is the electricity generated from wind turbines of the project activity measured through its panel located in WTG tower.  <math display="block">\sum_{y=0}^N EG_{\text{gross},y}</math> This parameter is directly measured the LSC meter (controller) that is integral of part of each WTG and continuously monitored through online monitoring system maintained by O&amp;M contractor at site office. The LCS meters do not require calibration as the energy readings of electricity generated at the LCS meter is cross-verified by the energy calculated by inverting system installed in the WTGs.</li> <li>3. Electricity exported by the project activity to the grid (<math>EG_{\text{export}}</math>)</li> <li>4. Electricity imported by the project activity from the grid (<math>EG_{\text{import}}</math>)</li> </ol> <p>Both the parameters (3&amp;4) are calculated using the apportioning procedure as described in section B.7.3 of the registered PDD (approved on 05/10/2017) and directly sourced from monthly break-up sheets issued by state utility.</p> <p><b>Apportioning procedure:</b> During the site visit it is observed that WTGs belongs to project activity are connected to 4 separate feeders where each feeder is a common pool where the PP and other project developers feed electricity. Hence electricity exported and imported by the project activity (<math>EG_{\text{export}}</math> and <math>EG_{\text{import}}</math>) is calculated using apportioning procedure as described under section B.7.3 of the registered PDD (approved on 05/10/2017). Maharashtra State Electricity Distribution Company Limited, "MSEDCL" is responsible to apportion the electricity generation data.</p> <p>The following parameters involved in the apportioning process:</p> <ol style="list-style-type: none"> <li>(a) Electricity export by project activity &amp; non-project activity recorded by main meter installed at DISCOM substation (<math>EG_{\text{JMR, export}}</math>)</li> <li>(b) Electricity import by project activity &amp; non-project activity recorded by main meter installed at DISCOM substation (<math>EG_{\text{JMR, import}}</math>)</li> <li>(c) Summation of <math>EG_{\text{gross},y}</math> 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.  <math display="block">\sum_{y=0}^M EG_{\text{gross},y}</math></li> <li>(d) Summation of <math>EG_{\text{gross},y}</math> is the electricity generated from wind turbines of the project activity measured through its panel located in WTG tower  <math display="block">\sum_{y=0}^N EG_{\text{gross},y}</math></li> </ol>
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y=0

As per the apportioning procedure, electricity exported by the project activity to the grid ( $EG_{\text{export}}$ ) is calculated using following formula:

$$EG_{\text{export}} = \frac{EG_{\text{JMR, export}} \times \sum_{y=0}^N EG_{\text{gross, y}}}{(\sum_{y=0}^N EG_{\text{gross, y}} + \sum_{y=0}^M EG_{\text{gross, y}})}$$

Similarly electricity imported by the project activity from the grid ( $EG_{\text{import}}$ ) is calculated as follows:

$$EG_{\text{import}} = \frac{EG_{\text{JMR, import}} \times \sum_{y=0}^N EG_{\text{gross, y}}}{(\sum_{y=0}^N EG_{\text{gross, y}} + \sum_{y=0}^M EG_{\text{gross, y}})}$$

It is to be noted that generation data of other project developers [parameter (a),(b) & (c) above] are confidential in nature, hence, state utility does not disclose the same and therefore beyond the control of PP. Thus,  $EG_{\text{JMR, export}}$ ,  $EG_{\text{JMR, import}}$  and summation of generation data from other WTGs (Non-project WTGs connected to the same feeder) is not available to PP. Hence, these parameters are not included in the approved monitoring plan.

Post apportioning, MSEDCL issues month wise “Break-up sheets” which contains electricity export, import and net export by the project WTGs connected to the individual feeder. These values (mentioned in “Break-up sheet”) are the main source to calculate the baseline emission by this project activity and same is in line with section B.7.3 of the registered PDD/01/.

The apportioning procedure has been implemented used in this project activity is a common practice followed for wind projects in the State of Maharashtra, India. This is also need to be considered that revision in the registered monitoring plan was already sought to incorporate the actual apportioning practice adopted at site and same was approved by UNFCCC on 05/10/2017(ref: PRC-3854-002). In the PRC validation, opinion/2.2/ it was concluded that the apportioning procedure is included in the PDD (Section B.7.3) to improve transparency regarding the actual monitoring practice followed at site.

It is clearly stated in the approved monitoring plan (PDD section B.7.1 and B.7.3) that “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” would not be directly used for estimation of emission reduction. Whereas,  $EG_{\text{export}}$  and  $EG_{\text{import}}$  will be calculated using apportioning procedure implemented by MSEDCL and values of parameter will be directly sourced from breakup sheets certified by MSEDCL.

It is worthy to note that complete set of parameters used in “apportioning procedure” neither available to PP nor the part of registered approved monitoring plan, hence calculation results obtained through apportioning (Break-up sheet) cannot be reproduced by PP in the ER calculation sheet/07/. Further, in line with registered monitoring plan (after Post Registration Changes) it is not required for PP.

The assessment team has verified that values of parameter  $EG_y$ ,  $EG_{\text{export}}$  and  $EG_{\text{import}}$  are directly sourced from breakup sheets/10/ which are in line with the requirements of approved monitoring plan (after Post Registration Changes)/2.2/.

During the onsite visit, representatives of O&M contractor were interviewed and confirmed that they implement the apportioning procedure described in the

	<p>registered PDD (approved on 05/10/2017) and the PP is not involved in the process directly or indirectly.</p> <p>In view of the above discussion, the assessment team confirms that the apportioning procedure revealed under section B.7.3 of registered PDD (approved on 05/10/2017) and in section C of the MR is the actual procedure implemented by the MSEDCL, provides completeness of the monitoring plan, and reflect the actual monitoring practices and procedure implemented at project site.</p> <p>As per the applied methodology ACM0002 version 11 "Monitoring shall consist of metering the electricity generated by the renewable technology". The net electricity supplied by the project activity is a calculated parameter; however, input values used in calculation are measured from energy meters installed at feeder 2, feeder 3, feeder 4 and feeder 6 and the LCS meters installed at individual WTGs connected to these feeders. Hence, it can be concluded that registered monitoring plan complies with the approved monitoring methodology applied to the project activity.</p>
<b>Findings</b>	No finding was raised.
<b>Conclusion</b>	The monitoring plan outlined in the registered PDD is in accordance with the applied methodology /03/ and correctly applied by the registered CDM project activity.

## E.6. Compliance of monitoring activities with the registered monitoring plan

### E.6.1. Data and parameters fixed ex ante or at renewal of crediting period

#### E.6.1.1. Operating Margin Emission Factor of Western Regional Electricity Grid, ( $EF_{OM,y}$ , $tCO_2e/MWh$ )

<b>Means of verification</b>	The value of this parameter is considered as 0.9985. This was checked with the registered PDD /01/ and "CO2 Baseline Database for Indian Power Sector", version 2 published by the Central Electricity Authority, Ministry of Power, Government of India /15/.
<b>Findings</b>	No finding was raised
<b>Conclusion</b>	The value in the monitoring report /05/ and corresponding emission reduction calculations spreadsheet /07/ are consistent with the registered PDD (page 20). The applied value is correct and justified.

#### E.6.1.2. Build Margin emission Factor of Western Regional Electricity Grid, ( $EF_{BM,y}$ , $tCO_2e/MWh$ )

<b>Means of verification</b>	The value of this parameter is considered as 0.6300. This was checked with the registered PDD /01/ and "CO2 Baseline Database for Indian Power Sector", version 2 published by the Central Electricity Authority, Ministry of Power, Government of India /15/.
<b>Findings</b>	No finding was raised
<b>Conclusion</b>	The value in the monitoring report /05/ and corresponding emission reduction calculations spreadsheet /07/ are consistent with the registered PDD (page 20). The applied value is correct and justified.

#### E.6.1.3. Combined Margin Emission Factor of Western Regional Electricity Grid, ( $EF_y$ or $EF_{CM,y}$ , $tCO_2e/MWh$ )

<b>Means of verification</b>	The value of this parameter is considered as 0.90641. This was checked with the registered PDD /01/ and "CO2 Baseline Database for Indian Power Sector", version 2 published by the Central Electricity Authority, Ministry of Power, Government of India /15/.
<b>Findings</b>	No finding was raised
<b>Conclusion</b>	The value in the monitoring report /05/ and corresponding emission reduction calculations spreadsheet /07/ are consistent with the registered PDD (page 20). The applied value is correct and justified.

## E.6.2. Data and parameters monitored

E.6.2.1 Net electricity supplied to the grid by the Project Activity,  $EG_y$  (MWh)

Means of verification	Determine / Assessment Criteria	Assessment Remarks
	The monitoring of parameter in the registered PDD has been implemented in accordance with the registered monitoring plan.	The parameter is calculated as difference of $EG_{Export}$ and $EG_{Import}$ in line with the approved monitoring plan. $EG_y = EG_{Export} - EG_{Import}$ Where, $EG_{Export}$ = Electricity exported by the project activity to the grid $EG_{Import}$ = Electricity imported by the project activity to the grid
	The equipment used for monitoring is in accordance with section 9.2.6 of CDM VVS Version 1 and is controlled and calibrated in accordance with the registered monitoring plan, the applied methodologies, the applied standardized baselines, Board guidance, local/national standards, or as per the manufacturer's specification;	No monitoring equipment is used as this parameter is calculated.
	Monitoring results are consistently recorded as per the approved frequency;	Yes. In line with the approved monitoring plan, this parameter is recorded on monthly basis in the breakup sheets issued by state utility.
	Quality assurance and quality control procedures have been applied in accordance with the registered monitoring plan.	Yes, all the stakeholders, namely, the Grid Authority (MSEDCL), and the WWIL (O&M Contractor and PP), implemented the adequate QA/QC procedures.
	If the project participants applied a sampling approach to determine data and parameters monitored, the DOE shall assess the compliance of the sampling efforts and surveys with the validated sampling plan in accordance with the "Standard: Sampling and surveys for CDM project activities and programme of activities".	Not applicable.
	Describe how it verified the information flow (from data generation, aggregation, to recording, calculation and reporting) for the parameter including the values in the monitoring report.	The data transfer process for the said parameter is as follows: The Joint meter reading at all the metering points at DISCOM substation is taken by the representatives of MSEDCL in the presence of WWIL officials in the form of JMRs. Based on the data recorded in the JMRs and generation recorded at WTGs panel meters, electricity exported/imported to/from the grid by the project activity is calculated by MSEDCL, using the apportioning procedure and breakup sheets for each project developer is prepared.

		<p>Cumulative value of <math>EG_y</math> for entire monitoring period is reported in the monitoring report, however monthly values are reported in the ER calculation sheet. The monthly values were verified from the breakup sheets issued by state utility and found to be consistent.</p> <p>Value of this parameter for the current monitoring period is 113,392.75 MWh.</p>
	The information provided in the monitoring report has been cross-checked with other sources such as plant logbooks, inventories, purchase records and laboratory analysis;	Monthly reported values of $EG_y$ for the current monitoring period were further cross-checked with the monthly invoices raised by the PP /11/ to state utility and found to be consistent.
	The calibration of the measuring equipment that has an impact on the claimed GHG emission reductions or net anthropogenic GHG removals is conducted by the project participants at a frequency specified in the applied methodologies, the applied standardized baselines and/or the registered monitoring plan.	Not applicable.
	<p>(a) A complete set of data for the specified monitoring period is available. If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, the DOE shall assess whether:</p> <p>(i) The most conservative values approach is applied to the parameters for the entire non-monitoring period in accordance with the provisions relating to the temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the "CDM project standard for project activities"; or</p> <p>(ii) Alternative monitoring arrangements for the non-monitoring period are described, whether they apply conservative assumptions or discount factors to the calculations, and whether the alternative monitoring arrangements have been approved by the Board under the prior-approval track or to be approved by the Board under the issuance track in accordance with the provisions relating to temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the "CDM project standard for project activities";</p>	No such issues identified for the current monitoring period.



<b>Findings</b>	No finding was raised.
<b>Conclusion</b>	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.

**E.6.2.2 Summation of  $EG_{gross,y}$  is the electricity generated from wind turbines of the project activity measured through its panel located in WTG tower**

N

$\sum EG_{gross,y}$  , (MWh)

y=0

Means of verification	Determine / Assessment Criteria	Assessment Remarks
	The monitoring of parameter in the registered PDD has been implemented in accordance with the registered monitoring plan.	The parameter is continuously measure, recorded hourly and reported monthly in line with the registered monitoring plan.
	The equipment used for monitoring is in accordance with section 9.2.6 of CDM VVS Version 1 and is controlled and calibrated in accordance with the registered monitoring plan, the applied methodologies, the applied standardized baselines, Board guidance, local/national standards, or as per the manufacturer's specification;	This parameter is measured through LCS meter (controller panel meter) integrated with WTG and monitored via online monitoring system (SCADA).  It is not possible to calibrate controller because it is integral part of WTG cannot be removed during operation. Letter of undertaking from WTG supplier/22/ regarding the calibration of controller is provided by PP and same has been confirmed through interview of site personnel during site visit.
	Monitoring results are consistently recorded as per the approved frequency;	Yes. In line with the approved monitoring plan, this parameter is recorded on monthly basis in the breakup sheets issued by state utility.
	Quality assurance and quality control procedures have been applied in accordance with the registered monitoring plan.	Yes, all the stakeholders, namely, the Grid Authority (MSEDCL), and the WWIL (O&M Contractor and PP), implemented the adequate QA/QC procedures.
	If the project participants applied a sampling approach to determine data and parameters monitored, the DOE shall assess the compliance of the sampling efforts and surveys with the validated sampling plan in accordance with the "Standard: Sampling and surveys for CDM project activities and programme of activities".	Not applicable.
	Describe how it verified the information flow (from data generation, aggregation, to recording, calculation and reporting) for the parameter including the values in the monitoring report.	The LCS meter at each WTG is a microprocessor based multi-function relay (MFR) which is highly accurate and it monitors the electricity generated by each WTG. The relay runs software to sample inputs and numerically processes the information. It is therefore highly unlikely for this relay to wrongly read/record data.

		<p>The data is generated and recorded in the SCADA system automatically. The O&amp;M contractor, based on recorded data in the SCADA system, prepares the daily generation reports. These daily generation reports are used to prepare monthly generation reports. The monitoring procedures were sufficiently robust to enable accurate transmission of data.</p> <p>Cumulative value of <math>EG_{gross,y}</math> for entire monitoring period is reported in the monitoring report, however monthly values are reported in the ER calculation sheet. The monthly values were verified from the monthly generation reports/10.1/ issued by state utility and found to be consistent. Value of this parameter for the current monitoring period is 118,079.32 MWh.</p>
	The information provided in the monitoring report has been cross-checked with other sources such as plant logbooks, inventories, purchase records and laboratory analysis;	Not applicable, as the generation recorded at the LCS meter is cross verified by the energy calculated by inverting system installed in the WTGs.
	The calibration of the measuring equipment that has an impact on the claimed GHG emission reductions or net anthropogenic GHG removals is conducted by the project participants at a frequency specified in the applied methodologies, the applied standardized baselines and/or the registered monitoring plan.	Not applicable.
	<p>(a) A complete set of data for the specified monitoring period is available. If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, the DOE shall assess whether:</p> <p>(i) The most conservative values approach is applied to the parameters for the entire non-monitoring period in accordance with the provisions relating to the temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the "CDM project standard for project activities"; or</p> <p>(ii) Alternative monitoring arrangements for the non-monitoring period are described, whether they apply conservative assumptions or discount factors to the calculations, and whether the alternative monitoring arrangements have been approved by</p>	No such issues identified for the current monitoring period.

	the Board under the prior-approval track or to be approved by the Board under the issuance track in accordance with the provisions relating to temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the “CDM project standard for project activities”;	
<b>Findings</b>	CL #1 was raised and resolved.	
<b>Conclusion</b>	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

### E.6.2.3 Electricity exported by the project activity to the grid , EG<sub>Export</sub> (MWh)

Means of verification	Determine / Assessment Criteria	Assessment Remarks
	The monitoring of parameter in the registered PDD has been implemented in accordance with the registered monitoring plan.	The parameter is calculated using following measured parameters: (a) Monthly export and import readings recorded at grid-interconnection point (JMR Reading) and (b) Generation recorded at LCS meter at each WTG. The monitoring of parameter has been implemented in accordance with the registered monitoring plan.
	The equipment used for monitoring is in accordance with section 9.2.6 of CDM VVS Version 1 and is controlled and calibrated in accordance with the registered monitoring plan, the applied methodologies, the applied standardized baselines, Board guidance, local/national standards, or as per the manufacturer's specification;	No monitoring equipment is used as this parameter is calculated using the measured values. The WTGs belongs to project activity are connected to four different feeders and each feeder have exclusive dedicated metering arrangement at DISCOM substation 33/132 kV at Panchpatta site. The accuracy of the monitoring equipment (energy meters) used to measure the input values used to calculate EG <sub>Export</sub> is 0.2s as verified from the physical inspection of the project activity, which is as per the approved CDM PDD/01/ which is as per the norm defined in the PPA/14/. Calibration details of the meters are provided under section E.7 of this report.
	Monitoring results are consistently recorded as per the approved frequency;	Yes. In line with the approved monitoring plan this parameter is recorded on monthly basis in the breakup sheets issued by state utility.
	Quality assurance and quality control procedures have been applied in accordance with the registered monitoring plan.	Yes, all the stakeholders, namely, the Grid Authority (MSEDCL), and the WWIL (O&M Contractor and PP), implemented the adequate QA/QC procedures.
	If the project participants applied a sampling approach to determine data and parameters monitored, the DOE	Not applicable.

	shall assess the compliance of the sampling efforts and surveys with the validated sampling plan in accordance with the "Standard: Sampling and surveys for CDM project activities and programme of activities".	
	Describe how it verified the information flow (from data generation, aggregation, to recording, calculation and reporting) for the parameter including the values in the monitoring report.	<p>The data transfer process for the said parameter is as follows:</p> <p>The Joint meter reading at all the metering points at DISCOM substation is taken by the representatives of MSEDCL in the presence of WWIL officials in the form of JMRs.</p> <p>Based on the data recorded in the JMRs and generation recorded at WTGs panel meters, electricity exported/imported to/from the grid by the project activity is calculated by MSEDCL, using the apportioning procedure and breakup sheets for each project developer is prepared. Cumulative value of <math>EG_{Export}</math> for entire monitoring period is reported in the monitoring report, however monthly values are reported in the ER calculation sheet. The monthly values were verified from the monthly breakup sheets/10/ issued by state utility and found to be consistent.</p> <p>Value of this parameter for the current monitoring period is 113,603.79 MWh.</p>
	The information provided in the monitoring report has been cross-checked with other sources such as plant logbooks, inventories, purchase records and laboratory analysis;	Monthly reported values of $EG_{Export}$ for the current monitoring period were further cross-checked with the monthly invoices raised by the PP /11/ to state utility and found to be consistent.
	The calibration of the measuring equipment that has an impact on the claimed GHG emission reductions or net anthropogenic GHG removals is conducted by the project participants at a frequency specified in the applied methodologies, the applied standardized baselines and/or the registered monitoring plan.	<p>No monitoring equipment is used as this parameter is calculated using the measured values.</p> <p>The monitoring equipment's (Energy meters) discussed in this report are concerning to the input values (Used in calculation of <math>EG_{Export}</math>) only.</p> <p>Additional details of energy meters are verified in section E.7 of this report.</p>
	<p>(a) A complete set of data for the specified monitoring period is available. If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, the DOE shall assess whether:</p> <p>(i) The most conservative values approach is applied to the parameters</p>	No such issues identified for the current monitoring period.

	<p>for the entire non-monitoring period in accordance with the provisions relating to the temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the “CDM project standard for project activities”; or</p> <p>(ii) Alternative monitoring arrangements for the non-monitoring period are described, whether they apply conservative assumptions or discount factors to the calculations, and whether the alternative monitoring arrangements have been approved by the Board under the prior-approval track or to be approved by the Board under the issuance track in accordance with the provisions relating to temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the “CDM project standard for project activities”;</p>	
<b>Findings</b>	CAR#03 was raised and resolved.	
<b>Conclusion</b>	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

#### E.6.2.4 Electricity imported by the project activity from the grid , $EG_{\text{import}}$ (MWh)

Means of verification	Determine / Assessment Criteria		Assessment Remarks	
	The monitoring of parameter in the registered PDD has been implemented in accordance with the registered monitoring plan.		The parameter is calculated using following measured parameters: (a) Monthly export and import readings recorded at grid-interconnection point (JMR Reading) and (b) Generation recorded at LCS meter at each WTG. The monitoring of parameter has been implemented in accordance with the registered monitoring plan.	
	The equipment used for monitoring is in accordance with section 9.2.6 of CDM VVS Version 1 and is controlled and calibrated in accordance with the registered monitoring plan, the applied methodologies, the applied standardized baselines, Board guidance, local/national standards, or as per the manufacturer's specification;		No monitoring equipment is used as this parameter is calculated using the measured values. The WTGs belongs to project activity are connected to four different feeders and each feeder have exclusive dedicated metering arrangement at DISCOM substation 33/132 kV at Panchpatta site. The accuracy of the monitoring equipment (energy meters) used to measure the input values used to calculate $EG_{\text{import}}$ is 0.2s as verified from the physical inspection of the project activity, which is as per the registered CDM PDD/01/ which is as per the norm defined in the PPA/14/.	

		Calibration details of the meters are provided under section E.7 of this report.
	Monitoring results are consistently recorded as per the approved frequency;	Yes. In line with the approved monitoring plan this parameter is recorded on monthly basis in the breakup sheets issued by state utility.
	Quality assurance and quality control procedures have been applied in accordance with the registered monitoring plan.	Yes, all the stakeholders, namely, the Grid Authority (MSEDCL), and the WWIL (O&M Contractor and PP), implemented the adequate QA/QC procedures.
	If the project participants applied a sampling approach to determine data and parameters monitored, the DOE shall assess the compliance of the sampling efforts and surveys with the validated sampling plan in accordance with the "Standard: Sampling and surveys for CDM project activities and programme of activities".	Not applicable.
	Describe how it verified the information flow (from data generation, aggregation, to recording, calculation and reporting) for the parameter including the values in the monitoring report.	<p>The data transfer process for the said parameter is as follows:</p> <p>The Joint meter reading at all the metering points at DISCOM substation is taken by the representatives of MSEDCL in the presence of WWIL officials in the form of JMRs.</p> <p>Based on the data recorded in the JMRs and generation recorded at WTGs panel meters, electricity exported/imported to/from the grid by the project activity is calculated by MSEDCL, using the apportioning procedure and breakup sheets for each project developer is prepared.</p> <p>Cumulative value of <math>EG_{Import}</math> for entire monitoring period is reported in the monitoring report, however monthly values are reported in the ER calculation sheet. The monthly values were verified from the monthly breakup sheets/10/ issued by state utility and found to be consistent.</p> <p>Value of this parameter for the current monitoring period is 211.04 MWh.</p>
	The information provided in the monitoring report has been cross-checked with other sources such as plant logbooks, inventories, purchase records and laboratory analysis;	Monthly reported values of $EG_{Import}$ for the current monitoring period were further cross-checked with the monthly invoices raised by the PP /11/ to state utility and found to be consistent.
	The calibration of the measuring equipment that has an impact on the claimed GHG emission reductions or net anthropogenic GHG removals is conducted by the project participants at a frequency specified in the applied methodologies, the applied	<p>No monitoring equipment is used as this parameter is calculated using the measured values.</p> <p>The monitoring equipment's (Energy meters) discussed in this report are concerning to the input values (Used in calculation of <math>EG_{Import}</math>) only.</p>

	standardized baselines and/or the registered monitoring plan.	Additional details of energy meters are verified in section E.7 of this report.
	<p>(a) A complete set of data for the specified monitoring period is available. If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, the DOE shall assess whether:</p> <p>(i) The most conservative values approach is applied to the parameters for the entire non-monitoring period in accordance with the provisions relating to the temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the “CDM project standard for project activities”; or</p> <p>(ii) Alternative monitoring arrangements for the non-monitoring period are described, whether they apply conservative assumptions or discount factors to the calculations, and whether the alternative monitoring arrangements have been approved by the Board under the prior-approval track or to be approved by the Board under the issuance track in accordance with the provisions relating to temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the “CDM project standard for project activities”;</p>	No such issues identified for the current monitoring period.
<b>Findings</b>	CAR#03 was raised and resolved.	
<b>Conclusion</b>	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

### E.6.3. Implementation of sampling plan

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

### E.7. Compliance with the calibration frequency requirements for measuring instruments

<b>Means of verification</b>	<p>As per the monitoring plan in the registered PDD/01/ the meters are to be tested and calibrated annually.</p> <p>The project activity metering has been physically inspected during the site visit. The details of monitoring equipment is involved in the project activity and their calibration dates are mentioned in Section C of the MR/05/ and are summarised in the tables below. All the meters are of accuracy class of 0.2s and calibration frequency of once in a year.</p>
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132/33 kV DISCOM substation:			
Meter Location	Meter Sr.No-	Date of recent calibration	Calibration Delay (Y/N)
Feeder 02	Main meter: 14831534 Check meter: 14831528	29/10/2012, 16/01/2014, 07/03/2015 and 14/12/2016	Y <b>Year 2013:</b> Delayed period: 29/10/2013 to 15/01/2014 Error Factor applied: 01/10/2013 to 31/01/2014 <b>Year 2015:</b> Delayed period: 16/01/2015 to 06/03/2015 Error Factor applied: 01/01/2015 to 31/03/2015 <b>Year 2016:</b> Delayed period: 07/03/2016 to 13/12/2016 Error Factor applied: 01/03/2016 to 31/12/2016
Feeder 03	Main meter: 14831529 Check meter: 14831530	01/08/2012, 16/01/2014, 21/05/2015 and 14/12/2016	Y <b>Year 2013-14:</b> Delayed period: 01/08/2013 to 15/01/2014 Error Factor applied: 01/08/2013 to 31/01/2014 <b>Year 2015:</b> Delayed period: 16/01/2015 to 20/05/2015 Error Factor applied: 01/01/2015 to 31/05/2015 <b>Year 2016:</b> Delayed period: 21/05/2016 to 13/12/2016 Error Factor applied: 01/05/2016 to 31/12/2016
Feeder 04	Main meter: 14831520 Check meter: 14831521	29/10/2012, 19/11/2013, 07/03/2015, 05/09/2015 and 14/12/2016	Y <b>Year 2013:</b> Delayed period: 29/10/2013 to 18/11/2013 Error Factor applied: 01/10/2013 to 30/11/2013 <b>Year 2014:</b> Delayed period: 19/11/2014 to 06/03/2015 Error Factor applied: 01/11/2014 to 31/03/2015 <b>Year 2016:</b> Delayed period: 05/09/2016 to 13/12/2016 Error Factor applied: 01/09/2016 to 31/12/2016
Feeder 06	Main meter: 14831533 Check meter: 14831535	29/10/2012, 19/11/2013, 02/02/2015, 28/08/2015 and 14/12/2016	Y <b>Year 2013:</b> Delayed period: 29/10/2013 to 18/11/2013 Error Factor applied: 01/10/2013 to 30/11/2013 <b>Year 2014:</b> Delayed period: 19/11/2014 to 01/02/2015 Error Factor applied: 01/11/2014 to 28/02/2015



			<b>Year 2016:</b> Delayed period: 28/08/2016 to 13/12/2016 Error Factor applied: 01/08/2016 to 31/12/2016	
	<p>Note: Since the billing, cycle starts from 1<sup>st</sup> day of and ends on 1<sup>st</sup> day of consecutive month in the current monitoring period. Hence, the error factor is applied for the entire month concerning to calibration delay.</p> <p>The above meter details have been verified through the following means:</p> <ul style="list-style-type: none"><li>i. Physical inspection of the meters during the site visit</li><li>ii. Interviewing the staff at the sub-station</li><li>iii. The CMS of the O&amp;M service provider located at the site</li><li>iv. Calibration certificates/12/</li></ul> <p>The installation and working condition of the meters were checked during the on-site inspection and it was found to be satisfactory. These meters are duly approved, installed, tested, sealed and in the custody of the state utility. The PP has no control over the same.</p> <p>It is evident from the above table that calibration for all monitoring equipment involved in the project activity is not carried out as per the frequency mentioned in the registered monitoring plan.</p> <p>The assessment team has checked the latest calibration certificates of energy meters and confirmed that meter was working satisfactorily and error within the permissible limits. Accordance with the guidelines outlined under paragraph 369(a) of CDM VVS for PAs version 01.0, an error factor had to be applied for both export &amp; import i.e. the measured values in the delayed calibration period. However, the monthly breakup sheets issued by the state utility only provides the calculated value of electricity exported and imported by the project activity. Hence the error factor “-0.2%” is applied for export values and “+0.2%” for import values. The approach followed by the PP was found to be conservative and appropriate, hence accepted.</p> <p>It is verified through the registered PDD and PPA signed by the PP with state utility that the state utility (MSEDCL) is the buyer of generated electricity and sole entity responsible for calibration of meters.</p> <p>Accordance with the guidelines as state under section 3.2.3 of CEA Notification No. 502/70/CEA/DP&amp;D dated 17/03/2006/19/ which is considered as national standard “All interface meters shall be tested at least once in five years.” Hence, the calibration frequency of once in a year, mentioned in the registered PDD for the meters is appropriate.</p> <p>It is verified that the PP receives payment, for the electricity supplied to the grid, from the state utility (which is a Government Organisation and a 3<sup>rd</sup> party with respect to this CDM project). This electricity supplied to the grid is obtained using directly measured values at the energy meters. Hence, the state utility ensures that the energy meters are in proper working condition, since it has to make payments based on these meter readings.</p>			
	<b>Findings</b>	CAR #5 was raised and resolved		
	<b>Conclusion</b>	The assessment team has confirmed that the calibration is conducted at the frequency following the relevant industry standard as specified by the methodology		

	<p>/03/ and the monitoring plan contained in the registered PDD /01/. Therefore, the requirements of paragraph 370 of CDM-VVS for PAs, version 01.0 have been met. The assessment team also confirm that the error has been applied:</p> <p>(a) In a conservative manner, such that the adjusted measured values of the delayed calibration shall result in fewer claimed GHG emission reductions or net anthropogenic GHG removals;</p> <p>(b) For all measured values taken during the period between the scheduled date of calibration and the actual date of calibration.</p>
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## E.8. Assessment of data and calculation of emission reductions or net removals

### E.8.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

<b>Means of verification</b>	<p>The verification team verified that</p> <ol style="list-style-type: none"> <li>A complete set of data for the monitoring period was available for the monitoring period and the verification of each monitoring parameter is elaborated under Section E.6.2 of this report. The complete monitoring data is also presented in the corresponding ER sheet /07/ of final Monitoring Report /05/.</li> <li>The information provided in the monitoring report was crosschecked with other sources, wherever appropriate and available, and such information is also included under Section E.6.2 of this report.</li> <li>The calculations of baseline emissions as presented in the corresponding ER sheet of final Monitoring Report were checked and found to be consistent with the formulae and methods described in the registered monitoring plan and the applied methodology.</li> <li>All assumptions used in the emission calculations were found appropriate and therefore justified</li> <li>Appropriate emission factors and other reference values have been correctly applied. This has also been elaborated under Section E.6.1 of this report.</li> <li>No standardized baseline was prescribed in the registered PDD and therefore it has not been applied.</li> </ol> <p>The baseline emissions are the product of net electricity exported to the grid <math>EG_y</math> expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor. Baseline emission factor is calculated as combined margin, consisting of a combination of operating margin (OM) and build margin (BM) factors.</p> $BE_y = EG_y * EF_y$ <p>Where:  <math>BE_y</math>: Baseline Emissions in year y; t CO<sub>2</sub>  <math>EG_y</math> : Net Electricity supplied to the grid in year y  <math>EG_y = EG_{Export} - EG_{Import}</math>  <math>EF_y</math> = Combined margin CO<sub>2</sub> emission factor (tCO<sub>2</sub>/MWh)</p> <p>As per the registered PDD, combined margin emission factor is 0.90641 tCO<sub>2</sub>/MWh. Hence the baseline emissions for the project activity for the current monitoring period are as follows.  <math>BE_y = 113392.75 * 0.90641 = 102,778 \text{ tCO}_2\text{e}</math></p>
<b>Findings</b>	No finding was raised.
<b>Conclusion</b>	<ol style="list-style-type: none"> <li>The calculations of baseline GHG emissions or baseline net GHG removals, project GHG emissions or actual net GHG removals, and leakage GHG emissions have been carried out in accordance with the</li> </ol>

	<p>formulae and methods described in the registered monitoring plan, the applied methodology.</p> <p>b) All assumptions used in emission or removal calculations have been justified;</p> <p>c) Appropriate emission factors and other reference values were correctly applied.</p>
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#### E.8.2. Calculation of project GHG emissions or actual net anthropogenic GHG removals by sinks

<b>Means of verification</b>	The registered PDD/1/ and applied monitoring methodology/03/ does not prescribe any project emissions to be considered. The onsite visit and project design also did not reveal any potential source to be considered in this regard.
<b>Findings</b>	No finding was raised
<b>Conclusion</b>	No project emissions were required to be calculated.

#### E.8.3. Calculation of leakage GHG emissions

<b>Means of verification</b>	The registered PDD/1/ and applied monitoring methodology/03/ does not prescribe any leakage emissions to be considered. The onsite visit and project design also did not reveal any potential source to be considered in this regard.
<b>Findings</b>	No finding was raised
<b>Conclusion</b>	No leakage emissions were required to be calculated.

#### E.8.4. Summary calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

<b>Means of verification</b>	<p>As elaborated above, the entire emission reductions from the project activity were based on baseline emissions. The calculations presented in this regard in the final monitoring report and corresponding ER calculation sheet were found appropriate and complying with the provisions prescribed in the registered monitoring plan of registered PDD and applied methodology.</p> <p>The verification team confirms that an audit trail that contains the evidence and records that validated the stated figures were checked and found acceptable.</p>
<b>Findings</b>	No finding was raised
<b>Conclusion</b>	<p>The verification team confirms that</p> <ul style="list-style-type: none"> <li>a) The complete data was available and is duly reported;</li> <li>b) As indicated above, the description with regard to cross-check of reported data is included under respective parameter (refer Section E.6.2 of this report);</li> <li>c) Appropriate methods and formulae for calculating baseline GHG emissions or baseline net GHG removals, project emissions and leakage emissions were followed;</li> <li>d) Appropriate emission factors and other reference values were correctly applied.</li> <li>e) There is no pro-rate approach was applied in the current monitoring period as entire monitoring period falls into period that is after the end of first commitment period of Kyoto Protocol.</li> </ul> <p>The total number of ERs achieved during the current monitoring period is 102,778 tCO<sub>2</sub>e.</p>

### E.8.5. Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

<b>Means of verification</b>	As verified and evident from the final Monitoring Report /05/ and corresponding ER sheet /07/, the actual emission reductions achieved by the project activity in the current monitoring period were found lesser than (25.99% lower) the estimated quantity in the registered PDD/01/ for the comparable period.	
	Estimated ERs for comparable period as per registered PDD (tCO <sub>2</sub> e)	Actual ERs achieved in the current monitoring period (tCO <sub>2</sub> e)
	138,874	102,778
<b>Findings</b>	CAR #5 was raised and resolved	
<b>Conclusion</b>	In line with the requirement outlined under paragraph 268 of CDM-PS for PAs version 01.0, it is concluded that: <ul style="list-style-type: none"> <li>a) A comparison of actual GHG emission reductions or net anthropogenic GHG removal of the project activity achieved during this monitoring period with the estimates in the approved revised PDD has been provided in the Monitoring Report.</li> <li>b) The verification team confirms that the calculation of the comparison is correct.</li> </ul>	

### E.8.6. Remarks on difference from estimated value in registered PDD

<b>Means of verification</b>	The actual emission reductions were less than the estimation in the registered PDD for an equivalent length of the monitoring period therefore no further explanation is required.
<b>Findings</b>	No finding was raised
<b>Conclusion</b>	The actual ERs are less than the estimated quantity of ERs as given in the registered PDD, which is appropriate and accepted.

### E.8.7. Actual GHG emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

<b>Means of verification</b>	Based on the assessment done in section E.8.1 to E.8.6, the verification team is able to certify that the emission reductions from the CDM project activity 3854 "20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra" in India during the period 01/01/2013 to 28/02/2017 (including both days) is 102,778 tCO <sub>2</sub> e.		
		First commitment period (up to 31 Dec 2012) (tCO <sub>2</sub> e)	01 Jan 2013 onwards (tCO <sub>2</sub> e)
	Emission Reductions	NA	102,778
<b>Findings</b>	No finding was raised		
<b>Conclusion</b>	Actual GHG emission reductions achieved during period starting from 1 <sup>st</sup> January 2013 onwards was verified as 102,778 tCO <sub>2</sub> e .		

### E.9. Assessment of reported sustainable development co-benefits

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

### E.10. Global stakeholder consultation

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

## SECTION F. Internal quality control

>> The draft verification report that is prepared by verification team is reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by Earthood were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable CDM rules/requirements. The technical review team is collectively required to possess the

technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the verification team.

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

## SECTION G. Verification opinion

>>

Earthood Services Private Limited (ESPL), contracted by Wind World (India) Limited., has performed the independent verification of the emission reductions for the CDM project activity "20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra" in India for the monitoring period 01/01/2013 to 28/02/2017 (including both days) as reported in the Monitoring Report (public) Version 1 dated 03/05/2017. The Wind World (India) Limited is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

ESPL commenced the verification based on the baseline and monitoring methodology ACM0002 Version 11, the monitoring plan contained in the PDD Version 8 dated 12/09/2017, Monitoring Report (public) Version 1 dated 03/05/2017.

ESPL's verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. ESPL planned and performed the verification by obtaining evidence and other information and explanations that ESPL considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

The verification team confirms that:

- The project activity was found completely implemented as per the description given in the registered PDD.
- The actual operation conforms to the description in the registered PDD.

## SECTION H. Certification statement

>> Earthood Services Private Limited (ESPL), contracted by Wind World (India) Limited, has performed the independent verification of the emission reductions for the CDM project activity 3854 "20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra" in India for the monitoring period 01/01/2013 to 28/02/2017 (including both days) as reported in the Monitoring Report (Final) Version 3 dated 30/10/2017. The Wind World (India) Limited is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity. It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity.

ESPL commenced the verification on the basis of the baseline and monitoring methodology ACM0002 Version 11, the monitoring plan contained in the PDD Version 8 dated 12/09/2017, Monitoring Report (public) Version 1 dated 03/05/2017.

ESPL's verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. ESPL planned and performed the verification by obtaining evidence and other information and explanations that ESPL considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 01/01/2013 to 28/02/2017 (including both days) are fairly stated in the Monitoring Report (final) Version 3 dated 30/10/2017. The GHG emission reductions were calculated correctly based on the approved baseline and monitoring methodology ACM0002, version 11 and the monitoring plan contained in the PDD Version 8 dated 12/09/2017. Earthood Services Private Limited is able to certify that the emission reductions from the CDM project activity 3854 "20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra" in India during the period 01/01/2013 to 28/02/2017 (including both days) amount to 102,778 tCO<sub>2</sub>e.

**Verified and certified emission reductions as per commitment period:**

Commitment period	Amount
Upto 31/12/2012 (1 <sup>st</sup> commitment period)	Not Applicable/Nil
From 01/01/2013 onwards	102,778 tCO <sub>2</sub> e

## Appendix 1. Abbreviations

Abbreviations	Full texts
ABT	Availability Based Tariff
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CDM VVS	Clean Development Mechanism Validation and Verification Standard
EB	Executive Board
EF	Emission Factor
EPC	Engineering ,Procurement and Construction
ER	Emission Reductions
CEA	Central Electricity Authority
CER	Certified Emission Reduction
CL	Clarification Request
DOE	Designated Operational Entity
DNA	Designated National Authority
EIL	Enercon(India) Limited
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
MWh	Megawatt hour
PDD	Project Design Document
PPA	Power Purchase Agreement
PP	Project Participant
PRC	Post Registration Changes
PS	Project Standard
RMP	Revised Monitoring Plan
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 Convertor
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	WWIL	Registered PDD (Approved on 05/10/2017)	Version 8 ,Dated 12/09/2017	Other												
2	Det Norske Veritas(D NV)	Validation report	Report No: 2009-0327 Rev.05 ,Dated 30/06/2010	Other												
2.1	Bureau Veritas Certification	Verification report for the period from 01/04/2012 to 31/12/2012	Report No-BVC-India /VR/576.49/2013, dated 08/05/2013	Other												
2.2	ESPL	Validation opinion on changes in PDD	Version 03,Dated 12/09/2017	Other												
3	UNFCCC	Consolidated baseline methodology for grid-Connected electricity generation from renewable sources, ACM0002	Version 11	Other												
4	WWIL	Monitoring Report (publication)	Version 1,dated 03//05/2017	WWIL												
4.1		Monitoring Report	Version 2, dated 10/06/2017													
5	WWIL	Monitoring Report (final)	Version 3, dated 30/10/2017	WWIL												
6	WWIL	ER Spread sheet (initial version)	dated 03/05/2017	WWIL												
7	WWIL	ER spread sheet (final)	dated 30/10/2017	WWIL												
8	UNFCCC	CDM VVS for Project activities	Version 01.0	Other												
9	UNFCCC	CDM PS for Project activities	Version 01.0	Other												
10	MSEDCL	Monthly breakup sheets issued by state utility	For the period from 01/01/2013 to 01/11/2016	WWIL												
10.1	WWIL	Monthly generation records maintained at site office	For the period from 01/01/2013 to 28/02/2017	WWIL												
11	WWIL	Monthly invoices raised by the PP to state utility	For the period from 01/01/2013 to 28/02/2017	WWIL												
12	MSEDCL	Calibration certificates of main meters and check meters (All 4 Feeders). <table><tr><td>Location</td><td>Meter Nos.</td><td>Calibration dates</td></tr><tr><td>Feeder- 2</td><td>Main:14831534 Check:14831528</td><td>29/10/2012, 16/01/2014 07/03/2015 and 14/12/2016</td></tr><tr><td>Feeder- 3</td><td>Main:14831529 Check:14831530</td><td>01/08/2012, 16/01/2014, 21/05/2015 and 14/12/2016</td></tr><tr><td>Feeder-4</td><td>Main:14831520 Check:1483152</td><td>29/10/2012, 19/11/2013, 07/03/2015, 05/09/2015 and 14/12/2016</td></tr></table>	Location	Meter Nos.	Calibration dates	Feeder- 2	Main:14831534 Check:14831528	29/10/2012, 16/01/2014 07/03/2015 and 14/12/2016	Feeder- 3	Main:14831529 Check:14831530	01/08/2012, 16/01/2014, 21/05/2015 and 14/12/2016	Feeder-4	Main:14831520 Check:1483152	29/10/2012, 19/11/2013, 07/03/2015, 05/09/2015 and 14/12/2016	-	WWIL
Location	Meter Nos.	Calibration dates														
Feeder- 2	Main:14831534 Check:14831528	29/10/2012, 16/01/2014 07/03/2015 and 14/12/2016														
Feeder- 3	Main:14831529 Check:14831530	01/08/2012, 16/01/2014, 21/05/2015 and 14/12/2016														
Feeder-4	Main:14831520 Check:1483152	29/10/2012, 19/11/2013, 07/03/2015, 05/09/2015 and 14/12/2016														



		Feeder -6	Main:1483153 3 Check: 14831535	29/10/2012, 19/11/2013, 02/02/2015, 28/08/2015 and 14/12/2016		
13	MSEDCL	Commissioning certificates (for all 25 WTGs)			Dated 28/02/2007, 13/09/2008, 24/09/2008, 04/12/2008, 11/02/ 2009, 26/02/2009 & 17/03/2009	WWIL
14	MSEDCL	Power Purchase Agreements between MSEDCL and WWIL			Dated 21/05/2007, 03/08/2008, 01/10/2008, 10/12/2008, 17/03/2009 and 30/03/2009	WWIL
15	CEA	CO <sub>2</sub> Baseline Database for Indian Power Sector			Version 2	Others
16	UNFCCC	UNFCCC webpage for the project activity			<a href="https://cdm.unfccc.int/Projects/DB/DNV-CUK1279516994.31/view">https://cdm.unfccc.int/Projects/DB/DNV-CUK1279516994.31/view</a>	Others
18	Ministry of corporate Affairs, GOI	Name change consent issued by Government of India			dated 01/01/2013	WWIL
19	CEA	CEA Notification No. 502/70/CEA/DP&D			dated 17/03/2006	Others
20	ESPL	Site visit observation and photographs			Dated 06/06/2017	-
21	UNFCCC	Sampling and survey for CDM project activities and programmes of activities'			Version 06	Others
22	WWIL	Undertaking from WTG supplier regarding calibration of LCS meter			-	WWIL

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

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

<b>FAR ID</b>	Xx	<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of FAR</b>				
NA				
<b>Project participant response</b>				<b>Date:</b> DD/MM/YYYY
<b>Documentation provided by project participant</b>				
DOE assessment				
				<b>Date:</b> DD/MM/YYYY

**Table 2. CL from this verification**

<b>CL ID</b>	01	<b>Section no.</b>	E.8	<b>Date :</b> 07/06/2017
<b>Description of CL</b>				
Please submit ER calculation sheet for current monitoring period.				
<b>Project participant response</b>				<b>Date :</b> 15/06/2017
ER Calculation Sheet has been submitted along with revised version of MR.				
<b>Documentation provided by project participant</b>				
ER Calculation Sheet				
<b>DOE assessment</b>				<b>Date:</b> 23/06/2017
Parameter summation of $EG_{gross, y}$ is not reported in the ER calculation sheet in line with the revised monitoring plan. CL #1 is open				
<b>Project participant response</b>				<b>Date:</b> 28/06/2017
$EG_{gross, y}$ is reported in the revised ER calculation sheet in line with the revised monitoring plan.				
<b>Documentation provided by project participant</b>				
ER Calculation Sheet				
<b>DOE assessment</b>				<b>Date:</b> 10/10/2017
The PP has reported the monitoring parameter summation of $EG_{gross, y}$ in the revised ER calculation sheet in line with the frequency mentioned in the approved monitoring plan. Monthly values are verified with the MGRs (Monthly Generation Reports) issued by O&M contactor and found to be consistent. CL #1 is closed.				

**Table 3. CAR from this verification**

<b>CAR ID</b>	02	<b>Section no.</b>	E.1	<b>Date :</b> 07/06/2017
<b>Description of CAR</b>				
Monitoring period mentioned under section E.1 of the MR is not consistent across the MR. Please clarify the inconsistency observed.				
<b>Project participant response</b>				<b>Date :</b> 15/06/2017
Monitoring Period has been corrected under section E.1 of the revised MR.				
<b>Documentation provided by project participant</b>				
MR version 02, dated 10/06/2017				
<b>DOE assessment</b>				<b>Date:</b> 23/06/2017
Monitoring period mentioned dates are corrected in section E.1 of the MR and found consistent with published MR at project webpage. CAR #2 is closed.				

  

<b>CAR ID</b>	03	<b>Section no.</b>	E.6	<b>Date :</b> 07/06/2017
<b>Description of CAR</b>				
As per the registered monitoring plan (PDD, section B.7.1), $EG_{JMR, Export}$ & $EG_{JMR, Import}$ are monitoring parameters, it is not clear why these parameters are not reported in section D.2 of the MR.				
<b>Project participant response</b>				<b>Date :</b> 15/06/2017

PP is taking revision in monitoring plan, as per revised monitoring plan <ul style="list-style-type: none"> <li>Under section B.7.1 of revised PDD, description of source of data has been changed for <math>EG_y</math> <math>EG_{Export}</math> <math display="block">\sum_{y=0}^N EG_{gross,y}</math> <math display="block">\sum_{y=0}^M EG_{gross,y}</math> , <math>EG_{Import}</math> &amp; </li> <li>As per revised monitoring plan, value of <math>EG_y</math> is sourced from the break-up sheet based on Joint Meter Reading (JMR) prepared &amp; signed by DISCOM, based on which invoice is raised by PP to the DISCOM. Hence, <math>EG_{JMR, Export}</math> &amp; <math>EG_{JMR, Import}</math> cannot be used as monitoring parameters and have been removed from Section B.7.1 &amp; for <math>EG_y</math>, <math>EG_{Export}</math>, <math>EG_{Import}</math>, measurement method &amp; procedures has been described in detail.</li> <li>Due to revision in monitoring plan, QA/QC procedure under section B.7.1 of revised PDD has been updated for more transparency.</li> <li>Correction has been made under section B.7.3 &amp; Appendix 5 of PDD to make it more understanding and transparent.</li> <li>In Appendix 1 contact details have been updated.</li> </ul>	
For the revision in monitoring plan, revised PDD has been submitted along with revised MR.	
<b>Documentation provided by project participant</b>	
Revised PDD, version 06, dated 15/06/2017	
<b>DOE assessment</b>	<b>Date: 23/06/2017</b>
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 EPC 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:	
<ol style="list-style-type: none"> <li>Section B.3 of the PDD is updated, it is not clear why the changes are not summarized under Appendix 6 of the revised PDD</li> <li>Font size in section B.6.1 of the revised PDD is not in line with the instructions for filling the PDD form.</li> <li>Web link for CO2 Baseline Database for the Indian Power Sector published by CEA is not accessible (section B.6.1 of PDD)</li> <li>Grid identification mentioned in the PDD is not consistent with CEA database referred to determine baseline scenario.</li> </ol>	
CAR #3 is open.	
<b>Project participant response</b>	<b>Date: 28/06/2017</b>
<ol style="list-style-type: none"> <li>The changes in Section B.3 are summarized under Appendix 6 of the revised PDD.</li> <li>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.</li> <li>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.</li> <li>Grid identification mentioned in the PDD has been made consistent with CEA database referred to determine baseline scenario.</li> </ol>	
<b>Documentation provided by project participant</b>	
Revised PDD	
<b>DOE assessment</b>	<b>Date : 10/10/2017</b>

The PP has requested revision in the registered monitoring plan and the revised PDD was submitted (prior approval track) to CDM EB.  
 Permanent changes to the registered monitoring plan along with some corrections are approved by CDM EB on 05/10/2017 (Ref: PDD version 8, dated 12/09/2017 and validation opinion on PRC, version 03, dated 12/09/2017)  
 The assessment team has checked the registered PDD (approved on 05/10/2017) and confirmed that the PP has monitored and reported all the parameters in the revised MR in line with the requirements of approved monitoring plan.  
 CAR #3 is closed.

<b>CAR ID</b>	04	<b>Section no.</b>	E.4	<b>Date :</b> 26/10/2017
<b>Description of CAR</b>				
As verified through UNFFCCC web page that post registration changes to the project activity were approved on 05/10/2017. Please clarify why this information is not reported in section B.2 of the monitoring report. It is indicated in the registered PDD (approved on 05/10/2017) that project WTGs are connected DISCOM substation, however the line diagram (Annex 2 of MR) mentions the same as WWIL substation. Kindly clarify the inconsistency observed.				
<b>Project participant response</b>				<b>Date :</b> 30/10/2017
The information on PRC has been updated in Section B.2 of revised MR. The line diagram has been corrected in Annex 2 of revised version of MR.				
<b>Documentation provided by project participant</b>				
MR Version 3 ,dated 30/10/2017				
<b>DOE assessment</b>				<b>Date:</b> 02/11/2017
The PP has included the information's about post registration changes in section B.2 of the revised MR, found consistent with the project web page. Hence accepted. Identification of the substation is corrected and found consistent with the approved PDD, hence accepted. CAR #4 is closed.				

<b>CAR ID</b>	05	<b>Section no.</b>	E.1	<b>Date :</b> 25/10/2017
<b>Description of CAR</b>				
<ol style="list-style-type: none"> <li>1. Please clarify why latest version of MR template (CDM-MR-FORM) is not used.</li> <li>2. Please clarify why specific calibration delay period for each meter is not reported in the MR and ER calculation sheet.</li> <li>3. Please clarify why the comparison of estimated and actual ERs is not provided in the ER calculation sheet.</li> </ol>				
<b>Project participant response</b>				<b>Date :</b> 30/10/2017
<ol style="list-style-type: none"> <li>1. The latest version has been used in revised MR.</li> <li>2. The Calibration Delay Period is reported in Annex 1 of revised MR &amp; in revised ER Calculation Sheet.</li> <li>3. The comparison of estimated and actual ERs is provided in the revised ER calculation sheet.</li> </ol>				
<b>Documentation provided by project participant</b>				
MR version 03, dated 30/10/2017 ER Calculation Sheet				
<b>DOE assessment</b>				<b>Date:</b> 02/11/2017
The PP has refereed latest version of MR template, found satisfactory, hence accepted. Calibration delayed period is specified in the revised MR and ER calculation sheet, found to be appropriate. Comparison of actual and estimated CERs is provided in the ER calculation sheet, found satisfactory. CAR #5 is closed.				

Table 4. FAR from this verification

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

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**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
02.0	31 October 2017	Revision to align with the requirements of the “CDM validation and verification standard for project activities” (version 01.0).
01.0	23 March 2015	Initial publication.
Decision Class: Regulatory		
Document Type: Form		
Business Function: Issuance		
Keywords: project activities, verifying and certifying		